

A HISTORY OF THE ORD RIVER SCHEME
A STUDY IN INCREMENTALISM

by

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This is my own account of my
research, and contains as its
main content work which has
not previously been submitted
for a degree at any University

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ABSTRACT

The decision to commence the Ord River Irrigation Scheme in the East Kimberley region of Western Australia had extensive political repercussions in national and state politics. The thesis is introduced with an analysis of the decision in relation to the literature of decision-making theory, in particular the two most actively supported decision-making theories - the rational and the incremental approaches. The thesis demonstrates that the Ord River Scheme accords with the empirical patterns of incremental decision-making. The processes of decision-making on the Ord River Scheme involved a seemingly endless sequence of small, incremental and unco-ordinated adjustments on the part of both the Commonwealth and the Western Australian governments.

The initial chapters trace the early exploration of the Kimberley region, the state-encouraged experiments in tropical agriculture in the 1920's and the early plans for settlement in, and development of the area. Later chapters analyse the main decisions made by both the Commonwealth and Western Australian governments relating to the development of the region - decisions concerning the establishment of Kimberley Research Station, the construction of the Ord River Diversion Dam and early farming developments. The thesis then examines the attempt by both the Commonwealth and Western Australian governments to inject some rationality into the decision-making process on the Ord, in the form of cost-benefit analysis, the Commonwealth government's agreement of 1967 to finance the construction of the Main Ord Dam and finally, the Western Australian government's decision in 1974 to abandon cotton growing.

TABLE OF CONTENTS

	Page
<i>Abstract</i>	ii
Introduction	1
Chapter I. Early development of the North West and in particular the Ord River District, to the late 1930's.	18
Chapter II. Moves to establish a Research Station in the Kimberleys.	55
Chapter III. The Role of Research in Planning for the Ord River Scheme - the Kimberley Research Station.	89
Chapter IV. "Muddling through" - the initial decision on the Ord River Scheme.	122
Chapter V. Stage I of the Ord River Scheme.	163
Chapter VI. Justification for the Project - Cost-Benefit Analysis.	204
Chapter VII. Commonwealth-state negotiations - the decision to proceed with Stage II.	243
Chapter VIII. The basis for the decision to proceed with Stage II - the position at the Ord in the late 1960's.	301
Chapter IX. Stage II of the Ord River Scheme.	353
Conclusion	400

Appendixes

I.	Commonwealth Government Capital Expenditure on the Ord River Project.	414
II.	Western Australian State Government Capital Expenditure on the Ord River Project.	415
III.	Cotton Production at the Ord River Irrigation Area 1960/61 to 1973/74.	416
IV.	A Chronology of significant Events.	417
V.	Significant committees involved in the development of the Ord River Scheme.	418

LIST OF TABLES

	Page
Table 1. Administrative Structure for the Ord River Project to November 1971.	171
Table 2. Commonwealth and Western Australian Government machinery for administration of North Western Australia.	178

LIST OF MAPS

	Page
Map 1. Ord Irrigation Project.	viii
Map 2. Kimberley Area - Location Map	ix
Map 3. Cotton Growing Areas of Australia.	292

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Abbreviations and Notes

Abbreviations

B.A.E.	Bureau of Agricultural Economics.
C.P.D.	Commonwealth Parliamentary Debates.
C.S.I.R.	Council for Scientific and Industrial Research, became C.S.I.R.O. in May 1949.
C.S.I.R.O.	Commonwealth Scientific and Industrial Research Organization.
C.S.R.	Colonial Sugar Refining Company Ltd.
K.R.S.	Kimberley Research Station.
P.P.B.S.	Planning, Programming and Budgeting Systems.
P.W.D.	Public Works Department.
W.A.P.D.	Western Australian Parliamentary Debates.

Notes

Weights and measures: figures quoted prior to 1971 (when metric conversion began) are in imperial units. Those relating to the post 1971 period are quoted in both imperial and metric units for comparative purposes.

Currency: monetary values are quoted according to the currency in use at the time - pounds prior to 1966 and dollars thereafter.

INTRODUCTION

The limits of rationality have been seen to derive from the inability of the human mind to bring to bear upon a single decision all the aspects of value, knowledge and behaviour that would be relevant.¹

On 27 August 1959, it was announced that Australia's Federal government had decided to allow the Western Australian government proposal that the Commonwealth grant for northern development under the *Western Australia Grant (Northern Development) Act 1958-9*, be spent on Stage I of the Ord River Project - a project which aimed to use the waters of the Ord River in the far north of that state for intensive irrigated agriculture.² That decision was the result of many years of intergovernmental negotiations and it gave rise to a series of consequential decisions for the building of two dams, the associated irrigation works, the settlement of farmers and the encouragement and marketing of their agricultural products.

This thesis is primarily a history of those decisions; it also has a secondary purpose - it relates the contemporary literature referred to collectively as "decision-making theory" to the realities of decision-making in

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1. H. A. Simon, *Administrative Behaviour*. A Study of Decision-Making Processes in Administrative Organization. (N.Y., 2nd edition, 1958), p. 108.
 2. *West Australian*, 27 August 1959, p. 1.

governmental practice in this particular case. Whereas such a juxtaposition of theory and practice in decision-making proves neither the validity of the theory nor the correctness of the practice, it does however, provide some insights through which both the theory and the practice might usefully be refined.

Decision-making, more than any other administrative skill, has been the subject of intensive analytical enquiry since World War II. It has been described as "that thinking which results in the choice among alternative courses of action."³ Much attention has been given to the method of thinking and the actual process of making a choice. Some authors have attributed greater rationality to some methods over others. A rational decision according to one author, could be expected if the decision-maker

- 1) clarifies his general objectives, goals and values;
- 2) ascertains all possible means of achieving those objectives;
- 3) examines all the consequences of employing each of the alternative means;
- 4) chooses the mean whose consequences best match the goals, objectives or values identified in the first step (above).⁴

3. D. W. Taylor, "Decision-making and Problem Solving," in J. G. March (ed.), *Handbook of Organizations* (Chicago, 1965), p. 48.

4. C. E. Lindblom, "The Science of 'Muddling Through'," *Public Administration Review*, Vol. 19 (Spring 1959), pp. 79-88.

It is obvious that this model of decision-making asks the impossible of the decision maker who has neither the time, nor the knowledge necessary to consider all possible alternatives and foresee the consequences of each alternative. However, the ideal continues to win widespread endorsement. A U.S. presidential aide has put the rational approach into the context of national security policy.⁵ He felt that for each important decision it would be desirable to undertake a series of carefully calculated steps including the following:⁶

- 1) agreement on facts.
- 2) agreement on the overall policy objective.
- 3) a precise definition of the problem.
- 4) a canvassing of all possible solutions.
- 5) a list of all possible consequences that would flow from each solution.
- 6) a recommendation and final choice of the alternative.
- 7) the communication of that selection.
- 8) provision for its execution.

Harold Lasswell too, in his work on policy sciences, has identified seven phases or functions of any decision, following the sequence outlined above. These are intelligence, promotion, prescription, invocation, application, termination and appraisal.⁷

5. T. Sorenson, *Decision Making in the White House*. (New York, 1963), pp. 18-19.

6. *Ibid.*

7. H. D. Lasswell, *A Pre-View of Policy Sciences*. (N.Y. 1971), pp. 28-30.

In recent years, in an effort to achieve rationality in decision-making, governments have turned increasingly to a quantitative comparison of alternate strategies where goals and objectives are defined and costed. Planning, Programming and Budgeting Systems (PPBS) and cost-benefit analysis are the most important developments within this approach. P.P.B.S. was introduced in America in 1965 and was later adopted in several European countries. Under that system, departments or government agencies define the particular objectives for which they are responsible, then detail the policy measures they have taken, and identify their costs accordingly. By this means, the budget is intended to progress from a simple monetary exercise to the realm of strategic planning, or a "conscious appraisal and formulation of future goals and policies."⁸ The technique of cost-benefit analysis was also developed in the United States, this time to help evaluate proposals for the development of water resources. It is concerned with the quantification and comparison of the costs and benefits of alternative courses of action.⁹ Both P.P.B.S. and cost-benefit analysis can be criticised on the same grounds as the rational model of decision-making. It is not always possible to determine the desired policy goal, and the estimation of the costs and benefits associated with a project is fraught with conceptual, evaluative and

8. A. Schick, "The Road to PPB: The Stages of Budget Reform," *Public Administration Review*, Vol. XXVI (1966), pp. 243-58.

9. See chapter 6.

practical difficulties. Both techniques produce mixed results, comprised as they are of political and social value judgements and uncertainties in calculation.

Since the mid-1960's, a loose group of economists and political scientists calling themselves "public choice" theorists, have sought to analyse the concept of rational choice as it extends from the individual to the whole.¹⁰ Public choice theorists seek to explain public policies in terms of decisions made by individuals, assuming that the individual makes rational decisions about his social, political and economic needs.

The numerous critics of the rational models of decision-making can be broadly divided into two schools. First, those who would modify the model to take account of incomplete information, uncertainty, and the cost involved in canvassing all possible solutions. Secondly, those who suggest that even the modified rational model is neither descriptively accurate or prescriptively desirable.

The most prominent of the first school is Herbert Simon.¹¹ His two main alterations to the classical rational models are the ideas of "bounded rationality" and "satisficing." He describes the limits to rationality in

10. V. Ostrom and E. Ostrom, "Public Choice: A Different Approach to the Study of Public Administration," *Public Administration Review*, Vol. XXXI, No. 2, (March/April 1971), pp. 203-216.
M. H. Sproule Jones, "Strategic Tensions in the Scale of Political Analysis," *British Journal of Political Science*, Vol. 2 (1972), pp. 173-191.
For a criticism of Ostrom see R. T. Gdombiewski, *Public Administration as a Developing Discipline* (New York, 1977), Part 1, pp. 157-195.

11. H. A. Simon, *op. cit.*

actual behaviour as incompleteness of knowledge, and the difficulties of anticipation and imagination.¹² Simon claimed that his concept of "bounded rationality" made allowance for the psychological limits of decision-makers.¹³ In searching for a rational strategy which took "bounded rationality" into account, Simon proposed a "satisficing" model of activity. "Satisficing" meant that the decision-maker attained satisfactory levels of criterion variables rather than optimum levels, i.e. choosing the first alternative discovered to satisfy his basic expectation.¹⁴ Using this model, the level of aspiration on the part of the decision-maker begins to adjust itself downward until goals reach levels that are satisfactory and practically attainable.¹⁵

The second school of critics of the rational model of decision-making is represented by Charles Lindblom who agrees with Simon that the rational model is incapable of realization but goes even further, to argue that it is, in most cases, "fruitless and unhelpful as an ideal."¹⁶ Lindblom's criticism of the rational model parallels that

12. *Ibid.*, p. 81.

13. *Ibid.*, pp. 80-83.

14. J. G. March and H. A. Simon, *Organizations*. (U.S. 1958), p. 141.

15. *Ibid.*

16. D. Braybrooke and C. E. Lindblom, *A Strategy of Decision: policy evaluation as a social process*. (N.Y. 1963), p. 16.

of Simon. He points to the fact that it fails to take into account man's limited problem-solving capabilities, the inadequacy of information on which to base decisions and the vast cost involved in canvassing all possible solutions.¹⁷ However, in devising a decision-making scheme to take these limitations into account, Lindblom proposed the "strategy of disjointed incrementalism."¹⁸ His strategy, earlier known as "the science of muddling through," has the following characteristics:¹⁹

- 1) Rather than undertaking a comprehensive survey and evaluation of all alternatives, the decision-maker focuses only on those policies which differ marginally from existing policies. Agreement, it was felt, would be more likely to result if discussion is limited only to those aspects of the proposed programme which differed slightly from the status quo.
- 2) Only a small number of policy alternatives are considered.
- 3) Only a restricted number of important consequences are considered for every given policy alternative.
- 4) The problem confronting the decision-maker is continually redefined with ends adjusted to means and means to ends to make the problem more manageable.

17. C. E. Lindblom, "The Science of Muddling Through," *op. cit.*, p. 84.

18. D. Braybrooke and C.E. Lindblom, *op. cit.*, pp. 83-106.

19. *Ibid.*

5) Thus, there is no one correct solution but any problem is subject to an endless series of attacks.

Policy output then, will be in the form of an indefinite sequence of policy moves which "rarely solve problems but merely stave them off or nibble at them, often making headway but sometimes retrogressing."²⁰ Policy then, is never final but is made and remade endlessly, being "a process of successive approximation to some desired objectives in which what is desired itself continues to change under reconsideration."²¹ In this way, the policy maker avoids mistakes because:

- a) past sequences of policy steps have given him the knowledge of the probable consequences of further similar steps;
- b) he need not attempt major steps toward his goals requiring predictions beyond his knowledge because he never expects his policy to be a final resolution of the problem, only a first step;
- c) he is, in effect, able to test his previous prediction as he progresses to each further step;
- d) he is able to remedy a past error fairly quickly, more quickly than if policy proceeded through more distinct steps spread over time.²²

20. *Ibid.*, p. 71.

21. C. E. Lindblom, "The Science of Muddling Through," *op. cit.*, p. 86.

22. *Ibid.*, p. 86.

The incrementalist approach to decision-making has aroused considerable disputation. One writer has suggested that according to this approach "we do stagger through history like a drunk putting one disjointed incremental foot after another."²³ It has been said that the theory is excessively conservative and exaggerates the degree of stability and regularity in government. Yehezkel Dror claimed that the incrementalist approach had limited liability and labelled it "an ideological reinforcement of the pro inertia and anti innovation forces."²⁴ His optimal model of policy making had the following features:²⁵

- (1) some clarification of values, objectives and decision criteria;
- (2) the identification of alternatives, with a conscious effort to consider new alternatives;
- (3) the preliminary estimation of the expected pay off of various alternatives and decisions, whether a strategy of minimal risk or a strategy of innovation is preferable;
- (4) if the first strategy is chosen, the "successive limited comparison" model should be followed. If the latter strategy is chosen, the next step is to

23. K. E. Boulding, Review of "A Strategy of Decision," *American Sociological Review*, Vol. 29 (1964), p. 931.

24. Y. Dror, "Muddling Through - 'Science' or 'Inertia'?" *Public Administration Review*, Vol. XXIV, No. 3 (September 1964), p. 155.

25. *Ibid.*, p. 156.

consider the possible results of alternate policies, relying on available knowledge.²⁶

The test of optimum policy is that it is agreed upon by the various analysts after full and frank discussion of stages (1) to (4). Thus, Dror's optimal model of policy making, in seeking to devise a policy process which can recognizably increase the output of substantive goods and services, relied on theory and experience, rationality and extra-rationality, the exact mix depending on the nature of the problem.

Amitai Etzioni has put forward a "third approach to decision-making" which he claimed to be superior both to the utopianism of the rationalistic approach, and the alleged conservative bias of incrementalism.²⁷ For the purposes of this survey of the literature of decision-making theory, he can be included in the second broad school of critics of the rational model of decision-making.

Etzioni rejected rational models as being unrealistic and undesirable. By requiring complete information prior to a decision (an impossibility) and given the costs of securing such information (infinite) he felt decision-makers would in fact, never be in a position to act, even if they had the ability to handle such complexities of information.²⁸ He felt too, that the rationalistic model

26. *Ibid.*

27. A. Etzioni, "Mixed Scanning: A Third Approach to Decision-Making," *Public Administration Review*, XXVII (December 1967), pp. 385-92.

28. *Ibid.*, p. 386.

presumed agreement on the social needs of the community and the ends to be pursued. Etzioni's alternative was "mixed scanning,"²⁹ a strategy which sought to avoid what he felt to be the most serious problems of both the rationalistic and incremental models, by taking advantage of both models in different situations. The strategy combined a detailed (rationalistic) examination of some sectors of the community with a "truncated" review of other sectors.³⁰

Of the decision-making strategies outlined above, incrementalism would seem to correspond very much better with practical experience than does the rationalist model, and offers explanatory appeal to participants in the decision-making process. It appeals as an effective means of coping with the clash of interests and values in a complex society, and the inherent limitations of the human mind. Incrementalism has been given strong empirical backing in the O. Davis, M. A. H. Dempster and A. Wildavsky study of the U.S. budgetary process.³¹

The group studied time-series data collected from fifty-six non-defence agencies for the period 1947 to 1963. Eight different models were constructed and tested and it was found that two types of behaviour were most responsible for the final budgetary decision. First, the

29. *Ibid.*

30. *Ibid.*, p. 389.

31. O. A. Davis, M. A. H. Dempster and A. Wildavsky, "A Theory of the Budgetary Process," *American Political Science Review*, LX (September, 1966), pp. 529-547.

agency request for a certain year was a fixed mean percentage of the congressional appropriation for that agency in the previous year plus a random variable for that year.³² Secondly, the congressional appropriation for an agency in a certain year was a fixed mean percentage of the request in that year plus a "stochastic disturbance."³³ Thus, they found that the budget-maker who followed incremental procedures, simplified his decision-making task by starting from the "base" of expenditures won by each agency during previous budget periods. Executive and legislative reviewers, it was revealed, did not attempt a zero base analysis but focused attention only on the increments of new funds that agencies requested. Thus, if an agency were to request no increase over its current budget, its request would probably be approved as submitted.

Ira Sharkansky and Augustus B. Turnbull III developed a model of state budgeting from the literature on incremental budgeting and legislative reliance on the executive's recommendations.³⁴ They tested this model of the state budgetary process with respect to the administrations of several governors and forty-three separate agencies in Georgia and Wisconsin over several years.

32. *Ibid.*, p. 534.

33. *Ibid.*

34. I. Sharkansky and A. B. Turnbull III, "Budget Making in Georgia and Wisconsin: A Test of a Model," *Midwest Journal of Political Science*, Vol. 13 (November 1969), pp. 631-45.

Their findings were:

- 1) that only weak or non-existent relationships existed between the actual size of the agency request, the recommendations of the governor and the appropriations of the legislature. Budget reviewers concentrated on the increments sought, rather than on the size of the request, which included both new increments and the agency's base of current appropriation.³⁵
- 2) that budgetary reviewers concentrated most heavily upon increment, the size of the request being less important than the requested increase. Reviewers, it was found, generally cut the requests of agencies seeking the largest increments but gave increments only to the agencies which requested them.³⁶
- 3) that the legislature not only responded favourably to the recommendations of the executive but relied heavily on them.³⁷

Samuel Huntington in *The Common Defence* examined the manner in which bargaining incremental strategy was actually applied in the deliberations of the United States' Joint Chiefs of Staff and the National Security Council.³⁸ He found that both resorted to the same methods

35. *Ibid.*, p. 633.

36. *Ibid.*

37. *Ibid.*, p. 634.

38. S. Huntington, *The Common Defence*. (N.Y., 1961) Excerpt - "Strategic Programs and the Political Process" in L. C. Gawthorp, *The Administrative Process and Democratic Theory*. (N.Y., 1970), pp. 231-242.

for dealing with controversial issues. The Joint Chiefs of Staff attempted to avoid controversial issues - "decision delayed is disagreement avoided" - bargained over immediate specific plans without attempting to agree on the long range policy goals, and expressed policies in vague generalities representing the "lowest common denominator" of agreement in which all could acquiesce.³⁹

There is very little Australian material on the areas of budgeting and public expenditure.⁴⁰ Decision-making studies have tended to be formal and legalistic in character. Hugh Emy, commenting on the study of public policy in Australia, claims that certain factors in Australia have contributed to this situation.⁴¹ First, the secretive tradition of Australian governments has limited the amount of information available and discouraged senior public servants from speaking out and contributing to our knowledge of the policy process.⁴² Secondly, he claims that outside Canberra there is a "certain gulf" between the academic student of government and the

39. *Ibid.*, pp. 231-234.

40. P. Weller and J. Cult, *Treasury Control in Australia* (Sydney, 1976). This book appears to be the only Australian study, along the lines of the American budgetary studies mentioned above. It emerged out of two reports written in 1975 for the Royal Commission into Australian Government Administration.

41. H. V. Emy, *Public Policy: Problems and Paradoxes*. Problems in Australian Politics Series. (Australia, 1976).

42. *Ibid.*, p. 51.

professional practitioner.⁴³ Thirdly, there is the problem of access to Canberra for many universities which "has not been sufficiently offset by research grants."⁴⁴

There is also a lack of material on public policy formation in the states in Australia, and little on the way in which the federal system affects the development and implementation of policies at both the federal and state levels of government.⁴⁵ This thesis will attempt to trace the history of a public decision - the decision to build the Ord River Irrigation Scheme in the North West of Western Australia. The Ord River Scheme accords with the empirical patterns of incremental decision-making.⁴⁶ The process of decision-making on the Ord Scheme was continuous and complex and outputs tended to be disjointed and incremental, rather than synoptic and innovative. The process involved officials in many different government departments, both federal and state - Commonwealth Treasury, Department of National Development, and C.S.I.R.O., the Western Australian North West Department and Public Works Department. Each individual decision

43. *Ibid.*

44. *Ibid.*

45. Apart from S. R. Davis (ed.), *The Government of the Australian States* (Melb., 1960), and W. J. Campbell, *Australian State Public Finances* (Sydney, 1954).

46. First suggested, with little elaboration, by K. J. Walker, "The Politics of National Development: The Case of the Ord River Scheme," *Public Administration* (Austr.), Vol. 32 (March 1973), pp. 93-113.

relied on what had gone before and, in turn influenced future decisions. Early, low cost decisions such as the decision in 1959 to construct the Diversion Dam on the Ord River, built up a momentum that made later, higher cost decisions such as the decision to go ahead with the Main Dam, imperative. The nature of the problems faced in the area and the multiplicity of participants in the decision-making process (farmers as well as public servants) resulted in great complexity and decision-making was therefore attuned more to circumstances and facts than to goal.

The time span covered by the thesis (almost a century) has forced a chronological approach. The first chapters trace the early exploration of the Kimberley region, the state encouraged experiments in tropical agriculture in the 1920's and early plan for settlement in and development of the Ord River area. Later chapters analyse the main decisions taken by both the Commonwealth and Western Australian governments relating to the development of the region - decisions concerning the establishment of the Kimberley Research Station, the construction of the Ord River Diversion Dam and early farming developments. Chapter VI examines the attempts by both the Commonwealth and Western Australian governments to inject some rationality into the decision-making process on the Ord by the use of cost-benefit analysis. The Commonwealth government agreement in 1967, to finance the construction of the main Ord Dam, is covered in chapter VII and the

final two chapters examine the reasons behind the Western Australian government decision in 1974 to abandon cotton growing in the area. That decision provides an appropriate point at which to conclude the study - the outlook for the scheme not having changed since that date.

CHAPTER I

EARLY DEVELOPMENT OF THE NORTH WEST AND IN PARTICULAR THE ORD RIVER DISTRICT TO THE LATE 1930's

As the world stands today the Jews are the only race with the finance and incentive to develop this difficult area in which community settlement would make the immediate contribution to ultimate success that it would break down isolation, create the nucleus of a local market, and permit the worst rigours of the climate to be mitigated by suitable housing and the provision of other amenities.¹

The Ord Irrigation Project, located in the East Kimberleys in the far north of Western Australia and extending over the border into the Northern Territory, is approximately 3,500 kilometres by road from Perth and 800 kilometres from Darwin, the nearest centre of population. The area is predominantly semi-arid with a warm dry monsoonal climate characterized by a rainy season of four to five months (December to March) and a dry period for the rest of the year.

The length of the rainy season, quantity of rainfall and its distribution within season is however, extremely variable. Despite the relatively high annual rainfall, studies have shown that the chances of successful

1. *West Australian*, 12 July 1939.

production of raingrown crops are small.² The rainfall distribution also creates problems in connection with the drainage and cultivation of irrigated crops.

The average mean daily temperatures, even during the cooler part of the year generally exceed 20°C, and in the hottest part of the year are often in the region of 32°C. However, in the mid-winter period, minimum temperatures below 10°C occur on about 10 per cent of days and below 16°C on more than half the days. Between October and December, maximum temperatures of 38°C or more occur on 60-70 per cent of days. The following table gives relevant climatic data for the area:

	Rainfall (mm)	Number rainy days	Rainfall per rainy day mm	Mean max. temp. °C.	Mean Temp. °C.	Mean Min. temp. °C.
Jan.	193.0	11	17.5	36.5	30.1	23.9
Feb.	180.1	10	18.0	35.2	29.5	23.9
March	128.8	7	18.3	36.3	29.7	23.3
April	16.5	2	2.3	35.3	27.8	20.6
May	5.6			33.2	25.3	17.5
June	4.6			30.6	23.3	16.0
July	1.5			30.7	22.5	14.4
Aug.	0.3			32.8	24.0	15.3
Sept.	1.8			35.7	27.0	18.2
Oct.	17.8	2	8.9	38.6	30.6	22.6
Nov.	67.8	6	11.2	39.0	31.8	24.6
Dec.	127.5	10	12.7	37.5	31.0	24.6
Year	745.3	48	14.1	35.1	27.7	20.5

Source: Climatic Data for Kimberley Research Station. Table No. 1
Page 78.
An Outline of the Ord Irrigation Project, Western Australia
April 1976. Department of National Resources, Canberra,
1976.

2. See R. O. Slatyer, "Climate" Part III, *Lands of the Ord-Victoria Area, Western Australia and Northern Territory*. Land Research Series No. 28. C.S.I.R.O. (Australia, 1970).

The areas potentially irrigable from the Ord River consist of almost flat alluvial plains covered for the most part by a heavy cracking soil with low permeability - Cunnunurra clay. When dry, the soil becomes hard and difficult to work and when wet (the plains being liable to sporadic flooding and waterlogging from heavy rains) it becomes plastic and sticky. The soil is low in nitrogen and phosphate, and soil salinity and sodium content are also low.³

The first explorer known to have been in the vicinity of the Ord River was Captain Phillip King who, during a survey of the Australian coast in September 1819, sailed into the waters of a great inlet which he named Cambridge Gulf. Although he thought he may have discovered the mouth of a great river, he failed to investigate further.⁴ In 1837 Captain George Grey was commissioned to explore the country between the North West and the Swan River colony, the object of his expedition being to gain information as to the real state of North Western Australia, its resources and the courses and direction of its rivers and mountains - to collect any detail that might be relevant to its possible capabilities for colonisation.⁵

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3. "Soils," in *Lands of the Ord-Victoria Area, op.cit.*
 4. Phillip King, *Narrative of a Survey of the Intertropical and Western coasts of Australia performed between the years 1818 and 1823* (London, 1926), Vol. 1, p.299.
 5. George Grey, *Journals of two Expeditions of Discovery in North Western Australia during the years 1837, 1838 and 1839* (London, 1841).

In the account of his exploration, Grey emphasised the possible commercial importance to Great Britain of the country around the mouths of the Prince Regent and Glenelg Rivers. He claimed "the cultivated production for the growth of which the country and climate seem best adapted are cotton, sugar, indigo and rice."⁶ He felt that if a colony was established and a proper cotton plant introduced, "Great Britain would possess in Northern Australia a colony standing in the same relation to her manufacturers for cotton, that her colonies in the south do to her wool market."⁷

A number of investors were encouraged to look to the North West as a result of Grey's descriptions.⁸ However, it was the report of Alexander Forrest's exploration in the Fitzroy and Ord Valleys between 1875 and 1879 that sparked permanent interest in, and movement to the Kimberley district.⁹ Forrest wrote of his discovery of the Ord River:

No-one can regret more than I do, that I am unable to follow this magnificent stream to its mouth, which I have no doubt will be found in Cambridge Gulf - the whole of its waters in that case being in Western

6. *Ibid.*, p. 274.

7. *Ibid.*

8. G. C. Bolton, *A Survey of the Kimberley Pastoral Industry 1885 to 1953* (M.A. thesis, 1953), pp. 6-9.

9. A. Forrest, "Journal of Expedition from de Grey to Port Darwin," *Votes and Proceedings of the Legislative Council* 1880, No. 3.

Australian territory. I have named this river the Ord, after his excellency the Governor of Western Australia who has taken so great an interest in this expedition.¹⁰

He concluded, "it will, I believe, be found that an extent of country equal to about 25 millions of acres has been opened up for pastoral and agricultural experiments."¹¹

The news of Alexander Forrest's discoveries came at a time when cattlemen in the Eastern colonies were beginning to look further afield - Queensland for instance, had suffered several adverse seasons.¹² By the end of 1883, leases totalling 51,289,080 acres had been granted in the Kimberley district.¹³ The newly discovered areas were soon surveyed. In 1883 Surveyor General John Forrest accompanied by Surveyors J.S. Brooking, H.F. Johnston, G.R. Turner and G.J. Walsh, examined a large portion of the Kimberley district declaring the townsites of Broome and Derby and traversing the Fitzroy, Margaret, May, Meda and Lennard rivers.¹⁴ His description of the district was more cautious than that of Alexander Forrest:

The Kimberley district is not a place where Gold can be gathered without toil, nor can pearls and

10. *Ibid.*, p.27.

11. *Ibid.*, p.40.

12. G.C. Bolton, *Kimberley Pastoral Industry*, pp. 12-14.

13. *Ibid.*, p.14.

14. J. Forrest, "Report on the Kimberley District North Western Australia," *Votes and Proceedings of the Legislative Council* 1883, No. 23.

pearlshells be obtained without labour. It is merely a district with fertile plains which will, I believe and hope, be suitable for pastoral purposes, and its more northern portion, in the future for tropical agriculture.¹⁵

The Government Geologist (E. T. Hardman) accompanied the survey party and reported that the Kimberley area would eventually prove to be to some extent auriferous.¹⁶

After a further study in 1884, Hardman reported that gold was to be found over about 140 miles along the Elvire, Panton and Ord Rivers. He warned however, that intending prospectors "must be prepared to expend and perhaps lose money; but the appearances are quite good enough to justify this risk."¹⁷

In 1885 Surveyors C. Y. Nyulasy and H. F. Johnston landed at View Hill, Cambridge Gulf, and mapped the course of the Ord River, also ascertaining portions of the Bow, Fraser and Behn Rivers.¹⁸ By this time, cattlemen from Victoria, Queensland and New South Wales had begun to arrive in the East Kimberley, having overlanded their stock from Eastern Australia. In 1884 W. Osmond and J. Panton established Ord River Station, and in 1885 the Duracks and their associates founded Lissadell, Argyle and

15. *Ibid.*, p. 6.

16. E. T. Hardman, "Report on the Geology of the Kimberley District," *Votes and Proceedings of the Legislative Council* 1884, No. 31.

17. E. T. Hardman, "Report on the Geology of the Kimberley District," *Votes and Proceedings of the Legislative Council* 1885, No. 34, p. 35.

18. "Crown Lands and Survey Report for Year 1885," *Votes and Proceedings of the Legislative Council* 1886, p.307.

Rosewood Stations.¹⁹

The short-lived East Kimberley gold rush, described as "one of the craziest gold rushes in Australian history,"²⁰ forced the Western Australian government to provide public works for the area. The town site of Wyndham was declared and a temporary jetty built, a telegraph line was extended across the Kimberley and a Road Board created.²¹ However, by 1887 when little gold had been produced and men fled the field in their hundreds, the government had suspended all public works in the area.

The East Kimberley pastoral industry faced several setbacks in the 1890's. These were: inadequate marketing facilities, stock killings by Aborigines, restricted credit, a severe drought in 1891/2, and the introduction of the cattle tick into northern Australia.²² In 1898 the Executive Council declared the East Kimberley an infected area and banned the export of all livestock from the district to other parts of Western Australia.²³ In the face of the problems of the pastoral industry, the possibility of tropical

19. G. C. Bolton, *Kimberley Pastoral Industry*, pp. 29-31.

20. G. Blainey, *The Rush That Never Ended*. (Melbourne, 1963), p. 166.

21. G. C. Bolton, *Kimberley Pastoral Industry*, p. 69.

22. *Ibid.*, Chapter 1.

23. *Ibid.*, p. 89.

agriculture in the Kimberleys appealed to the Newton Moore ministry early in the twentieth century. In 1906 Surveyor General H. F. Johnston, wrote to the Under Secretary for Lands suggesting that someone be sent to inspect the valleys of the Fitzroy and the Ord "with the object of ascertaining what portions of Kimberley are adapted for the cultivation of tropical products."²⁴

W. V. Fitzgerald later reported that after an examination of the plains along the valley of the Fitzroy and Ord rivers, he had chosen sites for two experimental stations.²⁵ He marked off an area of about 2,000 acres for experimental purposes, about twenty-four road miles from Wyndham. Within the area, the soils varied from light sandy to black friable loam, to one of a heavy clay-like nature, and he felt that there was "every chance of being successfully produced cotton, tobacco, maize, sorghum, bananas, rice, species of hemp, pine-apples, sugar cane, etc. also species of rubber trees."²⁶

In 1909 Adrian Despeissis, an expert in tropical agriculture with the Department of Agriculture, was commissioned to proceed to the North West and Kimberleys to collect any information which could be of use in

24. H. F. Johnston to R. C. Clifton, 29 June 1906. Department of Lands and Surveys file 5843/06.

25. W. V. Fitzgerald, "Report on Portions of the Kimberleys," *Votes and Proceedings of the Legislative Council* 1907, No. 19.

26. *Ibid.*, p. 15.

connection with "the future development of the agricultural resources of our tropical country."²⁷ Despeissis saw the possibilities for irrigation in the Kimberleys where over twenty rivers carried away flood water during the rainy season.²⁸ He felt that when the rivers of the North West were properly dammed and a system of water conservation and distribution effected, "millions of acres of rich plains along lengthy river frontage will be made available for the plough."²⁹ He claimed that the North West soil was suitable, both physically and chemically, for raising tropical crops. Cotton, he saw as becoming "one of the leading agricultural industries of our tropical country."³⁰

There was, in fact, a private experimental plot of cotton grown in Derby in 1914. The Imperial Institute in London received samples of the crop of American upland cotton grown without irrigation, and described it as "fairly satisfactory quality."³¹ The crop, however, had been attacked by insects, and the living larvae of pink bollworm were found in each sample. No government action

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27. A Despeissis, *Handbook on Tropical Agriculture*. (Perth 1913), p. 3. Revised and reissued in 1921 as the first publication of the Department of the North West.
28. *Ibid.*, p. 16.
29. *Ibid.*
30. *Ibid.*
31. W. Dunstan (Professor, Imperial Institute) to G. Connolly (Agent General for Western Australia), 18 November 1920. North West Department file 607/22.

was taken until the 1920's, despite a motion by J. P. Gardiner (M.L.A. Roebourne) in September 1913 that, "in view of the immense area and vast undeveloped resources of the North West, it is desirable that a special department should be created to control and develop that portion of the state."³² He claimed that the development of the North West, "the front door of Australia," should be seen from a national viewpoint - if allowed to remain unpopulated it would, he felt, become a menace to Australia.

The 1920's saw a decline in the Kimberley pastoral industry and it was possibly this fact which once again forced the Western Australian government to take more interest in the future of the area and, in 1920, to establish a Department to control the North West. The report of the Royal Commission into the Western Australian meat industry painted a gloomy picture of the pastoral industry.³³ It stated that those persons who invested their capital in the pastoral industry when marketing conditions were favourable, and the outlook bright, "have now passed into a zone where their capital is in jeopardy, and the future of the industry gives them cause for the gravest concern."³⁴ The total number of cattle in the North and North West portion of the state had declined

32. *W.A.P.D.*, Vol. 46, 10 September 1913, pp. 1052-3.

33. *Report of the Royal Commission to inquire into the Meat Industry in Western Australia*, 1928. (Perth, 1928.)

34. *Ibid.*, p. v.

from 701,051 in 1916 to 630,281 in 1927.³⁵

The new North West Department established in December 1920, with H. P. Colebatch as Minister and G. Drake-Brockman as Commissioner resident in Broome, took little interest in the rehabilitation of the pastoral industry.³⁶ Premier Mitchell claimed:

it is necessary that we should produce such things as bananas, pineapples, peanuts and other articles of tropical production, more especially since the Federal Government have increased the duties so considerably. What we propose to do is to get enough men there to produce for the requirements of Western Australia.³⁷

In February 1921 the Secretary of the North West Department suggested that an expert in tropical agriculture be appointed to organize experiments on an extensive scale.³⁸ He felt that it was necessary to prove that certain crops could be commercially produced and, if such proof was forthcoming, there was no doubt that men and money would be found "to enter extensively into the business of tropical cultivation in the north."³⁹ In August 1923,

35. *Ibid.*, p. vi.

36. The department was created on the recommendation of H. P. Colebatch M.L.C. who, in April 1920, returned from a five week tour of the North West organized by the North West Railway and Development League.

37. *W.A.P.D.*, Vol. 64, 27 September 1921, p. 946.

38. A. O. Neville to H. P. Colebatch, 15 February 1921. North West Department file 70/21.

39. *Ibid.*

F. J. S. Wise, an officer of the Queensland Department of Agriculture, was appointed as Tropical Adviser.⁴⁰

Prior to the appointment of Wise, there were various experiments with cotton in the North West. Small quantities of cotton seed were obtained from Queensland in the 1919 and 1920 seasons and planted at Moola Bulla, Violet Valley and La Grange Bay Native Stations. Violet Valley reported complete success (using irrigation), other results were negative.⁴¹ In August 1920, a cable received from the Agent General in London advised that British cotton manufacturers were anxious to find a source of supply outside America but within the Empire.⁴² This added incentive, and efforts were concentrated at Violet Valley which was declared a quarantine station by Commonwealth authorities, so that imported seed could be grown. Egyptian seed was obtained and planted during the 1921/22 season with complete success, and on this limited evidence the North West Department claimed it had established that good cotton could be grown in the East Kimberley under natural conditions.⁴³

In 1923 the Commonwealth government gave great stimulus to the cotton growing industry in Australia by

40. North West Department file 70/21.

41. North West Department file 607/23.

42. *Ibid.*

43. A. O. Neville, 16 May 1923. North West Department file 607/23.

guaranteeing growers 5½d per lb. of seed cotton.⁴⁴ In Western Australia, great numbers of returned soldiers applied to the department for assistance to embark on tropical agriculture in the North West. Cotton became a subject of great public interest. In August 1922, the *Sunday Times* instituted a cotton growing campaign, claiming that it was an industry that possessed "more potentialities of progress and profit than any other, with the possible exception of tobacco growing."⁴⁵ The paper obtained a quantity of cotton seed from Queensland for distribution to those sending a 2d stamp and a coupon from the *Sunday Times*.

On his return from a visit to Queensland in 1922, F. W. Teesdale (M.L.A.) recommended that the Western Australian government invite Mr. Dan Jones, a recognized pioneer of the cotton industry in Queensland, to visit Western Australia to recommend the most suitable localities for cotton growing.⁴⁶ In October 1922 Jones spent three days touring Wyndham and the surrounding districts distributing cotton seed. In his report Jones claimed that the Derby district possessed the greatest potential for successful cotton growing.⁴⁷ He had hoped to find a

44. *The Australian Cotton Growing Industry. An Economic Survey 1964-5 to 1966-7.* B.A.E. (Canberra, May 1970) p. 1.

45. *Sunday Times*, 13 August 1922.

46. North West Department file 526/22.

47. D. Jones, *Report*, 11 October, 1922. North West Department file 526/22.

suitable agricultural area in the vicinity of the Ord River, however, he wrote:

inspection too clearly proved that this great river once overflowed its banks, inundating a large area of country 10-15 feet, as shown by flood marks on fences and forest trees. Under these circumstances our search for suitable land for close settlement in view of establishing cotton growing ended in disappointment, due entirely to the danger from floods.⁴⁸

He concluded that the fertile areas of the North West would "accommodate hundreds of thousands of migrants who in a very short time should make prosperous farmers."⁴⁹

By the end of 1922, as a result of Jones' recommendation, twelve returned soldiers were established in the Knowsley area, about eight miles from Derby. Only one had previous experience in cotton growing.⁵⁰ In January 1923, arrangements were made with the Queensland government to permit Mr. Geoffrey Evans, Director of Agriculture Bengal, whose services were being loaned to the Queensland government by the Empire Cotton Growing Corporation, to break his journey at Fremantle to report on cotton growing prospects in Western Australia.⁵¹ Evans visited the group settlement at Knowsley and other centres where cotton was being grown, reporting that the pindan soils selected for cotton growing at Knowsley were not of the right class and

48. *Ibid.*

49. *Ibid.*

50. North West Department file 866/22.

51. North West Department file 607/23.

crops grown there were likely to fail.⁵² He recommended that experiments be continued on heavier black soils rather than on the light sandy loam which lacked fertility.⁵³ His report also noted the appearance of cotton bollworm at Broome and pointed out the necessity for experimental work as a preliminary step before starting a new commercial crop such as cotton.⁵⁴ He stressed too the need to look at other field crops suitable for rotation with cotton. As a result of Evans' report, experimental work at Knowsley was transferred to selected black soils and all but three of the men comprising the group declined to continue.⁵⁵

Pest control in cotton cultivation was emerging as a major problem. In May 1923 the Secretary of the North West Department (A. O. Neville) ordered that all cotton plants in Broome be destroyed by fire, the Government Entomologist having reported that "in every instance, the plants carrying squares or bolls were found to be infested more or less with the larvae of this moth - one of the most serious of cotton pests."⁵⁶ He observed that the

52. Report of visit of Mr. Geoffrey Evans to the North West. North West Department file 104/23.

53. *Ibid.*

54. *Ibid.*

55. *Notes on efforts to establish the cotton industry in the North.* North West Department file 607/22.

56. A. O. Neville to G. Drake-Brockman, 10 May 1923. North West Department file 524/22.

pest was widespread through the North West and that the host plants were the various species of native Hibiscus and Malvaceous plants.⁵⁷ The *North West Echo* claimed that it had warned the Government of the pest problem as early as 1907.⁵⁸ The paper claimed:

We can readily realise why the Perth officials are at a loss to understand how the cotton pests gained an entrance to the North West. It is typical of their don't-care-a-tinker's-curse about the potentialities of our great heritage, the far flung Nor' West.⁵⁹

It stated that in March 1909 the *S.S. Century* landed 515 camels at Hedland along with fifty tons of cotton seed from Karachi. Seeds were taken from the shipment to every port from Carnarvon to Wyndham, and also inland. Apparently, the *North West Echo* claimed, the cotton seed was "a moving mass of parasites" and the paper advocated its destruction.⁶⁰ No notice was taken and, the article concluded, "anyone but a Perth official should be able to realise how the too numerous cotton pests got into the Nor'West."⁶¹

The North West Department was not deterred, and arranged to purchase the 1923 season crop primarily to

57. *Ibid.*

58. *North West Echo*, 26 May 1923. North West Department file 524/22.

59. *Ibid.*

60. *Ibid.*

61. *Ibid.*

assist growers in their early stages and also to have some lint available for exhibition at the 1924 British Exhibition. About three tons of cotton were sent to England, only seven of twenty five bales being priced below the official quotation.⁶² Most of the cotton was from Nulla Nulla station (about fifty miles south of Wyndham and belonging to two returned soldiers, F. W. Hay and F. C. Overheu), the rest was from Beagle Bay Mission, Forrest River Mission and the Broome district. Neville felt that these results were satisfactory and that the Department could "go right ahead now with actual settlement on right lines with no fear as to the results."⁶³

On his appointment, Tropical Agriculture Advisor F. J. S. Wise left for the North West with Commissioner G. Drake-Brockman and a surveyor, to "ascertain what quantity of land within a reasonable distance from ports could be discovered suitable for cotton growing and tropical culture."⁶⁴ The party inspected the country in the vicinity of the Forrest and Ord Rivers and decided to deal first with an area of about 10,000 acres on the Ord River. Wise reported that the soil in the Wyndham area was the

62. A. O. Neville to J. M. Drew (Minister for the North West), 15 July 1924. North West Department file 607/22.

63. *Ibid.*

64. "Report of Under Secretary for Lands and the Surveyor General," Year ended 30 June 1924, p. 3. *Minutes and Votes and Proceedings of the Parliament*, Vol. II, 1924.

best he had seen in the North West, and if a large enough area could be located within reasonable distance of Wyndham, "consideration could be given to the establishment of the cotton industry on sound lines, and if a gin-nery were needed on the spot, plenty of available power could be used from the meatworks."⁶⁵ In March 1924, a survey party left Perth to classify the country on the Ord River about thirty miles east of Wyndham, selecting a suitable site on the coast for a port and marking the main access roads through the country.⁶⁶ By June 1926 about 266,000 acres had been surveyed and classified, about twenty seven miles of main roads selected and surveyed, sites selected for two townsites and a suitable landing place established on Cambridge Gulf.⁶⁷ Approximately 35,000 acres of land suitable for tropical agriculture and settlement had been subdivided into 136 blocks.⁶⁸

There were no takers for these blocks, for by the end of 1926 the North West Department had been abolished and very little cotton was being grown in Western Australia.

65. F. J. S. Wise, *Report*, October 1923. North West Department file 804/23.

66. "Report of Under Secretary for Lands and the Surveyor General," Year ended 30 June 1925, p. 5. *Minutes and Votes and Proceedings of the Parliament*, Vol. II, 1925.

67. "Report of Under Secretary for Lands and the Surveyor General," Year ended 30 June 1926, p. 4. *Minutes and Votes and Proceedings of the Parliament*, Vol. II, 1926.

68. *Ibid.*, p. 14.

The 1924 season had been unsuccessful. The settlement of returned soldiers near Derby was disbanded when the usual seasonal rains failed and no crop was produced.⁶⁹ Hay and Overheu at Nulla Nulla continued to express the belief that cotton could be successfully grown in the North, but were forced to admit that owing to the absence of rain they were not able to arrive at "any satisfactory conclusions from a commercial point of view."⁷⁰ To June 1924 the North West Department had spent a total of £6,344 in endeavouring to establish tropical agriculture in the north - very little had been produced.⁷¹ However, with little if any reason, the Department remained satisfied that "practically every tropical plant and fruit could be grown in the north and that cotton growing could be made a commercial success, particularly if combined with peanut growing and pig raising."⁷² This almost blind faith in the future of tropical agriculture led, in 1925, to the North West Department's purchase of a cotton gin at a cost of £215/5/-.⁷³ However, climatic conditions in 1926 were once again against the cultivation of cotton. Hay and

69. A. O. Neville to J. M. Drew, 27 May 1924, North West Department file 607/22.

70. *Ibid.*

71. A. O. Neville to A. J. Reid (Secretary, State Committee on Federal Financial Relations), 8 January 1925, North West Department file 593/24.

72. *Ibid.*

73. North West Department file 1106/22.

Overheu wrote, "with reference to this season's crop - it is finished! With first planting and replanting we planted forty-six acres, but only about a dozen bushes are left growing."⁷⁴

It was at about the same time that the government announced the abolition of the North West Department. Its future had been in doubt since July 1924 when, soon after assuming office, the Minister for the North West in the Collier Government, J. M. Drew, met with all members of Parliament representing North West constituencies to discuss the future of the North West Department.⁷⁵ Mr. A. Lamond (Pilbara) for instance, felt that the Department had never justified its existence and A. A. Coverley (Kimberley) could see no justification for the continuance of the Department which he saw as "only a smokescreen between Parliament and the people."⁷⁶ Mr. G. Miles (North Province) and E. H. Angelo (Gascoyne) felt that the Department should be continued but that the Commissioner should have more power and the Minister for the North West should have only the North West Department to control.⁷⁷ In June 1926, Acting Premier W. C. Angwin announced the

74. F. W. Hay and F. C. Overheu to A. O. Neville, 26 April 1926, North West Department file 607/22.

75. Minutes of meeting between Minister for the North West and Members for the North West, 18 July 1924. North West Department file 315/21.

76. *Ibid.*

77. *Ibid.*

government's decision to abolish the North West Department and to return to the old state of affairs whereby engineers and other officers in the North West were attached to the Public Works Department, and the Commissioner for the North West occupied a subordinate office under the Engineer-in-Chief.⁷⁸ Angwin added, "it was not that the officials of the Department were not doing their best in the interest of the North, but the area being so far removed from the centre of administration and the lack of funds, no doubt, handicapped their work considerably."⁷⁹ Commissioner Drake-Brockman later commented on his great disappointment at this time - "all my development schemes, research stations and irrigation plans were shattered."⁸⁰

Throughout the 1920's it was continually stressed, by members of both the Legislative Assembly and Legislative Council, that the North West must be developed for the safety of Australia. The empty North was often described as "the weakest link in Australia," "a serious menace to the whole Empire," and it was felt necessary to people the north so as to "complete the chain of defence essential for the protection of Australia against the thousand millions of coloured people adjacent to Western Australian shores."⁸¹ The Western Australian

78. *West Australian*, 3 June 1926.

79. *Ibid.*

80. G. Drake-Brockman, *The Turning Wheel* (Perth, 1960), p. 219.

81. *W.A.P.D.*, Vol. 73, 18 October 1925, pp. 991, 994.

government continually emphasised the fact that any money spent in the north was spent in order to secure the safety of Australia.⁸² In the mid 1920's the Western Australian government began to think in terms of using this argument as a means of getting Commonwealth financial assistance for the area, if not actually handing over the North West to the Commonwealth.

In 1924, the Commonwealth government appointed a Royal Commission,

to inquire into and report upon the effect of federation upon the financial position of the state of Western Australia, and as to any special financial disability suffered by that state as a result of Federation which is not suffered by other states of the Commonwealth, and to recommend what steps should be taken to remedy such financial disability, if any, suffered by that state.⁸³

The special committee appointed by the Western Australian government to present its disabilities to the Royal Commission claimed that the question of Northern development was by far the most important problem Western Australia faced for, "it would be not only impolitic but highly dangerous and manifestly unjust to leave the North West

82. For instance, *Federation and Western Australia* (Papers outlining the states' case prepared by the Advisory Committee appointed by the Government of Western Australia for submission to Commonwealth Royal Commission upon Finances, Western Australia as affected by Federation) (Perth, 1925), p. 18.

83. Conference of Commonwealth and State Ministers, Melbourne, May 1926. *Commonwealth of Australia, Parliamentary Papers 1926/27/28*, Vol. V, p. 323.

and North unoccupied and undeveloped."⁸⁴ The Commonwealth Royal Commission, although rejecting most of the disabilities claimed, agreed that the finances of Western Australia did suffer heavily because of the disorganization of the war, the decline of the gold mining industry and the large extent of its territory.⁸⁵ Above all, the Commonwealth agreed that assistance for the North West was necessary and the Royal Commission concluded that the answer was for the Commonwealth to assume responsibility for the development of the area.⁸⁶ In August 1926, Prime Minister Bruce wrote to Premier Collier giving details of the Commonwealth offer to assume responsibility for "that part of Western Australia north of the 26th parallel of latitude" and to assume liability for the £2,700,000 in loan funds the state had expended in the development of the area.⁸⁷

The *West Australian* appeared to be in favour of the Commonwealth offer, saying that "opposition to the surrender to the Commonwealth of our North West can hardly be

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84. *Federation and Western Australia*, p. 18.
The Western Australian committee comprised:
Hon. Norbert Keenan K.C. (Chairman)
Hon. G. Gardiner,
J. Curtin,
M. J. Calancrini,
G. W. Simpson,
A. J. Reid (Secretary).
85. Conference of Commonwealth and State Ministers,
p. 325.
86. *Ibid.*, p. 326.
87. S. M. Bruce to P. Collier, 12 August 1926. Premier's Department file 364/25.

based on other but sentimental grounds, for, after all, if the ceded territory were no longer in, it would still be of Western Australia and its trade and commerce - its increasing trade and commerce under the spur of Federal expenditure - would be with the parent state."⁸⁸ The paper also doubted whether the Western Australian government would have any more success in the north in the future, than it had had in the past.⁸⁹ Cabinet however decided to reject the Commonwealth proposal on the grounds that the country lying between the 20th and 26th parallels was in a very satisfactory condition - the northern railroad (Meekatharra) serving the whole of the district south of the 26th parallel and a large area north of that line.⁹⁰ The territory north of the 20th parallel was a different matter. Cabinet felt that this country was more difficult to develop and thus lent itself to consideration for transfer.⁹¹

The Commonwealth replied, undertaking to amend its proposal so as to apply to the territory of Western Australia north of the 20th parallel.⁹² It would appear that the Western Australian government had already decided firmly against the proposal. In the Legislative Assembly

88. *West Australian*, 20 August 1926, p. 10.

89. *Ibid.*, 5 May 1926, p. 10.

90. P. Collier to S. M. Bruce, 26 November 1926. Premier's Department file 364/25.

91. *Ibid.*

92. E. Page (Acting Prime Minister) to P. Collier, 14 December 1926. Premier's Department file 364/25.

on 15 December 1926, Premier Collier moved:

that in the opinion of this House, the proposal of the Commonwealth Government for the surrender of all the territory in Western Australia north of the 26th parallel of south latitude, contained in a letter from the Prime Minister dated 12 August 1926, is not in the best interests of Western Australia and therefore is not acceptable to the House.⁹³

Collier claimed that the Commonwealth would face the same difficulties in governing the distant northern portions of the state as Western Australia did, and it would be preferable if the Commonwealth gave financial assistance for the area rather than taking over the territory itself.⁹⁴

The debate on Collier's motion was indicative of the general lack of knowledge of, and plans for the area. Sir James Mitchell exclaimed, "God knows the people of this country know little enough of the North West! Still we know more than do the people of the Eastern States."⁹⁵ The theme running through all speeches was once again the menace of Asia and the need to people and develop the vast empty spaces. Now, having rejected the Commonwealth offer, it would seem to be even more necessary for Western Australia to formulate a policy for the North West - there was now, however, no Department of the North West to assist in the formulation or implementation of such a policy. It was at this time that the government found

93. *W.A.P.D.*, Vol. 75, 15 December 1926, p. 3052.

94. *Ibid.*, p. 3058.

95. *Ibid.*, p: 3061.

itself under increasing pressure to examine the possibilities for irrigation in the area.

As early as 1921 a group of East Kimberley pastoralists requested that the government consider the construction of a dam at the bend of the Ord (about thirty five miles from Wyndham) to prevent salt water contaminating the fresh water already there.⁹⁶ The pastoralists were prepared to provide half the cost by means of a levy on travelling stock, spread over a period of two or three years. Commissioner Drake-Brockman could see the possibility of using the dam for irrigation in connection with tropical agriculture, and plans for a concrete dam were drawn up.⁹⁷ No further action was taken. Throughout the 1920's Drake-Brockman continually stressed the great scope he saw for irrigation in the North West, as did Sir James Mitchell.⁹⁸ In his report on a tour of inspection of North Western Australia on behalf of the North Australian

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96. J. Rademy to G. Drake-Brockman, 24 September 1921, North West Department file 464/21. Pastoralists involved were C. W. D. Conacher and H. Loder (Northern Agency Ltd.), W. J. C. Jones (Ivanhoe Pastoral Co.), Ambrose Durack (Argyle Station), W. Weaber (Ninbing Station), Alfred Martin (Bovril Australian Estates Ltd.), J. Rademy (representing W. Naughton Lissadel and Marble Downs), Arthur Haly (Livestock Manager Wyndham Meat Works).
97. G. Drake-Brockman to A. O. Neville, 6 October 1921. North West Department file 464/21. The estimated cost of the dam was £200.
98. E.g., G. Drake-Brockman, *Memo*, 24 January 1924, North West Department file 116/24. *W.A.P.D.*, Vol. 75, 15 December 1926, p. 3061.

Railway and Development League, Commonwealth Engineer of Way and Works, Mr. G. A. Hobler, proposed that:

with proper systems of water conservation on the Fitzroy and Ord Rivers, sufficient water could be made available to irrigate large areas of first class agricultural land on both rivers, and institute industries, giving a yearly turnover of several millions of money, besides providing the means of closer settlement, which, as also in regard to the pastoral industry would mean the tremendous enhancement of the value of the country and consequently its great utility in making railway and other means of development pay.⁹⁹

Late in 1928, E. H. Angelo (M.L.A. Gascoyne) argued for a comprehensive policy for northern development. He moved a motion in the Legislative Assembly urging the government to engage an expert irrigation engineer to investigate the suitability of northern rivers for irrigation and closer settlement.¹⁰⁰ Angelo explained that considerations of national safety demanded a well balanced population throughout the state, and he spoke of what had been achieved with irrigation in India.¹⁰¹ He felt that from the Gascoyne River to the Ord River in the East Kimberley, there were more than twenty large rivers flowing into the sea and much of the country along the river banks would be "eminently suitable for the growth of tropical and subtropical products and for the production of lucerne

99. G. A. Hobler, *North Western Australia Report of Tour of Inspection, April, May, June 1920.*

100. *W.A.P.D.*, Vol. 80, 31 October 1928, p. 1528.

101. *Ibid.*, p. 1529.

and other fodders."¹⁰² Sir James Mitchell agreed, suggesting that a first class irrigation engineer from India be appointed.¹⁰³ He doubted whether cotton could be grown in the north by white labour in competition with those countries able to employ cheaper labour, but Western Australia could he felt, supply its own requirements of tropical fruit.¹⁰⁴ J. H. Smith (Nelson) provided the only opposition to the motion - claiming that it would be better to spend money in the South West, the North West being "a huge area offering no possible chance of intense culture" and where irrigation was "a dream."¹⁰⁵

Despite the fact that the motion was passed, there was no further discussion of the possibilities for irrigation, and active interest in the development of the North West waned until the late 1930's. The Department of the North West had been abolished, schemes for tropical agriculture in the North West had failed dismally, and depressed conditions in the pastoral industry forced many owners to withdraw from the Kimberley district. Until 1935 the North West portfolios had been held by men with no personal experience of the area with which they were dealing. The Collier government's appointment of F. J. S. Wise in 1935 and the Willcock government's appointment of

102. *Ibid.*, p. 15.

103. *Ibid.*, p. 2613.

104. *Ibid.*

105. *Ibid.*

A. A. M. Coverley in 1939, appear to have made for a more sympathetic and active government approach to the area. However, it was the possible settlement of the Kimberleys by a group of Jewish refugees from Europe which, in the late 1930's, led to community participation in the debate on the future of the North West, and sparked renewed government interest and eventual action in the Ord River area.

The aim of the Freeland League for Jewish Territorial Colonization was "to create a Jewish settlement in some unoccupied area for those who seek a new home and who cannot or will not go to Israel."¹⁰⁶ In 1938, the London branch of the League resolved to investigate the topographical and political prospects for Jewish colonization in Australia. At that time, George Miles (M.L.C. North Province) was in Britain seeking a buyer for the Connor, Doherty and Durack properties in the Kimberleys, and he began negotiations with Dr. I. Steinberg, Secretary and founder of the Freeland League.¹⁰⁷ On 23 May 1939, Dr. Steinberg arrived at Fremantle to investigate the feasibility of settling refugees in the Kimberley area.¹⁰⁸

Steinberg left Perth for the Kimberleys early in June 1939 and spent fourteen days in the area, covering 750 miles of the country by car. The seven million acres

106. *Freeland*, Spring 1972, Vol. XXIV, No.1 (65).

107. M. P. Durack, *Diaries*, 3 October 1938. Battye Library.

108. *West Australian*, 24 May 1939.

in which he was interested included the cattle stations of Ivanhoe and Argyle on the Ord River, and Newry, Auvergne and Bullita which lay between the Western Australian border and the Victoria River in the Northern Territory.¹⁰⁹ The Duracks acted as guides and G. F. Melville, a young University Lecturer, acted as scientific expert. Steinberg made a broad ecological survey of the area marking soil, vegetation and topographical features on maps and charts. He described his journey with enthusiasm: seeing the soil on Ivanhoe station as "soil which peasants the world over would most desire, on which the wealth of nations rests."¹¹⁰ He marvelled on seeing the Ord River for the first time:

Here was the mighty source of water that could be turned into a generous source of food and livelihood. Large irrigation works could be built on this site as well as on others, if competent engineers confirmed the presence of the necessary natural conditions. Those engineers could also easily provide the reservoirs for the collection and storing of the torrential rains.¹¹¹

Steinberg felt that in the Ord River area there was no need to resort to "the miracle of Moses and strike water from a stone for an unbelieving flock."¹¹²

The report of the expedition and the plans for settlement drawn up by G. F. Melville, saw the initial development as a gradual transition from the existing

109. I. N. Steinberg, *Australia - The Unpromised Land: In Search of a Home*. (London, 1948).

110. *Ibid.*, p. 19.

111. *Ibid.*, p. 20.

112. *Ibid.*

pastoral industry to a combination of pastoral and agricultural activities.¹¹³ It was claimed that the initial irrigation schemes need not be complicated works involving the damming of rivers, but that it would be possible to establish small schemes utilizing existing waters.¹¹⁴ The seasonal character of the rainfall suggested two types of agriculture. First, the growing of crops such as maize, rice, millets, hay, peanuts, soya beans, or cotton during the wet period - sowing in November and harvesting in April or May. Secondly, the use of crops of a perennial nature and those requiring growth during the dry season: tropical fruits, perennial pastures, or vegetables. Both types of agriculture would require irrigation during the dry season.¹¹⁵ The report went on to suggest that the size of an allotment easily managed by a family unit, would be two acres of irrigable land under intense cultivation (vegetables, fruit, etc.) or twenty acres of perennial pasture or grain crop.¹¹⁶

On his return to Perth, Steinberg spoke enthusiastically of his plan wherever and whenever possible - "let but the hands of science and experience, impelled by the

113. I. Steinberg and G. F. Melville. *Investigations in East Kimberley Region of Western Australia and in Northern Territory in respect to the possibility of close settlement* (Perth, June 1939).

114. *Ibid.*, p. 10.

115. *Ibid.*, p. 13.

116. *Ibid.*, p. 14.

will and determination of Jewish labour, awaken this dormant earth."¹¹⁷ He aroused great interest within all sections of the community. Letters to the editor of the *West Australian* relating to the scheme appeared almost daily, as did the press reports of his meetings. He addressed the Perth Club, the Metropolitan Council of the Australian Labor Party, and the University Economics and Historical Society. The Perth Chamber of Commerce adopted the motion that "this Chamber of Commerce views with the deepest interest the Jewish colonisation project for the North West as outlined by Dr. Steinberg, and hopes that the scheme will come to fruition with the encouragement and co-operation of the State and Federal governments."¹¹⁸ The Synod of the Anglican Diocese of Perth passed a motion in favour of Steinberg's proposal. In recommending the motion Archbishop Lefanu said, "I believe the scheme is a contribution Australia might make for Christianity's sake. It may also be the solution of one of the most serious problems we may have to face in the next few years."¹¹⁹ In the *West Australian*, Walter Murdoch spoke in favour of the scheme, in view of Western Australia's need for population from a defence as well as an economic point of view.¹²⁰ He felt that the proposal had a two-fold appeal:

117. I. Steinberg, *Australia - The Unpromised Land*, p. 21.

118. *West Australian*, 2 August 1939, p. 17.

119. I. Steinberg, *Australia - The Unpromised Land*, p. 147.

120. *West Australian*, 15 July 1939, p. 7.

it appealed to one's compassion for the distressed and also to one's patriotism or desire for the welfare of Australia. Murdoch wrote:

If we adopt the proposal, we shall be conscious of having done our duty and we shall be conscious that we have served our own economic interests: two kinds of satisfaction seldom to be found in combination. For a great number of refugees the alternative to finding a home such as this is large scale extermination; would you like your country to be an accessory to such a crime as the murder of a people?¹²¹

Murdoch's article was followed by daily letters to the press and articles on northern development. Many saw irrigation as the one thing needed for the development of northern Australia. Irrigation was generally linked with the pastoral industry, irrigated pastures being seen as a means of supplying prime cattle to the Wyndham Meat Works.¹²² The government too, felt that the future of the area was linked with the pastoral industry. When notifying Steinberg of the State government's approval and encouragement in his approach to the Commonwealth, Premier Willcock added, "we are firmly of the view that the successful occupation of this country will depend on its approach being through the already proven successful pastoral industry in the raising of sheep and cattle."¹²³

121. *Ibid.*

122. E.g., *West Australian*, 25 July 1939, p. 25; 25 August 1939, p. 25.

123. *W.A.P.D.*, Vol. 104, 8 November 1939, p. 1818.

The *West Australian* praised the State Government for its decision in favour of the scheme, and a group of thirteen Perth citizens issued a statement congratulating the Government.¹²⁴ The group argued for the scheme from an economic viewpoint, claiming that the proposed settlement would mean the inflow of capital from outside, to be spent on the development of Australia as well as expansion of the home market for Australia's products.¹²⁵ They felt that the increase in population would add to the country's capacity for self-defence.¹²⁶ Steinberg received similar support on his visit to Melbourne where, on 1 December 1939, the "manifesto of 46" appeared in the press - a document supporting Steinberg's Kimberley plan signed by forty-six leading Melbourne citizens.¹²⁷ A similar document with fifty-five signatures was published in Sydney on 19 April 1940.¹²⁸

A memorandum containing Steinberg's Kimberley proposals was presented to Prime Minister Menzies in August 1940, but, owing to the critical state of the European war, the official decision was postponed.¹²⁹ On 26 November 1941, the Freeland League approached the Curtin Government asking for an immediate decision so that the

124. *West Australian*, 30 August 1939, p. 14;
6 September 1939, p. 12.

125. *West Australian*, 6 September 1939, p. 12.

126. *Ibid.*

127. I. Steinberg, *Australia - The Unpromised Land*, p. 31.

128. *Ibid.*, p. 153. 129. *Ibid.*, p. 158.

project could commence as soon as possible after the cessation of hostilities.¹³⁰ The Japanese declaration of war put a halt to any further Commonwealth consideration of the matter, and for the next two years the proposal was forgotten. When announced in July 1944, the Commonwealth decision was in the negative. Curtin wrote:

After mature consideration of all the circumstances which had to be taken into account, however, the government is unable to see its way to depart from the long established policy in regard to alien settlement in Australia, and therefore cannot entertain the proposal for a group settlement of the exclusive type contemplated by the Freeland League.¹³¹

The Minister for the Interior (Senator J. S. Collings) later elaborated, saying that it was the Government's policy of avoiding community settlements that led to the rejection of the plan. The lesson of Innisfall, Queensland, where the Italians printed their own newspaper and had their own schools, he said, had convinced the Government of "the undesirable aspects of community settlement."¹³² The *West Australian* commented that the scheme as propounded in Western Australia by Dr. Steinberg, was not thoroughly understood "on the Molonglo."¹³³ The example of Italian settlement in Queensland, it claimed, was not applicable to Jewish settlement; migrant Jews

130. *Ibid.*, p. 159.

131. *Ibid.*, p. 165.

132. *West Australian*, 12 December 1944, p. 4.

133. *Ibid.*, 13 December 1944, p. 4.

could, and should, be drawn from three or four different European countries with no common language or single nationality.¹³⁴ The editorial concluded, "the amiable thesis that all men are brothers seems to be accepted in high places with some mental reservations. There is little evidence that it extends to the cruelly persecuted race of European Jews."¹³⁵

Despite the *West Australian's* continuing sympathy for the Jewish scheme, the Western Australian government would appear to have been relieved on hearing of the Commonwealth's negative decision. To the late 1930's the Western Australian government had failed in all attempts to develop the north by means of tropical agriculture without irrigation, and the pastoral industry remained in a depressed condition. Despite failures, caused mainly through lack of preliminary planning and research, the state government had rejected the Commonwealth offer in 1926 to assume responsibility for the area of Western Australia north of the 20th parallel. Ten years later there was still no agreement as to just what was to be done in the North West. Steinberg's scheme appeared to be the answer to this problem. He offered a positive plan for the area, one not requiring State funds. The statement of A. Thomson (M.L.C.) was typical - "I understand that the Jewish people invested £70 million in settling

134. *Ibid.*

135. *Ibid.*

their nationals in Palestine. Even a comparatively small portion of that amount spent in the Kimberleys would result in tremendous benefits to the Commonwealth and to this State in increased trade."¹³⁶ The Commonwealth delay in reaching a decision on the matter meant that the Western Australian government had time to reconsider its decision and to conclude that perhaps the Kimberleys should be developed by the state, in conjunction with the Commonwealth government, rather than by allowing private interests to obtain large tracts of land. For instance, the Minister for Agriculture, F. J. S. Wise, previously a supporter of Steinberg's plan, suggested that the Kimberley should be given to "our own flesh and blood."¹³⁷ By the time the Commonwealth decision was announced in 1944, the Western Australian government had already authorised its own surveys of, and investigations in the Ord River area, with a view to establishing an irrigation scheme for improving the quality and quantity of beef production in the East Kimberleys.

136. *West Australian*, 17 June 1939, p. 25.

137. *Ibid.*, 23 August 1941, p. 4.

CHAPTER II

THE KIMBERLEY PASTORAL INDUSTRY AND MOVES TO ESTABLISH A RESEARCH STATION IN THE AREA

A research station, well equipped and adequately staffed, should be regarded as an essential part of every large irrigation scheme.¹

The serious condition of the Kimberley pastoral industry in the 1930's and 1940's is well documented in the reports of the various Western Australian government committees established to examine the problem. Approximately 85 per cent of the cattle, and 10 per cent of the sheep in Western Australia were carried in the Kimberley division.² The industry received a major setback with the Depression, and many station owners were not in a position to face the long drought of 1935 to 1942. The total number of sheep in Western Australia fell from a peak of five and a half million in 1934 to three million in 1945. Cattle numbers dropped from 850,000 in 1917 to 541,000 in 1945.³

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1. "Irrigation, Water Conservation and Land Drainage," *The Rural Reconstruction Commission 8th Report*, 11 December 1945, p. 76.
 2. R. J. Dumas, *Report of the Committee appointed by the Government to investigate measures necessary to promote the development of the North West* (Perth, 1945).
 3. *Ibid.*

In July 1932, the Minister for the North West (Mr. T. A. L. Davy) appointed a special committee to report on the most suitable methods for developing the north of Australia.⁴ The committee reported that the causes of the serious condition of the pastoral industry were the high cost of production, the low price and consequent great demand for mutton, and the regulations prohibiting the sale of Kimberley store cattle to the southern graziers of the state.⁵ The report predicted the total collapse of the pastoral industry unless steps were taken to give relief, and to assist cattle growers with markets for their produce.⁶

A meeting of the Western Australian Meat Advisory Committee in August 1937, also discussed the problem.⁷ Following the meeting, the secretary of the committee (Mr. R. C. Adkins) wrote to the Minister for Lands and Agriculture (Mr. F. J. S. Wise) explaining that, due principally to the unfavourable seasonal conditions of the past two years, Kimberley cattle producers had been unable to participate in the war trade offering in chilled beef "to anything like a proportionate extent to other

4. Premier's Department file 415/33.

5. *Report of Committee to advise on the future Development of the North West.* September, 1932.

6. *Ibid.*

7. Premier's Department file 415/33.

centres."⁸ The letter also claimed that there was much room for improvement in the quality of cattle sent to the Wyndham Meatworks:

Even in normal seasons, considerable wastage takes place in the condition of the cattle driven over long distances, and, if by research work, it was found possible to establish holding grounds with good feed in reasonable proximity to the works, where cattle could be rested, much of the present economic waste might be obviated.⁹

It was suggested that the State Government apply to the Commonwealth for financial assistance for pasture investigation.¹⁰

It was the above communication which prompted Wise to investigate the possibility of a research station. In a note to the Director of Agriculture he said, "we set a plan in motion during the past twelve months in connection with the establishment of experimental areas on Ivanhoe Station somewhere near Carlton Reach - kindly have this matter looked into and an establishment made of costs."¹¹ Sutton replied saying that no trace of previous papers on the matter could be found and suggesting that the first step necessary would be the appointment of an

8. R. C. Adkins to F. J. S. Wise, 18 August 1937.
Department of Agriculture file 430/37, Vol. I.

9. *Ibid.*

10. *Ibid.*

11. F. J. S. Wise to G. Sutton, 10 September 1937.
Department of Agriculture file 430/37, Vol. I.

officer to make a survey of fodder plants in the district, then later, the establishment of a field research station for experimentation with cultivated plants and grasses prior to their being planted on a commercial basis.¹²

In his reply to the Western Australian Meat Advisory Committee, Wise advised that the problem of achieving some improvement in the facilities for the transport of cattle in the Kimberleys, by the improvement of pasture or the establishment of holding grounds, had been receiving his attention for some time.¹³ He added that during the last twelve months he had been giving special consideration to the possibility of establishing experimental areas on Ivanhoe Station in the vicinity of Carlton Reach.¹⁴ In late March 1938, the Meat Advisory Committee enquired as to progress, to be told that the Tropical Advisor had not yet been able to look into the matter, but would visit the North West in May 1938.¹⁵

Tropical Advisor T. A. Barnett, visited the area as promised and subsequently presented his report in

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12. G. Sutton to F. J. S. Wise, 25 September 1937.
Department of Agriculture file 430/37, Vol. I.
 13. F. J. S. Wise to R. C. Adkins, 29 September 1937.
Department of Agriculture file 430/37, Vol. I.
 14. *Ibid.*
 15. R. C. Adkins to F. J. S. Wise, 25 March 1938.
Department of Agriculture file 430/37, Vol. I.
F. J. S. Wise to R. C. Adkins, 2 April 1938.
Department of Agriculture file 430/37, Vol. I.

December 1938.¹⁶ He stressed the loss of feed occurring in the Kimberleys as a result of trampling by stock, and explained that during the latter part of the season, stock were forced along parts of the route to Wyndham with little or no feed available.¹⁷ Barnett saw four possible solutions. First, he felt that parts of the route could be fenced off into paddocks and retained until late in the season. Secondly, areas of natural grasses could be harvested for hay and stacked adjacent to camping and watering sites. Thirdly, the main feeds of the Kimberley could be analysed to discover which types were more nutritious. Fourthly, trial plots of such supplementary fodders as lucerne, maize or sorghum could be introduced. He suggested that Carlton Reach on the Ord River would be a suitable location for an experimental area.¹⁸ Early in 1939, the government Botanist added weight to Barnett's points by suggesting that a botanical survey be made of a portion of the Kimberleys, the knowledge of Kimberley pastures being meagre: based on the early collections of W. V. Fitzgerald in 1904-5, and the somewhat haphazard selections of individual settlers in the district.¹⁹

The next inquiry into the pastoral industry was a

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16. T. A. Barnett, *The Kimberley Stock Route Pastures*, 28 December 1938. Department of Agriculture file 430/37, Vol. I.
 17. *Ibid.*
 18. *Ibid.*
 19. C. A. Gardener to G. K. Baron-Hay, 20 April 1939. Department of Agriculture file 430/37, Vol. I.

Royal Commission appointed as a result of a resolution passed at a meeting of the Pastoralists' Association in February 1940.²⁰ The Commission, under the chairmanship of W. V. Fyfe,²¹ visited nineteen stations in the Kimberley district; covering about 225 miles of pastoral leasehold country and obtaining evidence from twenty-nine pastoralists. The Commission's report reiterated the need for research into the potential of the East Kimberley district, and stressed the need for the classification of the country along the Ord River: to ascertain the extent of land suitable for irrigation and pasture development.²² Three main avenues along which development in the area might proceed were discussed.²³ First, improvement in the quantity and quality of cattle delivered to the Wyndham Meatworks. Secondly, the establishment of sheep stations, mainly in the southern half of the district, and thirdly, closer settlement for the purposes of tropical agriculture and mixed farming.²⁴

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20. *Report of the Royal Commission appointed to inquire into and report upon the financial and economic position of the pastoral industry in the leasehold areas of Western Australia.* (Perth, 29 March 1940).
 21. Surveyor General and Chairman of the Pastoral Appraisement Board.
 22. *Report of the Royal Commission appointed to inquire into and report upon the financial and economic position of the pastoral industry.* *Op. cit.*, p. 144.
 23. *Ibid.*, p. 145.
 24. *Ibid.*

Following the presentation of the Commission's report, F. J. S. Wise (Minister for Lands and Agriculture) wrote to G. K. Baron-Hay (Under Secretary for Agriculture) expressing his desire to see the establishment of experiments on fodder crops in the area south of Wyndham.²⁵ He informed G. K. Baron-Hay of the interest of Mr. Kim Durack in such work, and suggested that his services could be used if such a plan were to come to fruition.²⁶

Kim Durack became concerned with questions of northern development early in his life.²⁷ He was born in Western Australia in 1917 and educated at Christian Brothers' College, then Muresk Agricultural College, from where he graduated in 1935. In 1938 he interrupted an Agricultural Degree course to become more involved with northern development and to work on cattle stations in the East Kimberley and Northern Territory. In 1940 he became actively associated with promoting the idea of a research station in the East Kimberley. He produced a brochure entitled *Developing the North - Proposed Research Station for the Kimberleys*,²⁸ claiming that his aim in writing was "to show how we may hope to increase the productive

25. F. J. S. Wise to G. K. Baron-Hay, 17 July 1940. Department of Agriculture file 430/37, Vol. I.

26. *Ibid.*

27. The following biographical details were obtained from the K. M. Durack papers in the possession of Mrs. Mary Durack Miller.

28. K. M. Durack, *Developing the North - Proposed Research Station for the Kimberleys*. (Perth, 31 March 1941.)

capacity of an area that has been open to exploitation for over fifty years, an area that has the reputation of being one of the safest pastoral propositions in Australia, and yet an area that is still in the pioneering stages of development."²⁹ He proposed that a research station be established at Ivanhoe in the East Kimberley - to deal with the problems confronting the pastoral industry and to investigate the possibilities of future, more intensive land utilisation.³⁰ Experiments would be mainly directed toward establishing irrigated pastures. He felt that Ivanhoe was the ideal location; being on one of the finest reaches of water in the Ord Valley, with ready access to the main types of soil. Ivanhoe was also important geographically as practically all cattle destined for the Wyndham Meatworks had to pass through the property. The rainfall here, he felt, was greater and more reliable than in the more outlying districts.³¹

Durack immediately began to make representations to both Commonwealth and State Governments and to research organisations. In May 1941 he received a letter from the Deputy Chief Executive Officer of the C.S.I.R., A. E. V. Richardson.³² After studying Durack's brochure,

29. *Ibid.*, p. 1.

30. *Ibid.*, p. 20.

31. *Ibid.*, p. 21.

32. A. E. V. Richardson to K. M. Durack, 22 May 1941. K. M. Durack papers. The C.S.I.R. (Council for Scientific and Industrial Research) was reorganized in May 1949 and re-established as the Commonwealth Scientific and Industrial Research Organization (C.S.I.R.O.).

Richardson felt that it was doubtful whether close settlement based on agricultural production and export was feasible. He wrote:

this does not necessarily mean that investigations based on agricultural crops should not be initiated, but rather that efforts in this direction should be subordinated to beef production and certainly limited to small scale experimentation.³³

Durack felt that pastoralists would be willing to assist financially with any scheme which would improve production in the area. The Under Secretary for Agriculture (G. K. Baron-Hay) adopted his suggested method of financing the research work, and submitted it to the Minister for the North West.³⁴ Durack calculated that a sixpence contribution per bullock treated at the Wyndham Meatworks would have raised an average of £875 over the past five years. He also felt that the government should undertake to subsidise contributions from pastoralists on a £ for £ basis up to a maximum of £1,000 government contribution.³⁵ That the pastoralists themselves were not unanimously in favour of the above scheme is seen in a letter from pastoralist T. J. Quilty (Bedford Downs Station) to the Secretary of the Wyndham Meatworks

33. *Ibid.*

34. G. K. Baron-Hay to A. A. Coverley, 21 May 1941. Department of Agriculture file 430/37, Vol. I.

35. *Ibid.*

Suppliers.³⁶ He wrote:

I cannot see what benefit a Research Station in the East Kimberley would be to the pastoralist. We already know the cause of losses at the end of the season are due to bad management, fires, light rainfall ... We cannot control the seasons and it does not require a Research Station to change a manager. Any man who tries to cover his run or in portion large enough to fatten 1,000 bullocks with artificial grass or licks suitable for fattening stock at the end of one year will go stoney motherless broke.³⁷

Perhaps Durack had sensed the attitude of the pastoralists for he was already seeking Commonwealth financial assistance for his scheme. In June 1941 he wrote to J. McEwen (Minister for Air) telling him of the state government's decision to subsidise the pastoralists' contribution to a maximum of £1,000, and to give £250 for a botanical survey of the area.³⁸ Durack explained that the growers of the north were not fanatical about the need for research and "the whole idea will probably die a natural death, unless it can be placed on a firmer footing."³⁹ He said that £6,000 would be required to establish a research station in the Ord area and asked for a Commonwealth contribution of not more than £2,000 per annum towards running costs.⁴⁰ McEwen replied that

36. T. J. Quilty to Secretary, Wyndham Meatworks Suppliers Committee, 30 July 1941. K. M. Durack Papers.

37. *Ibid.*

38. K. M. Durack to J. McEwen, 11 June 1941. K. M. Durack Papers.

39. *Ibid.*

40. *Ibid.*

although he felt it would be difficult to obtain finance at present, he had referred Durack's letter to the C.S.I.R.⁴¹ In August 1941, the Secretary of the Commonwealth Department of the Interior wrote to Durack explaining that his proposals had been considered, and it was felt that the matter of the establishment of an experimental station in the Kimberleys was one for the Western Australian Government to consider.⁴² He continued:

it seems improbable that the Commonwealth government would favourably consider any request for financial support unless the station were established and maintained by the Western Australian Government and the investigational work to be undertaken were subject to approval by the C.S.I.R.⁴³

Early in August 1941, shortly after his appointment as Director of Works, R. J. Dumas was requested to make a special study of the problem of the North West.⁴⁴ Dumas immediately contacted Durack to ask whether he knew of any possible dam sites on northern rivers. Durack arranged to show a film he had taken of the Ord River gorge from the air, and made plans to meet Dumas in the

41. J. McEwen to K. M. Durack, 17 June 1941.
K. M. Durack papers.

42. J. A. Carrodus to K. M. Durack, 13 August 1941.
K. M. Durack papers.

43. *Ibid.*

44. R. J. Dumas, "Development of the North-West of Western Australia. East Kimberleys - Ord River Scheme," *Journal of the Institution of Engineers Australia*, Vol. 16 (1944), pp. 65-70.

Kimberleys.⁴⁵ Dumas spent three weeks in August 1941 investigating the country in the North East Kimberleys and along the Ord River. He was accompanied by F. Forman (Government Geologist), T. Brennan (Acting Engineer for the North West), K. Durack, J. Walker (a half caste aboriginal) and a full blood aboriginal, Jacko.⁴⁶

From Wyndham, Dumas drove to Ivanhoe station and the party set out from there by horse.⁴⁷ By sundown on the first day they reached a camping site about one mile from the northern entrance to the Ord River Gorge. The next day, the party surveyed half the length of the Gorge, examining three possible dam sites. Dumas found that the Gorge, which extended approximately ten miles through the Carr Boyd Ranges, comprised hard sandstone merging into a dense, hard granite. The sides of the gorge rose steeply, reaching 500 to 800 feet in height. The party spent some days travelling over the country between Wyndham and the boundary of the Northern Territory. They then inspected the area at the southern end of the gorge and returned, convinced that "providing the levels made the distribution of water practicable and the soil analysis

45. K. M. Durack to G. C. Bolton, 25 November 1967.
K. M. Durack papers.

46. R. J. Dumas, *Proposal for Development of the East Kimberleys*, 3 November 1941. Public Works Department (P.W.D.) file 168/43.

47. R. J. Dumas, *Development of the North West of Western Australia*, *op. cit.*

confirmed the general appearance of fertility, there should be little difficulty in obtaining an area of 100,000 acres suitable for irrigation."⁴⁸

In his report, Dumas wrote that the investigation had convinced him that "the only hope of establishing any settlement based on products from the land lay in harnessing the rivers and applying the water by irrigation to the land."⁴⁹ He felt that under the existing climatic conditions, there appeared to be very little prospect of any major agricultural or pastoral development in the North West. He recommended the establishment of a small experimental area comprising twelve separately fenced acre blocks, on the eastern bank of the Ord River at Carlton Reach.⁵⁰ He felt too, that a soil survey should be immediately carried out, as well as a preliminary engineering survey to establish the best site in the gorge for a dam; the storage at various heights and the estimated cost.⁵¹ Dumas asserted, "it is obvious, if irrigation is demonstrated to be a successful means of developing the Kimberleys, that the Ord River flow will be controlled, as are the rivers in America, by a series of dams built over a number of years."⁵²

48. *Ibid.*, p. 68.

49. R. J. Dumas, *Proposal for Development of the East Kimberleys*, *op. cit.*, p. 1.

50. *Ibid.*, p. 15.

51. *Ibid.*

52. *Ibid.*

In October 1941 the Officer in Charge, Irrigation, at the Department of Agriculture (A. R. C. Clifton), submitted a layout for twelve acres under irrigation on the Ord River.⁵³ He explained that the most satisfactory and economical watering method, considering the deeply alluvial soil and the long dry period between wet seasons, would be to "control flooding under the border method."⁵⁴ Clifton left Perth in November 1941 to be present during the lay-out of experiments, and Mr. F. H. Bottrell of the Public Works Department left a few weeks later to install the thirty six horsepower diesel engine and the five inch centrifugal pump and necessary piping.⁵⁵ Kim Durack was appointed to manage the experimental site at six pounds per week plus one pound per week district allowance.⁵⁶

By June 1942 the area had been cleared and three acres planted with Mitchell, Buffel and Birdwood grasses.⁵⁷ Watering commenced in July 1942, water being pumped direct into a stilling pool and from there distributed by a system of channels. Good germination and

53. A. R. C. Clifton to G. K. Baron-Hay (Acting Under Secretary for Agriculture), 7 October 1941. Department of Agriculture file 430/37, Vol. I.

54. *Ibid.*

55. G. K. Baron-Hay to S. B. Barnett (Tropical Agriculture-at Advisor), 17 October 1941. Department of Agriculture file 430/37, Vol. I.

56. *Ibid.*

57. K. M. Durack, *Progress Report*, 22 June 1942. P.W.D. file 537/42.

vigorous growth were obtained, and watering continued over periods of from two to three weeks through the whole dry season until the first rains in November.⁵⁸ On Christmas Eve 1942, the first stock, twelve head from Ivanhoe station, were introduced to the area. A system of rotational grazing commenced: as each new crop of grass or lucerne was established the stock moved from paddock to paddock.⁵⁹ W. A. Durack wrote of the vastly improved condition of the cattle over the next eighteen months; "one could have ridden for hundreds of miles north, south, east or west without meeting cattle in anything approaching the condition of those on Carlton Reach."⁶⁰

Early in 1942, the Resident Engineer in the North West (F. H. Bottrell), accompanied by Durack and half-caste Johnny Walker, examined the full length of the Ord River Gorge and reported the existence of an additional three possible dam sites - that at the southern entrance to the gorge appearing by far the best.⁶¹ Dumas himself revisited the Kimberleys in October 1942, recommending as a result that preliminary engineering surveys be made of the dam site at the southern entrance to the gorge.⁶² These surveys would include the means of access to the

58. W. A. Durack, *General notes on the foundation and subsequent development of Carlton Reach, East Kimberley*, February 1945, p. 2. K. M. Durack papers.

59. *Ibid.*, p. 3.

60. *Ibid.*, p. 4.

61. R. J. Dumas, *Development of the North West of Western Australia, op. cit.*, p. 68.

62. *Ibid.*

damsite, a possible site for a diversion weir, and a contour survey for the approximate location of the main irrigation channel.⁶³

As a result of Dumas' recommendation, the government approved the sum of £10,000 to cover the cost of engineering surveys "incidental to the preparation of estimates for a conservation and irrigation scheme in the district."⁶⁴

A survey party under Surveyor F. T. Butson and Assistant Engineer D. Bryden, left Perth in April 1943: establishing a series of concrete bench marks set approximately one mile apart along the existing road route, for the full eighty six miles between Wyndham and Argyle Station.⁶⁵ These levels were later extended to the proposed dam site and to the grid lines of the storage basin survey. The party camped on the east bank of the Ord, near the southern entrance to the gorge, and surveyed the river as far as the damsite, where a cross section to a height of 150 feet was taken.⁶⁶ Bryden wrote describing the area:

from a rough estimation I should say that the irrigable area on the Ord River is in the vicinity of

63. *Ibid.*, p. 69.

64. "Notes for file on the East Kimberleys - Ord River Irrigation," 17 March 1943, P.W.D. file 168/43.

65. R. J. Dumas, *Development of the North West of Western Australia*, *op. cit.*, p. 69.

66. *Ibid.*

120,000 acres. The soils especially the 'black soils' have greatly impressed me and the physical factors i.e. flatness and absence of big timber make the site ideal. The high rainfall in the 'wet' and its reputed regularity add to the safeness of the scheme ... With a community of able settlers this acreage could be very intensely settled and exploited for the purpose of pasture development for the fattening of cattle prior to delivery to the meat-works.⁶⁷

In October 1943 Dumas visited the area to inspect the work of the survey party.⁶⁸ He was accompanied by Mr. V. C. Munt (Resident Engineer during the construction of Canning Dam) and Mr. E. W. C. Godfrey (Bridge Engineer, Main Roads Department).⁶⁹ They located a suitable site for diversion works, at a spot where a quartzite bar approximately 300 feet wide crossed the river bed, and where the channel was approximately 200 feet wide and forty to fifty feet deep.⁷⁰

The functioning of the Carlton Reach experimental station was discussed at a meeting at the Department of Agriculture on 4 May 1943.⁷¹ Those present included T. A. Barnett, K. M. Durack, A. R. C. Clifton, Dr. L. J. H. Teakle (Plant Nutrition Officer) and M. Cullity (Superintendent of Dairying). It was demonstrated at the meeting,

67. D. Bryden to R. J. Dumas, 25 June 1943. P.W.D. file 392/43.

68. R. J. Dumas, *Development of the North West of Western Australia*, op. cit., p. 75.

69. *Ibid.*

70. *Ibid.*

71. *Minutes of Meeting*, 4 May 1943. Department of Agriculture file 430/37, Vol. I.

that the experimental site had been unfortunately chosen since the soil of the plots was typical of only a small riverain area found close to the river. The bulk of the area which would be irrigated was not the red alluvial type soil, but black soil plain country.⁷² The meeting recommended that a permanent station be established where the various types of soil could be brought into use in a compact area. Durack told of a promising site about eight miles lower down the river, at a point known locally as Dillon's Bottle Tree. This site had unrestricted water frontage for about three miles, with apparent easy access to black soil areas of unlimited extent.⁷³

At the Carlton Reach experimental station Durack had, by 1943, demonstrated that pasture and fodder crops could be grown satisfactorily under irrigation on the red soils of the district. Lucerne and a number of grasses, particularly para grass, paspalum and rhodes grass appeared the most promising.⁷⁴ In November 1943 Durack surveyed a half acre area for cotton growing, planning to practice planting at different times of the year.⁷⁵ He maintained his faith in the future of the area which, he felt, could

72. *Ibid.*

73. *Ibid.*

74. K. M. Durack to G. K. Baron-Hay, 22 October 1943. P.W.D. file 537/42.

75. K. M. Durack to R. J. Dumas, 26 November 1943. P.W.D. file 537/42.

become one of the greatest beef producing areas of the world, apart from any other subsidiary industries. He wrote, "I do look forward to the time when Kimberley beef will ring with the same note as Canterbury Lamb" and concluded the same letter with a slogan postscript, "Beef for National Revenue, Intensive Cropping for National Security and Individual Wellbeing!"⁷⁶

It was such faith in, and enthusiasm for his work, which caused Durack to become dissatisfied with the somewhat random and haphazard experiments, the general lack of facilities and planning for the area.⁷⁷ Late in November 1943 he telegraphed Dumas and Baron-Hay: "I find it impossible to transact business under present administration of Carlton Reach in the face of lack of facilities with which to work, please accept my resignation."⁷⁸ Dumas and Baron-Hay replied that arrangements were now proceeding for soil classification parties to visit the area next April, 1944, to carry out a complete soil classification and other surveys.⁷⁹ They claimed that under present circumstances, the transfer or extension of the existing irrigation area was impossible.⁸⁰ In letters

76. *Ibid.*

77. K. M. Durack to R. J. Dumas and G. K. Baron-Hay, 30 November 1943. P.W.D. file 200/42.

78. *Ibid.*

79. R. J. Dumas and G. K. Baron-Hay to K. M. Durack, 1 December 1943. P.W.D. file 200/42.

80. *Ibid.*

of 9 and 18 December 1943, Durack explained the basis of his dissatisfaction.⁸¹ He wrote, "the balance sheet of this country's worth can only be obtained by a change over from the present more or less demonstrational plots to a small research station."⁸² In March 1944 Durack wrote again, "I am rather discouraged. At the moment our initial successes are not standing up to the test of time. Condition of lucerne is tragic. This complicates everything a hundredfold ... we cannot now expect to institute an irrigation settlement without detailed research."⁸³

Dumas eventually replied to Durack's letters in April 1944.⁸⁴ He suggested that considerations of a major research station be postponed until the results of the year's investigations were known. If results were satisfactory, he promised to do what he could to expand and develop work at Carlton Reach.⁸⁵ Durack replied, asking once again to be relieved of his present duty. He heard nothing and continued his work at the experimental site until 1945.⁸⁶

81. K. M. Durack to R. J. Dumas and G. K. Baron-Hay, 9 December 1943 and 18 December 1943. P.W.D. file 21/44.

82. *Ibid.*, 18 December 1943.

83. K. M. Durack to R. J. Dumas, 31 March 1944. P.W.D. file 21/44.

84. R. J. Dumas to K. M. Durack, 19 April 1944. P.W.D. file 21/44.

85. *Ibid.*

86. K. M. Durack to R. J. Dumas, 8 May 1944. P.W.D. file 21/44.

A meeting, held in the office of the Under Secretary for Agriculture in July 1944, summarised and discussed the work already achieved at Carlton Reach.⁸⁷ The meeting recommended that a more suitable experimental site be selected, on the basis of the soil survey being conducted. It was felt that the new site should be suitable for the future development of a research station and adequate for the complete servicing of the irrigation project.⁸⁸ The government botanist, C. A. Gardener, listed the plants he felt would be worthy of trial under irrigation in the East Kimberley.⁸⁹ These he listed under various categories. First, oilseeds such as linseed, sesame, safflower, ground nut, soy bean, tung tree. Secondly, cereals such as rice and maize and thirdly, fruits such as bananas, pineapple, citrus and dates. Fourthly, he looked at plants such as sugar, coffee, lentils, cola nuts and then pigeon pea, tobacco and cowpea. Finally, he saw possibilities for rubbers, fibres (jute, cotton, broom, millet), drug plants (quinine, lemon grass and cocaine) and pasture plants (grasses and legumes).⁹⁰

By May 1944 there was a large body of agriculturalists, botanists and surveyors carrying out investigations in the vicinity of Carlton Reach. A scientific soil

87. *Minutes of Meeting*, 10 July 1944, P.W.D. file 21/44.

88. *Ibid.*

89. C. A. Gardner, *Notes for meeting*, 10 July 1944. P.W.D. file 21/44.

90. *Ibid.*

survey of the arable irrigable land was undertaken by Surveyor A. H. Richter, assisted for some of the time by Department of Agriculture officers Dr. L. J. H. Teakle and G. H. Burvill.⁹¹ Surveyor F. G. Medcalf undertook a soil erosion survey, from the aspect of possible dam siltation from eroded areas, as distinct from the effect on the pastoral industry.⁹² The two reports were presented in 1944.

The Richter report classified what it called the "Ivanhoe area" - land for the most part on Ivanhoe Station in the Ord River Catchment area. The report outlined the topography of the area and established the presence of eight major soil groups.⁹³ These were alluvial soils (representing the brown soils complex along the rivers), clay plains (brown and dark grey clay soils plains of alluvial deposits - called "black soil" plains) sands and sandy loams, deep sandy soils, hills, basaltic clay plains, limestone soils, and shale soils.⁹⁴ A schedule of acreages of the main soil groups on both a

91. A. H. Richter, *Surveys and Soil Classification of the Ord River Valley and Watershed*, Department of Lands and Surveys - Kimberley surveys (Perth, 1944).

92. F. G. Medcalf, *Soil Erosion reconnaissance of the Ord River Valley and Watershed*, Department of Lands and Surveys (Perth, 1944).

93. A. H. Richter, *Surveys and Soil Classification of the Ord River Valley*, *op. cit.*, p. 19.

94. *Ibid.*

pastoral and an agricultural basis was calculated.⁹⁵

Soil Group	Total acreage	Pastoral Land	Agricultural Land
Alluvial	24,000	24,000	24,000
Clay plains	120,000	120,000	120,000
Sandy soils	87,000	87,000	43,000
Hills	90,000	45,000	
Limestone soils	20,000	20,000	
Shale soils	9,000	9,000	
TOTALS	350,000	305,000	187,000

Of the calculated 187,000 acres of arable land, the Public Works Department definitely established that the 104,000 acres in the following schedule could be irrigated.⁹⁶

Acreage in each soil group

Locality	Alluvial	Clay plains	Sandy soils	Total Acreage
Carlton Reach plain	6,000	40,000	13,000	59,000
West of Ord River	2,000	5,000	3,000	10,000
Mantina Flats	7,000	9,000	4,000	20,000
House Roof Hill area	9,000	1,000	5,000	15,000
TOTALS	24,000	55,000	25,000	104,000

The acreage was reduced by 24,000 acres to make provision for a reserve of estimated average width of five chains on each side of the Ord River, giving a figure of 80,000

95. *Ibid.*, p. 25.

96. *Ibid.*, p. 26.

acres of arable land which could be utilised and had been proved irrigable.⁹⁷

The report concluded that at present, there was only one assured and economical method of improved land utilisation and development of the Kimberleys; and that was by solely "concentrating on the one established industry, the cattle industry, using it as a solid basis building it up in quality and quantity and developing off it."⁹⁸ Irrigated pastures were recommended, subject to proof of economics and of the suitability of clay plains, and it was felt that irrigated agriculture could be slowly developed as a sideline to irrigated pastures, subject again to economics and markets.

The Medcalf report on soil erosion was based on a survey of 10,000 square miles of country in the Ord River Valley, of which 1,000 square miles were found to be affected by erosion in varying degrees.⁹⁹ The practice of cattle travelling to watering places in rivers and creeks was, the report stated, a contributing cause of erosion, resulting as it did in the depasturing of the country and the formation of deep tracks along which waters flowed during rains.¹⁰⁰ The report claimed that some of the land

97. *Ibid.*

98. *Ibid.*, p. 37.

99. F. G. Medcalf, *Soil erosion reconnaissance of the Ord River Valley*, *op. cit.*

100. *Ibid.*, p. 2.

where deeply eroded gullies had formed would be of no further value, a progressive deterioration was proceeding rapidly over the other portion - and after only fifty eight years' pastoral use.¹⁰¹ Some alteration in pastoral usage was advocated, and the need expressed for the banning of stock from eroded areas, and for an actively functioning soil conservation staff to encourage the re-growth of vegetation.¹⁰² In view of the erosion in the Ord River valley, it was felt that sediment must be excessive. This meant that it would be important that "the nature, extent and rate of silting damage to any proposed dam be predetermined as accurately as possible, and that the established life of such dam be assessed, so that the economics of cost, scope and benefits may be reviewed in advance."¹⁰³

On the basis of the Richter soil survey, the sum of £3,000 was made available to remove equipment and buildings from the experimental site at Carlton Reach, to an area selected about ten miles upstream.¹⁰⁴ Even before this move towards a permanent experimental station, the state had begun to look to the Commonwealth for financial assistance. R. J. Dumas wrote to Dr. H. C. Coombs

101. *Ibid.*, p. 1.

102. *Ibid.*, p. 62.

103. *Ibid.*, p. 66.

104. G. K. Baron-Hay to W. S. Andrew (Under Secretary, P.W.D.), 8 February 1945. P.W.D. file 665/44.

(Director General, Ministry of Post War Reconstruction) early in 1944, outlining the surveys about to take place in the East Kimberleys.¹⁰⁵ He explained that the preliminary surveys in connection with the proposal to establish an irrigation area in the East Kimberleys had reached a stage "indicating that in the gorge cut by the Ord River through the Carr Boyd Ranges a dam approximately 124 feet in height will hold as much water as Hume Reservoir."¹⁰⁶ The project, Dumas explained, must become largely a national one and therefore any assistance from the Commonwealth would be gratefully received. He asked specifically for the use of a Bren Gun carrier with driver.¹⁰⁷

In December 1944 Dumas wrote to W. M. Hughes, at the time a backbencher in Canberra:¹⁰⁸

I cannot escape the conviction that Australia must be told and, with her eyes open to the risk, set aside £3 million for the implementation of such a project as the Ord River Scheme. If she doesn't, the next war will find the North empty and we won't be lucky a second time. In any case, we won't deserve to hold it.¹⁰⁹

Late in October 1944, Dumas was asked to prepare a case for financial assistance for the proposed Ord River

105. R. J. Dumas to H. C. Coombs, 2 March 1944. Department of Agriculture file 430/37, Vol. II.

106. *Ibid.*

107. *Ibid.*

108. R. J. Dumas to W. M. Hughes, 7 December 1944. P.W.D. file 665/44.

109. *Ibid.*

Scheme for submission to the Commonwealth government.¹¹⁰

The Western Australian Minister for Works, Water Supplies and Industrial Development, (A. R. G. Hawke), suggested to F. J. S. Wise (Minister for Lands and Agriculture) that at the same time, an approach should be made regarding an overall developmental scheme for the North West, including such matters as water supplies for North West towns, improvements to North West ports, roads and mining.¹¹¹

Wise agreed that if the government intended to approach the Commonwealth Government, a much wider review of developmental schemes should be made. He suggested the formation of a committee to consider and report on proposals which might be submitted to the Commonwealth.¹¹²

A committee was appointed to prepare a comprehensive development scheme for the North West.¹¹³ The committee comprised R. J. Dumas (Chairman), W. V. Fyfe (Surveyor General), J. J. Farrell (Manager, Wyndham Meatworks), Young (Commissioner, Main Roads), G. Drake-Brockman (Engineer for the North West), J. S. Foxall (State Mining Engineer), T. A. Barnett (Tropical Agricultural Adviser),

110. A. R. G. Hawke (Minister for Works and Labour) to F. J. S. Wise (Minister for Lands and Agriculture), 27 October 1944. Department of Agriculture file 430/37, Vol. II.

111. *Ibid.*

112. F. J. S. Wise to A. R. G. Hawke, 2 November 1944. Department of Agriculture file 430/37, Volume II.

113. Department of Agriculture file 256/43.

T. E. Owen (Manager, State Shipping Service), Dr. L. J. H. Teakle (Research Officer and Adviser in Plant Nutrition, also representative of the Pastoralists' Association).¹¹⁴ At its first meeting, the committee attempted to lay down guidelines for development, and decided that in view of the climatic conditions, agriculture could not be envisaged except where irrigation was possible; and then only as an adjunct to the pastoral industry.¹¹⁵ The committee's report, presented in September 1945, supported the government's proposal for a permanent research station, and recommended "that all necessary investigations into the Ord River irrigation scheme be expedited and that the Commonwealth government be requested to co-operate in these investigations."¹¹⁶ The committee felt that an irrigation project would be based primarily on the cattle industry, with a view to the delivery of fat beasts to the Wyndham Meatworks.¹¹⁷ The General Manager of the Meatworks (J. J. Farrell) estimated that with irrigation, the season could be lengthened, and the number of cattle delivered to the Meatworks increased from 35,000 to 50,000 per annum with associated improvement in quality. This

114. *Ibid.*

115. *Ibid.*

116. R. J. Dumas, *Report of the Committee appointed by the Government to investigate measures necessary to promote the development of the North West, op. cit.*, p. 14.

117. *Ibid.*, p. 13.

could mean an increased annual return to the grower of approximately £230,000.¹¹⁸ The report concluded that apart from rehabilitation, the Ord Irrigation Project opened a new chapter in northern development for, if it was carried out, it would be repeated many times on the Ord and other rivers.¹¹⁹

Meanwhile the Commonwealth Rural Reconstruction Commission was also examining the plans for the proposed Ord River Irrigation Scheme. This Commission was appointed in February 1943, under the chairmanship of the Hon. F. J. S. Wise, to inquire into and report on: first, the organisation of the Australian rural economy for the purposes of the defence of the Commonwealth and prosecution of the war, and secondly, the reorganisation and rehabilitation of the Australian rural economy in the post war period.¹²⁰ The Commission presented a series of reports, the eighth entitled "Irrigation, Water Conservation and Land Drainage."¹²¹

This report outlined the importance of irrigation in the future of the Australian economy, and stressed the need for a national policy as far as irrigation projects

118. *Ibid.*

119. *Ibid.*, p. 14.

120. *The Rural Reconstruction Commission*, 1st Report, "A General Rural Survey," 17 January 1944.

121. *Ibid.*, 8th Report, "Irrigation, Water Conservation and Land Drainage," 11th December 1945.

were concerned.¹²² It was claimed that:

if the Australian nation takes its future seriously, it should carefully construct a co-ordinated plan for the development of its water resources, especially for irrigation, and should ensure that in the formulation of such a plan the long term needs should be given a deciding influence.¹²³

The Commission felt that the emptiness, and present primitive stage of development in the north of Australia were a reproach in the eyes of the world, and claimed that "Australia would be in a much better position to face the assembled nations in conference if she were able to state unequivocally that she was committed to a scheme of this kind as a genuine endeavour to utilize the empty north."¹²⁴

As for the details of the proposed Ord Scheme - the Commission stated that the use of the area in conjunction with the cattle industry offered most promise. The markets for many types of vegetable crops and tropical fruits were mostly local, and very limited. Cotton was a possibility, but for the elaborate precautions required because of the insect problem, and the fact that the world position of the cotton industry did little to inspire confidence.¹²⁵ The report concluded that the Commonwealth

122. *Ibid.*, p. 6.

123. *Ibid.*, p. 23.

124. *Ibid.*, p. 59.

125. *Ibid.*, p. 61.

government should offer to discuss with the Western Australian government, the basis of development of the scheme as a whole and the basis on which the research station could be financed, provided that:

- a) defence authorities did not oppose the development of northern Australia.
- b) satisfactory results were obtained in the engineering tests being undertaken as to the suitability of the proposed dam site.
- c) investigations showed that the proposed dam would not be subjected to rapid siltation.
- d) soil and topographic surveys showed that a considerable area of suitable soil could be commanded by irrigation water without great difficulty.¹²⁶

The Commission suggested that about £25,000 per annum would be needed for the running of a full scale research station, and it claimed that this sum, and the technical staff involved, should be provided by the joint efforts of the state and the C.S.I.R. acting in co-operation.¹²⁷

There had already been some correspondence between the C.S.I.R. and the Western Australian Department of Agriculture. Dr. D. Rivett (Chief Executive Officer, C.S.I.R.) wrote to G. K. Baron-Hay in July 1945, stating

126. *Ibid.*, p. 64.

127. *Ibid.*

that, "there are bound to be a very great number of problems requiring investigation, including experimental work, before any scheme of settlement may safely be adopted, and in such work the C.S.I.R. will be only too glad to assist."¹²⁸ In August 1945, Baron-Hay told the Minister for Lands and Agriculture of his discussions with the executive of C.S.I.R. and the agreement reached, whereby C.S.I.R. would send a senior officer to the Ord River area to determine a plan for the development of research at the experimental station.¹²⁹ Baron-Hay went on to say that Dr. D. Rivett was prepared - if the state had a suitable area selected and was able to bear some of the capital expense - to recommend to C.S.I.R., further capital expenditure in the nature of equipment and accommodation and also the provision of research officers.¹³⁰

In January 1946, the Commonwealth government and the governments of Western Australia and Queensland, established the Northern Australia Development Committee under the chairmanship of Dr. H. C. Coombs.¹³¹ The Committee comprised two representatives from each of the states and three Commonwealth representatives. Its role was to plan, in a co-ordinated way, the development of Northern

128. D. Rivett to G. K. Baron-Hay, 19 July 1945.
Department of Agriculture file 371/43, Volume I.

129. G. K. Baron-Hay to F. J. S. Wise, 24 August 1945.
Department of Agriculture file 371/43, Volume I.

130. *Ibid.*

131. *Stage I, Ord Review Sub-Committee Report*, November 3, 1971, Chapter 2.

Australia (above the 26th parallel, excluding a strip along the East coast of Queensland).¹³² At its first meeting, the Committee examined the Western Australian government's plans for the Ord River valley and recommended that the Commonwealth and Western Australian governments share equally in the cost of investigations required for the proposed project.¹³³

Meanwhile, a mutually satisfactory basis for collaboration had been reached between C.S.I.R. and the Western Australian Department of Agriculture. In his letter to Premier F. J. S. Wise, Prime Minister J. B. Chifley suggested that each government pay its own salaried officers, but that other costs incurred since 1 May 1946 including wages, buildings, equipment and running expenses be shared equally.¹³⁴ When investigations were completed, he said, adjustment would be made between Commonwealth and State Treasurers according to whichever government retained ownership of items of capital expenditure such as buildings and equipment. Premier Wise was requested to have prepared an outline of the progress of all engineering, agricultural and economic investigations in connection with the proposed Ord River Project.¹³⁵ In his reply to the Prime Minister, Wise agreed with the above

132. *Ibid.*

133. J. B. Chifley to F. J. S. Wise, 2 August 1946. P.W.D. file 665/44.

134. *Ibid.*

135. *Ibid.*

proposals, and subsequently a comprehensive plan for investigational work in the Ord area was drawn up in co-operation with the C.S.I.R.¹³⁶

The problems facing the research station were numerous. The five years of research at the experimental station had been random, unplanned and had achieved little - in fact for four of the five years, the station had not been located on soils typical of the area which could be irrigated. The new research station, to be jointly administered by the Commonwealth and Western Australian governments, comprised 2,000 acres of soil, different from any type previously worked in Western Australia. The future of any irrigation scheme in the Ord Valley depended to a great extent on the way in which the administration of the research station handled the many problems requiring scientific investigation; problems such as the seepage and permeability of the black soils, insect pests, crop and pasture rotations and farm management procedures.

136. F. J. S. Wise to J. B. Chifley, 14 August 1946.
P.W.D. file 665/44.

CHAPTER III

THE ROLE OF RESEARCH IN PLANNING FOR THE ORD RIVER SCHEME - THE KIMBERLEY RESEARCH STATION

I believe that no project for northern development has been so well researched and its progress so well planned in logical stages.¹

The stated objective of the Kimberley Research Station (K.R.S.) was to determine whether the black soil plains of the Ord River region were suitable for irrigation, and to determine whether a stable system of agriculture could be devised which would provide a sound basis for settlement in the area.² The station aimed "to provide scientific data for the purpose of deciding whether the construction of a dam upstream on the Ord River would be warranted."³ Its role was also to gather scientific data of value to the development of similar areas in other parts of northern Australia and to undertake research aimed at generally improving the pastoral

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1. D. Brand to R. G. Menzies, 12 August 1964. North West Department file 63/60.
 2. Inaugural Meeting of K.R.S. Policy Committee, November 1951. Quoted in *Stage I, Ord Review Sub Committee Report*, 3 November 1971.
 3. *Ibid.*

industry in the north-west of Western Australia.

In reviewing its research achievements in July 1963, the Kimberley Research Station Policy Committee claimed that the work carried out at the Kimberley Research Station since 1946 had enabled the Western Australian government to decide in 1959, to undertake the development of commercial farming in the area.⁴ It also felt that the intensive research on cotton had led to the decision of the project development authorities to recommend this crop to Ord farmers and to establish a local ginnery.⁵ This chapter will examine the organization and work of the K.R.S. and the pilot farm in an attempt to assess the amount and type of knowledge available to the first Ord farmers, and to analyse the "scientific data" on which the decision to go ahead with commercial farming was allegedly based.

The inaugural meeting of the Ivanhoe Research Station Technical Supervisory Committee, which comprised the C.S.I.R. (one member), and the Western Australian Department of Agriculture (three members), clarified the basis of cooperation between the two organizations.⁶ The committee was required to recommend to the Departments

4. Minutes of K.R.S. Policy Committee, 16-19 July 1963. P.W.D. file 434/61.

5. *Ibid.*

6. Minutes of the Inaugural meeting of Ivanhoe Research Station Technical Supervisory Committee, 18-19 April 1946 (Perth). P.W.D. file 665/44. Known from 1952 as the K.R.S. Supervisory Committee.

cooperating, the general lines of investigation to be followed, to develop a "Memorandum of Understanding" for the guidance of cooperating officers, to plan investigation and to supervise their conduct, to recommend on matters of staffing and facilities and to prepare an annual estimate of funds required.⁷ Technical staff for research, it was agreed, would be appointed by the C.S.I.R., and managerial staff and labour by the Western Australian Department of Agriculture. When technical staff were available, the Department of Agriculture was to participate in research work dealing with irrigation and soil and stock aspects, while the C.S.I.R. officers covered plant aspects.⁸ The meeting agreed, that in view of the limited number of technical staff likely to be available in the near future, initial investigations should be principally concerned with plant growth on Cununurra clay and be designed to obtain factual information concerning the adaptability, production and suitability of a wide range of crop, fodder and pasture species. The general objectives of these plant investigations, under conditions of natural rainfall and partial or complete irrigation, were the production of exportable crops, the production of perennial pasturage and fodder for beef cattle, and the production of grain and other seed crops.⁹

7. *Ibid.*

8. *Ibid.*

9. *Ibid.*

The "Memorandum of Understanding," drafted for the guidance of cooperating officers, stated that the committee should meet four times a year (one meeting to be held at K.R.S.) and a chairman and secretary should be elected, the latter from the Department of Agriculture.¹⁰ The scope of the station's activities were described as "the determination of the possibility of economically using water for some form of agriculture or pastoral production at the K.R.S. with special reference to the use of the soil type referred to as Cununurra clay."¹¹ The station was also to be responsible for the improvement of stock nutrition in the Ord River region, particularly nutrition in the dry season.¹²

In June 1951, Prime Minister Menzies wrote to Premier D. R. McLarty, proposing that both governments establish a Policy Committee to maintain overall control of the station and, acting through the Supervisory Committee, to direct the research policy of the station.¹³ He suggested that the Policy Committee comprise two Western Australian members, one member from C.S.I.R.O. and one senior officer of the Department of National Development; that it meet annually, and review the station's achievements in the third year of every five

10. *Ibid.*

11. *Ibid.*

12. *Ibid.*

13. *Stage I, Ord Review, op. cit.*

year period.¹⁴ In his reply, the Premier agreed with Menzies' recommendation and advised that the Western Australian representatives on the Policy Committee would be from the Public Works Department and the Department of Agriculture.¹⁵

The financial agreement adopted by the Commonwealth government and the government of Western Australia, specified that each government pay the salary of its own salaried officers and share all other costs equally.¹⁶ The Department of Agriculture was to provide the machinery, managerial staff and labour for the work of the station, and also to provide accommodation including laboratories and housing. The C.S.I.R.O. was to provide technical staff for plant research (both on the station and throughout the region), and also some specialized equipment for its officers.¹⁷ In November 1956, the Prime Minister proposed that apart from salaries, the operation and capital expenses of the station be placed on five year budgets with equal financial contributions from both governments.¹⁸ Menzies suggested an annual expenditure of £50,000, claiming that the station was seriously handicapped by uncertainty about the future while its existence

14. *Ibid.*

15. *Ibid.*

16. *Ibid.*

17. *Ibid.*

18. R. G. Menzies to A. R. G. Hawke (Premier), 5 November 1956. P.W.D. file 844/54.

was dependent on the yearly approval of both governments - "current operations are inconvenienced and planning of future experiments is too restricted."¹⁹ Hawke agreed to this proposition and the yearly budget for K.R.S. was increased from £50,000 in 1956 to £92,000 for the five years ending 30 June 1965, and then to £130,000 to 30 June 1968.²⁰

There were initial adjustment difficulties as far as State/Commonwealth responsibilities were concerned. In May 1947, G. K. Baron-Hay (Under Secretary for Agriculture) wrote to A. Bosch (the Manager of K.R.S.) concerning the progress of experimental work.²¹ He claimed that four crops - cotton, rice, grain sorghum and peanuts, had been selected as showing promise and, as soon as seed became available, Bosch was to plant the crops on prepared plots.²² The Senior Research Officer C.S.I.R., then wrote to the Plant Nutrition Officer at the Western Australian Department of Agriculture regarding Bosch's instructions.²³

19. *Ibid.*

20. A. R. G. Hawke to R. G. Menzies, 19 February 1957.
P.W.D. file 844/54.
T. C. Dunne (Director Agriculture) to C. D. Nalder
(Hon. Minister for Agriculture), 13 April 1964.
P.W.D. file 434/61.

21. G. K. Baron-Hay to A. H. Bosch, 2 May 1947.
Department of Agriculture file 80/47.

22. *Ibid.*

23. C. S. Christian to L. C. Snook, 30 May 1947.
Department of Agriculture file 80/47.

He stated that he did not consider that the form of the investigations indicated would be acceptable to C.S.I.R. authorities as it followed "the line of experimental trials rather than research."²⁴ He maintained that as C.S.I.R. had undertaken to supervise the plant investigations, it was necessary for him to see that research methods conformed to those usually adopted by C.S.I.R. and that the technical staff obtained information of the standard usually sought."²⁵

There were also difficulties in personal relationships among the few inhabitants of the research station. These difficulties interfered with the progress of work and led, in 1948, to the resignation of both the Technical Officer and the Manager.²⁶ In 1954 Ernest Phillis, a C.S.I.R.O. officer at K.R.S., attempted to pinpoint the problem. He wrote, "the station is passing through a bad time ... I think the real trouble is the glittering prospects of high pay packets held out by other organizations in the area."²⁷ In October 1954, Research Officer L. C. Lee wrote that the mental distractions and loss of time resulting from relationships and various events at the station was seriously distracting from his own effectiveness and output as a member of the technical staff.²⁸

24. *Ibid.*

25. *Ibid.*

26. Department of Agriculture files 3/48 and 113/50.

27. E. Phillis to W. M. Nunn, 1 December 1954. Department of Agriculture file 113/50.

28. L. C. Lee to C. S. Christian, 22 October 1954. Department of Agriculture file 113/50.

Work at K.R.S. began with a wide range of crops and pastures in an attempt to make some preliminary observations on the irrigability of the soil. Rice was planted as both a wet and dry season crop but, of the five crops sown to 1949, three were destroyed by birds.²⁹ Cotton was planted both as a non irrigated wet season crop and as an irrigated crop in both wet and dry seasons.³⁰ Yields from all non irrigated experiments were so low as to discourage further plantings of this kind. Irrigated wet season plantings of cotton made promising growth until all plantings were attacked by grasshoppers and produced yields as low as 300 to 500 lbs. per acre of seed cotton.³¹ The 1949 dry season irrigated cotton crop was promising, however, yielding up to 1,200 lbs per acre.³² There appeared to be the possibility of heavy peanut yields (of the two varieties, Brown Spanish and Virginia Bunch) but methods of harvesting needed further investigation.³³ By 1949, the authorities had concluded that Cununurra clay soil could be satisfactorily irrigated but that work had not been in progress long enough to indicate whether continued irrigation would have desirable or

29. K.R.S. Progress Report 1947/49. Department of Agriculture file 162/48.

30. *Ibid.*

31. *Ibid.*

32. *Ibid.*

33. *Ibid.*

undesirable consequences. There 'did appear to be a soil fertility problem worthy of investigation.³⁴

By 1949, forty acres were under irrigation trials. A 100 h.p. diesel engine operated a centrifugal pump, lifting water through a twelve inch pipe over the forty foot banks of the Ord River and delivering water into the channels at the rate of 50,000 gallons per hour.³⁵ In his report on the experiments Nunn summarised progress:

from trials already under way, there seems little doubt that irrigation waters can be used to grow cotton, rice, peanuts, sorghum and pastures, and a variety of other agricultural produce also, whether such production will be profitable, however, is a much more difficult matter to determine. Already problems have arisen with regard to manurial treatments, soil management and insect and vermin control. Ibis have deseeded areas sown to rice. Cockatoos have completely harvested areas after they have come into ear. Grasshoppers have denuded crops and pastures on a grand scale.³⁶

The K.R.S. Supervisory Committee was considering sending a committee member to visit East, West, North Africa and India, as well as appointing a Research Officer, possibly trained in tropical agriculture.³⁷

34. Minutes of K.R.S. Supervisory Committee, 18-23 July 1949. Department of Agriculture file 162/48.

35. W. N. Nunn (Executive Officer, K.R.S. Supervisory Committee), *Report on Agriculture on the Ord River*, 5 April 1949. Department of Agriculture file 180/47.

36. *Ibid.*

37. Minutes of K.R.S. Supervisory Committee, August 3-8, 1947. Department of Agriculture file 162/48.

The K.R.S. had early success with sugar cane. In 1950 the K.R.S. Supervisory Committee discussed the advisability of including experiments with sugar cane which gave high returns per acre in Queensland and could, perhaps, be a determining factor on the Ord River.³⁸ The Committee concluded that 15,000 to 17,000 acres of sugar cane would support one sugar mill, and it would appear possible that with two sugar mills in the area, labour could be transferred to and from the Wyndham Meatworks.³⁹ There was some uncertainty expressed as to what might be the Commonwealth attitude, and it was suggested that Mr. C. S. Christian might, through C.S.I.R.O. channels, determine the Commonwealth attitude to a possible sugar industry on the Ord River.⁴⁰ Christian reported at the next meeting that he had made some enquiries as to the possible Commonwealth attitude and had found that in general, expansion would probably be frowned upon; however, in relation to specific development projects such as the Ord River Project, Commonwealth support could probably be expected and efforts to produce cane should therefore continue.⁴¹

Meanwhile, twelve varieties of cane had been planted

38. Minutes of K.R.S. Supervisory Committee, 10 February 1950. Department of Agriculture file 162/48.

39. *Ibid.*

40. *Ibid.*

41. Minutes of K.R.S. Supervisory Committee, 1-2 March 1951. Department of Agriculture file 162/48.

in small observation plots and had made satisfactory growth. In 1951, the K.R.S. Supervisory Committee claimed that work to date had indicated that "sugar and rice are the two cash crops most likely to give returns sufficiently high to justify dam construction and a system of agriculture under irrigation," and that there should therefore be some concentration on these two crops and an advance to farm scale areas as soon as possible.⁴² By March 1954, the committee felt that a statement could be issued to the effect that sugar cane was well adapted to the Kimberleys, that no major pest or problem had been met during the several years of production, and that indications were that it could be a satisfactory agricultural crop for the region.⁴³ Fifteen acres were to be grown in the coming season. By 1957, the Supervisory Committee felt confident enough to report that:

sufficient experience and sufficient data have been gained with sugar cane to conclude that sugar cane is well adapted to the Ord River region, and to suggest that economic and social investigations are now of more importance than continued agronomic investigations on the scale hitherto pursued.⁴⁴

Two years later, the Policy Committee agreed to suspend research on sugar cane except for museum plots, which would be maintained to preserve disease free planting stock.

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42. Minutes of K.R.S. Supervisory Committee, 22 November 1951. Department of Agriculture file 162/48.
 43. Minutes of K.R.S. Supervisory Committee, 15 March 1954. Department of Agriculture file 162/48.
 44. K.R.S. Progress Report, November 1957. Prepared by K.R.S. Supervisory Committee. P.W.D. file 1086/58.

The committee felt that "from national, economic and political viewpoints," it seemed unlikely that sugar cane would be produced as a commercial crop in the foreseeable future.⁴⁵

Pastures and fodder crops grew well at the first research site on the Ord River (on red soil), but when investigations were transferred to the black soil areas, very different results were obtained and yields continued to decline. In 1952, the K.R.S. Supervisory Committee confirmed that as far as pastures were concerned, progress was not such as to justify further intensive work at present and, as cash crops such as sugar cane and rice appeared to offer the only economic justification for irrigation settlement, it was decided that there should be no great extension of pasture work.⁴⁶ At their meeting in 1954, bearing in mind the fact that the proposed Ord River Scheme was first conceived as a means of assisting the ailing pastoral industry, the committee decided that there must surely be some place for pasture in any form of agriculture which might be established in the region and that a more comprehensive study would be warranted.⁴⁷

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45. Minutes of K.R.S. Policy Committee, 6-10 April 1959. P.W.D. file 1086/58. In May 1964, following the Cuban crisis and the subsequent world sugar shortage, sugar cane trials were again recommended at K.R.S. *Annual Report*, Department of Agriculture. Year ending 30 June 1964.
46. Minutes of K.R.S. Supervisory Committee, 15-19 March 1952. Department of Agriculture file 162/48.
47. Minutes of K.R.S. Supervisory Committee, 15 March 1954. Department of Agriculture file 162/48.

Research with pastures continued, however, in 1957 the Department of Agriculture *Annual Report* stated that permanent pastures were still unsatisfactory, and it seemed that if cattle fattening was to be part of any settlement scheme then the feeds used would be in the form of annual fodder crops.⁴⁸ At the 1959 meeting of the K.R.S. Policy Committee, it was decided that there was no justification for suggesting that pastures and fodder crops would warrant the establishment of an irrigation scheme, and no immediate research was planned.⁴⁹

Rice was, from an early stage, hailed as one of the crops most likely to give returns sufficiently high to justify dam construction and a system of agriculture under irrigation.⁵⁰ In 1955 rice cultivation was expanded to about twenty acres with some bulk plots of the "Indica" type grown on a semi commercial scale. From these bulk cropping areas, the station was able to supply about eight tons of seed to commercial concerns in the North West.⁵¹ There were however, two major but continuing problems with rice: the first nutritional, manifested by yellowing and leaf dieback, and the second, a serious insect pest - the stem borer. Despite these problems it

48. *Annual Report*, Department of Agriculture, Year ending 30 June 1957, p. 26.

49. Minutes of K.R.S. Policy Committee, 6-10 April 1959. P.W.D. file 1086/58.

50. Minutes of K.R.S. Supervisory Committee, 22 November 1951. Department of Agriculture file 162/48.

51. Minutes of K.R.S. Supervisory Committee, 15 November 1955. P.W.D. file 1086/58.

was felt that rice yields would compare favourably with those of other tropical countries, though they might not be as high as the average yields in the temperate regions of the Murrumbidgee Irrigation Area.⁵² In 1959, the K.R.S. Policy Committee recommended rice, along with safflower as the basis for initial commercial development in the Ord River area.⁵³

Safflower had made little progress through the 1950's - the yield tended to be erratic, ranging from 3,000 to 300 lbs. per acre.⁵⁴ By June 1958, further work on time of planting had indicated that higher yields and oil content could be expected from crops planted early in May to June.⁵⁵ One year later, after the state government's decision to proceed with the Ord Project, the K.R.S. Policy Committee felt confident enough to recommend safflower for commercial development.⁵⁶ The committee felt that the likely damage from insect pests and birds could not be assessed until large scale blocks of safflower were grown.⁵⁷

52. K.R.S. Progress Report, November 1957.

53. Minutes of K.R.S. Policy Committee, 7-9 October 1959. P.W.D. file 1086/58.

54. K.R.S. Progress Report, prepared for the K.R.S. Supervisory Committee, March 1957. P.W.D. file 1086/58.

55. *Annual Report*, Department of Agriculture, Year ended 30 June 1958, p. 25.

56. Minutes of K.R.S. Policy Committee, 7-9 October 1959. P.W.D. file 1086/58.

57. *Ibid.*

By 1950 peanuts were the most successful of all crops grown at the research station, having given commercial yields in the order of 200 to 300 lbs. per acre.⁵⁸ Harvesting and separating nuts from similar size soil lumps continued to be a problem, as was the increase in the incidence of "crown rot" disease which, by 1952, was the most serious disease on the station.⁵⁹ Investigations with peanuts were not maintained after 1957 because of harvesting and sorting difficulties with the available machinery, and the problems of disease control.⁶⁰

After attempts to grow cotton in both wet and dry seasons, it became evident that pests were multiplying to such an extent as to make the chances of success with this crop slight. It was felt necessary to keep K.R.S. cotton free during the 1952/3 season, in the hope of reducing the pest population.⁶¹ As early as 1945 the Government Entomologist had stated that the entomology of the northern portions of Western Australia had been very inadequately studied.⁶² He claimed that "from the information already available it is evident that some very serious pests are

58. *Annual Reports, C.S.I.R.O., Years ending 30 June 1950 and 30 June 1951.*

59. *Annual Report, C.S.I.R.O., Year ending 30 June 1952.*

60. K.R.S. Progress Report prepared by K.R.S. Supervisory Committee, November 1957. P.W.D. file 1086/58.

61. Minutes of K.R.S. Supervisory Committee, 15-19 March 1952. Department of Agriculture file 162/48.

62. C. F. H. Jenkins, *Report on Entomological Problems*, 31 January 1945. Department of Agriculture file 256/43.

widely established in the north, and that any agricultural programme will have to be developed with due regard to these insects and allied problems of the more important pests recorded."⁶³ He listed the main pests recorded in the area under six headings - stock pests (buffalo fly, cattle tick, blowflies), vegetable pests (grasshoppers, foliage eating beetles, caterpillars), pasture pests (grasshoppers and locusts of several species), cotton pests (pink cotton boll worm, the boll worm, the rough boll worm, cotton stainer bug, cotton seed bug), termites, human disease carriers (malaria - he noted two species of anopheles mosquito and dengue). He explained that early experiments with cotton in the north of Western Australia had proved disheartening, with a large number of cotton pests being recorded in the Broome/Derby region. The majority of the pests recorded, he said, were native species and he felt they could be expected to have a wide range.⁶⁴

Despite Jenkins' warnings, there was no systematic survey or collection of species in the Ord area until after 1951 when R. G. Lukins of the Entomology branch of the Department of Agriculture commenced work at K.R.S.⁶⁵ A subcommittee of the K.R.S. Supervisory Committee was

63. *Ibid.*

64. *Ibid.*

65. *Annual Report*, Department of Agriculture, Year ending 30 June 1953.

appointed in 1952, to consider the problem of pest control in crops.⁶⁶ The Supervisory Committee felt that it must be borne in mind that crops were being introduced into a new environment and that it was possible that an insect already existing on the native vegetation might suddenly migrate to one of the introduced crops.⁶⁷

A great deal of attention was focused on the pests of cotton, as it was felt that cotton could play an important part in a settlement on the Ord River.⁶⁸ The K.R.S. Supervisory Committee felt that with cotton, the main problems were entomological, but that they were by no means the only ones. However, until insect damage could be prevented, it was impossible to assess accurately the physiological factors involved.⁶⁹ The small area of cotton grown in 1955 had been badly infested with pests, including both pink and rough boll worm.⁷⁰ Short term success was obtained with the insecticide Endrin, leading the 1957 *Annual Report* of the Department of Agriculture to confidently claim:

Endrin, a new insecticide, has at last given control

66. Minutes of K.R.S. Supervisory Committee, 15-19 March 1952. Department of Agriculture file 162/48.

67. *Ibid.*

68. Minutes of K.R.S. Supervisory Committee, 15 November 1955. P.W.D. file 1086/58.

69. *Ibid.*

70. *Annual Report*, Department of Agriculture, Year ending 30 June 1955.

of insect pests and yields of up to 2,000 lbs. of seed cotton per acre can be expected from current crops. This is above the Queensland average, and good by world commercial standards. Cotton can be regarded as first on the list of crops which may make the development of the region possible.⁷¹

Despite this optimism, the 1959 meeting of the K.R.S. Supervisory Committee concluded that insect pest control based on a very intensive application of insecticides, regardless of cost, would be a hopelessly uneconomic method in commercial farming.⁷² The committee agreed that "entomological research including a thorough survey of local insect complex, ecological studies and investigations of various control methods (including biological control) must have very high priority."⁷³ The Policy Committee felt that a study of the life cycles of insects involved, and various sanitation measures, should lead to economic measures of control.⁷⁴ The committee claimed that cotton would be the next addition to the list of recommended crops for initial commercial development.⁷⁵

Until 1960, the main insect pests discovered at K.R.S. were budworms in linseed, safflower and cotton; rough and pink boll worm in cotton; and stemborer in rice. From

71. *Ibid.*, Year ending 30 June 1957.

72. Minutes of K.R.S. Supervisory Committee, April 4-10, 1959. P.W.D. file 1086/58.

73. *Ibid.*

74. Minutes of K.R.S. Policy Committee, 7-9 October 1959. P.W.D. file 1086/58.

75. *Ibid.*

1960 there was a marked increase in the population of the cluster grub (*Prodenia litura* (F)) particularly in cotton and linseed. The pest had been noted prior to the 1960/1 wet season but its larvae had been successfully controlled by regular spraying with a D.D.T.-Endrin mixture. After 1960, the application of a wide range of insecticides proved largely ineffective even at frequent intervals and heavy rates.⁷⁶ For instance, the average yield for all cotton experiments in 1960/1 season was 2,458 lbs. seed cotton per acre. In the 1962/3 season yields were down to 1,600 lbs. seed cotton per acre, due in the main to insect attack but also waterlogging and technical problems.⁷⁷ During the period September to December 1962, strict sanitation measures were undertaken at K.R.S. All channels and drains were cleared, all crop residues ploughed in as quickly as possible, and migrating caterpillars were sprayed with dieseline.⁷⁸ These measures were successful to a certain extent. However, the K.R.S. Supervisory Committee reported that sanitation alone could not be a fully effective control measure in view of the wide range of host and food plant species including indigenous species and weeds on arable land.⁷⁹ The committee

76. Minutes of K.R.S. Supervisory Committee, 23-26 April 1963. P.W.D. file 434/61.

77. *Ibid.*

78. Minutes of K.R.S. Supervisory Committee, 25-28 September 1962. P.W.D. file 434/61.

79. Minutes of K.R.S. Supervisory Committee, 23-26 April 1963. P.W.D. file 434/61.

resolved that because of its effect not only on the progress of research with cotton, but also on the future development of the Ord Project as a whole, *Prodenia litura* must be at present regarded as the most important and urgent research problem, warranting the full time attention of two entomologists.⁸⁰

When the K.R.S. Policy Committee reviewed its achievements in July 1963, it was stated that "intensive research on cotton resulted in the decision of project development authorities to recommend this crop to Ord farmers and to establish a local ginnery."⁸¹ The committee admitted that there was, at the time, no fully effective means of controlling *Prodenia litura*, but reassured itself by stating that the development of farming in new areas had in most cases "encountered such major problems which had to be solved either by a long and costly period of trial and error by the farmers or, more recently, by concentrated research effort."⁸² From August 1963, three months before the first five farmers began planting cotton, two research entomologists and a senior entomologist began working full time on the problem of *Prodenia litura*.⁸³ Meanwhile, the

80. *Ibid.*

81. Minutes of K.R.S. Policy Committee, 16-19 July 1963. P.W.D. file 434/61.

82. *Ibid.*

83. T. C. Dunne (Director, Department of Agriculture) to R. Patterson (Assistant Director, Bureau of Agricultural Economics (B.A.E.)), 7 July 1964. P.W.D. file 774/62.

pilot farm established in 1960 to obtain commercial experience before the construction of the Diversion Dam, faced similar problems with insects, and added little to the existing knowledge of crops suited to the area.

In April 1959, the K.R.S. Policy Committee had recommended that a pilot farm project be established so that by the time irrigation water was available from the Diversion Dam, several years' practical experience would have been achieved with crops apparently suited to the area.⁸⁴

Eight months later, negotiations commenced between the departmental officers connected with the proposed plans for the Ord area and representatives of Northern Developments Pty. Ltd., the company operating the Camballin irrigation scheme on the lower Fitzroy River.⁸⁵ As a result of these negotiations the Minister for the North West (C. W. Court) recommended first, that a contract be entered into with Northern Developments Pty. Ltd. (or an approved subsidiary) for the farming of an area in the vicinity of the Ord Diversion Dam, and secondly, that the final details of the contract be left in the hands of the Cabinet subcommittee comprising the Ministers for the

84. Minutes of K.R.S. Policy Committee, 6-10 April 1959. P.W.D. file 1086/58.

85. Those involved in negotiations were: W. M. Nunn and H.J.K. Gibsone (Department of Agriculture), J. E. Parker, D. C. Munro and J. G. Lewis (P.W.D.), K. Gorey and F. G. Stone (Northern Developments Pty. Ltd.).
D. C. Munro (Hydraulic Engineer) to J. E. Parker (Deputy Director of Works), 11 December 1959. P.W.D. file 1183/59.

North West, Agriculture and Works, in consultation with the Treasurer.⁸⁶ Cabinet approved these recommendations and the Western Australian government entered into an agreement with Northern Developments to develop a 2,400 acre pilot farm over five years, with water supplied by the state from a pool in the river.⁸⁷ The government was to advance £100,000 over three years - the advances being made following submission by the company of quarterly budgets approved by the Minister for the North West, after they had been considered and recommended by the Ord River Project Committee.⁸⁸ The agreement stated that if the company performed its part under the agreement, it could elect between the fourth and fifth years, or earlier, to acquire a Crown grant of land within the pilot farm area. The price to be paid would be calculated on the basis of £1 per acre, plus the economic value of all improvements on the pilot farm at the date of the request, together with the economic value of all further improvements subsequently completed on the pilot farm with money provided by the state, prior to the issue of the Crown grant.⁸⁹

86. C. W. Court to D. Brand (Premier), North West Department file 10/60.

87. *Northern Developments (Ord River) Pty. Ltd. Agreement Act No. 32 of 1960, The Acts of Parliament of Western Australia, Vol. I, 1960.*

88. *Ibid.*

89. *Ibid.*

The company was required to carry out practical farming on an area of not less than 2,000 acres and to keep full and accurate records so that the government could ascertain:

- a) what crops and pastures may successfully and economically be produced and grown in the area under difficult seasonal conditions with particular regard to crops of rice, cotton, safflower, linseed and other agricultural crops and pastures and how they may best be produced and grown and the economic and other factors involved in such production and growth.
- b) the approximate sizes and location of individual holdings which would be best suited in the area for each kind of crop which may economically be grown and marketed.
- c) what plant equipment, machinery and farming methods would be most appropriate for each kind of crop; the capital required for reasonable development and what services, facilities and amenities should be provided for large scale development and settlement.
- d) the advantages and disadvantages of larger and smaller holdings.
- e) other factors which may affect or relate to development of the area, the attraction thereto of suitable settlers and necessary capital labour and amenities and the well being of the inhabitants of the area.⁹⁰

Due to the fact that the company did not possess a plough heavy enough for the work, the early plantings at the pilot farm suffered from inadequate land preparation. Later crops were supervised more closely by officers of the Department of Agriculture.⁹¹ The K.R.S. Supervisory

90. *Ibid.*

91. Minutes of Ord River Development Project Committee, 17 January 1962. P.W.D. file 1183/59.

Committee noted on its visit to the pilot farm in 1961, that the cotton crop was disappointing, growth being in fact much poorer than at K.R.S., probably because of nutritional and drainage difficulties.⁹² The estimated safflower yield for the 1961 dry season was 1,400 lb. per acre, and the rice yield approximately 3/4 ton paddy per acre.⁹³

In July 1961, the chairman of the Ord River Diversion Dam Project Committee wrote to the Minister for the North West expressing concern that in view of the planning which provided for settlers moving into the area during 1963, it was a matter of urgency to have some knowledge of commercial aspects of cotton growing by June/July 1963.⁹⁴ The Project Committee felt that a large commercial area of cotton would be valuable in determining operational costs and providing the assurance that planting, watering and insect control could be handled on a commercial scale. It recommended that £25,000 be made available to enable Northern Developments (Ord River) Pty. Ltd. to grow a commercial cotton crop on the pilot farm.⁹⁵ The Western Australian government approved a special project to grow

92. Minutes of K.R.S. Supervisory Committee, 14-15 April 1961. P.W.D. file 434/61.

93. Minutes of K.R.S. Supervisory Committee, 10-13 April 1962. P.W.D. file 434/61.

94. J. E. Parker to C. W. Court, 21 July 1961. P.W.D. file 1183/59.

95. *Ibid.*

100 acres of cotton on the pilot farm in the 1961/2 season - seventy acres to be planted in the second half of November, and the rest at the end of January 1962.⁹⁶ Spraying was to be by helicopter and harvesting to be undertaken on a contract basis by a K.R.S. picker operated by K.R.S. staff.

Kimberley Research Station provided spraying schedules for the protection of cotton.⁹⁷ These schedules were required to give economical and effective control of the expected insect pests and to test the suitability of the insecticides for aerial application. The 1961/2 wet season programme consisted of three fortnightly applications of D.D.T. at one lb. per acre starting at the beginning of the fifth week from the emergence of the cotton, followed by four, weekly applications of D.D.T. and Endrin at ($\frac{1}{2} + \frac{1}{4}$) lb. per acre and finally two fortnightly applications of D.D.T. and Endrin at ($\frac{1}{2} + \frac{1}{4}$) lb. per acre.⁹⁸ Excellent insect control was obtained under this spraying schedule, but this success failed to compensate for the incompetence of Northern Developments (Ord River) Pty. Ltd. Rain interfered with later planting

96. C. W. Court to G. E. J. Barwick (Attorney-General), 12 September 1961. North West Department file 24/61.

97. K. T. Richards, "Insect Pests of cotton in the Ord River Irrigation Area," *Journal of the Department of Agriculture Western Australia*, Vol. 5, No. 1 (February 1964), pp. 79-86, 120-132.

98. *Ibid.*

and only thirty acres of cotton were planted. The crop became weed infested, Northern Developments had ordered the wrong cultivating equipment and then refused to carry out any hand weeding.⁹⁹ Mr. W. J. Toms, a Department of Agriculture Research Officer responsible for the conduct of the project, reported, "in actual fact I fear that N.D.L. has decided to now actively engage in making the cotton a complete failure and will do so if given the slightest chance."¹⁰⁰ In his ninth report, Toms claimed that either Northern Developments had the managerial ability of a six year old child or was trying to make the crop a failure.¹⁰¹ He referred to the company as "this circus."¹⁰² The average yield for the 1961/2 season, from a total of twenty eight acres was 1,977 lbs. per acre.¹⁰³ Of the total crop, 7,500 lbs. was ginned at K.R.S. for seed for the 1962/3 planting and the remainder was sold to the Cotton Board.¹⁰⁴

In June 1962, the Director of Agriculture (T. C.

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99. W. J. Toms, Report 6, *Northern Developments' Cotton*. 11 January 1962. North West Department file 24/61.
100. *Ibid.*
101. *Ibid.*, Report 9, 25 January 1962.
102. *Ibid.*
103. K. S. Cole (Agricultural Adviser) to H. J. K. Gibsone (O.I.C. Irrigation, Department of Agriculture), 18 June 1962. North West Department file 24/61.
104. Minutes of Ord River Development Project Committee, 20 June 1962. 24 August 1962. P.W.D. file 1183/59.

Dunne) explained that because it appeared likely that farmers would be growing a cotton crop during the 1963/4 wet season, it was essential to conduct a large scale test in the 1962/3 wet season to determine several outstanding matters concerning the technique of cotton growing.¹⁰⁵ He recommended that 210 acres of cotton be planted, that research officer Mr. J. Toms have complete control of the cotton crop and that Resident Engineer, R. Hamilton co-ordinate the various activities and be empowered to make day to day decisions. The estimated cost of this proposed crop was £34,000.

The 1962/3 wet season spraying programme was based on the findings of the previous season, but control of *prodenia litura* was unsatisfactory and the crops suffered severe damage.¹⁰⁶ In his report on the agricultural operations of the pilot farm, W. M. Nunn claimed that "the standard of farming by Northern Developments this season was shockingly low. Land preparation was poor and attention to watering later on was poorly supervised. As a result early establishment was unsatisfactory, crops were patchy and weedy and did not look promising at any stage."¹⁰⁷ Minister for the North West, C. W. Court, spoke of the apparent ill-feeling between the officers of

105. Minutes of Ord River Development Project Committee, 20 June 1962. P.W.D. file 1183/59.

106. K. T. Richards, "Insect pests of cotton in the Ord River Irrigation Area," *op. cit.*, p. 128.

107. Minutes of Ord River Development Project Committee, 20 June 1962. P.W.D. file 1183/59.

the Department of Agriculture at the Ord and the pilot farm administration, and said that the situation was unfortunate because the pilot farm was intended to do a very special task for all concerned in the development of the Ord area.¹⁰⁸ He claimed:

the friction that has existed has greatly reduced the effectiveness of the pilot farm and I think has reacted rather than assisted the area. I am not in a position to pass judgement on who is to blame, but I have had occasion to complain to the Minister for Agriculture about the conduct of at least one of his officers, who was not only very uncooperative, but was also very rude to me on one occasion.¹⁰⁹

Court added that under the circumstances it would appear to be best for the future of the area if the pilot farm were sold - "leave the company free within reasonable limits to undertake the development as it thinks fit, independent of the Agriculture Department and pinpricks from certain of the local officers."¹¹⁰

In accordance with the terms of their agreement, the company requested that the state government sell the pilot farm as at 31 March 1963.¹¹¹ The state government agreed, with the proviso that the cotton experiment be

108. C. W. Court, *Minutes*, 19 December 1962. North West Department file 31/62.

109. *Ibid.*

110. *Ibid.*

111. J. Ewing (Deputy Under Treasurer), *Final Report on Northern Developments (Ord River) Pty. Ltd. Agreement Act No. 32 of 1960*, 13 October 1964. North West Department file 16/63.

continued until the crop was harvested. A contract of sale, a mortgage, and a bill of sale were executed on 31 December 1963. Northern Developments Pty. Ltd. was required to pay for the land, survey fees, cost of developing the land, together with the agreed depreciated values of the fencing, building, fixed improvements, machinery, plant and equipment over a period of thirty years. The total amount involved was £37,728 over twenty four years (1969 to 1993 inclusive) by equal half yearly instalments of principal and interest at 5 per cent per annum.¹¹² During the years 1964 to 1968 inclusive, the company was to pay only interest at 5 per cent on the principal amount. In all, the State government had advanced £175,645 for the pilot farm project. The net cost of the experiment was £105,617 of which £15,111 was found from crop proceeds and plant hire and the balance from the General Loan Fund as follows - £23,472 for cotton crops and £67,034 for rice and other crops.¹¹³

The *Stage I Ord Review* claimed that:

the operation of this large scale pilot farm was not an unqualified success due to the difficulties of running a farming operation with hired labour in an area which, because of climate and locality had a very high labour turnover. The operation did, however, highlight the problems of large scale cropping of rice, linseed, safflower and cotton.¹¹⁴

112. *Ibid.*

113. *Ibid.*

114. *Stage I Ord Review*, November 3, 1971.

The work at K.R.S., at least to 1959, was also not as effective as it could have been. A C.S.I.R.O. officer, J. J. Baskinski, said there was little doubt that trying to do too much at once had been the main fault in past research work at K.R.S. He felt that as a result "the programme as a whole and individual experiments were usually too hurriedly prepared, hastily carried out and insufficiently analysed."¹¹⁵ The K.R.S. had aimed to provide scientific data on which the government could base its decision as to whether a Diversion Dam on the Ord River was justified.¹¹⁶ It would appear however, that the decision to build the Diversion Dam was made with limited information as to the agricultural potential of the region.

At its meeting in April 1959, the K.R.S. Policy Committee, having heard of plans for the establishment of an irrigation area on the Ord River being prepared by the Public Works Department, and anticipating both Commonwealth and State government requests for information on the agricultural potential for the region, agreed to the following statement:

The information obtained by K.R.S. has demonstrated to the satisfaction of this committee that the region has an agricultural potential under irrigation. The exact details of future agricultural development cannot be specified but the K.R.S. has shown that sugar

115. J. J. Basinski, Notes prepared for discussion by the K.R.S. Policy and Supervisory Committees, 4-10 April 1959. P.W.D. file 1086/58.

116. *Stage I Ord Review, op. cit.*

cane can produce yields totalling 12 tons sugar per acre for a planting plus two ratoons, rice 1½ tons per acre and safflower 1 ton per acre. With some additional work cotton and linseed could be expected to be included in the list of such crops.¹¹⁷

The committee went on to add that obviously they could not give complete assurance at this stage that such a scheme would be economically viable from a short term viewpoint but, the region had obvious economic potential and such an expense would be justified.¹¹⁸ At this stage, plans for the construction of a Diversion Dam as the first stage of the proposed Ord River Irrigation Scheme, had already been submitted to the Commonwealth government.

When the first farmers arrived in the area in 1963, there were still many outstanding problems and no one crop offered promise as an economically attractive crop for the future. There appeared to be little cause to claim, as did the Ord River Diversion Dam Project Committee in 1962, that "it was apparent that cotton could be grown successfully and was attractive financially."¹¹⁹ At the same meeting, the Director of Agriculture had explained that before the farmers grew cotton in the 1963/1964 wet season, it was essential to conduct a large scale test to "determine several matters concerning the technique of

117. Minutes of K.R.S. Policy Committee, 6-10 April 1959. P.W.D. file 1086/58.

118. *Ibid.*

119. Minutes of Ord River Diversion Dam Project Committee, 20 June 1962. North West Department file 63/60.

cotton growing."¹²⁰

The main problem which had faced the Research Station since the early 1940's, faced the pilot farm in 1960, and with which the first farmers had to grapple, was the problem of the control of insect pests. The K.R.S. entomologist wrote in 1964 that "effective and economical control by chemical, cultural and biological means of insect pests of cotton in the Ord River has proved to be a difficult task."¹²¹ He listed four main reasons for the problem. First, the number and variety of pests which often necessitated the use of different types of insecticides in the one spraying programme. Secondly, the effect of the wet season climate on the efficient and regular application of insecticides. Thirdly, the possible resistance of certain pests to chemicals and fourthly, the abundance of native host plants for the various insects.¹²² Weeds also remained a problem in all crops, and until 1963 little attention had been given to soil problems in the K.R.S. programmes.¹²³ Yet, with the development of irrigation on a large scale, drainage problems for example were likely to emerge. The black soils

120. *Ibid.*

121. K. T. Richards, "Insect pests of cotton in the Ord River Irrigation Area," *op. cit.*, p. 131.

122. *Ibid.*

123. Minutes of K.R.S. Policy Committee, 30 June-1 July 1960. P.W.D. file 1086/58.
Minutes of K.R.S. Supervisory Committee, 23-26 April 1963. P.W.D. file 1086/58.

of the region were, like many other tropical soils, deficient in phosphorus and nitrogen. As early as 1949, the K.R.S. Supervisory Committee pointed out that there was a soil fertility problem worthy of investigation.¹²⁴ To the late 1950's, none of the legumes tested at K.R.S. had shown nitrogen fixing qualities comparable to the clovers of temperate zones.¹²⁵

Despite the work of K.R.S. many problems relating to irrigated agriculture in the region remained unsolved when the decision to build the Diversion Dam was taken in 1959. Despite the pilot farm experiment, there were still as many problems requiring solution when the first farmers arrived in the area in 1963. Why then did the State government decide to commence the Ord River Irrigation Scheme in 1959? Dr. Paul Madge, head of K.R.S. in 1966, claimed that in his view, the scheme was started about two years too early. He was reported as saying that "there were certain areas of research we wanted to fill out - still, scientists are subject to political pressures like anyone else, I guess."¹²⁶

The next chapter will examine the background to the 1959 decision and attempt to identify the "political pressures" with which decision makers at both the Commonwealth and State level were faced.

124. Minutes of K.R.S. Supervisory Committee, 18-23 July 1949. Department of Agriculture file 162/48.

125. *K.R.S. Progress Report*, Prepared by K.R.S. Supervisory Committee, November 1957. P.W.D. file 1086/58.

126. *Australian*, 2 August 1966, p. 7.

CHAPTER IV

"MUDDLING THROUGH" - THE INITIAL DECISION ON THE ORD RIVER SCHEME

International pressures prevent us from awaiting the ultimate results of investigation before beginning practical action. The 'time' is never 'ripe' for undertaking great and difficult projects: it is necessary to make a practical start with the most obvious resources first, taking a calculated risk based on available knowledge.¹

Following the establishment of the Kimberley Research Station, the McLarty-Watts government in Western Australia began to press the Commonwealth government, first under Prime Minister Chifley and then under Prime Minister Menzies, for financial assistance for further work on the proposed Ord River Scheme. These and later requests were linked with a general resurgence of interest in the development of the northern areas of Australia.

At the conference of Commonwealth and State ministers in October 1944, Prime Minister Curtin had expressed the view that:

both for reasons of defence and development special attention must be given to certain parts of the Commonwealth in order to enable us to administer

1. C. W. Court, "Northern Australian Development," *Public Administration* (Aust.), Vol. XXIV, No. 1 (March 1965), p. 6.

more effectively the total strength of the nation. Some of these parts are, as it were, vampires which at present are sucking at much of the nation's strength. We cannot retain empty spaces in the face of modern development and communication.²

As a result of Curtin's initiative, the joint Commonwealth-State Northern Australia Development Committee was appointed in January 1946.³ In August 1948, Prime Minister Chifley met with the members of the N.A.D.C. to discuss the measures proposed for the development of northern areas.⁴ Following this meeting, Premier D. R. McLarty put forward a submission to the Commonwealth government urging the necessity for improvement in the West and East Kimberley water supplies, as the first and most effective means of developing the cattle industry and preserving the areas adjacent to existing water frontages from erosion. It recommended that the Commonwealth and State governments each subsidise the cost of providing evenly spaced water supplies in the Kimberleys - that is, £140,625 each, over eight years.⁵

In December 1948 the Director of Regional Planning in Australia (Mr. C. R. Lambert) visited Western Australia to confer with representatives of various state

2. *Report of the Northern Australia Development Committee 1947*, p. 2. Sir Russell Dumas papers, Battye Library.

3. See chapter II, p. 86.

4. D. R. McLarty to B. Chifley, 29 November 1948. G. Drake-Brockman Papers, Battye Library.

5. *Ibid.*

departments and bodies interested in the North West.⁶ As a result of the conference a submission "for works and undertakings to improve the quantity and quality of beef exported through Wyndham" was sent to Prime Minister Chifley in February 1949.⁷ Premier McLarty asked Prime Minister Chifley to give the proposals urgent attention as, he claimed, it was "financially impossible for Western Australia to meet the charges required for our North West without very material assistance from the Commonwealth government."⁸ The submission covered six proposals:⁹

1) road development between Wyndham and Nicholson station, suitable for the establishment of road trains for the transport of cattle to the meatworks (approximate cost £1 million), 2) improvements to stock routes by way of improved watering facilities about four miles apart, with a view to spreading over the area available for feed

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6. The interested parties had already met to formulate details for discussion with Lambert. Those involved were J. J. Farrell (General Manager, Wyndham Meatworks), J. W. Young (Commissioner for Main Roads), A. L. McKenzie Clark (Under Secretary for Agriculture), W. M. Nunn (Agricultural Adviser, Agriculture Department), W. A. McCullough (Acting Chief Engineer, Railways), C. M. Dimond (North West), G. Drake-Brockman (Assistant Director of Works).
 7. Submission for "Works and undertakings to improve the quantity and quality of beef exported through Wyndham." P.W.D. file 844/54.
 8. D. R. McLarty to B. Chifley, 1 February 1949. P.W.D. file 844/54.
 9. Submission for "Works and undertakings to improve the quantity and quality of beef exported through Wyndham," *op. cit.*

by travelling cattle (approximate cost £42,000),

3) assistance towards the provision of adequate watering facilities on cattle stations held under crown leases. It was felt that improvements to watering and paddocking could increase the off-take of herds from 10 to 15 per cent per annum. 4), that Wyndham jetty be extended to permit the berthing of one additional vessel and to provide independent connection to the shore (estimated cost £120,000). 5), that Commonwealth assistance be given so that the Ord River Irrigation Scheme could be commenced. 6) that the Commonwealth assist the Air Beef Ltd. scheme, by way of a subsidy equal to the amount of petrol tax collected from the petrol used in the operation.¹⁰ Appendix five of the submission contained details of the proposed Ord Scheme.¹¹ Preliminary proposals at this stage provided for the erection of a masonry dam 160 feet in height above the stream bed, of which ten feet was for flood control purposes. Storage capacity below flood control level was two million acre feet, and it was proposed to release the water at the dam into the river channel, and to construct a diversion weir on a rocky bar across the river about twenty nine miles downstream. Surveys had indicated that well in excess of 200,000 acres of irrigable land could be brought within the scheme. The project, the submission claimed, must be tied up with the

10. *Ibid.*

11. *Ibid.*

Commonwealth government's immigration policy, great care being exercised to prevent the development of any one particular racial type. Experience, it was said, had shown that Italian, Maltese and Yugoslav immigrants would be particularly suitable for the climate and conditions which would prevail.

Although the main objective of the scheme was felt to be the improvement of the cattle industry - it was considered that with the provision of 30,000 to 40,000 acres of pasture, the intake at the Wyndham Meatworks could be increased from 30,000 to 80,000 cattle per annum - the submission also stressed the possibilities for crops such as cotton, rice, groundnuts, tobacco and later sorghums, millets and soy beans. It was stated that "modern scientific pest control measures have now been so developed that it can be assumed that cotton growing, so far as pests are concerned, could be carried out as well in the Ord River area as in any other locality."¹² As far as rice was concerned, it was felt that with the increasing population in Australia and the demand for rice in South East Asia, there was no risk in allocating 30,000 acres of the project to rice. The cost of the scheme, seen as the "first unit of a regional development similar to that now in process in what is known as the T.V.A. project in America," was estimated at £4,300,000 (on 1946 figures).¹³

12. *Ibid.*

13. *Ibid.*

This comprised the main dam (£2,500,000), diversion weir (£600,000), channelling of the first 80,000 acres of the irrigation area (£800,000) and the hydro electric station (£400,000).¹⁴

The *West Australian* saw these proposals as revealing "a commonsense analysis of northern problems and a practical understanding of Australia's limited capacity to carry out national projects."¹⁵ The editorial claimed that it was essential that the Commonwealth assume a financial obligation for the north if more beef was to be exported to Britain.¹⁶ The Commonwealth responded in the form of the *States Grants (Encouragement of Meat Production) Act No. 74, 1949.*¹⁷ Under this Act, the Commonwealth provided financial assistance for the construction of a road, including the necessary bridges, between Wyndham and Nicholson station, and provided 50 per cent of the cost of adequate watering facilities on stock routes. No action was taken on any of the other proposals but the issue of development in the Kimberleys did not die.

In August 1950, the Premiers of Western Australia and Queensland requested that the Commonwealth assist the states to finance various northern development proposals.¹⁸

14. *Ibid.*

15. *West Australian*, 14 February 1949, p. 2.

16. *Ibid.*

17. *Acts of the Parliament of the Commonwealth of Australia*, Vol. XLVII, 1949.

18. Report of the Kimberleys Development Committee, 1 November 1951, p. 6.

Subsequent discussion in Perth, between the Premier of Western Australia and the Minister for National Development, resulted in a decision to appoint a joint Commonwealth-State committee to review the possibility of development in North Western Australia, particularly the Kimberleys, and to report on the steps which could be taken to increase production in the area.¹⁹ The formation of the Kimberleys Development Committee was agreed to in an exchange of letters between the Minister for National Development (W. H. Spooner), and the Acting Premier of Western Australia (A. F. Watts), and the committee commenced work in July 1951.²⁰ The committee comprised Western Australian members C. M. Dimond (Engineer, North West Department of Public Works Department), W. M. Nunn (O.I.C. North West Branch Department of Agriculture), and Commonwealth members G. Rudduck (Director, Division of Regional Development, Ministry of National Development) and P. A. Reid (Acting Assistant Director, for Director B.A.E. Department of Commerce and Agriculture).²¹

In its report, the committee maintained that production in the Kimberleys could be increased considerably, and the export of beef cattle doubled within a ten to fifteen year period. It foresaw major developments in agriculture, mining and pearling.²² As far as the proposed Ord

19. *Ibid.*

20. *Ibid.*, introduction, p. 6.

21. *Ibid.*

22. *Ibid.*, p. 1.

River Irrigation Scheme was concerned, the Committee recommended that the Kimberley Research Station continue on present lines but with increased areas and a higher degree of mechanisation which would enable adequate farming methods.²³ It was also recommended that an entomologist survey the insect pests over a full wet season, a survey of land use and possible subdivision problems be made as soon as possible and a farm scale trial with rice and sugar be established as soon as sufficient planting material became available.²⁴

The early 1950's saw agitation by northern residents themselves for a better deal for the Kimberleys. Mr. F. F. Thomson (Pardoo Station, Port Hedland), Mr. W. A. Leslie (Nunyerri) and Mr. L. G. Hancock (Mulga Downs), formed a committee subsequently known as the Northern Rehabilitation Committee.²⁵ They claimed that in view of the decreased population and production of that part of Western Australia lying north of the 26th parallel, an effort must be made to develop and populate the area. They felt that income tax exemption for a period of twenty years should be granted to all residents north of the 26th parallel in Western Australia, and to residents of the Northern Territory and West Queensland. The idea received the support of local residents, Roads Boards

23. *Ibid.*, p. 3.

24. *Ibid.*

25. *W.A.P.D.*, Vol. 134, 16 Sept. 1953, p. 603.

and the government of Western Australia. In June 1951 a delegation of the committee, plus A. F. Watts (Acting Premier), M. Forrest (M.L.C. North Province) and F. Wise (Leader of the Opposition) put their case to the Federal Treasurer in Canberra.²⁶ Watts asked:

What incentive is there for any individual or any company to bear and put up with severe climatic conditions, the absence of the many decencies of life, the detachment from the great centres of population, the incidence of occasional drought and cyclonic disturbances, only to find the income he earns and the return his investment makes, is subject to virtually the same heavy taxation as a similar income or return gained in hospitable areas and in a salubrious climate, where every facility and comfort abounds? It is contrary to human instincts, and particularly those of this period, that employment and investment should be sought in such areas in such circumstances.²⁷

The matter was submitted to the Taxation Advisory Committee which met with the committee in mid 1952.²⁸

There were further attempts to promote a tax free zone in 1953, when A. F. Watts put forward a motion on the matter in the Western Australian Legislative Assembly.²⁹ The motion was amended to include a plea for Commonwealth cooperation and financial assistance, not just for income tax exemption but for the provision of "better transport, education, health, water and other essential needs and services" in the north of Western

26. *Ibid.*

27. Quoted by A. F. Watts, *ibid.*

28. *Ibid.*

29. *Ibid.*, p. 601.

Australia.³⁰ The amended motion was put and passed by the Western Australian Parliament but was rejected when sent to the Prime Minister.³¹ In his letter to Premier Hawke, Prime Minister Menzies stated that after considering all factors the Commonwealth government had decided that "a bold policy of general tax reduction benefitting all taxpayers in the community rather than sectional concessions, would contribute more to the development and economic welfare of the country."³² By this time, wide newspaper coverage (both local and interstate) had already been given to the problems of the north-west and to the ideas of the Northern Rehabilitation Committee. In August 1953, the management of the *West Australian* had taken a party of interstate and overseas newspaper representatives on a three week tour of the north-west.³³

Late in July 1954, Mr. Ackland (M.L.A. Moore), put forward a motion in the Legislative Assembly.³⁴ The motion, which was subsequently passed in both Houses of the Western Australian Parliament, read:

that this House expresses its opinion that that portion of the state which lies north of the 26th parallel of latitude is incapable of being fully

30. *Ibid.*, p. 613.

31. *W.A.P.D.*, Vol. 138, 6 July 1954, pp. 262-3.

32. *Ibid.*

33. *W.A.P.D.*, Vol. 134, 16 September 1953, p. 603.

34. *W.A.P.D.*, Vol. 138, 21 July 1954, p. 610.

developed if wholly dependent upon such finance as is only obtainable from State resources. It therefore requests

- a) that the government present a programme for the development of that portion of the state to a committee consisting of the Premier (A. R. G. Hawke), Minister for the North West (H. C. Strickland), Leader of the Opposition (Sir R. McLarty), Leader of the Country Party (A. F. Watts) and the Speaker and member for the Pilbara (Hon. A. J. Rodoreda).
- b) That this committee consider the programme as presented to it by the government and, if necessary, amend the programme.
- c) That the committee submit such programme personally at Canberra to the Prime Minister and Federal Treasurer.
- d) That a special annual grant of an amount considered necessary for such development work be requested for a period of ten years in order to carry out the programme.³⁵

One year later, in June 1955, the all-party committee presented their proposals for the development of the Kimberleys and the North West to Prime Minister Menzies and Treasurer A. Fadden.³⁶ Their plan, which involved an expenditure of almost £20 million, included the development of a deep sea port at Black Rocks near Derby, the improvement of the North West coastal road between Ajana and Carnarvon, tariff protection or subsidising of the blue asbestos industry at Wittenoom, taxation concessions above the 26th parallel, the improvement of the 200 mile road between Port Hedland and Wittenoom by the construction of a thirty six mile deviation in the Mt. Herbert

35. *W.A.P.D.*, Vol. 138, 18 August 1954, pp. 1124-5.

36. *West Australian*, 21 June 1955, p. 1.

area, financial aid toward the provision of additional ships for the North West and the development of the Ord River Irrigation Scheme.

As far as the Ord River Scheme was concerned, the committee saw it as involving an overall farm population of approximately 2,400 and a town population of about 20,000. The water from the proposed dam would be used in growing sugar cane and rice, with beef fattening as an important subsidiary activity.³⁷

In December 1956 the State government prepared a more detailed submission on the Ord River Irrigation Scheme.³⁸ The proposed design of the dam had changed since the 1949 submission. Ten years of river gauging had shown that the flow of the Ord River was highly variable and a study of discharges (in particular, the seasons of low flow 1948, 1952 and 1954 and high flow 1956) pointed to the fact that consideration should be given to a dam ten feet higher than that proposed in 1949. This would provide for a normal storage capacity of three million rather than two million acre feet.³⁹ There was still much information to be obtained from the field before detailed design could be undertaken. The December 1956 submission estimated costs at £11½ million, comprising:

37. *Ibid.*, p. 4.

38. P.W.D. file 844/54.

39. *Ibid.*

Wyndham jetty improvements (provision of berth extension of 550 ft. together with a jetty neck and embankment approach to connect to the southern end of the goods yard)	£500,000
Main dam	5,800,000
Diversion weir	1,500,000
Channelling etc. for first 80,000 acres irrigation area	3,200,000
Hydro electric station	500,000
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Overall total	11,500,000
plus total developmental work on farms	7,200,000
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	<u>£18,700,000</u>

The Hawke government admitted that the scheme could in no sense be economic if the capital costs of dam construction, the hydro-electric power station, water reticulation and Wyndham jetty improvements were charged against it.⁴⁰

However, in submitting a case for the proposal to the Commonwealth, the State government took the view:

that these works should be considered a charge against a national effort to encourage settlement in our northern areas, in which case, other charges associated with farm construction and operation appear quite favourable from a land settlement point of view.⁴¹

The Western Australian government considered that they had some chance of gaining Commonwealth approval and financial assistance, at least for the Ord River Scheme. The Minister for National Development, Senator W. H. Spooner, had as early as September 1954, expressed an interest in the scheme. According to Senator H. S. Seward,

40. *W.A.P.D.*, Vol. 145, 4 Dec. 1956, p. 2829.

41. *Ibid.*

at the conclusion of a speech in the budget debate in which he had outlined some of the difficulties confronting the State government in its task of developing the North West, Senator Spooner approached him to ask if he had any plans for water conservation on the Ord River.⁴² He also told Seward that he was "particularly anxious to undertake some big work like the Snowy River job in Western Australia though possibly not quite so large." He added that it could only be done if requested by the State government.⁴³

Seward's letter provoked immediate interest in plans for the Ord River Scheme and the Director of Works (J. W. Young) was asked to comment on the matters raised by Seward. His reaction was that the Ord River Dam was still in its investigation stage and that before any benefit could arise from it, many millions would have to be spent. Works such as the Bunbury Harbour, Albany Harbour, Collie Sewerage, Wellington Dam, the deepwater port in the Derby area, the additional berth at Wyndham jetty, were meanwhile being delayed or held up due to a shortage of funds. Dumas wrote:

If Senator Spooner or Senator Seward is anxious to help the state in water projects that are of more vital importance to Western Australia in the near future then their help in obtaining the Federal

42. H. S. Seward to A. R. G. Hawke, 24 September 1954. P.W.D. file 844/54.

43. *Ibid.*

government's support in assisting by the 50/50 contribution for the full cost of the comprehensive scheme would be of value.⁴⁴

The Minister for the North West in the Western Australian government (H. C. Strickland) did not agree with Young's conclusions - he felt that although there were important schemes in the south of the state held up for want of finance, no opportunity for developing the north should be overlooked.⁴⁵ He claimed that the proposed Ord River Scheme was the only scheme that could ever bring an agricultural population in any worthwhile numbers to the East Kimberleys. The Director of Works continued to advise a cautious approach as far as the Ord River Scheme was concerned. In January 1955, he advised the Under Secretary for Works that there were still "many problems apart from those actually involved in obtaining information for dam design that will require investigation before the whole value of the project can be assessed."⁴⁶ He pointed out that none of the Public Works Department staff had any personal experience of the type of problem that would have to be faced in the construction of a dam under the conditions existing at the proposed site.⁴⁷

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44. Notes by the Director of Works (J. W. Young) "on matters raised by Seward," 30 Sept. 1954. P.W.D. file 844/54.
45. H. C. Strickland to A. R. G. Hawke, 18 October 1954. P.W.D. file 844/54.
46. J. W. Young to R. J. Bond (Under Secretary for Works), 19 January 1955. P.W.D. file 844/54.
47. *Ibid.*

The Director of Agriculture also advised a cautious approach, claiming that a premature request, unsupported by definite information, could well detract from the submission to the Commonwealth and would not hasten any decision.⁴⁸

Despite such advice, Premier Hawke wrote to the Acting Prime Minister (Sir Arthur Fadden) one month later, claiming that "investigations regarding the agricultural production under irrigation of lands which could be watered by a dam constructed on the Ord River in North Western Australia have now reached satisfactory conclusions."⁴⁹ He suggested that the Commonwealth appoint a panel on which Western Australia would have representation, to review and determine a policy for the project. Hawke also asked the Commonwealth government to arrange for the engagement of an engineer with experience in the special problems associated with this dam, to act as consultant during the design and preparation of estimates.⁵⁰

Meanwhile, despite persistent questions to the Prime Minister as to a Commonwealth decision in relation to the all-party committee's submission in June 1955, no announcement was made until late in November 1957, when the Prime Minister announced a general development grant

48. Director of Agriculture (G. K. Baron-Hay) to Minister for Agriculture (E. K. Hoar), 4 February 1955. P.W.D. file 844/54.

49. A. R. G. Hawke to A. Fadden, 1 March 1955. P.W.D. file 844/54.

50. *Ibid.*

to Western Australia.⁵¹ This grant, which totalled £2½ million over a five year period, was to promote the development of that area of the state north of the 20th parallel of latitude.⁵² Menzies stated that:

as the overall responsibility for the development of this area will continue to rest with the state, it is envisaged that the state government should decide the particular works projects on which this grant will be expended. At the same time, the Commonwealth is concerned to ensure that the money it provides will lead to new and additional development in the area and will not merely be used, wholly or partly, in substitution for expenditure which the state government would otherwise have carried out.⁵³

The state government was to submit projects for approval to the Commonwealth government.

Reaction to the proposed grant was varied. The *West Australian* reported that outside the House of Representatives, government members and senators described the grant as "chickenfeed" and "a political sop to stop Western Australian members from howling."⁵⁴ The *West Australian* received a telegram from Western Australian Senators S. D. Paltridge, M. F. Scott and V. S. Vincent, Territories Minister P. Hasluck, G. Freeth, F. C. Chaney and R. Cleaver stating that all Liberal Senators and members for Western Australia commended the Commonwealth grant

51. *C.P.D.*, H. of R. 17, 28 November 1957, pp. 2650-1.

52. *Ibid.*

53. *Ibid.*

54. *West Australian*, 29 November 1957, p. 2.

for the Kimberleys, and pointing out that the grant was "the first ever made for the development of a designated region unconditionally and without requiring matching state expenditure."⁵⁵ The telegram also said that "wise expenditure by the state government on £2½ million capital works can greatly assist development and prove a valuable argument for further measures for assistance to the north."⁵⁶

Premier Hawke felt that the £2½ million grant fell far short of the needs of that part of the state, however, he said, "it was good to know that a decision had been made at long last."⁵⁷ He said he would confer immediately with Deputy Premier J. S. Tonkin and North West Minister Strickland to decide on proposals for recommendation to State Cabinet. Opposition Leader Brand said that provided both State and Commonwealth governments were prepared to acknowledge that development of the north must be a stage by stage process, the Federal decision could be the start of a very satisfactory Commonwealth-State partnership in the development of the North West. He felt that it would obviate international criticism for holding such fertile and potentially rich land undeveloped and unpopulated.⁵⁸ The Northern Rehabilitation Committee had two reservations. First, they were disappointed at the choice of the

55. *Ibid.*

56. *Ibid.*

57. *Ibid.*

58. *Ibid.*

20th parallel rather than the 26th as the line of demarcation. Secondly, the grant did nothing to increase the permanent population of the north - "at best the expenditure of the Federal money would only mean a temporary increase in population with a resultant fillip to local businesses while works were in progress."⁵⁹

Western Australian M.H.R., H. Webb, felt that the grant was not nearly large enough. He claimed that the Commonwealth government should have endorsed specific proposals - particularly the Ord River Irrigation Scheme and the deep water port at Derby.⁶⁰ Senator V. S. Vincent (Lib. W.A.) felt that had the State advanced an adequate and proper plan, the grant would have been much larger.⁶¹ The *West Australian* editorial claimed that the grant was disappointing and "not enough for the job."⁶² It argued that the Commonwealth government had no imaginative policy for Northern Australia as a whole, and it had yet to show that it was fully aware of the size and complexity of the northern problem. The editorial stated that although the money would help in the north, it would not make a significant difference to its economy and population. What was needed was "a bold, Federal-state development policy involving tax concessions, big schemes of water

59. *Ibid.*

60. *Ibid.*

61. *Ibid.*

62. *West Australian*, 30 November 1957, p. 6.

conservation, harbour and road construction and measures to raise social standards."⁶³

That the Western Australian government had no well defined projects for development in the North West, despite its pleas, over nine years, for financial assistance in the area, is suggested by the fact that Premier Hawke did not submit proposals to the Commonwealth for expenditure of the £2½ million grant for three months. The proposals were for a deep water port at Black Rocks, extensions to Wyndham jetty and improvements in communications in the Napier-Broome Bay area.⁶⁴ The planned jetty at Black Rocks was 11,100 feet long and works were to include jetty approaches, navigational aids, cattle yards, goods yards and sheds, a jetty railway, water supply and housing for port operatives.⁶⁵ The plans for Wyndham jetty provided for a new 550 ft. berth, a jetty neck, approach embankment, extension of the goods yard and a timber fendering system for the existing jetty. In the Napier-Broome Bay area, a more detailed examination was to be made of the coast between Kalumburu mission and West

63. *Ibid.*

64. This proposal was first decided on by the McLarty-Watts government in 1951. The Commonwealth government was asked, in January 1951, to join with the state on a 50/50 basis to provide a jetty at Black Rocks at an estimated cost of £330,000.
W.A.P.D., Vol. 154, 27 October 1959, p. 2472.
C.P.D. Senate, Vol. 12, 13 May 1958, p. 982.

65. *West Australian*, 17 April 1958, p. 11.

Bay, to assess problems of access to the North Kimberley pastoral area by both land and water.⁶⁶ In his submission, Premier Hawke stated that it was possible that the construction of a deep water port at Black Rocks and the Napier-Broome Bay investigation would not leave a sufficient balance from the £2½ million grant to meet the full cost of the Wyndham jetty project. Hawke said that "should this situation develop, the state would desire to make a further approach to your government and would itself be prepared to make available at that time a reasonable amount of loan moneys from the General Loan Fund then available to the State government."⁶⁷

It was clear that much work was still needed before final designs and estimates could be prepared for any of the three projects. The proposals, not yet approved by the Commonwealth government, were criticised during debate on the *Western Australia Grant (Northern Development) Bill* 1958, in both the Senate and the House of Representatives. Mr. R. Cleaver (M.H.R. Swan) expressed concern that the Western Australian government did not appear to be very far advanced with detailed plans for the North West developmental work.⁶⁸ He claimed that:

apparently the Western Australian government is ill prepared or has been until very recently - for although the Prime Minister announced the intention

66. *Ibid.*

67. *W.A.P.D.*, Vol. 58, 22 August 1961, p. 394.

68. *C.P.D.*, H. of R., Vol. 18, 22 April 1958, p. 1076.

to make these funds available in November of last year, only in recent days have any proposals been received from the Western Australian government.⁶⁹

Senator M. F. Scott stated that the Western Australian government should have another look at the proposal for a deep water jetty at Black Rocks. He felt that the expenditure of one or two million pounds on developing the port at Black Rocks would have little effect on exports. The proper approach, he said, would be to repair the present jetty at Derby.⁷⁰ The Commonwealth government justified its grant by admitting that although scientific research in the Kimberleys was in its infancy, sufficient knowledge of the region's economic possibilities was available to justify increased public investment.⁷¹

The £2½ million grant, followed by the visits of the Governor General Sir William Slim and Prime Minister Menzies to the North West in May 1958, were together seen by the *West Australian* as the turning point in the development of the North. The paper felt that Western Australia had suffered the disadvantage that the North West was virtually unknown, nobody with any real decision making influence having ever been there.⁷² It was felt that

69. *Ibid.*

70. *C.P.D.*, Senate, Vol. 12, 13 May 1958, p. 983.

71. Senator W. Spooner on introducing the *Western Australia Grant (Northern Development)* Bill 1958 to the Senate. *C.P.D.*, Senate, Vol. 12, 1 May 1958, p. 758.

72. *West Australian*, 20 May 1958, p. 6.

Menzies' four day visit, inspired by the championing of the north by the Northern Rehabilitation Committee, the 1955 all party committee, the speeches of M.H.R.'s H. Webb, K. Beazley, G. Freeth and R. Cleaver, "gave Western Australia a very definite hope of material gain in addition to an important intangible fillip, especially in the north."⁷³ The editorial claimed that "the evolution of a bold, imaginative policy for the North West and Northern Territory would be a landmark in the history of a government which has done much in the way of development outside already highly developed southern areas. All that is needed to open an era of unprecedented expansion in the north is a courageous Federal lead."⁷⁴

It was during the late 1950's too, that the State Liberal and Country League began to express an interest in the North West and formulated a policy for the area. A committee was formed by the L.C.L. as a result of a motion passed at the 1958 state conference of the party.⁷⁵ The motion read:

in view of the inability of any state government to develop the north of Western Australia from its own resources and in view of the urgency of this development it is requested that a special committee be established by State Council with strong North West and Kimberley representation to examine the practicability and desirability of reaching agreement with

73. *Ibid.*

74. *Ibid.*

75. C. W. Court to H. Guthrie, 13 May 1958. H. Guthrie papers, Box I, Battye Library.

the other states and the Commonwealth for a separate Commonwealth budget supplemented and agreed between the Commonwealth and Western Australia, without prejudice to Western Australia's normal Commonwealth allocation.⁷⁶

The committee, which first met on 19 May 1958, comprised G. Blythe, W. Butcher, R. Dumas, R. B. Goode, H. N. Guthrie, L. Hancock, A. W. Miles, and C. W. Court M.L.A. (Convenor).⁷⁷ By September 1958 the committee had prepared a comprehensive policy for the north of Western Australia and submitted it for detailed examination, to the Federal Policy Committee.⁷⁸ The policy had two parts, one dealing with matters considered within the capacity of a state government and which would be implemented by a Liberal government in office as a state government; the other containing proposals for negotiation with the Commonwealth government on what the committee saw to be the basic elements of a broad national policy for the north.⁷⁹ The first part included provision for greater local North West and Kimberley influence in government activities, co-operation with the Commonwealth government and encouragement of private enterprise, expanded agricultural and pastoral research, encouragement of industries such as minerals, oil, fisheries, pearling, and the improvement of

76. *Ibid.*

77. *Ibid.*

78. Submission to Commonwealth government, 30 September 1958. H. Guthrie Papers, Box I.

79. *Ibid.*

land, sea and air transport. The second part proposed:

to examine with the Commonwealth, the government of Queensland and the administration of the Northern Territory, the problems of development of the whole of Northern Australia in order to determine what common problems exist. If common problems are established and agreed upon then to press for the establishment of a Northern Australia Development Commission.⁸⁰

Three delegates from the L.C.L. of Western Australia (F. A. Johnston, state president, W. E. Butcher of Nangetty Station and Gordon Freeth M.H.R.) took the plans to the Federal Council of the Liberal Party in October 1958; where Butcher moved the motion "that recognizing it as a matter of high national importance, this Federal Council recommends the whole subject of the development of the north of Australia to the immediate attention of the Federal government."⁸¹ The Western Australian delegates argued that the development of the north was a national problem and that "bold schemes would fit into the party's election platform of an Australia unlimited under a Liberal government."⁸² They also laid emphasis on the Ord River Scheme, claiming that if Australia could afford a £300 million Snowy River Scheme it could easily adopt a £20 million Ord River proposal - the Ord River it was felt would return a dividend 100 to 200 per cent greater. The motion was passed by the

80. *Ibid.*

81. *West Australian*, 1 October 1958, p. 2.

82. *Ibid.*

Federal Council, delegates from other states reporting that no motion from any other state had been more enthusiastically received or wholeheartedly supported.⁸³

The *West Australian* gave the Federal Council of the Liberal Party enthusiastic coverage - in fact it had promised as much on 24 September 1958 when H. Guthrie and C. W. Court met with Griff Richards of the *West Australian*.⁸⁴ In talking to Court and Guthrie, Richards placed emphasis on the need for the Prime Minister to make a worthwhile pronouncement in connection with the North West in his forthcoming election policy speech. Court felt it necessary to warn V. L. Ockerby (State Secretary of the L.C.L.) that he felt certain that the *West Australian* would "severely criticise the Commonwealth Liberals if something worthwhile is not included, particularly in view of the Prime Minister's utterances when and since he was in the area."⁸⁵ The *West Australian* editorial of 2 October 1958, stated that Western Australia would look expectantly to the election speech of the Prime Minister, now that the Federal Council had adopted as policy the Western Australian sponsored plan for northern development:

The nation has made great progress since he took

83. *Ibid.*

84. C. W. Court to V. L. Ockerby, 25 September 1958. H. Guthrie Papers, *op. cit.*

85. *Ibid.* Ockerby was, at the time, in Canberra for the Federal Council.

office in 1949. Yet it must cause the Prime Minister and his colleagues some embarrassment that none of the Menzies cabinets has produced a landmark in achievement comparable with Labor's Snowy Mountain scheme or its immigration programme. In his policy speech the Prime Minister has an opportunity to open wide our last frontier and leave the mark of his statesmanship on half the continent.⁸⁶

The 1958 Federal election campaign saw both Liberal and Labor parties expressing an interest in the problems of the north of Australia. The election speech given by the Leader of the Opposition (Dr. H. V. Evatt) was criticised by the *West Australian* for lacking any concrete proposal for helping North Western Australia.⁸⁷ However, when in Perth one week later, Dr. Evatt elaborated on his party's policy, and promised that a Labor government would implement the £20 million plan for North Western development taken to Canberra three years before by the all-party Western Australian delegation. He claimed that in his opinion, the Ord River Scheme was completely justified on the grounds of defence and closer settlement.⁸⁸ In his election policy speech, Prime Minister Menzies promised to double the existing grant to Western Australia for development of that part of the state north of the 20th parallel of latitude.⁸⁹ Additional funds were to be available from June 1959, bringing the total special assistance to the

86. *West Australian*, 2 October 1958, p. 6.

87. *West Australian*, 17 October 1958, p. 6.

88. *West Australian*, 25 October 1958, p. 7.

89. *West Australian*, 30 October 1958, p. 1.

North West to £5 million over the five years from June 1958. The *West Australian* editorial described his policy speech as "safe but uninspired" and claimed that adding £2½ million to the £2½ million already given to Western Australia for northern development, over five years, would not alter the face of the north or solve any of its basic problems.⁹⁰ In Perth early in November 1958, deputy Prime Minister J. McEwen promised that Commonwealth special aid for North West development could be expected to continue indefinitely, but the Commonwealth government wanted to watch results before making decisions - it did not wish to bind itself to fixed plans whose basis might be changed by events.⁹¹ The election of 22 November 1958 resulted in a decisive election victory for the Liberal-Country Party government which now had the majority it needed in the Senate (a 30-30 stalemate was converted to a 32-28 majority) and had a stronger grip on the House of Representatives (a majority of 32, compared with 28 in the old House). Western Australia contributed to this victory in that the Liberals won two seats - Stirling and Kalgoorlie - and also won the Senate in Western Australia.

On 1 December 1958 the Western Australian State Cabinet appointed a special sub-committee of four ministers to draw up a list of suggested works on which the additional £2½ million grant could be spent. The sub-committee

90. *West Australian*, 30 October 1958, p. 6.

91. *West Australian*, 3 November 1958, p. 7.

(comprising Premier A. R. G. Hawke, Deputy Premier J. T. Tonkin, North West Minister Strickland and Industrial Development Minister F. J. Wise) obviously found no concrete, well researched plans for possible development projects in the North West - in fact, they considered the possibility of preparing a case to have some, or all of the additional funds, spent south of Derby.⁹² The *West Australian* claimed that proposals for works south of Derby, though admirable in themselves, would be dubious as a charge on the special grant.⁹³ The paper pressed for the money to be spent on the Ord River Scheme, saying that the State government would thus avoid the danger of frittering away a great opportunity and losing goodwill in Canberra.⁹⁴

Late in January 1959, the State government put forward a submission for Commonwealth authority to start the Ord River Irrigation Project with the second £2½ million grant.⁹⁵ However, by the end of February 1959 the State government had changed its mind and decided to spend all, or nearly all the second grant on the three schemes already approved under the first grant.⁹⁶ The State

92. *W.A.P.D.*, Vol. 151, 2 December 1958, p. 2561.

93. *West Australian*, 6 December 1958, p. 6.

94. *Ibid.*

95. *West Australian*, 20 January 1959, p. 6.

96. *C.P.D.* H. of R. Vol. 22, 25 February 1959, p. 253.

government had obviously appeared uncertain as to the nature of its request for assistance under the second grant. When M.H.R. P. Browne (Liberal, Kalgoorlie) questioned the Prime Minister late in February 1959 as to whether the Western Australian government had yet submitted any proposal, Menzies replied that he felt the increased amount would probably be used in connection with the three earlier proposals.⁹⁷ He answered:

The Premier of Western Australia has since put forward a pretty comprehensive proposal with respect to the Ord River, which, as he has made clear, he does not consider should be included in the works to be covered by the £5 million grant. It is a very complicated proposal. It will require an immense amount of investigation, and this government and the Western Australian government are discussing it at the present time.⁹⁸

Premier Hawke confirmed his changed decision in the press, when he said, "rather than lose the second grant, we decided to agree that the money be used for purposes other than the irrigation scheme at Ord River."⁹⁹ He told of Canberra's concern about the marketing possibilities for rice, sugar, cotton and the types of products that could be grown in the proposed Ord River Irrigation area.¹⁰⁰

The editorial of the *West Australian* claimed that the

97. *Ibid.*

98. *Ibid.*

99. *West Australian*, 26 February 1959, p. 1.

100. *Ibid.*

shelving of the Ord River Project showed that neither the Commonwealth, nor the State government had a northern policy - faced with this unexpected money and without any preconceived idea for spending it, the State government, it said, had simply offered a "grab sample of public works."¹⁰¹ The State government was asked to explain why three port projects, which were to have been carried out with the original £2½ million grant, should now take "all or nearly all" of the total £5 million grant.¹⁰²

Meanwhile, there was persistent criticism of the government's port projects - both in Parliament and in the press. Peter Browne (M.H.R. Kalgoorlie) returned from a tour of the North West and Kimberleys claiming that a port at Black Rocks "would not add a bale of wool or a head of cattle to the Kimberley economy."¹⁰³ He felt that although a deepwater port in the area would ultimately be essential, the decision to establish one there at this stage was a classic example of "putting the cart before the horse."¹⁰⁴ He also claimed that the state government did not know what to do with the grant money. The town of Derby, he said, was too permanent an institution to be shifted the thirty five road miles to Black Rocks, therefore Derby people would obviously have to

101. *West Australian*, 27 February 1959, p. 6.

102. *Ibid.*

103. *West Australian*, 14 March 1959, p. 2.

104. *Ibid.*

bear thirty five miles of freight costs.¹⁰⁵ On speaking on the *Western Australia Grant (Northern Development) Bill* 1959 (the Bill to increase the amount of financial assistance to £5 million), Senator Scott also spoke out against the construction of Black Rocks port - "I believe that a responsible government would not venture to spend money on the development of a port to provide facilities for overseas vessels when the tonnage of cargo available of shipment does not warrant the calling of more than one vessel a year, and possibly warrants the calling of only one vessel every two years."¹⁰⁶

The issue of the second £2½ million grant was further complicated by the matter of the state election, held on March 21, 1959. In his policy speech, Premier Hawke pledged that the government would continue to press the Commonwealth government to join with the state financially and technically, to construct the Ord River Irrigation Scheme.¹⁰⁷ The *West Australian* criticised the West Australian Labor Party's northern development policy saying that "the government has not yet evolved a comprehensive policy offering a specific programme of development for the North. It is not looking beyond the Ord River Irrigation Scheme."¹⁰⁸ The paper claimed that the

105. *Ibid.*

106. *C.P.D. Senate* Vol. 14, 14-15 May 1959, p. 1490.

107. *West Australian*, 3 March 1959, p. 6.

108. *Ibid.*

Liberal party, on the other hand, sought to stimulate development with comprehensive plans, soundly based on Commonwealth-State cooperation.¹⁰⁹

At this stage, four months after the announcement of the increased grant, the Commonwealth was still awaiting a decision from the Western Australian government as to how the £2½ million grant would be spent. At a press conference on 13 March, Prime Minister Menzies said that the Commonwealth "intended the additional grant for greater North West development, but in matters of this kind we are largely in the hands of the State. The Commonwealth legislation authorising the second grant is ready to be introduced but waits on the state outlining the projects it intends to undertake."¹¹⁰ The Hawke government, defeated at the polls on 21 March 1959, was not replaced by the D. Brand Liberal-Country Party coalition until 2 April 1959. During its last days in office, the Labor government once again submitted proposals to the Commonwealth government seeking approval to spend the second grant on a Diversion Dam on the Ord River.¹¹¹

On 21 April 1959, the cabinet of the new State Liberal-Country Party government appointed a special

109. *Ibid.*

110. *West Australian*, 14 March 1959, p. 2.

111. Submitted on 26 March 1959. *W.A.P.D.*, Vol. 154, 27 October 1959, p. 2472.

committee to clarify the whole question of the spending of the two grants. The committee comprised Premier Brand, Deputy Premier Watts, Works Minister Wild and North West Minister Court.¹¹² Premier Brand claimed that "an examination of the files showed that there had been many confusing decisions in the past," and in view of the urgent need for work to proceed on new deepsea ports the committee was asked to expedite its inquiry.¹¹³ On 5 May 1959, following a visit by the committee to the Ord Dam site and the Wyndham and Black Rocks port sites, Cabinet confirmed the Diversion Dam as one of the desirable projects within the framework of the £5 million grant.¹¹⁴ It was to involve about £3 million and would, it was felt, present an opportunity to examine the productivity and economic potential of the main scheme.¹¹⁵ Details were submitted to the Commonwealth government for approval on May 7, 1959.¹¹⁶

The northern inspection tour of the committee also produced tentative plans for a more intensified approach to northern development, with emphasis on improved transport and marketing facilities. C. W. Court (Minister for the North West) returned, convinced that a series of deep

112. *West Australian*, 22 April 1959, p. 7.

113. *Ibid.*

114. *West Australian*, 6 May 1959, p. 1.

115. *Ibid.*

116. *W.A.P.D.*, Vol. 154, 27 October 1959, pp. 2472-3.

water ports would help reduce the operating costs of coastal shipping, improve the service and open the north west to world shipping and markets.¹¹⁷ He said that no decision would be made on Black Rocks until a thorough investigation of all possible port sites had been made.¹¹⁸ Following Commonwealth approval for the Black Rocks proposal, new soundings had been made. These proved that there was less depth at the proposed jetty head than had been recorded in the 1952 sounds, and shown on the plan submitted to the Commonwealth government.¹¹⁹ This discovery, together with conflicting views as to whether Black Rocks was the proper place for a deepwater port, prompted the government to appoint a firm of consultants to report on the matter.¹²⁰ On their report, G. Maunsell and Partners concluded that the cost of a deepwater port at Black Rocks would be not less than £2½ million (the 1951 estimate was £330,000) and recommended that the best port site for the West Kimberley would be Broome.¹²¹ The report concluded that "at Derby there appears to us no solution that can be achieved either at moderate cost or without the legacy of costly maintenance and doubts of

117. *West Australian*, 26 May 1959, p. 1.

118. *Ibid.*

119. *W.A.P.D.*, Vol. 158, 16 August 1961, p. 271.

120. *Ibid.*

121. *Deepwater port to serve the West Kimberley Region*. North West Department file 2/61.

its abilities to match the demands of the future."¹²²

Disbursement of the major part of the £5 million grant on the proposed Ord River Scheme now seemed virtually certain; the Black Rocks project was abandoned and the extensions to Wyndham jetty, and surveys in the Napier-Broome Bay area required only a small portion of the grant. Despite the claims of the state government that development was urgently needed in the north, there appeared to be few, if any, well researched and viable projects awaiting finance. In mid August 1959, North West Minister Court, at the Commonwealth government's invitation, visited Canberra to discuss the proposed Ord River Scheme, in particular the Diversion Dam proposals submitted by the state government in May 1959.¹²³ He met for two hours with Prime Minister Menzies, Deputy Prime Minister J. McEwen, Treasurer H. Holt and National Development Minister W. H. Spooner, but failed to reach any agreement.¹²⁴ The Prime Minister said that he would set out the Commonwealth government's attitude on the Ord River Project in a letter the following week; although the Commonwealth took the view that a small pilot farm scheme should be undertaken before work began on the Ord River Diversion Dam.¹²⁵ On his return to Perth, Court accused

122. *Ibid.*

123. *West Australian*, 21 August 1959, p. 2.

124. *Ibid.*

125. *Ibid.*

the Commonwealth government of too timid an approach.¹²⁶

He claimed that the Diversion Dam scheme was a pilot project in itself:

What is just as important is that it will give practical experience in the community needs of the area. Data on such things as the type and location of housing, transport, communications, supply, markets and education - among other important information - is necessary before the bigger and main Ord Dam scheme is attempted. The diversion scheme can give this information. One or two pilot farms cannot.¹²⁷

M. C. Uren, writing his *Canberra Diary*, expressed the view that it was Treasury timidity which dominated and called the Commonwealth government's unimaginative approach.¹²⁸ He stated that although the Menzies government could claim many a record, it could not claim one "in the field of imaginative national development to hold a candle to Labor's Snowy Scheme."¹²⁹

Commonwealth government approval for the Ord River scheme as a proposal under the *Western Australia Grant (Northern Development) Act 1958-1959* was received on 26 August 1959.¹³⁰ It would appear that the argument which changed the Commonwealth government's attitude, was that

126. *West Australian*, 24 August 1959, p. 2.

127. *Ibid.*

128. *Ibid.*, p. 4.

129. *Ibid.*

130. *West Australian*, 27 August 1959, p. 1.

it was not for the Commonwealth, having promised £5 million for northern development, to tell the Western Australian government how to spend it. Nevertheless the Commonwealth government was still not convinced as to the merits and economic soundness of the scheme. Menzies wrote:

If we were spending the money ourselves and of our own choice, we would, I think, like to have a good deal more information as to the problems of transport and marketing. It is one thing to feel reasonably satisfied that certain commodities can be grown under irrigation. It is, of course, quite another to determine whether they can be profitably grown. But we have come to the conclusion that this is, after all, your business. You have the immediate responsibility for developments in your state; we have esteemed it our duty to provide some financial assistance.¹³¹

Menzies stated that the £5 million grant was firm and that no decision was to be treated as involving an obligation to exceed it. He added that he felt it would have been wise to take the preliminary step of establishing, on a normal farming basis, several irrigated farms supplied with water from the river, before any decision about the Diversion Dam was made.¹³² Premier Brand's reply claimed that the project would demonstrate "the commercial possibilities of the area and be a firm basis from which to make decisions regarding the greater Ord Scheme as well as conservation, irrigation and

131. R. G. Menzies to D. Brand, 24 August 1959. P.W.D. file 560/60.

132. *Ibid.*

agricultural schemes in the West Kimberleys."¹³³

Of the total £5 million grant for northern development, approximately £4,100,000 was eventually spent on the construction of the Ord River Diversion Dam.¹³⁴ The state's decision to submit the Ord River scheme for inclusion as a project under the *Western Australia Grant (Northern Development) Act 1958-59*, does not appear to have been a decision based on definitive scientific information. The previous chapter has shown that despite fourteen years of research at Kimberley Research Station, there were still many problems outstanding. The K.R.S. Supervisory Committee pointed to some of the agricultural, and particularly the entomological problems still requiring solution, and stated that there was no single outstanding, commercially viable crop available for the first farmers.¹³⁵

Why then did the state government decide to press for funds for the Ord River Scheme at this time, and the Commonwealth government eventually agree to the expenditure of most of the £5 million grant in this way? Despite what appeared to be a vague commitment to northern development (on the grounds of defence and closer

133. D. Brand to R. G. Menzies, 11 September 1959. P.W.D. file 560/60.

134. *Ord Irrigation Project - a request for aid from the Commonwealth government.* (Draft) P.W.D. 774/62.

135. See chapter III.

settlement) by both political parties over the past forty years or so, the state government's decision to go ahead with the Ord Scheme at this time would appear to be an example of "muddling through." The first £2½ million grant for northern development was announced in November 1957, yet the state government, which had been pressing the Commonwealth for finance to develop the north since the late 1940's, did not submit its proposals for the expenditure of the grant until March 1958. Even then, the plans were not very detailed or thoroughly researched. The Black Rocks port site had to be abandoned after further research, and even the plans for Wyndham jetty had to be altered after further, more thorough investigation. After the Commonwealth government announcement of the second £2½ million grant, the state government even considered spending the money south of the 20th parallel, suggesting once again the lack of any well researched plan for the north west. The proposal that the great proportion of the money be spent on the Diversion Dam as stage I of the Ord River Scheme, would appear to have been a last resort - all other alternatives having disappeared.

On the part of the Commonwealth, the first £2½ million grant appeared to be a token grant, a result of pressure from the press, Parliament, and bodies such as the Northern Rehabilitation Committee and the Western Australian all-party committee. There appeared too, to be definite needs to which the grant could be applied. The second £2½ million grant, announced by Prime Minister

Menzies in his policy speech for the 1958 general election would appear to be purely politically inspired (with the Western Australian elections to follow soon afterwards). There was obviously great pressure on Menzies to make a definite commitment to northern development, especially after the Federal Council of the Liberal Party had so enthusiastically adopted the Western Australian Liberal and Country League policy on the matter. As for Menzies' agreement to the expenditure of most of the grant on the Ord River Scheme - it would seem possible that he was swayed by the press and party comment that his government needed to come up with a great scheme to match Labor's Snowy Mountains Scheme.

CHAPTER V

STAGE I OF THE ORD RIVER SCHEME

Stage I was developed in successive discrete steps. Design has a piecemeal quality because construction was started before sufficient data had been assembled for the preparation of an overall plan.¹

The previous two chapters have shown that the decision taken in 1959 to proceed with the Ord River Scheme was based on inadequate research and limited information. The early development of the scheme was to suffer from these deficiencies in planning. With only four years between the decision to proceed and the arrival of the first five farmers, there were problems concerning the administration of the scheme, the layout of the area and the early farming methods. Decision-making as far as the mechanics of the first stage of the scheme were concerned, was of an incremental nature - and disjointed incrementation at that. At no time did the state government review the situation at the Ord and come to a definite decision.²

This chapter will attempt to explain how the state government, claiming that development in the region was a

1. *Stage I Ord Review*, November 3, 1971.

2. Not, that is, until after the completion of Stage I.

"national duty,"³ adapted and readapted to various situations and crises as they arose.

The Ord Cabinet sub committee was named shortly after the Commonwealth government agreed to the Western Australian government's proposal that the Ord River Scheme come under the terms of the *Western Australia Grant (Northern Development) Act 1958-1959*.⁴ The committee, which comprised North West Minister C. W. Court, Works Minister G. P. Wild and Agriculture Minister C. D. Nalder, was required to coordinate the planning of the Ord River Diversion Dam Project.⁵ In October 1959 the committee recommended a basis for the coordination of the project. First, that the cabinet sub committee be retained at ministerial level. Secondly, that at officer level, a committee known as the Ord River Diversion Dam Project Committee be established, comprising a nominee of the Minister for Works (as chairman), nominees of the Ministers for Agriculture and Lands and a nominee from K.R.S. It was recommended that Commonwealth representation on the committee be the nominee of the Prime Minister (possibly from the Department of National Development), a nominee from the C.S.I.R.O. Division of Land Research, and

3. See, for instance, D. Brand (Premier), quoted in the *West Australian*, 7 March 1964.

4. C. W. Court (Convenor, Cabinet Sub committee) to D. Brand, 16 October 1959. North West Department file 39/59.

5. *Ibid.*

Mr. C. S. Christian (Chief, Division of Land Research and Regional Survey C.S.I.R.O., Chairman of K.R.S. Policy Committee) as consultant to the committee. State cabinet approved the formation of such a committee - to be known as Ord River Diversion Dam Project Committee - to assist the cabinet sub committee in coordinating and planning the project.⁶

The cabinet sub committee also drew up a timetable for agricultural development, the object being to complete the Diversion Dam by the end of the 1962 dry season, so that the project authorities would be in a position by the end of 1965, if possible, to evaluate the results of the Diversion Dam project and present the case for the Main Ord River Dam to the Commonwealth government.⁷ It was also recommended that the townsite for the scheme be named Cununurra, the native name for the Ord River and also the name the scientists had given to the black soil characteristic of the Ord River plains.⁸

The initial meeting of the Ord River Diversion Dam Project Committee formulated terms of reference.⁹ These

6. *Ibid.*

7. *Ibid.*

8. The Nomenclature Advisory Committee later found that the Postmaster General's Department did not favour the names Cununurra, Awarawari or Ord as they were too closely similar to names of post offices in other states. A compromise was reached, and from 1 July 1960 Cununurra was spelt with a K. North West Department file 11/59.

9. Minutes of meeting O.R.D.D.P.C., 3 December 1959. North West Department file 39/59. Those present - J. E. Parker (Deputy Director of Works, Chairman), G. K. Baron-Hay (Director of Agriculture), T. A. Cleave (Deputy Surveyor General), W. M. Nunn (Department of Agriculture, representing K.R.S.).

terms, finalised at the end of December 1959 were:

1. To coordinate all the requirements necessary for
 - a) the building of the diversion dam.
 - b) the establishment of the townsite.
 - c) arrangements to properly service and maintain the townsite and labour force.
 - d) any improvements to Wyndham harbour and townsite needed to adequately service the project.
 - e) the establishment of the agricultural project associated with the diversion dam.
 - f) land alienation and land tenures.
 - g) rehabilitation of eroded areas to minimise the danger of siltation on the Ord scheme.
 - h) research into long term market problems of disposing of crops expected from the Ord area.

2. To maintain close liaison with the Kimberley Research Station to ensure that full advantage was taken of the Research Station activity and that its future role was being properly used for the development of the Ord River project.

3. To prepare data from which the state's case for presentation to the Commonwealth could be prepared for financial assistance to proceed with the Main Ord Dam Scheme.¹⁰

Everyday working problems were to be the concern of three state officers on the committee, J. E. Parker, G. K.

Baron-Hay and T. A. Cleave.¹¹ In June 1960, the Premier approved a recommendation that the Treasury be represented on the committee by J. R. Ewing, to be known as Finance Coordinator.¹²

After the completion of the Diversion Dam, the officially accepted name of the committee became the Ord

10. *Ibid.* Mr. J. E. Parker (Deputy Director Works, P.W.D.) was chairman of the Ord Project Committee from its inception, to 1969.

11. *Ibid.*

12. J. E. Parker to C. W. Court, 7 February 1964. North West Department file 39/59.

River Development Project Committee, and its terms of references were extended to cover the work associated with the remainder of the scheme, including the construction of the Main Dam and associated works.¹³ The detailed terms of references, formulated in July 1964 were:¹⁴

1. to coordinate all the requirements necessary for
 - a) the construction of the main storage dam and water distribution systems.
 - b) the generation and distribution of electric power.
 - c) the development of the road system.
 - d) further townsite developments with the full cooperation of the local authority.
 - e) any further developments to the port of Wyndham necessitated by the project.
 - f) the establishment of the agricultural projects and industries associated with the scheme.
 - g) land alienation and land tenures.
 - h) rehabilitation of eroded areas to minimise the danger of siltation.
 - i) research into the long term market problems of disposing of crops expected from the irrigation area.
2. To maintain close liaison with K.R.S. to ensure that full advantage is taken of the Research Station activity and that its future role is being properly used for the development of the Ord River Project.
3. To have full power to coopt from any government department as required from time to time and to form subcommittees as approved by the Minister for the North West.

13. *Ibid.* Throughout state government files and publications however, the committee has been variously called the Ord Project Committee, the Ord Irrigation Project Committee, Ord Project Coordinating Committee. For convenience, the thesis will use the shorter 'Ord Project Committee.'

14. J. E. Parker to C. W. Court, 6 July 1964. North West Department file 39/59.

Cabinet approved these terms of reference in October, 1964.¹⁵

During the early construction phase of the project, two major subcommittees of the Ord Project Committee were created - the Townsite Coordinating Committee and the Farm Development Committee. The latter committee was responsible for designing the layout of the irrigation area and for making recommendations regarding the order of release of parcels of land.¹⁶ From September 1964, members of the Ord Project Committee were also members of the newly created North West Planning and Coordinating Authority, and in 1971 the Ord Project Committee was re-constituted as a sub committee of the North West Planning and Coordinating Authority.¹⁷

In June 1962 the Project Committee resolved that the appointment of a Project Manager was necessary, in the face of the rapid growth of the town and the resulting coordination required.¹⁸ North West Minister Court had

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15. Minutes of Ord Project Committee, 1 December 1967. North West Department file Stack 20. At that date the committee comprised J. E. Parker (Convenor and Chairman), T. C. Dunne (Director of Agriculture), H. Camm (Surveyor General), J. R. Ewing (Deputy Under Treasurer), D. C. Munro (Chief Engineer P.W.D. and Project Engineer), W. M. Nunn (Department of Agriculture and representing K.R.S.).
 16. *Stage I Ord Review, op. cit.*
 17. D. C. Munro to J. E. Parker, October 2, 1970. North West Department file 31/70. The formation of this Authority will be discussed later in the chapter.
 18. Minutes of Ord Project Committee, 8 June 1962. P.W.D. file 1183/59.

returned from a visit to the Ord, convinced that the appointment of a Project Manager was a matter of urgency.¹⁹ In fact, he felt that it would have been desirable to have had a Project Manager in Kununurra when applicants for farms were being interviewed and briefed. He saw the responsibilities of a Project Manager as "not only including the reception of successful applicants and instruction to them as to what is available for their use and where they can obtain additional equipment, labour, supplies etc. but also ... to achieve the liaison between the actual farmers and the engineering staff responsible for supplying water and the like."²⁰ The position was established, but cancelled in November 1963 when responsibilities for these functions passed to the Resident Engineer with the assistance of a more junior officer.²¹ Farmer dissatisfaction with the Project Committee was expressed in 1969, and it was suggested that it be replaced with a Statutory Authority with farmer representation.²² It was held that the "creation of such an authority was not considered in the best interests of the

19. C. W. Court, *Minute*, 7 June 1962. North West Department file 8/62.

20. *Ibid.*

21. *Stage I Review*, *op. cit.*

22. Minutes of combined meeting of Ord River District Growers Association and farmer shareholders of the Ord River District Co-op., 12 November 1969. Ord River Project. Unnumbered North West Department file.

project at the time" and the position of Kimberley Regional Manager was created.²³ The administrative structure for the project (to November 1971) is illustrated in the accompanying Table (Table 1). It can be seen that there was no single full-time body or person concerned with the administration of the Ord Scheme. All members of the Ord Project Committee had other, heavy responsibilities throughout the state. This fact, in conjunction with the area's vast distance from Perth, was to prevent the efficient administration of the scheme and alienate the farming community in Kununurra.

At the same time as the Western Australian government was constructing an administrative system for the Ord Scheme it was, with the Queensland government, advocating the establishment of a Northern Australia Development Authority, with the stated object of being able to "achieve on a properly planned and coordinated basis the quicker development of the area defined as Northern Australia."²⁴ It was felt that this aim could best be achieved through a partnership of the Commonwealth government and the states of Queensland and Western Australia. The idea dated back to 1958 and was, in fact, included in the Liberal Party policy speech of 1959.²⁵ In a letter to

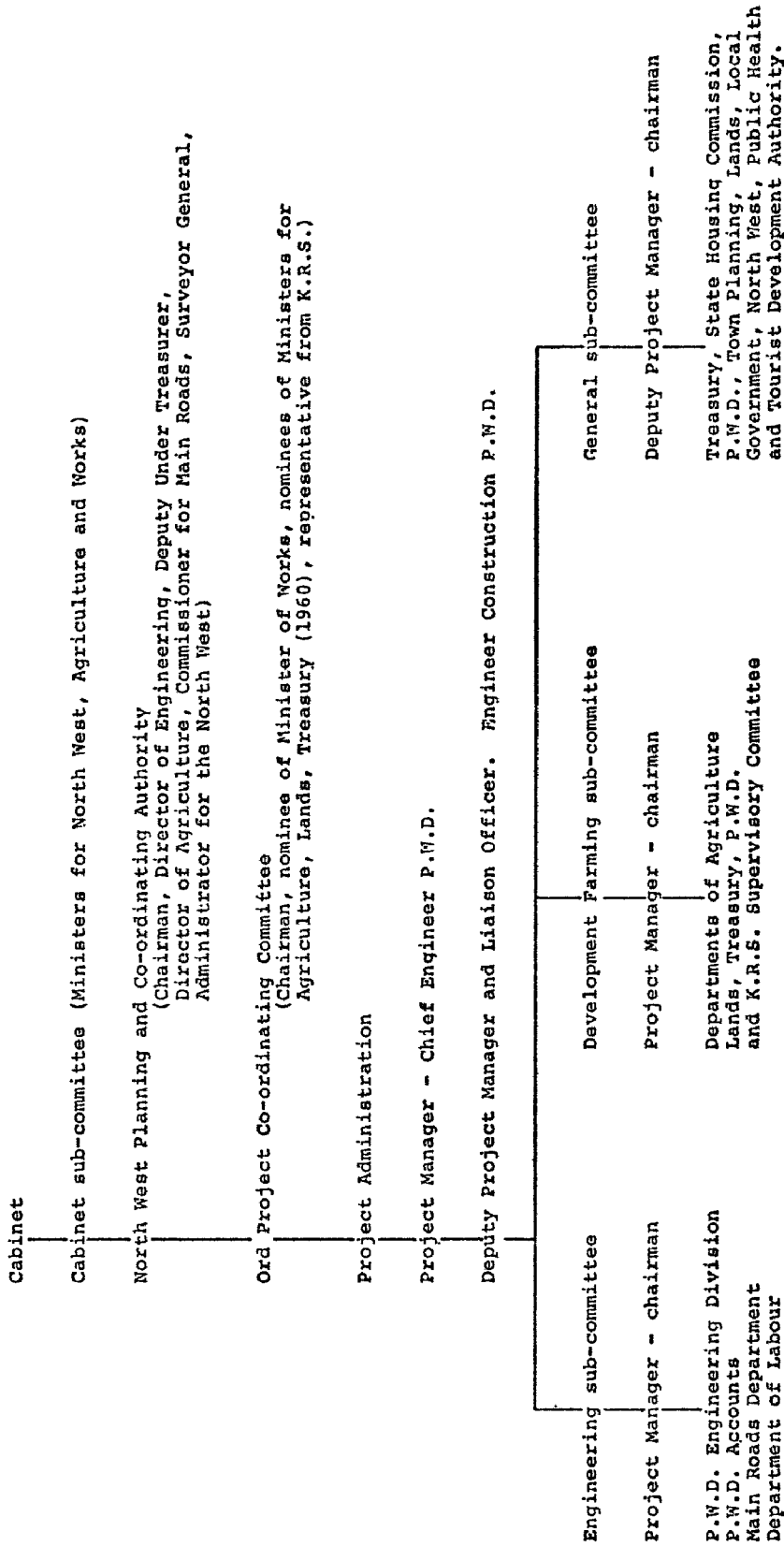
23. *Stage I Review, op. cit.*

24. *Proposal for Establishing a Northern Australia Development Authority*, 8 July 1963. North West Department file 65/63.

25. C. W. Court, *Press Statement*, 10 April 1963. North West Department file 65/63.

TABLE 1

ADMINISTRATIVE STRUCTURE FOR THE ORD RIVER PROJECT TO NOVEMBER 1971



Source: Stage I Review, *op. cit.*

Prime Minister Menzies in August 1959, newly elected Premier, D. Brand, suggested the creation of the authority as a partnership between Western Australia and the Commonwealth.²⁶ Menzies replied, saying that he could not accept the proposal and "would in fact from a financial point of view prefer to retain our right to an independent judgement and to the decision of the nature and extent of Commonwealth financial aid."²⁷ He expressed willingness to provide technical assistance, saying that Western Australia would have the benefit of the Commonwealth government's friendly help and cooperation "without incurring a danger of losing its own proper autonomy" in designs for development.²⁸

In early 1963 the People the North Committee, a committee of North Queensland local government associations, began to press the Queensland government to advocate the establishment of a Northern Development Authority: "to plan and implement massive developmental schemes financed by the Federal government, aimed at increasing the population of tropical Australia from 350,000 to one million by 1973."²⁹ Nicklin's government in Queensland agreed to

26. D. Brand to R. G. Menzies, 13 August 1959. P.W.D. file 560/60.

27. R. G. Menzies to D. Brand, 24 August 1959. P.W.D. file 560/60.

28. *Ibid.*

29. *Report of deputation of People the North Committee to Premier of Queensland (F. Nicklin), 1 April 1963.* North West Department file 65/63.

support the campaign by the People the North Committee, and appealed to Western Australia's Minister for the North West for joint action to accelerate the development of the north of Australia.³⁰ Court had discussions with Nicklin in July 1963; and in October, despite Court's reservations, a deputation from the People the North Committee saw Prime Minister Menzies.³¹ D. Copland (President, National Council for Balanced Development) told Court after the meeting, that the Prime Minister had given them a good reception although he had made no specific commitment.³²

Meanwhile, the Federal Government Members National Development Committee (established in 1959) had produced a comprehensive report regarding the need for a Ministry for Northern Development.³³ The committee's chairman (Senator R. H. Whittorn) believed that it was this report which persuaded the government to establish the Northern Division of the Department of National Development.³⁴

30. F. Nicklin to C. W. Court, 19 April 1963. North West Department file 68/63.

31. C. W. Court to Sir D. Copland, 10 October 1963. North West Department file 65/63. The deputation comprised the chairman of the committee H. Hopkins, the committee's news officer (L. Foley) and Sir Douglas Copland.

32. D. Copland to C. W. Court, 16 October 1963. North West Department file 65/63.

33. G. S. Reid, "Backbenchers or 'Rubber Stamps'." Unpublished research paper on Government Backbench Committees, p. 8.

34. *Ibid.*

Senator W. H. Spooner announced the creation of the new Division in March 1964, stating that it was to specialise and concentrate only on the north of Australia so that the Commonwealth government would have "a sound basis on which to ensure that northern development is being consistently and properly promoted."³⁵ The Division was to comprise three branches: the first concerned with the evaluation of developmental proposals, the second to deal with issues rather than specific developmental proposals (policy branch) and the third concerned with the coordination, examination, identification and development of the natural resources of the area.³⁶

The Western Australian government felt that the Commonwealth had adopted the new Division within the Department of National Development as their preferred alternative to a separate authority.³⁷ Court had already written to the head of the new Northern Division (Dr. R. Patterson) expressing satisfaction at his appointment and adding:

I have always appreciated your realistic approach to problems of Northern development. I sincerely hope that the new division and your appointment will lead to important moves in Northern development and the general approach on a nation-wide basis to the significance of Northern development.³⁸

35. *C.P.D.* H. of R., Vol. 25, 17 March 1964. pp. 312-317.

36. *Ibid.*

37. C. W. Court to D. Brand, 5 May 1964. North West Department file 65/63.

38. C. W. Court to R. Patterson, 27 April 1964. North West Department file 65/63.

The Premiers of Queensland and Western Australia met with the Prime Minister and Commonwealth ministers J. McEwen, H. Holt, C. Barnes and Senator W. Spooner early in May 1964 to discuss the means for achieving closer co-operation in the development of Northern Australia.³⁹ The Premiers presented their case for the establishment of a Northern Development Authority.⁴⁰ Menzies' press statement, issued after the meeting with the Premiers, claimed that the two states had expressed full support for the Commonwealth's decision to make northern development problems the special responsibility of the new Northern Development Division within the Department of National Development.⁴¹ Court had obviously expected Commonwealth rejection of the plans for a Northern Development Authority. On his comments to Premier Brand, before the meeting with the Prime Minister, he stated that "Commonwealth fears generate from the thought that they might be put on the 'treadmill' if there is an Authority and they might find that they cannot control the flow of finance as easily as they might under the present ad hoc arrangements."⁴² He felt that under the new system of having a Division within the Department of National Development,

39. R. G. Menzies, *Press Statement*, 7 May 1964. North West Department file 138/64.

40. *Proposal for Establishing a Northern Development Authority*. North West Department file 65/63.

41. R. G. Menzies, *Press Statement*, 7 May 1964.

42. C. W. Court to D. Brand, 5 May 1964. North West Department file 65/63.

the states would have no more say in the speed and the direction in which development was taken, than they had under present "ad hoc" arrangements, which he felt were both "frustrating and demoralizing."⁴³ Court claimed that it would be unfair to expect people to invest in farms in future irrigated agricultural projects, with the same uncertainty that had prevailed in respect of the Ord Scheme.⁴⁴ He blamed the "anti-north zealots" at the Western Australian University's Institute of Agriculture, for working amongst their academic friends in Canberra and "selling them on what they refer to as the Myth of the North."⁴⁵

Despite the Commonwealth decision on the matter of the Joint Authority, the Western Australian government went ahead with plans for the establishment of the North West Planning Authority - to formulate ideas and undertake research, as a prerequisite to the presentation of proposals to the Commonwealth government for consideration by the Northern Development division of the Department of National Development. The Authority comprised the Director of Engineering (chairman), the Commissioner for Main Roads, the Director of Agriculture, Surveyor General, Deputy Under-Treasurer and the Administrator for the

43. *Ibid.*

44. *Ibid.*

45. *Ibid.*

North West.⁴⁶ In order to assist in contacting local people and in obtaining their views, three consultative councils were established - Kimberley Division Consultative Council, Central North Division and North West Division Consultative Councils. Table 2 illustrates the relationship between Commonwealth government and Western Australian government machinery for the administration of the north.

The provision of an administrative structure for the development of the North West and for the Ord Irrigation Scheme, was but one of the problems facing the state government in 1959. There were also many problems to be solved as far as the engineering of the scheme was concerned. In 1959, the major aspects of the proposal were a main dam for the storage of water, a diversion or off-take works calling for a structure on the river downstream from the dam to divert the water into a major channel, and a major channel and network.⁴⁷

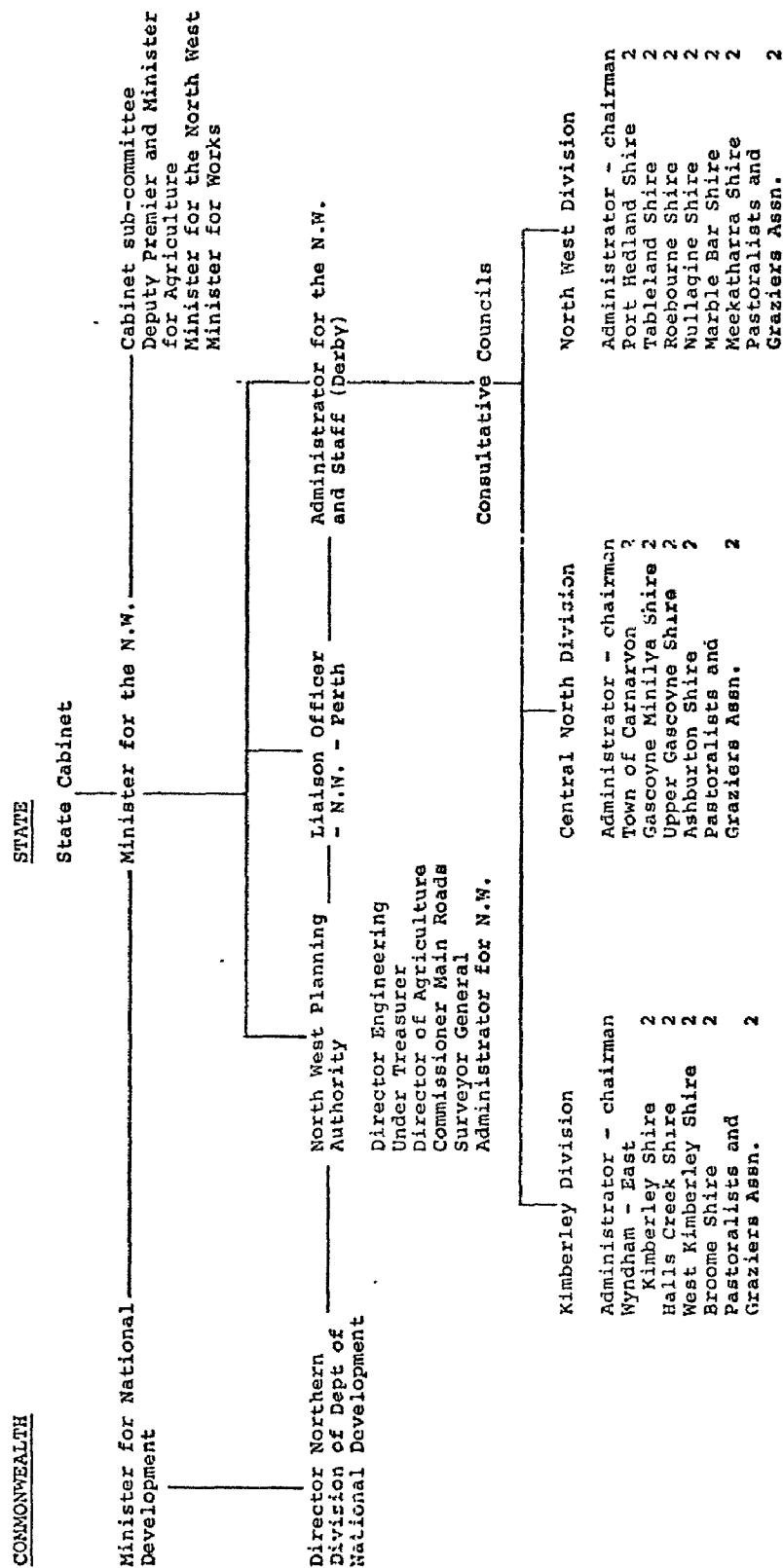
It was felt that the construction of a diversion works in advance of the major storage, would "offer an opportunity to develop a substantial pilot irrigation

46. C. W. Court, "Northern Australian Development," *Public Administration (Aust)*, Vol. XXIV No. 1, March 1965, p. 76.
The position of Administrator for the North West based in Derby, had been created in 1962 in an effort to overcome the difficulty of contact with the people of the North West.

47. *Diversion Dam - Notes on Diversion or Offtake Works*, 21 February 1959. P.W.D. file 77/59.

TABLE 2

COMMONWEALTH AND WESTERN AUSTRALIAN GOVERNMENT MACHINERY FOR THE ADMINISTRATION OF NORTH WESTERN AUSTRALIA



Source: C.W. Court, "Northern Australian Development," *op. cit.*, p.82.

project which would ultimately be extended as part of the major Ord River Scheme and from which the economics of the full development could be more accurately assessed."⁴⁸ A suitable site for the diversion structure was found on a natural quartzite bar, known as Bandicoot Bar, about thirty miles downstream from the proposed major damsite.⁴⁹ At this point the Ord River was approximately 2,000 feet wide and the rock bar was exposed for the full width of the river. The planned works were a concrete base on the rock bar with piers at intervals of possibly fifty feet to support a roadway and massive radial gates, possibly thirty feet high, designed to be lifted at any time to pass floodwater. The possible storage capacity of the dam was unknown until the area was surveyed late in 1959, although aerial photographs had indicated a capacity in the range of 30,000 to 50,000 acre feet.⁵⁰ The three main engineering problems facing the Public Works Department were first, the control of silt accumulation in the long narrow storage at the diversion dam, especially by the use of a set programme of gate operation.⁵¹ Secondly, the prevention of accumulations of fine silt in the normal course of operation of channels on small gradients. The third problem was the handling of large numbers of

48. *Ibid.*

49. *Ibid.*

50. *Ibid.*

51. D. Munro to J. G. Lewis, 1 October 1959. P.W.D. file 560/60.

floating logs during flood through the diversion structure at Bandicoot Bar.⁵²

The tender from Christiani and Nielsen (Australia) for the construction of the Diversion Dam was accepted in July 1960, the value of the contract being approximately £2,900,000.⁵³ The contract period commenced in August 1960, and it was anticipated that work would be completed by the end of 1962 so that water would be available for irrigating the first farms from early 1963. Construction work on the site commenced in March 1961 and the dam was officially opened on 20 July 1963. The structure comprised a 1,000 foot long concrete spillway made up of twenty radial gates each thirty seven feet high by forty nine feet wide and storing 80,000 acre feet - enough water to irrigate 30,000 acres.⁵⁴

In the meantime, the Ord Project Committee had determined that units of about 200 acres should form the basis of farm development, with possibly three units forming a farm.⁵⁵ The Department of Agriculture and the Public Works Department also determined that a farm should be provided with a water supply, drainage, minor structures (including meters) and internal jeep roads for each unit

52. *Ibid.*

53. P.W.D. file 650/60.

54. *Ord Irrigation Project*, August 1972. (P.W.D. brochure), p. 5.

55. Minutes of Ord Project Committee, 21 June 1961. North West Department file 63/60.

of 200 acres.⁵⁶ In order that the first farming activities, planned to commence in 1963, should be given every opportunity of success, and to allow the first farmers to sow safflower in April/May 1963, rice in November/December 1963 and get cash returns within twelve months, the Project Committee decided that the government should prepare a certain portion of the land surface of each farm. The committee recommended planning on the following lines:

- a) the first five farms (each of three 200 acres units) be allocated to carefully selected farmers for occupancy in April 1963.
- b) the land surface of one 200 acre unit in each of the five be prepared during the 1963 dry season in such a manner as would permit the sowing of a rice or cotton crop in November 1963.
- c) the planning for farming of the remaining 7,000 of the first 10,000 acres be reviewed in June 1962 in the light of the availability of water, which would depend on the progress with the diversion dam project.⁵⁷

Land preparation was, in fact, undertaken for 400 acres of the first farms, and 250 acres after the allocation of nineteen farms. The cost to the government of clearing, ploughing, levelling, cultivating, and excavating the irrigation and drainage ditches was limited to £20

56. J. Parker to C. W. Court, 11 April 1960. North West Department file 63/60.

57. *Ibid.*

per acre for the first nineteen farms and then increased to £25 per acre.⁵⁸

Land in the irrigation area was released under conditional purchase conditions as follows:⁵⁹ A farmer obtained a thirty year lease on his property with a right to freehold title after five years if he:

- i) took up residence within walking distance of his farm in the first year and made it his usual place of residence in subsequent years
- ii) cultivated and irrigated a crop on at least one third of the area each year
- iii) fenced half the farm within five years and the whole of the farm in ten years with the proviso that prior to introducing stock to any area, the boundaries and channel and drain reserves had to be fenced.⁶⁰

For the first five years of the lease the farmer was to accept guidance from the Department of Agriculture in relation to the crop to be grown, area to be fallowed, time of planting and the amount and type of fertiliser. The price of land to the farmer was set at £1 per acre.⁶¹

58. *Stage I Review, op. cit.*

59. *Ord Irrigation Project, op. cit., p. 8.*

60. *Ibid.*

61. *Ibid.* Terms were interest only at 5% per annum on the survey fees and land preparation costs for the first five years; thereafter for the next twenty five years of the lease interest as above, plus the value of land, survey fees and land preparation costs in fifty six monthly instalments.

The selection of successful applicants for Ord River farms was made by a Land Board, before which an applicant could appear to support his written application. The Land Board comprised a representative from the Lands Department as chairman and convenor, two members representing the Treasury and the Department of Agriculture, and two observers representing the Public Works Department and the North West Department.⁶² Prior to the selection of the first five Ord farmers, approximately 2,000 brochures describing the scheme were distributed, including 700 in bulk to Eastern Australia, 300 to the United Kingdom and 600 in response to individual requests to the Public Works Department.⁶³ The first farm allocation, advertised in April 1962 and selected in August 1962, drew forty five applications of which five were selected. Four of the five were experienced farmers and the fifth farm was allocated to a group of four from Kimberley Research Station.⁶⁴ A total of thirty farms were progressively allocated under Stage I of the Ord scheme, the final group being selected in 1965. The following table shows the numbers of applicants and the number of farmers selected at each allocation:

62. Minutes of Ord Project Committee, 24 August 1962. North West Department file 34/62 Vol. I.

63. Progress Report, 21 June 1962. P.W.D. file 1183/59.

64. *Stage I Review, op. cit.*

	Allocation	Number Applicants	Number Selected	Experience
I.	Advertised April 1962, Selected August 1962.	45	5	4 experienced farmers and fifth farm allocated to group of 4 from K.R.S. experienced in research work but not in commercial farming.
II.	Advertised April 1963, selected August 1963.	32	7	5 experienced farmers, 1 industrial chemist with experience as an orchardist and one experienced with the Department of Agriculture in the Kimberleys.
III.	Advertised March 1964, selected May 1964.	26	7	4 experienced cotton growers from U.S. and 3 Australian farmers.
IV.	Advertised December 1964, selected February 1965.	25	7 (1 offer declined)	3 experienced cotton growers from U.S. and 3 Australian farmers.
V.	Advertised November 1965, selected February 1966.	38	5	2 experienced from U.S., 2 experienced Australian cotton growers (one the son of a farmer from second allocation, and one experienced from pilot farm and Camballin), one experienced Australian farmer.

Source: *Stage I Review, op. cit.*

As was planned, a unit in each of the first five farms was prepared for the sowing of a safflower crop in May 1963. A total of 922 acres of safflower was planted and yields of 2,240 lbs. per acre anticipated; however,

yields were lower than expected.⁶⁵ Typical figures were J. Arbuckle 1,450 lbs/acre, B. Arbuckle 1,100 lbs/acre, D. Revell 1,000 lbs/acre and W. Dougall 700 lbs/acre.⁶⁶ The main problem the farmers faced was the *Prodenia* caterpillar. Speaking of the safflower experiment, J. Arbuckle said:

We've had our share of troubles since we started farming in March, but we expected difficulties in opening up country like this. For instance, we've had a plague of *Prodenia* caterpillars as fierce you'd swear you could hear them munching the safflower, and they could come again.⁶⁷

Kimberley Research Station had also experienced a build up of *Prodenia* caterpillar from 1960. In July 1963, the K.R.S. Policy Committee was informed that the insect was the main problem to be faced in growing hard leaf crops (cotton, safflower and linseed) and as yet, no effective method of control had been found.⁶⁸

The low safflower yields, combined with a price drop of up to £10 per ton, probably caused by an American surplus, made the growing of safflower less attractive than expected. The Director of Agriculture, T. C. Dunne, claimed that safflower did not appear to be suitable as a

65. *W.A.P.D.* Vol. 167, 4 August 1964, p. 12.

66. Minutes of Ord Project Committee, 6 November 1963. North West Department file 34/62, Vol. I.

67. *West Australian*, 18 July 1963, p. 5.

68. Minutes K.R.S. Policy Committee, 16-19 July 1963. P.W.D. file 434/61.

first crop on new land.⁶⁹ Early in 1964, when in Kununurra, North West Minister Court agreed with local farmers that the government would not make it mandatory for them to grow safflower in the dry season.⁷⁰ However, he claimed that "it was not intended that this would mean the abandonment of safflower growing at the Ord. Rather it would mean a slackening of the emphasis on it until such time as research and experience give the answers to a number of questions."⁷¹

It was intended that the first five farmers plant cotton in November and December 1963, on land which had carried safflower crops. However, safflower harvesting was delayed and only a portion of the crops were sown on previously cropped areas - the rest being sown on land first ploughed about mid 1963. A total of 1,500 acres of cotton had been planted by mid December 1963.⁷²

In August 1959, North West Minister Court told the visiting Federal Government Members Food and Agriculture Committee that although the state government realised that there would have to be a diversity of crops at the Ord, it was anxious to develop cotton.⁷³ It seemed, Court

69. *West Australian*, 3 September 1963.

70. C. W. Court to J. Parker, 3 February 1964. P.W.D. file 758/63.

71. *Ibid.*

72. C. W. Court, *Press Statement*, 16 December 1963. North West Department file 63/60.

73. C. W. Court, *Report on North West Survey of Federal Government Members Food and Agriculture Committee*, August 1959. North West Department file 15/59.

said, "to be one of the sensible crops to develop." The K.R.S. Policy Committee stated that it was the "intensive research" on cotton which had led the project development authorities to recommend this crop to Ord farmers.⁷⁴

There would appear, however, to have been no alternative. No single crop offered promise as a commercially and agriculturally viable crop on which the future of the Ord River Scheme could be based. There were still many unsolved problems common to all the crops tested at K.R.S. and with which the first farmers were soon to grapple. The Commonwealth cotton bounty was obviously an important factor in the state government's decision to recommend cotton to the first farmers.

From 1907 to 1963 the Australian cotton growing industry had received support from successive Commonwealth governments by means of price guarantees, bounties and/or tariffs.⁷⁵ From 1952 to 1963 a guaranteed price system was in force, whereby growers received a guaranteed price of 14d. per lb. for all cotton produced. In 1963 the Bureau of Agricultural Economics conducted an economic survey into the Australian cotton growing industry, and as a result of its recommendations, the 1963 Raw Cotton Bounty Act was introduced.⁷⁶ Under this Act, which covered the

74. Minutes of K.R.S. Policy Committee, 16-19 July 1963. P.W.D. file 434/61.

75. *The Australian Cotton Growing Industry. An Economic Survey 1964/5 to 1966/7.* (BAE. 1970), p. 1.

76. *Ibid.*, p. 2.

period 1964 to 1968, a bounty of 16.125d. was to be paid for middling grade white raw cotton (lint) of one inch staple length produced and sold for use in Australia. The rates payable varied according to grade and staple length, to encourage the production of better quality lint, and the annual bounty distribution was subject to a maximum payout of £2 million. If production exceeded approximately 30 million pounds of raw cotton, rates would be proportionately reduced.⁷⁷ Bounty payments were to be an important part of Ord producers' total returns from growing cotton; and it would seem that the state government had the bounty in mind, when deciding to recommend cotton. On writing to Prime Minister J. Gorton in 1968, to request the continuance of the bounty or some other form of assistance, Premier Brand stated:

I think it can be fairly judged that when the cotton project at Kununurra was initiated, and taking into account the past history of Commonwealth assistance to encourage cotton production, everyone expected that the home market would be available to producers at Kununurra for at least ten years and that a bounty would be paid for a somewhat similar period.⁷⁸

The area of cotton planted, the yield per acre and percentage of premium grade lint (1" middling or better) for the 1963/4 cotton crop were as follows:

77. *Ibid.*

78. D. Brand to J. Gorton, 23 August 1968. North West Department file 57/67.

Name of grower	Area planted	Lint		Premium	
		Total lb	lb. per acre	Quantity lb.	% of total
B. T. Arbuckle & Co.	324	145,892	451	110,510	76
J. Arbuckle & Sons	273	128,354	470	93,871	73
Ord River Farmers Ltd.	280	129,912	465	90,656	70
Revell Bros.	280	128,075	457	68,151	53
W. H. Dougall	202	76,686	380	45,210	59
Total or average	1,359	608,919	445	408,398	67

Source: *Ord River Cotton - Financial Returns 1963-4*.
Department of Agriculture. North West Department file 63/60.

The average farm cost of production was £16,777 and, allowing for all costs (including £1,500 per year for each labour unit except the operator, depreciation and interest on total capital at 6 per cent per annum), the average return to the operator for his labour and management was £2,826.⁷⁹

When the results of the first cotton crops were announced, Director of Agriculture T. C. Dunne made it clear that all the farmers were completely inexperienced and believed they could produce much better crops.⁸⁰ The problem of insect control was an early problem: the numbers of *Prodenia* began to increase after March 1964,

79. *Ord River Cotton - Financial Returns 1963-4*.
Department of Agriculture. North West Department file 63/60.

80. T. C. Dunne to R. Patterson, B.A.E., "Summary of 1963/4 cotton season," 7 July 1964. P.W.D. file 774/62.

at the same time as nitrogen deficiency became evident in a number of cotton crops. Bolls were smaller in size than anticipated, this being attributed to seasonal conditions (below average rainfall), inadequate fertilizer levels or to indirect damage to flowers.⁸¹ Court was evidently not surprised by the *Prodenia* outbreak. In June 1963, he claimed that an infestation of *Prodenia* would not be unexpected in the early stages of cotton growing.⁸² He wrote:

I was very interested in the reaction of two of America's most prominent cotton growers who recently visited the area. They made very light of the problem and expressed tremendous confidence in the future of the project. They told me of some of their own experiences from time to time with various insects and how they are able with modern science to defeat these various pests.⁸³

The remoteness of the Ord River from Australian spinners caused unavoidably high freight costs for Ord farmers who were also faced with problems at the newly installed cotton gin. In June 1962 a meeting of the Ord Project Committee recommended that a cotton ginnery be established in the area by the end of 1963. A sub-committee established to report on alternative methods of operating a ginnery, reported in October 1962.⁸⁴ The

81. *Ibid.*

82. C. W. Court to M. E. Farley (Associated Rural Industries Ltd.), 10 June 1963. North West Department file 63/60.

83. *Ibid.*

84. Minutes of Ord Project Committee, 22 October 1962. Department of North West file 34/62.

committee saw four alternatives. First, a growers' co-operative which they felt would be impracticable in the early stages of the project, with the small number of farmers. Secondly, they considered the offer of Northern Developments Pty Ltd. to operate the ginnery along the lines of the pilot farm.⁸⁵ Thirdly, they considered the establishment of a cotton marketing board, and finally a possible attempt to interest a firm such as Westralian Farmers Co-operative Ltd. (Wesfarmers) in making an offer. The committee resolved that Dr. T. Dunne talk with Wesfarmers and, if they were interested, to have them submit a firm offer within one month. It was resolved that whatever the alternative adopted, a ginnery, with a capacity to absorb the output from 5,000 acres of cotton crop, should be established in the area by September 1963.⁸⁶

By March 1963 a ginnery site had been chosen - four miles from Kununurra, adjacent to the power line and to the east of the irrigation channel, and Wesfarmers had submitted a proposal for the formation of a growers' co-operative.⁸⁷ Under the terms of the offer Wesfarmers would take the initiative to form a co-operative for the

85. Minutes of Ord Project Committee, 1 January 1962.
P.W.D. file 1183/59.

86. Minutes of Ord Project Committee, 22 October 1962.
Department of North West file 34/62.

87. Minutes of Ord Project Committee, 5 March 1963.
North West Department file 34/62.

Ord River area, to purchase the requirements of the settlers, market their produce and undertake such other activities as were considered to be in the interests of the settlers from time to time.⁸⁸ Wesfarmers were to be appointed co-operative agents in the area, to immediately subscribe for 5,000 shares at £1 each, and make an interest bearing loan of £5,000 to the co-operative. Each settler would subscribe not less than £250 toward share capital, and as grower subscribed capital increased, Wesfarmers would have the right to increase its paid up capital to maintain parity (a holding equal to 50 per cent of the total share issue). Wesfarmers would, it was proposed, manage the co-operative which in turn would lease the ginnery for a period of years at a rental based on the through put of seed cotton.⁸⁹ At the expiry of the lease period, a suggested three years after the area was fully established, the co-operative would have the option of purchase or renewal of the lease for a further period. The settler shareholder in the co-operative would have the right to buy the whole of the shareholding of Wesfarmers on the date of termination of the lease, at a value to be fixed.⁹⁰

The Ord Project Committee accepted Wesfarmers' offer

88. Minutes of Ord Project Committee, 9 April 1963.
North West Department file 34/62.

89. *Ibid.*

90. *Ibid.*

and a draft lease of the ginnery was prepared in July 1963.⁹¹ Wesfarmers accepted the management of the Ord River District Co-operative on behalf of the farmers, in September 1963.⁹² The ginnery, which was operating by October 1963, cost the state £190,000 of which £165,000 was expended on plant and other improvements on the area to be leased, the balance being required for public access, water and electrical connections.⁹³

As only six farmers would be using the gin in the first year, and the gin would thus be operating at well below its full fourteen million pounds seed cotton per annum capacity, it was agreed to assist the farmers by charging rental at the rate per pound which would have applied had the full fourteen million pounds been processed.⁹⁴ However, the cotton growers expressed concern at the high costs of ginning, marketing and freight of Ord cotton.⁹⁵ In August 1964, the Manager of the Ord River District Co-operative estimated the cost for the ginning, freight and marketing of the 1963/4 cotton crop as 10.93d. per lb. lint cotton. Early in April 1965, the cotton

91. Minutes Ord Project Committee, 17 July 1963.
P.W.D. file 1183/59.

92. *Stage I Review, op. cit.*

93. K. J. Townsing (Deputy Under Treasurer) to J. R. Ewing (Under Treasurer), 10 January 1964. P.W.D. file 1071/62.

94. *Ibid.*

95. R. A. Patterson to J. E. Parker, 24 May 1965.
P.W.D. file 1071/62.

growers were advised that the cost for the 1963/4 cotton crop was in fact, 15d. per lb. lint.⁹⁶ Eighteen shareholders of the Co-operative requested that their Board of Directors (two Wesfarmers' representatives and three cotton growers) make available a breakdown of the costs incurred in the ginning, freight and marketing of the 1963/4 cotton crop and the estimates for the 1964/5 crop.⁹⁷ The Board of Directors only issued a partial breakdown of costs, and on 30 April 1965, a meeting of shareholders passed a vote of no-confidence in the directors of the Co-operative.⁹⁸ At the same meeting the directors announced a ½d. per lb. reduction in the quoted cost of ginning, freight and marketing of the 1963/4 crop and the estimated cost of the 1964/5 crop.⁹⁹ R. Patterson commented that he felt that Ord costs for ginning and marketing appeared unduly high when compared with Narrabri costs, and he provided the following table:¹⁰⁰

<u>Costs</u>	<u>Narrabri d/lb. lint</u>	<u>Ord d/lb. lint</u>
Cost of ginning	7.138	7.45
marketing	0.480	2.00
freight	1.460	4.05
less seed sold	4.500	13.50
net cost	4.578	13.50

Patterson commented that freight costs could be minimized

96. *Ibid.*

97. *Ibid.*

98. *Ibid.*

99. *Ibid.*

100. *Ibid.*

in subsequent years by selling the cotton to those spinners closest to the Ord.¹⁰¹

Complaints about the operation of the gin itself, resulted in discussions at Kununurra early in May 1964. Those involved were the Minister for Works (G. P. Wild), the Director of Engineering (J. E. Parker), the Resident Engineer (W. Sheridan) and a representative of Western farmers.¹⁰² The main problems were the dust, the lack of a dehumidifier, and poor extraction in the gin. Each day the dust, certain properties of which were of saleable value, had to be collected and removed to a temporary shed - this meant that it could not be treated. Works Minister Wild stated that "problems such as this must be expected as no one in Western Australia until a couple of months ago had even seen a ginnery."¹⁰³ He commented that if a mistake had been made it was that an expert in ginning had not been provided from the outset.¹⁰⁴ The technician sent to rectify the problems claimed that only minor adjustments were required.¹⁰⁵ He felt that the ginnery was operating too fast for the seed cotton which contained a high percentage of trash. Cleaner seed cotton, he said, was now being brought to the ginnery and, with minor

101. *Ibid.*

102. K. J. Townsing (Deputy Under Treasurer) to J. R. Ewing (Under Treasurer), 10 January 1964. P.W.D. file 1071/62.

103. *Ibid.*

104. *Ibid.*

105. *Ibid.*

adjustments, a higher grade of lint cotton was being produced.¹⁰⁶ Representatives of the Public Works Department, the Department of Agriculture, Platt Lummus, the Ord River District Co-operative and Wesfarmers met late in May 1964, and it was agreed that facilities for trash collection, dust handling and incineration at the gin were to be erected by the Public Works Department by 31 October 1964.¹⁰⁷ A shed for a delinter was to be erected, the machine installed and the gin surrounds surfaced, to enable a fork lift truck to operate with baled cotton, and to provide outside storage space for cotton, pending despatch from Kununurra. The meeting agreed to investigate the need for a third stand in the ginnery; the economics of the erection of an oil mill in the Ord River area; the provision of facilities for seed cleaning and grading; and the requirements of storage in Wyndham pending shipment, as against storing on the site.¹⁰⁸

Another problem the early farmers faced was the unsatisfactory layout of their farms and the facilities provided. This problem was, once again, the result of inadequate background research and planning before the scheme was required to be operational. It has been said that the design of Stage I of the Ord River Scheme had "a piecemeal quality because construction was started before

106. *Ibid.*

107. *Ibid.*

108. *Ibid.*

sufficient data had been assembled for the preparation of an overall plan."¹⁰⁹ As the surveying for Stage I progressed, it became clear that inadequate slopes were posing problems for furrow irrigation, and for cotton growing in particular. As ground surveying progressed, it was discovered that much of Stage I was flatter than the first areas allocated in 1962 and 1963. A committee comprising representatives of the Public Works Department and the Department of Agriculture, was formed to investigate layout problems.¹¹⁰ It was decided that in view of the soil type, and the need for the high intensity rainfall to flow off the farms promptly, only land with a minimum slope of 0.03 feet per chain should be classified as suitable for cotton growing. In September 1963, the Ord Project Committee resolved that where possible, each new farm should contain not more than 400 acres or less than 350 acres of land suitable for cotton growing.¹¹¹ The seven farms allocated in May 1964 were selected on this basis, however, during 1964 it became apparent that two of the first five farms did not have 350 acres of land suitable for cotton growing and therefore did not satisfy the criteria. The Public Works Department agreed to upgrade 150 acres on one farm and sixty acres on

109. *Stage I Review, op. cit.*

110. *Ibid.*

111. *Ibid.* This criteria was reduced from 350 to 250 acres for the six farms allocated in February 1965 and the five farms allocated in February 1966.

another.¹¹²

The design of drains for Stage I was of a similarly piecemeal nature. The design objective was to provide adequate drainage for the removal of surplus water after small storms, and sufficient drainage capacity to ensure that the duration of ponding in any part of the cropped area would be unlikely to exceed forty eight hours more frequently on average than once in five years.¹¹³ The capacity of the drainage installed around the perimeter of the irrigated area, to protect the plains from run off from adjacent hillside catchments, was designed to achieve the same degree of protection against flooding. The drains designed to the above criteria were found to be inadequate for both these purposes.¹¹⁴ The problems were threefold. First, some of the culverts added to improve access to the blocks, were never allowed for in the original design. Secondly, a fault in the initial design was that at design flood, drain water levels rose to ground level, and at this level prevented full capacity discharge of the farm drainage outlet. Thirdly, in some cases the drainage outlets were badly positioned for effective draining of the farm. Eventually the project authorities were forced to revise their design, to require discharges 50 per cent greater than the original design.¹¹⁵

112. *Ibid.*

113. *Ibid.*

114. *Ibid.*

115. *Ibid.* See chapter eight for further discussion of these problems.

By early March 1963, the construction of the Diversion Dam itself, was completed to the stage where water could be impounded, and irrigation from the dam commenced in April 1963. The Diversion Dam was opened by Prime Minister Menzies three months later. In his opening speech Menzies claimed:

We are not at the end of something here today - we are at the beginning of something. We must go on and on if these great areas in Australia are to grow and become effective contributions to Australian life.¹¹⁶

In state government circles, Menzies' speech was interpreted as a strong hint that the Western Australian government would receive a favourable hearing when it sought Federal finance for the Main Ord Dam.¹¹⁷ One comment was that the Prime Minister "did more than leave the door to the Commonwealth Treasury ajar - he gave it a push."¹¹⁸ Agriculture Minister C. Nalder claimed that Menzies' speech was "the most significant statement on the north since the time of John Forrest. It was significant not only because of the unqualified confidence expressed in the north's future, but also because of the calibre and influence of the man who expressed it."¹¹⁹ North West Minister Court felt that in some ways the opening of the Diversion Dam represented the achievement of an objective,

116. *West Australian*, 23 July 1963, p. 2.

117. *Ibid.*

118. *Ibid.*

119. *Ibid.*

and in others it represented but "a milestone along the road of a much greater conception for both the Ord and the Kimberleys generally."¹²⁰

When outlining a timetable for agricultural development, Court had said, in 1959, that the project development authorities wanted to be in a position by the end of 1965, to evaluate the results of the Diversion Dam project and present the case for a greater Ord Scheme.¹²¹ However, as early as 1961, even before the first farmers had arrived, Court had requested that the Department of Economics and Commerce at the University of Western Australia inquire into the economic aspects of the Ord River Scheme, in view of the need for a strong case on the Main Dam.¹²² *The case for financial assistance from the Commonwealth government to complete the Ord Irrigation Project* was submitted in February 1964.¹²³ The Commonwealth government had already, in August 1963, approved a state request for £1,650,000 to complete the channels and drains required to develop the whole 30,000 acres of

120. C. W. Court to C. S. Christian, 17 May 1963. North West Department file 63/60.

121. C. W. Court to D. Brand, 16 October 1959. North West Department file 39/59.

122. C. W. Court to I. Bowen (Professor, Department of Economics and Commerce), October 6, 1961. North West Department file 25/61.

123. *A Case for financial Assistance from the Commonwealth Government to complete the Ord Irrigation Project*. February 1964.

Stage I, the expenditure to be spread over three years.¹²⁴

The State government requested financial assistance to complete the Ord Project, by the construction of a Main Dam about thirty miles upstream from the Diversion Dam (to store 3,500,000 acre feet of water), and by the extension of the existing channels, drains and ancillary works to irrigate a total area of 150,000 acres of which about 30,000 acres were already being developed as Stage I of the scheme.¹²⁵ The construction of an underground hydro-electric station at the Main Dam, and the provision of housing for farmers, essential farm labour and administrative staff, were also included in plans for the Main Dam.¹²⁶ The *Case for Financial Assistance* proposed that preliminary work on the dam commence in the 1964/5 financial year. The estimated cost of the programme was £30 million, comprising £20 million for the dam and irrigation works, £6 million for the hydro electric station and £4 million for housing.¹²⁷ Proven crops were cotton, sugar, safflower, linseed and rice, and although cotton and sugar were "the best financial crops both to the grower and as an investment of public money," improved techniques of growing other crops would, the document

124. *An Outline of the Ord Irrigation Project Western Australia*, April 1976, p. 8.

125. *A Case for Financial Assistance*, *op. cit.*, p. 9.

126. *Ibid.*

127. *Ibid.*

continued, "make them more attractive in due course."¹²⁸ Agricultural development, it was asserted, could be expected to stimulate the cattle industry by extending the killing and trucking seasons, increasing calving and weaning percentages and increasing the quality of herds and of the meat obtained.¹²⁹ It was anticipated that the scheme would generate a stable population of from 10,000 to 20,000 in the sparsely populated north of the state, and that, from an engineering point of view, a Main Dam would protect the Diversion Dam from flood damage and silting.¹³⁰

By February 1964, when the *Case for Financial Assistance* was submitted to the Commonwealth government, the Western Australian government was obviously not in a position to evaluate the results of the Diversion Dam project. The first farmers had not yet harvested their cotton crops, their safflower crops had been disappointing, and the pilot farm experiment had added little to existing knowledge. The indications were that rice could not be economically produced in relation to other areas, and the commercial success of cotton still depended on the control of *Prodenia*. Sugar cane had been shown to be well suited to the area, however, a thorough evaluation of all aspects of production was required, and the matter of

128. *Ibid.*, p. 11.

129. *Ibid.*

130. *Ibid.*, p. 9.

sugar production on the Ord was still a delicate political question.

When justifying the state government's decision to go ahead with the construction of the Diversion Dam as part of Stage I of the Ord River Scheme, North West Minister Court claimed:

No great project was ever undertaken without a degree of risk. The state government has faith in the state and in the north. It has accepted the challenge and is prepared to take the calculated risk that might be involved. Surely, it is infinitely better to gain practical experience of farming and the needs of servicing a community in the Ord River area at a cost of £3 million rather than sit back and do nothing, or, alternatively, to wait until a later date and take a risk on a £20 million project for the greater Ord Scheme.¹³¹

Now, less than five years later, with little more definitive information on the commercial prospects for the area, the state government was asking the Commonwealth government to "take a risk," not on a £20 million project, but on a £30 million project for the greater Ord Scheme.

131. *West Australian*, 3 September 1959, p. 6.

CHAPTER VI

JUSTIFICATION FOR THE PROJECT - COST-BENEFIT ANALYSIS

Decisions on national development are not just thrown in at Budget time. Intense study is made and cost-benefit analyses are prepared and decisions are based on the results of these analyses.¹

The Western Australian government's submission to the Commonwealth government for funds for the Main Ord River Dam, stimulated extensive public debate during 1964 and 1965. The debate, as to the economic justification for proceeding with the Main Dam, centred around four main studies. The Commonwealth Bureau of Agricultural Economics prepared a cost-benefit analysis of the scheme which the Western Australian government attached to its submission.² The Economics and Commerce Faculty of the University of Western Australia prepared, at the request of, and with financial assistance from the state government, an analysis of the secondary benefits of the Ord Scheme for incorporation into the *Case for financial*

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1. D. Fairbairn, *C.P.D.* Vol. 60, 29 August 1968, p. 759.
 2. *The Ord Irrigation Project - a Benefit-Cost Analysis*, Bureau of Agricultural Economics, Canberra, 1964.

assistance from the Commonwealth government to complete the Ord Irrigation Project.³ Dr. B. R. Davidson (Lecturer in Agricultural Economics at the Institute of Agriculture, University of Western Australia) published first an article on the economics of the Ord River Scheme, then a book on northern development in general.⁴ Late in 1965, Dr. R. A. Patterson (Director, Northern Division Department of National Development) presented a paper entitled "The Economic Justification of the Ord River Scheme."⁵ To understand the following examination of the controversy with which these studies were involved, it is necessary first to outline the technique of cost-benefit analysis.

Cost-benefit analysis is but one of a number of aids to decision-making developed by economists over the past thirty years in a quest for "rational" models on which to base decisions. The idea of cost-benefit analysis is to evaluate a decision by expressing some or all of the

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3. A Research Fellow was employed from late 1962 to work on this project. His conclusions were later published:
C. A. Cannegieter, "Some Socio-Economic Aspects of the Ord River Scheme," *The Economic Record*, Vol. 40 (September 1964), pp. 375-388.
C. A. Cannegieter, "The Secondary Benefits of the Ord River Scheme," *Economic Growth in Western Australia. Economic Studies* No. 1 (1964), pp. 56-8.
 4. B. R. Davidson, "The Economics of Irrigated Agriculture on the Ord River," *Farm Policy* (Perth), Vol. 3 (September 1963), pp. 54-60.
B. R. Davidson, *The Northern Myth* (Melbourne, 1965).
 5. R. A. Patterson, "The Economic Justification of the Ord River Project," 38th Congress ANZAAS, Hobart, 20 August 1965.

factors seen as relevant to that decision in terms of comparable monetary values so that their sizes can be compared, their benefits added and their costs subtracted. A. R. Prest and R. Turvey see its aim as being "to maximise the present value of all benefits less that of all costs, subject to specified restraints."⁶

Such an analysis is normally carried out in several stages. First, the project is defined and a list made of the current benefits and costs to be included. Two types of benefits can be included in the evaluation - primary and secondary. Primary benefits can be defined as the direct economic consequences of a particular project. Secondary benefits are those considered to be induced by the increased turnover and profitability in activities handling, processing or marketing, system inputs and outputs including indirect economic benefits and all social benefits. Next, all costs which form part of the investment project are listed - both the project costs, or value, of the goods and services used for the establishment, maintenance and operation of the project, and the associated costs, or the value of goods and services needed over and above those included in the project costs, to make the immediate products of the project available for sale.

The second step in a cost-benefit analysis is to

6. A. R. Prest and R. Turvey, "Cost-Benefit Analysis: A Survey," *The Economic Journal*, Vol. 75 (December 1965), pp. 683-781.

quantify the various costs and benefits in monetary terms, and compare them with each other. For this step, a discount rate is needed so that the present and future values of benefits and costs can be made compatible. Irrigation schemes for instance, typically involve heavy initial costs, while the benefits produced are spread over a long period.⁷ The third step, once the project benefits and costs have been listed, evaluated and discounted back to present values at an appropriate discount rate, is to present the results of the analysis. The results are usually presented as a benefit/cost ratio - the ratio of the present value of benefits to the present value of costs, or the discounted benefits and costs are expressed in terms of net benefits. The ratio measure has been the most favoured criterion, a project being deemed worthwhile or a course of action chosen, which offered the greatest surplus of benefits over costs, or produced a benefit/cost ratio greater than unity.

The whole process may appear to be very rational and straight forward. However, there are a number of obvious difficulties associated with the cost-benefit exercise. Such an exercise, it has been said, "can give no more valid results than the data and assumptions it incorporates, and for many projects the principal problem will be

7. L. A. Duhs, "Economic Evaluation of Regional Development Schemes - a Study in Cost-Benefit Analysis," *C.E.D.A.*, M. Series No. 22 (May 1969), p. 9.

the scantiness of the data and the largeness of the assumptions."⁸ Such difficulties have led to criticism of cost-benefit analysis, the technique being seen as "anything from an infallible means of reaching the new Utopia to a waste of resources in attempting to measure the unmeasurable."⁹

One of the most difficult and important problems in the evaluation of investment projects, is the necessity to relate the benefits and costs occurring at different times. The size of the discount rate needed for the comparison is of central importance and obviously requires a value judgement. There are two alternative solutions to this problem: the results can be calculated using several different discount rates, or the administration can make the choice, justifying it as far as possible. In Australia, the Commonwealth Treasury has seen rates of 5 to 6 per cent as appropriate.¹⁰

Other problems of cost-benefit analysis are the problems of defining costs and, to a greater extent, benefits; and the question of uncertainty (flood, drought, plant diseases, pests). Various methods can be used to take account of risk and uncertainty. Some allowance can be

8. *Supplement to the Treasury Information Bulletin: Investment Analysis*. Commonwealth Treasury (July 1966), p. 7.

9. A. R. Prest & R. Turvey, "Cost-Benefit Analysis: A Survey," *op. cit.*, p. 728.

10. *Supplement to the Treasury Information Bulletin*, *op. cit.*, p. 20.

built into the estimates of net benefits by the adoption of lower values for benefits, or by the inclusion of "contingency allowances" in costs. The economic life of the project is often shortened for purposes of calculating net benefits and adjusting for uncertainty, or a "premium for risk" added to the interest rate used for discounting.¹¹

The use of cost-benefit analysis began earlier, and appears to have progressed further in the United States than in any other country.¹² The U.S. *River and Harbour Act* 1902 required studies of river and harbour projects to measure and compare tangible benefits and costs. The U.S. *Flood Control Act* 1936, officially endorsed the use of cost-benefit studies, and the practice then spread to several agencies concerned with the development of water resources. In 1950 a more detailed uniform approach to cost-benefit analysis as related to water resource projects, was formulated by the Federal Inter Agency River Basin Committee.¹³

In Australia, interest in the technique has grown over the past ten to twenty years, corresponding with a growth in the number of large investment projects. The report of the Committee of Economic Inquiry (May 1965) noted the potential value of the technique:

11. *Ibid.*, p. 18.

12. *Ibid.*

13. *Ibid.*

We draw particular attention to the value of cost benefit analysis as a guide in the examination of development proposals involving large expenditures of public money. Unfortunately, relatively little appears to have been made to date in Australia of such analysis. Too often an analysis is undertaken, frequently as the result of doubts after a project has been commenced, instead of as a basic step in the planning process.¹⁴

The Commonwealth Treasury endorsed this type of analysis in 1966, when it published a white paper explaining the technique and encouraging the state governments to justify development projects on economic grounds when seeking financial assistance.¹⁵ The publication stated that:

increasingly, government departments or other bodies putting forward proposals for this or that expenditure of public funds must expect to have to justify them, first on their own merits, and secondly against the relative merits of competing proposals coming forward from other quarters.¹⁶

Four cost-benefit studies had already been published in Australia by the Bureau of Agricultural Economics between December 1963 and August 1965.¹⁷ A report by the Bureau

14. *Report of the Committee of Economic Inquiry*, May 1965. Vol. I, Paragraph 3, 9.3.10.

15. *Supplement to the Treasury Information Bulletin*, *op. cit.*

16. *Ibid.*, p. 27.

17. These were:

- 1) *The Economics of Brigalow Land Development in the Fitzroy Basin, Queensland* (December, 1963).
- 2) *The Craighburn Irrigation Scheme, South East Tasmania: An Economic Evaluation* (July, 1964).
- 3) *Economic Analysis of Road Development in the Northern Territory Buffalo Area* (December, 1964).
- 4) *Extension of the Comprehensive Water Supply Scheme (Agricultural Areas of Western Australia): An Economic Evaluation* (August, 1965).

of Agricultural Economics on the Ord River Scheme, was never published.¹⁸ In a reply to his letter to the Bureau of Agricultural Economics, G. McDonnell was told, "for a number of reasons including the changes which have taken place in the Ord area since 1961 - a considerable revision of the report would be necessary before it could be published for general distribution."¹⁹

Early in 1962, the Western Australian government had approached the Bureau of Agricultural Economics for an investigation into the problem of farm size and enterprise combination, in connection with the proposed Ord development.²⁰ After consideration, the Bureau decided that "in view of the proposed expenditure from public and private sources a wider investigation into the economic implications of development must be undertaken before any worthwhile economic conclusions could be drawn."²¹ The Bureau planned to consider, among other things, the cost of establishing the project, the expenditure necessary on ancillary services, the costs likely to be incurred in production, the revenue likely to accrue to producers, and

18. *The Ord River Irrigation Project - a Benefit-Cost Analysis* (1964).

19. G. McDonnell, "The Ord Debate and Public Decision Making: A View from the Terrace," *The Australian Quarterly*, Vol. XXXVIII, No. 3 (September, 1966), p. 45.

20. A. C. B. Maiden (Director, B.A.E.) to J. Parker, 20 August 1962. P.W.D. file 774/62.

21. *Ibid.*

the secondary benefits likely to stem from the proposed development.²² The findings were to be presented in the form of a cost-benefit analysis which involved determining the annual cost of establishing the project up to full development, the annual cost of maintaining and operating the scheme over its economic life and the annual gross revenue and operating costs for the farms involved.²³

The Western Australian government agreed to this wider approach, and also agreed to provide the Bureau with all relevant information regarding the cost of preliminary surveys, the annual costs incurred or to be incurred on the construction of headworks, water reticulation and drainage facilities, farm development costs and the cost of road construction and other essential facilities.²⁴ The Bureau also intended to calculate, with the aid of the Western Australian Department of Agriculture, Northern Developments Ltd. and K.R.S., the crops likely to be grown, the best farming techniques, likely yields, machinery requirements and costs, as well as the available markets and freight charges.²⁵

The Western Australian government received six copies

22. *Notes on the Ord River Project being currently undertaken by the Bureau of Agricultural Economics.*
P.W.D. file 774/62.

23. *Ibid.*

24. *Ibid.*

25. *Ibid.*

of the B.A.E. cost-benefit analysis in November 1963, and from 19 November 1963, Dr. Rex Patterson (Assistant Director, B.A.E.) was available in Perth for discussions on the contents of the B.A.E. study, so that agreement could be reached before its submission to the Commonwealth government with the Western Australian *Case for financial assistance from the Commonwealth government to complete the Ord Irrigation Project*, in early 1964.²⁶

In its report, the B.A.E. set out to show at what levels of price and yield per acre (for cotton) the ratio of benefits to costs, over the life of the scheme, could be unity.²⁷ Cost-benefit ratios were calculated on the basis of a long term yield estimate, and assumptions were made as to price, yield, and farm costs, for the purpose of calculating farm budgets.²⁸ The report emphasised that the analysis was preliminary and should be regarded primarily as a guide to future planning. It stated that "the paucity of information, particularly of agronomic data, required the Bureau to make assumptions based on judgments and opinions rather than on quantitative evidence."²⁹ The analysis was based on cotton monoculture as it was

26. Minutes of the Ord Project Committee, 6 November 1963. P.W.D. file 774/62.

27. *The Ord River Irrigation Project - a Benefit-Cost Analysis*, *op. cit.*, Foreword.

28. *Ibid.*

29. *Ibid.*

felt that cotton offered a greater prospect of financial gain.

Cost-benefit ratios were calculated for eight combinations of farm gate seed cotton prices and yields per acre.³⁰ These ratios measured the long term relationship between the estimated benefit (the net economic gain to the irrigation farmers), and the public cost (the total capital cost of the construction and operation of the scheme over its assumed working life of 100 years).³¹ The analysis concluded that the cost/benefit ratio reached unity in the following situations:³²

- A. If the total cost of public investment was charged against farm income
 - i) at import parity price of seed cotton 8.44d. per pound seed cotton and a yield of 3,053 lb. seed cotton per acre.
 - ii) at the supported domestic price of 14.53d. per pound (for middling 1 1/32" white seed cotton) and a yield of 1,773 lb. seed cotton per acre.

- B. If the capital cost of the public investment was not charged against income, but maintenance and annual operating costs were
 - i) at import parity price (8.44d. per pound seed cotton) and a yield of 2,373 lb. seed cotton per acre.

30. *Ibid.*

31. *Ibid.*

32. *Ibid.*, Summary paragraph 5.

- ii) at the supported domestic price (14.53d. per pound as above) and a yield of 1,378 lb. seed cotton per acre.

On 18 November 1963, the day before Patterson's arrival, the Ord Project Committee met to consider a Public Works Department report on the B.A.E. analysis.³³ The meeting considered the various aspects of the report where a divergence of opinion between the state and Commonwealth government was possible, with a view to agreeing on a common approach. The committee felt that yields as low as 2,000 lb. seed cotton per acre need not be considered, and that 2,400 lb. was the correct figure to accept for calculation of primary and secondary benefits.³⁴ The committee considered too, that the B.A.E. report did not stress the potential of the area to grow a variety of crops. It was also felt that the B.A.E. had taken no account of the possible financial return from by-products such as oil and meal, assuming the eventual establishment of an oil extraction plant at Kununurra.³⁵ The B.A.E. should have used, it was claimed, a higher rate of development - 20,000 acres per annum instead of 10,000 acres, an interest rate of 6 per cent rather than 5 per cent, and the figure of three workers per farm rather than the two

33. Minutes of Ord Project Committee, 18 November 1963. P.W.D. file 774/62.

34. *Ibid.*

35. *Ibid.*

plus casual labour used in their cost-benefit analysis. The committee decided that the primary benefit was £19 million, expressed as a lump sum.³⁶

While in Perth for discussions on the B.A.E. study, Patterson requested that the Western Australian Department of Agriculture examine C.S.I.R.O. estimates of cotton yields and quality in the Ord irrigation area and forward comments for consideration.³⁷ These comments were included as an appendix to the B.A.E. study. Dr. T. C. Dunne (Director, Department of Agriculture) advised that yield levels of 2,750 lbs. and 2,875 lbs. seed cotton per acre would be likely over a 100 year period.³⁸ The figure of 2,750 lbs. seed cotton per acre was arrived at by assuming an average of 2,000 lbs. per acre for fifteen years during which time pests and disease are kept in check, followed by an increase to 3,000 lbs. per acre over twenty years. The calculation of 2,875 lbs. per acre was based on an assumed 2,000 lbs. per acre for five years, followed by an increase to 3,000 lbs. for fifteen years.³⁹ The C.S.I.R.O. on the other hand, estimated that with the present insect problem, long term yields would be

36. *Ibid.*

37. T. C. Dunne to D. H. McKay (Director, B.A.E.), 28 November 1963. *The Ord River Irrigation Project - a Benefit-Cost Analysis, op. cit.*, Appendix I, p. 106.

38. *Ibid.*

39. *Ibid.*

1,500 lbs. per acre, or 2,000 lbs. with satisfactory control.⁴⁰ As for the more distant future, the C.S.I.R.O. claimed, "if the rate of research progress, now interrupted by *Prodenia*, could be maintained for a few years, yields of 2,500 lbs. per acre rising to 3,000 lbs. per acre should be attainable."⁴¹

Other divergences of opinion between the B.A.E. and the state government appear to have been dealt with by using alternatives. For instance, the B.A.E. used two interest rates, a rate of 6 per cent per annum for private capital costs and a rate of 5 per cent per annum for public capital costs.⁴² The 140 page report was never published but was attached to the Western Australian government *Case for Commonwealth Financial Assistance to complete the Ord Irrigation Project*, submitted to the Commonwealth government early in 1964. Minister for the North West, C. W. Court, often referred to the report as being strongly in favour of the scheme as a medium of investment for public and private funds.⁴³

Meanwhile, other studies concerning the costs of

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40. G. A. Stewart (Chief, Division of Land Research and Regional Survey C.S.I.R.O.) to R. Patterson (Assistant Director B.A.E.), 5 November 1963. *Ibid.*, Appendix II.
41. *Ibid.*, p. 110.
42. *Ibid.*, p. 22.
43. E.g., C. W. Court, "Northern Australian Development," *Public Administration* (Sydney), Vol. XXIV, No. 1 (March, 1965), p. 73.

benefits of the Ord Scheme were being vigorously debated. Dr. B. R. Davidson, who, it is claimed, was stopped from publishing findings unfavourable to the Ord Scheme when employed by the C.S.I.R.O., was the first to publish an economic study of the Ord Scheme.⁴⁴ His book, *The Northern Myth*, criticised not only the Ord River Scheme but northern development in general, claiming that whatever could be grown north of the Tropic of Capricorn could be grown more cheaply south of it.⁴⁵ Davidson claimed that it was possible that no agricultural settlement in Australia's history had been commenced "with so little chance of economic success."⁴⁶ In backing up his arguments, Davidson adopted assumptions as to crop yield, prices of farm outputs, expected production costs, farm size and the appropriate interest rate.

On the assumption that commercial yields are only likely to average about two-thirds of experimental yields, Davidson calculated that the average commercial yields of seed cotton would be 1,450 lbs. per acre.⁴⁷ Both Drs. R. A. Patterson and C. A. Cannegeiter criticised this

44. *The Bulletin*, Vol. 88, 5 November 1966, p. 20.
B. R. Davidson, "The Economics of Irrigated Agriculture on the Ord River," *op. cit.*

45. B. R. Davidson, *The Northern Myth*, *op. cit.*, p. ix.

46. *Ibid.*, p. 200.

47. *Ibid.*, p. 55.

assumption.⁴⁸ Patterson claimed that Davidson's data was outdated and that "under known technical and financial information, based on the current data available from the Ord River area, the growing of cotton is a sound financial proposition at the present average yields being obtained."⁴⁹ He felt that at the current average yield of 1,950 lbs. seed cotton per acre, Ord farmers would be able to profitably grow cotton, even if the cotton bounty were removed and the export price were to prevail.⁵⁰

Cannegieter maintained that according to past experience, it could be assumed that the average commercial yields over the whole period of the next 100 years, would be much higher than two-thirds of the present experimental yields.⁵¹ He felt that the growth of "practical and research experience, combined with the development of scientific agriculture" over the next 100 years would make the highest present experimental yields suitable as the minimum indicators of average commercial yields to be expected over the lifetime of the project - at least 150 per cent higher than Davidson suggested.⁵² In his

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48. R. A. Patterson, *The Economic Justification of the Ord River Project*, *op. cit.*
C. A. Cannegieter, "Economics of Irrigated Agriculture on the Ord River - A Note," *Farm Policy*, Vol. 3, No. 4, pp. 93-97.
49. R. A. Patterson, *The Economic Justification of the Ord River Project*, *op. cit.*, p. 57.
50. *Ibid.*
51. C. A. Cannegieter, "Economics of Irrigated Agriculture on the Ord River," *op. cit.*, p. 93.
52. *Ibid.*

Rejoinder, Davidson maintained that an increase in yield did not mean that a product could be produced without subsidies. Yields elsewhere, he said, could increase as well as yields at the Ord River, so there would be no variation in relative yields.⁵³ In its report, the B.A.E. attempted to solve the problem of yield prediction by using five levels of seed cotton yield per acre - 1,800 lbs., 2,000 lbs., 2,400 lbs., 3,000 lbs. and an estimated long term yield of 2,750 lbs. per acre.⁵⁴

Another basic assumption from which the economic studies of the Ord Scheme had to work, was the expected price of farm output. This too produced disagreement among economists looking at the Ord Project - first, as to the appropriate market price which would be received for cotton (this involved estimating demand on both domestic and export markets) and secondly, as to whether outputs should be valued at the subsidised domestic price, import parity price or export price. The B.A.E. study used two levels of prices for products produced - the import parity price of 8.44d. per lb. seed cotton and the domestic subsidised price of 14.53d. per lb. (for middling 1 1/32" white seed cotton).⁵⁵ Davidson and Patterson estimated returns on the bases of domestic prices of cotton currently

53. B. R. Davidson, "Rejoinder," *Farm Policy*, Vol. 3, No. 4, pp. 97-8.

54. *The Ord River Irrigation Project - a Benefit-Cost Analysis*, op. cit., p. 87.

55. *Ibid.*, p. 22.

being received by Australian producers (including the Commonwealth bounty payment), import parity price and export price.⁵⁶ Patterson also made calculations on the "minimum domestic price" which he calculated as 10d. per lb. of seed cotton, compared with the export price of 8.32d. per lb.⁵⁷ Cannegieter argued that to make the Ord River Scheme comparable with other Australian sectors it would be appropriate to take the domestic price for cotton.⁵⁸ He maintained that other primary industries were subsidised and their output valued at the subsidised price. He felt too, that the future development of the Australian cotton industry would not be so fast that it would be too much for the home market.⁵⁹

The problem of estimating production costs also raised problems and caused disagreement among those examining the economics of the Ord Scheme. Gross farm income was determined by estimating yields and the price per unit of farm output, while net income was calculated by subtracting estimated production costs. These costs, both fixed (machinery, depreciation, repair of fencing, interest on capital etc.) and variable (seed, fertilizer and

56. B. R. Davidson, *The Northern Myth*, *op. cit.*, pp. 158-160.

57. R. A. Patterson, *The Economic Justification of the Ord River Project*, *op. cit.*, p. 30.

58. C. A. Cannegieter, *Economics of Irrigated Agriculture on the Ord River*, *op. cit.*, p. 93.

59. *Ibid.*

insecticide inputs) were estimated by determining the operations necessary for preparing the land, sowing and harvesting the crop. Labour and machinery requirements for a certain acreage of crop were then calculated. The variation in assumed farm size, in itself, led to differing calculations of net benefits of the scheme. The B.A.E. report assumed all farms to have a nominal net irrigable area of 600 acres, but a total area of 670 acres.⁶⁰ For the purpose of his analysis, Davidson estimated the costs of producing 1,000 acres of cotton as a monoculture, as well as the cost of producing differing areas of cotton, safflower, linseed and rice, both as monocultures and as part of a rotation.⁶¹ Patterson accepted 600 acres as the optimal farm size, though he also calculated for 450 acres.⁶² He examined cotton growing in the Western states of the U.S.A., and concluded that the per acre costs on the Ord were significantly lower than those in California, despite lower yields.⁶³ He calculated net costs of production (including ginning) per acre to be 12.0d. per lb. seed cotton in Imperial Valley, California; 9.9d. per lb. in King's County, California;

60. *The Ord River Irrigation Project - a Benefit-Cost Analysis, op. cit., p. 32.*

61. B. R. Davidson, *The Northern Myth*, pp. 155 and 167.

62. R. A. Patterson, *The Economic Justification of the Ord River Project, op. cit., p. 44.*

63. *Ibid., p. 27.*

and 9.6d. to 10.7d. per lb. of seed cotton in the Ord River.⁶⁴ Patterson felt that some reductions in the cost of production on the Ord could be expected as the project became larger. The greatest advantage the Ord had over the U.S.A. was its abundance of cheap water, cheap land and relatively large farm acreages.⁶⁵

On the basis of his varying assumptions as to yields, acreages, by-products and supplementary crops, Patterson concluded that "under known technology," the production of cotton or cotton with sorghum was a sound economic undertaking as far as the individual farmer was concerned, even if the bounty was removed and the export price prevailed.⁶⁶ On the basis of his estimates of yields, costs and prices, Davidson concluded that at present costs and prices, using existing methods of production, there was nothing to be gained economically by proceeding with the Ord River Scheme.⁶⁷ The total annual subsidy necessary to maintain the scheme would, he felt, be a continual burden to the Australian economy. Davidson concluded that subsidies would need to be paid ranging from 38 per cent of the market value of output if sugar were produced, to 287 per cent of the market value of output if

64. *Ibid.*

65. *Ibid.*

66. *Ibid.*, p. 39.

67. B. R. Davidson, "The Economics of Irrigated Agriculture on the Ord River," *op. cit.*, p. 60.

the crop were short grain rice.⁶⁸ He felt that cotton crops would need subsidies ranging from 60 to 72 per cent of their market value, compared with the present 25 per cent subsidy for Australian milk products, 4 per cent for wheat and 14 per cent for sugar.⁶⁹ Davidson claimed that even if new techniques were developed to increase yields or decrease costs, these would be equally applicable to the lower cost areas in southern Australia.⁷⁰

A further key basic assumption, vital to any cost benefit analysis but posing a further problem, is the choice of the rate of interest to be used in discounting future benefits and costs to present values. It has been stated, that economic analyses of income earning assets of long life, must reduce to comparable terms the varying levels of annual investment expenditure during the period of development, and annual income and costs over time.⁷¹ The B.A.E. study used two different rates of interest. Private capital costs were discounted at a rate of 6 per cent per annum, while public capital costs (construction of the water storage and reticulation system, the basic services of the township etc.) were discounted at 5 per

68. B. R. Davidson, *The Northern Myth*, *op. cit.*, p. 195. The estimates of subsidies include an allowance for interest on irrigation works.

69. *Ibid.*

70. B. R. Davidson, "The Economics of Irrigated Agriculture on the Ord River," *op. cit.*, p. 60.

71. See page 207 of this chapter.

cent per annum.⁷² Dr. Patterson assumed an interest rate on public capital of 5 per cent, a rate of return from sinking fund investments of 6 per cent and a discounting rate of 6 per cent per annum.⁷³ Dr. Davidson used an interest rate of 5 per cent on state capital works.⁷⁴ Patterson himself pointed out the limitation of cost-benefit analysis as far as the rate of interest was concerned. He demonstrated that at the same yield of 2,127 lbs. per acre, the benefit-cost ratios were 1.0 at 5 per cent interest per annum, 1.18 at 4 per cent interest and 4.05 at a zero interest rate per annum.⁷⁵ The results, he said, illustrated that in any economic analysis of development funds, the results obtained must be treated with caution.⁷⁶ He felt that the actual rate of interest was "more of a policy judgement to be made by the government rather than by the economist."⁷⁷

A further area of controversy relating to the economics of the Ord Scheme, was the question of the inclusion of secondary benefits in economic analyses.

72. *The Ord River Irrigation Project - a Benefit-Cost Analysis, op. cit., p. 22.*

73. R. A. Patterson, *The Economic Justification of the Ord River Project, op. cit., p. 45.*

74. B. R. Davidson, *The Northern Myth, op. cit., p. 193.*

75. R. A. Patterson, *The Economic Justification of the Ord River Project, op. cit., p. 46.*

76. *Ibid.*

77. *Ibid., p. 45.*

Secondary benefits and costs have not generally been included in cost-benefit studies conducted in Australia.⁷⁸ Dr. Patterson admitted that although intangible benefits should be a part of every project evaluation, the responsibility for their evaluation rested with the government.⁷⁹ The preparation of the Western Australian government case for further financial assistance for the Ord, was however, closely linked with research into secondary benefits undertaken by the Western Australian University Faculty of Economics and Commerce.

As early as July 1961, Professor I. Bowen and Dr. A. Kerr of the Economics and Commerce Faculty called to see North West Minister Court to ask for government funds for a long term study of the economic development of the North West of Western Australia.⁸⁰ The Faculty, they said, already had a research grant from the Reserve Bank which would give them about £2,200 per year until December 1961 and probably after that date. Bowen and Kerr asked for an assured income for North West research of £2,000 for 1962 and £3,000 for 1963.⁸¹ The Western Australian Treasury was not keen - the Under Treasurer felt that the government had already given enough

78. *Supplement to the Treasury Information Bulletin: Investment Analysis, op. cit., p. 24.*

79. R. A. Patterson, *The Economic Justification of the Ord River Project, op. cit., p. 5.*

80. C. W. Court, *Minute*, 10 July 1961. North West Department file 25/61.

81. *Ibid.*

financial support to the University.⁸² However, Bowen and Kerr responded with a plan for an intensive cost benefit analysis of the Ord Scheme.⁸³ Two months later, with the need for a strong case on the Ord Dam in mind, the Western Australian government approved grants of £2,000 for the year ending 30 June 1962 and a further £2,000 for the year to 30 June 1963.⁸⁴

The government grant was used to establish a Research Fellowship in the University Economics and Commerce Department, and Dr. C. A. Cannegieter of the Netherlands was appointed in late March 1962, to arrive in Perth seven months later.⁸⁵ In February 1963 Cannegieter visited Canberra and discussed his benefit-cost analysis with the B.A.E. who were also undertaking a benefit cost analysis of the Ord River Project.⁸⁶ As a result of his visit, the

82. K. Townsing to D. Brand, undated. North West Department file 25/61.

83. I. Bowen and A. Kerr to G. K. Baron-Hay (Consultant to the government), 9 August 1961. North West Department file 25/61.

84. C. W. Court to I. Bowen, 6 October 1961. North West Department file 25/61.

85. I. Bowen to C. W. Court, 29 March 1962. North West Department file 25/61. Dr. C. A. Cannegieter had had experience as an economist with the Netherlands government, also in Indonesia, Mexico and Dutch New Guinea. For nine years he had been a staff member of the Central Planning Bureau of the Hague and during this time was concerned with the evaluation of development projects.

86. Progress Report No. 2, 6 March 1963, Faculty of Economics and Commerce. North West Department file 25/61.

B.A.E. drew up a document entitled "Basic assumptions proposed jointly by the B.A.E. and the University of Western Australia concerning a cost-benefit analysis of the Ord River irrigation project."⁸⁷ The document made explicit several common assumptions, including taking the life of the project as 100 years for the purposes of the analysis and working with a discount rate of 6 per cent. It was also made clear that the University Faculty of Economics and Commerce would be primarily responsible for the analysis of secondary costs and benefits, whilst the B.A.E. concentrated on an evaluation of the primary costs and benefits of the scheme.⁸⁸ Kerr and Bowen reported to the Ord Project Committee on the progress of Cannegieter's research at regular intervals. The results of the secondary benefit study were incorporated into the state *Case for financial assistance from the Commonwealth government to complete the Ord Irrigation Project* in February 1964, and later published by Cannegieter.⁸⁹

Cannegieter looked at the secondary benefits under three headings - additional employment, additional income generated by the scheme, and "political" benefits.⁹⁰ He felt that one of Australia's main political aims was to

87. *Ibid.*

88. *Ibid.*

89. C. A. Cannegieter, "Some Socio-Economic Aspects of the Ord River Scheme," *op. cit.*
C. A. Cannegieter, "The Secondary Benefits of the Ord River Scheme," *op. cit.*

90. *Ibid.*, p. 56.

fill its empty continent rapidly with immigrated population. A scheme such as the Ord River Scheme would, he felt, open up additional employment opportunities.⁹¹ Cannegieter estimated the additional employment benefits, by multiplying the additional workforce with the estimated value added per worker in secondary and tertiary industry, with respect to each year of the period 1960-2060.⁹² He assumed that the rate of growth in value added per capita for the period to 1990 was equal to the Western Australian growth rate of secondary industry in the period 1948/1949 to 1957/1958 (4½ per cent per year). For the period 1990-2060, he assumed that the growth rate (value added per capita) would be equal to a more normal long term growth rate of 1¼ per cent per year. Cannegieter concluded by multiplying those values added, by the estimated additional workforce, and obtained a value of £24 million (in 1960 values).⁹³

He then estimated the increase in income the Ord Scheme would generate in the region to be £11 million (1960 value, reduced by the discount factor).⁹⁴ The above mentioned secondary benefits of £24 million and £11 million were then reduced, to allow for additional costs needed to generate those benefits. He estimated these

91. *Ibid.*

92. *Ibid.*, p. 57.

93. *Ibid.*

94. *Ibid.*

additional costs by using a co-efficient of 3.9 (i.e. the capital co-efficient for Australia in the period 1913-1918, a period which Cannegieter felt to be "more or less comparable with the Ord River development of 1960-2060").⁹⁵ He concluded that the total capital need, in 1960 values, was £13 million.⁹⁶

Cannegieter valued the "political" or national benefits at £45 million. He claimed that:

by settling 10,000 persons in this river valley, we are showing as a nation, a genuine intention of using our natural resources and not leaving them idle, when there are over-populated Asian countries looking for land of high fertility such as the Ord River plains in fact are.⁹⁷

Cannegieter then proceeded to compare discussions relating to the establishment of the Australian sugar industry in Queensland, with those arguments raised on the prospects of the Ord Scheme. He quoted from the 1912 *Report of the Royal Commission on the Sugar Industry*:

Some means must be discovered of establishing industries within the tropical regions. So long as these regions are unoccupied, they are an invitation to invasion, as well as a source of strategic weakness. Granted so much, it follows that the supreme justification for the protection of the sugar industry is the part that the industry has contributed, and will, as we hope, continue to contribute to the problems of the settlement and defence of the

95. *Ibid.*

96. *Ibid.*, p. 58.

97. C. A. Cannegieter, "Some Socio-Economic Aspects of the Ord River Scheme," *op. cit.*, p. 384.

northern portion of the Australian continent.⁹⁸

Cannegieter also quoted H. W. Herbert's statement - that strategically the sugar industry helped to turn the war against the Japanese, in particular by rushing tractors from nearby farms to build the emergency airstrips so important in the Coral Sea Battle.⁹⁹ He claimed that the extra amount the Australian consumer paid to sustain the Australian sugar industry could be estimated at £45 million and, assuming that there is judged to be the same political objective attainable from the development of the Ord, then the value of that objective to the community must be of the same order, not less than £45 million.¹⁰⁰

The above assumptions led Cannegieter to conclude that the present value of total secondary benefits was £67 million, comprising:¹⁰¹

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98. C. A. Cannegieter, "The Secondary Benefits of the Ord River Scheme," *op. cit.*, p. 57.
99. *Ibid.*
100. *Ibid.*, p. 56. This is the Australian sugar consumption per year, multiplied by the import duty of £6 per ton for the period 1902-1914, from which is deducted the amount the Treasury received in this period as import duties and net benefits of the sugar excises (all in £ of 1960). The seventeen years the Australian sugar consumers paid on average £1 per head per year too much for his sugar (1923-1940) can be offset by another seventeen years when the consumers had their sugar approximately £1 cheaper per head (during World War I, plus 1946-52).
101. *Ibid.*, p. 58.

Secondary benefits from a national point of view	£45 million
Benefits of additional employment to immigrants	£24 million
Benefits of a rise in income per capita	<u>£11 million</u>
Total	£35 million
additional capital needed	£13 million
present value of other secondary benefits	<u>£22 million</u>
present value of total secondary benefits	<u>£67 million</u>

Cannegieter estimated the net total present worth of the primary benefits of the Ord Scheme to be £47 million, making the total present worth of primary and secondary benefits £114 million, and giving a secondary benefits to primary benefits relationship of 143 per cent.¹⁰² He concluded that:

especially in respect of the political advantages, it seems difficult to question the reasonableness of the scheme carried out at this time. In earlier decades it might have been costly and impracticable; in later decades it may be too late. In the 1960's it seems to have some risks, but still to be a wise and reasonable investment.¹⁰³

102. *Ibid.*, p. 58. Assuming that the Ord Scheme would be based on cotton and that the Australian home market would continue to support the cotton industry, primary benefits Cannegieter felt, could be based for the time being on the domestic price for cotton. Cannegieter assumed the average future crop yield to be the highest attained experimental yield to date.

103. C. A. Cannegieter, "Some Socio-Economic Aspects of the Ord River Scheme," *op. cit.*, p. 388.

Before Cannegieter's work was presented for publication, Professor Bowen sought the permission of North West Minister Court, who said that although he saw no objection to the article being published, he could not agree with some of the observations, which, in the light of experience appeared over cautious.¹⁰⁴ Court felt that the article did not allow for the impact sugar would make on the Ord Scheme. He commented:

against this one must allow for the approach of an economist searching for yardsticks by which to measure and justify these yardsticks to academic colleagues. We make a bolder approach in our assessments of population, markets etc. because of our experience with projects of this kind and the trends that have marked agricultural and industrial developments.¹⁰⁵

He felt that there would be plenty who would "snipe" at the approach and quote out of context, however this could not be avoided.¹⁰⁶

Cannegieter's work was strongly criticised, both for his use of secondary benefits and his methods of quantification. W. F. Musgrave and J. N. Lewis of the University of New England, felt that his arguments about secondary benefits were doubtful and confused.¹⁰⁷ They saw no

104. C. W. Court to J. Parker, 4 June 1964. North West Department file 16/62.

105. *Ibid.*

106. *Ibid.*

107. W. F. Musgrave and J. N. Lewis, "Measuring the value of political arguments - a comment on Cannegieter," *The Economic Record*, Vol. 41, No. 94, pp. 262-6.

W. F. Musgrave and J. N. Lewis, "The Ord Controversy - a Rejoinder," *The Economic Record*, Vol. 41, No. 96, pp. 633-636.

evidence of over-populated Asian countries looking for fertile land or even suffering any land shortage.¹⁰⁸ They took issue on two grounds - the validity of giving values to political objectives on the basis of past decisions of government, and on the question of whether subsidisation of the Australian sugar industry had, in fact, been undertaken for political defence objectives.¹⁰⁹ Musgrave and Lewis concluded that Cannegieter's "casually imputed value for the dubious intangible or political benefit of the Ord Scheme must be rejected, as must his attempt to press the butcher's thumb of secondary benefits on to the economic scales by which the project is being gauged."¹¹⁰

Professor I. Bowen replied in support of Cannegieter, claiming that Musgrave and Lewis's comments did not penetrate to the heart of the matter.¹¹¹ This was, he felt, an apparently irreconcilable difference of opinion between "developers" and "anti-developers," between those who saw Australia as still an essentially pioneering country with resources to develop and consolidate, and those who thought of it as a coastal fringe urban economy with "a large, infertile hinterland which is best left

108. W. F. Musgrave and J. N. Lewis, "Measuring the value of political arguments," *op. cit.*, p. 263.

109. *Ibid.*, p. 264.

110. *Ibid.*, p. 266.

111. I. Bowen, "A Comment on the Ord Controversy," *The Economic Record*, Vol. 41, No. 94, pp. 267-269.

alone as long as possible."¹¹² Musgrave and Lewis's rejoinder questioned the economics of the scheme. They considered that "even if there were defence and political benefits, however, they would have to be very substantial and peculiar to the Ord scheme to compensate for the inefficiencies of growing our cotton requirements there."¹¹³ They attacked too, the emotive appeal to pioneering traditions asking, "why should the desires of frustrated pioneers be satisfied at public expense in one of the most feather-bedded projects on record?"¹¹⁴ Musgrave and Lewis claimed that Professor Bowen was mistaken in seeing the fundamental conflict as one between "developers" and "anti-developers." Instead, although they felt it would be just as serious an oversimplification, they claimed it would be more correct to see the fundamental conflict as one between "economists" and "anti economists" -

between those who hold that economic principles are relevant to public decision-making on resource development and those who believe that vague political objectives should override all other considerations at least where Northern development is concerned. Or, between those who think alternative uses of limited funds should be carefully weighed and those who suggest that, if the percentage of national budget is small, why question proposed public investment projects.¹¹⁵

112. *Ibid.*, p. 268.

113. W. F. Musgrave and J. N. Lewis, "The Ord Controversy - a Rejoinder," *op. cit.*, p. 634.

114. *Ibid.*, p. 635.

115. *Ibid.*, p. 636.

Professor Bowen commented that because political benefits were difficult to define or measure, they were not for that reason, either vague or unimportant.¹¹⁶

N. F. Laing (also of the University of Western Australia) welcomed Cannegieter's challenge to the view that intangibles should be omitted from cost-benefit analysis, but contended that his method of calculating the benefits accruing to new immigrants attracted by a project, was either "illogical or unrealistic, depending on how it is interpreted."¹¹⁷

The economics of northern development was extensively debated in the press over the 1964/1965 period.

Davidson's book, *The Northern Myth*, was variously criticised and praised. Peter Samuel in the *Canberra Times*, felt that Davidson had so solidly argued his case that proponents of the north would have to muster something much more solid than "the sentiment and loose propaganda they have relied on so heavily in the past."¹¹⁸ W. Mackay in the *Australian*, claimed that Davidson's economics were good, and his book good, but once again "as is so often the case with hypothetical research, Dr. Davidson looks no further than the narrow economic boundaries that limit his

116. I. Bowen, "A Comment," *The Economic Record*, Vol. 41, No. 96, p. 637.

117. N. F. Laing, "Measuring the 'benefits' to additional immigrants - A Comment on Dr. Cannegieter," *The Economic Record*, Vol. 40, No. 91, pp. 935-38.

118. *Canberra Times*, 25 March 1965, p. 2.

field of inquiry."¹¹⁹ J. Stubbs, also writing in the *Australian*, claimed that Davidson's book was written to influence politicians, however, he felt it would have little political effect "because nobody is likely to disturb the balance by publicly supporting his antimyth case. Its major effect will be to strengthen the case of the quiet men in the Treasury who have long been opponents of uneconomic northern projects like the Ord."¹²⁰ A letter to the *Australian Financial Review* claimed that Australia had always had the like of Dr. Davidson - "the inevitable croakers and do nothing advocates." The writer wished good luck to "the Arbuckle brothers and their mates, who are proving that an ounce of common sense is worth tons of scientific jargon."¹²¹

In April 1965 the *Australian* called for the Department of National Development to come into the open and counter in detail Davidson's arguments on the Ord Scheme.¹²² The Commonwealth government was almost universally criticised in all reviews of Davidson's book, for not releasing the Bureau of Agricultural Economics' cost-benefit study of the Ord and other C.S.I.R.O. economic assessments. On 4 April 1965, the Minister for National

119. *Australian*, 27 March 1965, p. 11.

120. *Ibid.*

121. H. R. McWilliam, Tuross, N.S.W. *Australian Financial Review*, 23 April 1965, p. 3.

122. *Australian*, 1 April 1965, p. 10.

Development, D. Fairbairn ended government silence on the matter with a statement saying that Davidson's *The Northern Myth* could not be regarded as a treatment of the subject of northern development as a whole, dealing as it did solely with the agricultural and pastoral aspects of development, and not considering the scope for development in other fields - minerals, forestry, fishing and tourism.¹²³ Fairbairn also criticised Davidson for using information, much of which was out of date. He concluded, "in the light of the evidence available to date, Dr. Davidson's wide sweeping conclusions on the economic aspects of the Ord River Project are open to grave doubt."¹²⁴ Dr. Rex Patterson of the Northern Division, Department of National Development, also countered Davidson's views a few days later, at an address to the National Farmers' Union at Surfers' Paradise.¹²⁵ Dr. Davidson replied to both criticisms in the *Australian Financial Review* of 7 April 1965. He claimed that his book was intended to examine the physical and economic limits of agricultural and pastoral development in tropical Australia - he could not therefore be criticised for ignoring the possibility of mineral development, a subject on which he had no technical knowledge.¹²⁶ He said that schemes

123. *Australian Financial Review*, 5 April 1965, p. 1.

124. *Ibid.*

125. *Australian Financial Review*, 7 April 1965, p. 5.

126. *Ibid.*

should only be proceeded with if there was every reason to suppose that they would be profitable. Why not then, he suggested, delay the construction of the Main Dam for five years and treat the first section of the scheme as a pilot scheme as was originally intended. By this time, he said, the advantages of the Ord Scheme compared with alternative forms of investment, as claimed by Patterson and Fairbairn, would be so obvious that further discussion would be unnecessary.¹²⁷ He concluded, "both Dr. Patterson and Mr. Fairbairn will appreciate the dilemma of a research worker who is refused information by a government and then criticised by the same government for not using this information."¹²⁸

North West Minister Court however, continued to maintain that the Ord Scheme had "the highest level of academic support from twenty years of on the spot research."¹²⁹ It had, he claimed, the backing of an extensive analysis of the B.A.E., an engineering feasibility study by the Snowy Mountains Authority and a secondary benefits study by the University of Western Australia Faculty of Economics and Commerce.¹³⁰ However, in the light of this review of the literature relating to the cost benefit analyses and economic studies of the Ord River Scheme,

127. *Ibid.*

128. *Ibid.*

129. *Australian*, 14 December 1964, p. 10.

130. *Ibid.* See also *West Australian*, 18 March 1965, p. 1.

just what influence was brought to bear on government decision-making on the Ord?

The limitations of the technique of cost-benefit analysis arise both from assumptions underlying the technique, and also from difficulties in estimating costs and especially benefits. The method is full of political and social value judgements and surrounded by uncertainties. This is seen particularly in the differing results obtained by Patterson and Davidson, and the argument between Cannegieter and Musgrave and Lewis. Quantification difficulties are evident, for instance the problem of estimating crop yields and production costs, as well as the problem of choosing a discount rate. How objective can the information be? Cannegieter's study was funded by the state government and Professor I. Bowen and A. Kerr were present at various meetings of the Ord Project Committee. In March 1962, W. T. Allen of the B.A.E. called to see North West Minister Court to talk about the proposed cost-benefit analysis to be undertaken by the B.A.E.¹³¹ Court claimed that he told Allen of his government's misgivings regarding reports that the B.A.E. was unfavourably disposed towards the Ord Project, and Allen "hastened to dissociate himself from any such approach" saying that "his approach to the Ord Scheme was one of optimism."

131. C. W. Court, *Minute*, 6 March 1962. North West Department file 25/61.

There was never any doubt expressed about cost-benefit analysis as a method of reaching a decision on the Ord Scheme. The Western Australian government placed much emphasis on the 140 page B.A.E. cost-benefit study and the University Economics and Commerce Department's secondary benefits study, both of which were attached to the state's case for Stage II of the Ord Scheme. C. W. Court said of the submission:

Surely this is a well-prepared and researched case presented in a form which should be ideal for those at the policy and administrative level to make a decision, confident in the knowledge that those concerned have been responsible in their approach and have had regard for both economic and developmental considerations.¹³²

Previous chapters have attempted to show that decision-making on the matter of development at the Ord River had not, until now, been 'rational' in nature. Here, with the use of cost-benefit analysis, we have seen a belated attempt to inject some rationality into the decision-making process as far as the Ord was concerned. However, the project had already been launched and what we have seen in fact, was an attempt by the Western Australian government to justify their decision. The attempt to introduce rationality failed because of this, and also because of the very nature of cost-benefit analysis which only served to confuse and obscure, rather than clarify the issue.

132. C. W. Court, "Northern Australian Development," *op. cit.*, p. 74.

The usefulness of cost-benefit analysis must not, however, be underestimated. It is, if used correctly, a valid method of helping to solve a problem. If adequate data is available, it is possible to say whether a particular project will mean a gain or a loss of a certain amount of money - if unmeasurable secondary benefits and costs are ignored. The studies of the economics of the Ord Scheme indicate the weakness of the method. They also point to the difficulties involved in economically analysing a project after its commencement.

The decision to grant Commonwealth assistance for the Main Dam was not made as a direct result of a definitive cost-benefit analysis. In fact, the decision was not made until November 1967, by which time the economic studies of the Ord Scheme were outdated, having been replaced by four years of practical farming experience. The next chapter will attempt to show that the Commonwealth decision to help finance the Main Dam was, in fact, the product of complex political and administrative pressures rather than a decision based on any "rational" or "scientific" analysis of the scheme.

CHAPTER VII

COMMONWEALTH-STATE NEGOTIATIONS AND THE DECISION TO PROCEED WITH STAGE II

The Government is in such a desperate political position with respect to the people of Western Australia and Queensland that it has been forced to make a decision regarding water conservation in both States.¹

We do not see policy making as just an election-eering device. We try to run this country in the most effective way we can.²

Late in 1963, North West Minister C. W. Court announced that 1,500 acres of cotton had been planted at the Ord, and he expressed his great faith in the project:

We have a fine lot of practical farmers working in close cooperation with our departmental advisers. The case we will submit early in 1964 for the Main Dam and supported by the Bureau of Agricultural Economics research is a strong one and will justify a favourable decision for an early start on the Dam.³

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1. Dr. R. Patterson, *C.P.D. H. of R.*, Vol. 56, 1 November 1967, p. 2523.
 2. Prime Minister H. Holt, *C.P.D. H. of R.*, Vol. 56, 1 November 1967, p. 2535.
 3. C. W. Court, *Press Statement*, 16 December 1963. North West Department file 63/60.

The case for finance to complete the Main Dam was submitted to Prime Minister Menzies in February 1964.⁴ However, the "favourable decision" was not reached until late 1967 after much bargaining and negotiation on the part of both the Commonwealth and the Western Australian governments. This chapter will examine the process by which the Commonwealth government arrived at the decision to grant financial assistance for the construction of the Main Dam.

The Commonwealth interdepartmental committee, appointed to examine *The Case for financial assistance from the Commonwealth Government to complete the Ord Irrigation Project*, worked closely with the newly established Northern Development Division of the Department of National Development and its head, Dr. Rex Patterson. The trade aspects of the case were referred to Sir Alan Westerman (Secretary, Department of Trade) and Mr. J. Plank (Regional Director, Department of Trade). Court expressed satisfaction with this arrangement.⁵ He felt that Westerman's approach to the project was constructive and positive and "whilst he did query the economic features of the case nevertheless he seemed to be quite realistic in his attitude."⁶ Patterson expressed the view to the Western Australian government that the new Minister for

4. C. W. Court to R. G. Menzies, 10 February 1964. P.W.D. file 774/62.

5. C. W. Court, *Minute*, 28 May 1964. North West Department file 63/60.

6. *Ibid.*

National Development would look upon the case favourably because he would be anxious "to get this job - his first major Northern Development Project as Minister - underway."⁷ However, the views of Patterson and the Treasury representatives on the committee were a long way apart, particularly on the method of financing the Main Dam and the "undue emphasis" the latter were placing on sugar.⁸

Sugar had not been seriously considered as a crop for the Ord since the late 1950's when the all-party delegation to Canberra found that to mention the possibility of sugar on the Ord to Commonwealth Treasurer, Country Party Leader, and Queenslander A. Fadden, was "like a matador waving a red flag at a bull in Madrid."⁹ Fadden shocked some of the committee by saying, "over my dead body."¹⁰

In July 1963, Donald Beech of Ord River Farmers Pty. Ltd. wrote to Court claiming that sugar cane was a "natural" for the Ord, and adding that "the villain *Prodenia* does not eat sugar cane."¹¹ Court took the matter up with the Minister for Agriculture (C. Nalder, Country Party) suggesting that there was a need for

7. D. Munro (Chief Engineer P.W.D.) to J. Parker (Director, P.W.D.), reporting a telephone conversation with Dr. Rex Patterson, 19 June 1964. P.W.D. file 774/62.

8. *Ibid.*

9. *W.A.P.D.*, Vol. 174, 26 October 1966, p. 1670. See chapter 4 for details of the delegation.

10. *Ibid.*, p. 1725.

11. D. Beech to C. W. Court, 1 July 1963. North West Department file 135/64.

"expert and discreet" investigation as to whether the outlook for sugar had permanently changed to a point where the possibility of producing sugar at the Ord should be reconsidered.¹² Court also wrote to C. S. Christian (C.S.I.R.O.), saying that "it would put the seal on the future of the Ord if we could come out with a proposition for sugar production in the Kimberleys."¹³ He also felt that the subject should be reopened, in view of the pending report by the Queensland Government appointed Committee of Inquiry into the Sugar Industry, led by Mr. Justice Gibbs. The confidential information available to Court was that the Sugar Inquiry was likely to lead to an almost immediate expansion of the sugar industry.¹⁴ Premier Brand telegraphed Prime Minister Menzies requesting that consideration be given to the claims of the Ord Project area before any decision was made on increased sugar areas or tonnages.¹⁵ In his following letter Brand said:

The world market for sugar has undergone a dramatic change in recent months and I understand the time has arrived when Australia could confidently agree to increased approved acreage. For this reason we

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12. C. W. Court to C. Nalder, 17 July 1963. North West Department file 135/64.
 13. C. W. Court to C. S. Christian, 7 October 1963. P.W.D. file 1228/63.
 14. C. W. Court to C. Nalder, 7 October 1963. P.W.D. file 1228/63.
 15. D. Brand to R. G. Menzies, Telegram 30 October 1963. North West Department file 135/64.

desire to be considered for an acreage allocation should your government decide to extend the already approved areas.¹⁶

In Canberra, the Western Australian government had a friend in Dr. R. A. Patterson (then Assistant Director B.A.E.). Patterson raised the strong possibility of sugar production on the Ord with the Department of Primary Industry.¹⁷ He advised Court on the moves necessary in order to keep the matter before the Commonwealth. In a letter to Court, Patterson wrote:

As things are going now I feel that Western Australia will be given every opportunity for sugar. However you will need to keep the pressure up. With respect to the major case for the Ord the diversification aspects will greatly strengthen the request. I have kept this matter quite confidential at this end as I guess it is probably not the best thing for a Commonwealth officer to be pushing any point on behalf of a state.¹⁸

Patterson enclosed with his letter, a long draft letter to Prime Minister R. G. Menzies from Premier D. Brand urging him to take into consideration plans for a sugar industry at the Ord, when considering the implementation of the recommendations reached by the Committee of Inquiry (Sugar Industry).¹⁹ Court concurred with the draft and it was

16. D. Brand to R. G. Menzies, 30 October 1963. P.W.D. file 1228/63.

17. R. A. Patterson to C. W. Court, 28 November 1963. P.W.D. file 1228/63.

18. *Ibid.*

19. *Ibid.*

duly submitted to the Commonwealth government.²⁰

Late in December 1963, R. G. Mauldon and B. R. Davidson of the W.A. Institute of Agriculture at the University of W.A., spoke out against the suggestion that sugar would be a suitable crop for the Ord.²¹ They claimed that the present high price of the commodity was due to a world shortage caused by a large decrease in Cuban exports which previously formed 30 per cent of total world sugar exports. They felt that an oversupply of sugar could return, even within the space of two years, and that "while sugar might be a profitable crop on the Ord River at present prices, it is difficult to see how sugar could be produced profitably in the long term."²² Court replied that within the Institute of Agriculture there was a group conducting a crusade against the development of the north.²³ Their attitude, he felt, contrasted with that of the University's Economics and Commerce Faculty -

unlike some members of the institute who are apparently more concerned about gaining a reputation as the great breakers down of development effort, the Faculty of Economics and Commerce is anxious to be part of the team working for the better and quicker development of the state on sound lines.²⁴

20. C. W. Court to D. Brand, 13 December 1963. P.W.D. file 1228/63.

21. *West Australian*, 25 December 1963, p. 6.

22. *Ibid.*

23. *West Australian*, 28 December 1963, p. 6.

24. *Ibid.*

Nevertheless, Court realised that there would be major problems facing an Ord sugar industry. He said:

without being unduly pessimistic in advance, that, prima facie, it is difficult to visualise raw sugar from the Ord competing with raw sugar from the old established industry in Queensland and New South Wales unless subsidisation is to be made available, in one form or another, of agriculture and of the factory, and possibly of the port and of the transport facilities for cane and raw sugar.²⁵

While in Sydney in January 1964, Court proposed to senior executives of Colonial Sugar Refining Co. Ltd. (C.S.R.) that C.S.R. report on all aspects of the feasibility and financial and economic soundness of an Ord sugar industry.²⁶ He also had discussions with Premier F. Nicklin in Brisbane who, he found, was "a little apprehensive" at the news that Western Australia proposed to establish a sugar industry.²⁷ The Bureau of Agricultural Economics were, Court discovered, keen on the plan for C.S.R. to be entrusted with the preparation of a report on sugar growing and milling at the Ord, as was the Western Australian Cabinet, which agreed to the proposal early in February 1964.²⁸

On 13 February 1964, Court met with C.S.R. executives

25. C. W. Court, *Minute*, 21 January 1964. North West Department file 135/64.

26. *Ibid.*

27. C. W. Court to D. Brand, 3 February 1964. North West Department file 135/64.

28. *Ibid.*

in Melbourne to discuss details of the C.S.R. proposal. It was agreed that the work commence on 17 February and take approximately six months.²⁹ Court felt that one of the main problems confronting C.S.R. would be the problem of keeping the Queensland government and growers both "on side."³⁰ He claimed:

They are still a little sensitive in Queensland to our proposal. This is understandable when it is appreciated that there has been no new mill constructed since 1926 and this is the first major project to establish a sugar industry outside Northern New South Wales and Queensland.³¹

Premier Brand informed Prime Minister Menzies of the arrangements with C.S.R. and asked whether the Commonwealth government concurred in the production of sugar on the Ord.³² He said, "this work by the C.S.R. is aimed at obtaining advice on the detailed way to implement the sugar industry in the Ord area, and, as we see it, is not a prerequisite of any decision to engage in sugar growing."³³ The Commonwealth government evidently saw the matter in a different light. Acting Prime Minister and Country Party Leader J. McEwen wrote:

Although your government does not regard the detailed

29. C. W. Court, *Minute*, 13 February 1964. North West Department file 135/64.

30. *Ibid.*

31. *Ibid.*

32. D. Brand to R. G. Menzies, 17 June 1964. North West Department file 135/64.

33. *Ibid.*

examination of the potential of the Ord River area for sugar by the C.S.R. Co. Ltd. as a prerequisite of any decision to engage in sugar growing, I would expect that this report should provide much valuable data for assessing the scope for cane growing on the Ord.³⁴

He said that the Commonwealth wished to see the report before answering Brand's question.³⁵ McEwen's letter provoked an immediate telegraphed reply from Court (with the authority of Brand, then in Wyndham):

It was never our understanding that C.S.R. report would be a prerequisite for decision about Ord sugar being accepted in principle as part of the overall Australian cane sugar industry. Nor did we consider C.S.R. report would be significant in the Ord case when budget being framed.³⁶

Court elaborated in a letter to McEwen explaining that if the world scene for sugar had not changed, the case for financial assistance would be before the Commonwealth without sugar as one of the proposed crops.³⁷ He asked that the Commonwealth reconsider its decision in respect to the general principle of Ord sugar growing without waiting for the C.S.R. report.³⁸

While visiting the Ord area in August 1964, National

34. J. McEwen to D. Brand, 13 July 1964. North West Department file 135/64.

35. D. Brand to J. McEwen, 16 July 1964. North West Department file 135/64.

36. C. W. Court to J. McEwen, 16 July 1964. P.W.D. file 1228/63.

37. *Ibid.*

38. *Ibid.*

Development Minister D. Fairbairn (Liberal, N.S.W.) reiterated the desire of the Commonwealth government to await the C.S.R. report before making a decision on sugar or on the matter of financial assistance for the Main Dam.³⁹ Brand again pleaded with Menzies, saying that an early decision was vital.⁴⁰ He claimed that a delay would cause a break in farm allocation, destroy the confidence of prospective farmers and, in view of the likely siltation of the Diversion Dam, the early construction of the Main Dam was vital.⁴¹ Menzies replied, saying that he had nothing to add at that stage.⁴²

The Western Australian government received the C.S.R. report late in October 1964 and two copies were forwarded to the Commonwealth; one to the Prime Minister and one to Dr. R. Patterson.⁴³ The details of the report were not made public. Public Relations Officer W. W. Mitchell advised Court to issue a short press statement, stating only that the government had received the C.S.R.

39. *West Australian*, 7 August 1964, p. 16. Fairbairn was accompanied by Sir Harold Raggatt (Head of Department of National Development) and Dr. R. Patterson (Head Northern Division, Department of National Development).

40. D. Brand to R. G. Menzies, 12 August 1964. North West Department file 63/60.

41. *Ibid.*

42. R. G. Menzies to D. Brand, 19 August 1964. North West Department file 63/60.

43. C. W. Court to R. G. Jackson (Senior Executive Officer, C.S.R.), 23 October 1964. North West Department file 63/60.

preliminary report on the prospects of sugar growing on the Ord River.⁴⁴ Mitchell felt it inadvisable to elaborate at that stage as the report was "preliminary and to some extent unfavourable," and the less favourable aspects would be the subject of discussion and possible modification. He said that the conclusions were therefore inconclusive and the Federal government should not be given the opportunity of regarding them as conclusive.⁴⁵

The report implied that a sugar industry on the Ord would probably be technically feasible, subject to further work on yields and agricultural practice but because of the massive capital expenditure needed in a new, isolated area, there would appear to be little point in seeking to press on with its establishment except within a framework of a national policy of developing the north.⁴⁶ The report estimated the total capital cost (excluding irrigation works), for an output of 120,000 tons raw sugar, would be about £24 million of which £15 million would normally be regarded as the responsibility of the private sector.⁴⁷ The total income requirement, to meet costs and to give farms and mill a return on funds

44. W. W. Mitchell to C. W. Court, 30 August 1964. North West Department file 69/63.

45. *Ibid.*

46. *Sugar on the Ord River*. Confidential report to the Government of Western Australia. C.S.R. Co. Ltd., September 1964, p. 78.

47. *Ibid.*

invested, was estimated at about £54 per ton of raw sugar as the average obtained from selling on all markets. This would require a world free price of £45 sterling and, as the current price was about £32.10.0 sterling and remained below £40 sterling for long periods, on these assumptions a sugar industry on the Ord would not be a financial proposition.⁴⁸ The report suggested that two pilot farms be established to collect operational and costs data through a full crop cycle of four years.⁴⁹

The Ord Project Committee considered the report, and recommended that it be stressed to the Commonwealth government that there were many aspects which appeared conservative, and on which further discussions were necessary before the report was felt to be acceptable.⁵⁰ The aspects felt to be conservative were first, the relative levels of public and private capital; secondly, the allowances made in arriving at the cost of production for contingencies, harvesting, cane transport, industry services and profit margins.⁵¹ Thirdly, it was felt that a less expensive testing on pilot farms might be feasible.⁵²

48. *Ibid.*

49. *Ibid.* At an estimated cost of £550,000.

50. Minutes of the Ord Project Committee, 16 October 1964. P.W.D. file 1228/63.

51. J. E. Parker to C. W. Court, 19 October 1964. North West Department file 63/60.

52. *Ibid.*

The C.S.R. report did not result in an immediate Commonwealth decision on Ord finance or on sugar as a crop for the Ord. In fact, by mid November 1964 it was obvious that Federal Cabinet had deferred a decision on the Ord. There was little prospect of a decision before the December 5 Federal elections. M. C. Uren wrote in his *Canberra Diary*, "no decision has been made and, with ministers scattered all over Australia for the election campaign, none is likely in the next fortnight - unless it is a sudden telephone vote."⁵³ He told of the many "blame McEwen" stories circulating, McEwen being seen as the stumbling block in the Cabinet room.⁵⁴ When in Perth for the election campaign, McEwen said he was sure money would be found for the Ord Scheme, if government studies on the economics of the project were favourable.⁵⁵ He felt that more investigation was needed - "I can bear the government losing some money, but what we are talking about here is a lot of individual farmers putting up their money and careers."⁵⁶ Court had already claimed that Western Australia would consider other sources of finance if necessary, in fact, he said, he had been offered overseas private capital to carry out the whole of the £30 million project.⁵⁷

53. *West Australian*, 21 November 1964, p. 4.

54. *Ibid.*

55. *West Australian*, 24 November 1964, p. 2.

56. *Ibid.*

57. *West Australian*, 16 November 1964, p. 1.

The Commonwealth Government Members National Development Committee discussed the Western Australian government's Ord River submission early in 1964, and gave a quick decision in favour of the project. This committee, established in 1959, was one of the twenty or so government members' committees operating in the early 1960's on the Liberal-Country Party side of Parliament.⁵⁸ Its "self appointed" members met thirty to forty times a year and travelled extensively throughout Australia.⁵⁹ The National Development Committee was in the habit of obtaining information from representatives of sections in the community, and public servants often addressed meetings and answered questions.⁶⁰ In March 1964 R. H. Whittorn, secretary of the committee, wrote to Court to obtain the Western Australian government proposals on the Ord River Scheme and also a copy of B. Davidson's criticisms.⁶¹ He added a reassuring note:

as you can well imagine, our Chairman Senator Malcolm Scott gives full support to any additional activity proposed in the West, and it could well be that the pros and cons, after having been discussed by members of the Committee, will still fall in your favour.⁶²

58. G. S. Reid, *Backbenchers or "Rubber Stamps," op. cit.*, p. 6.

59. *Ibid.*, p. 8.

60. *Ibid.*, p. 11.

61. R. H. Whittorn to C. W. Court, 19 March 1964. P.W.D. file 774/69.

62. *Ibid.*

In July 1964 the committee made a two day visit to the Ord,⁶³ and subsequently Senator M. Scott wrote to Court to say that as a result of their visit to Kununurra and an examination of the Ord River Scheme, his committee was completely satisfied with the proposal and Court could "rest assured we will support the project wherever necessary."⁶⁴

The committee members, it would appear, were not as certain of their decision as the chairman. In November 1964 Liberal Party backbencher C. R. Kelly (South Australia) wrote to the Prime Minister urging the government to delay its decision on the greater Ord Scheme.⁶⁵ He said:

I cannot help making bitter comment. If the Forster Committee in 1959 had given agricultural development in the Northern Territory the kind of rosy optimistic assessment given by the Western Australian government in this case, then we would have recommended a peanut industry there, with the farmers now going broke right and left. I think the same kind of close look should be given in the Ord.⁶⁶

The *West Australian* editorial commented that Kelly's letter had apparently strengthened support for the Ord River Scheme in the Government Members National Development Committee; his colleagues being annoyed that he chose a direct approach to the Prime Minister while the matter was

63. *Press Statement*, 24 July 1964. North West Department file 150/64.

64. M. Scott to C. W. Court, 27 July 1964. P.W.D. file 774/62.

65. *West Australian*, 12 November 1964, p. 2.

66. *Ibid.*

still under discussion in the committee.⁶⁷

Dr. Davidson's announcement that the first cotton crop on the Ord had cost taxpayers £55,000 in subsidies, or £2,600 for every farmer and farm worker employed, provided fuel for those opposing the Ord River Scheme.⁶⁸ Patterson spoke of "organized opposition" to the scheme in Canberra.⁶⁹ He claimed that there was a lack of Commonwealth interest in the north and that no other project had received such organized opposition.⁷⁰ Dr. Davidson, he said, "has an axe to grind and his observations are played up by the press. Remarks such as his are seized on by Cabinet Ministers and others not favouring the Ord Scheme."⁷¹ However, Patterson considered that the Commonwealth government would support the claim for the Main Dam, the pressure in Canberra being "not to decline the claim but to have action on it deferred."⁷² The Prime Minister, he felt, would consider the Ord case on his return from leave.

M. C. Uren in his *Canberra Diary* also predicted a decision after the Prime Minister's return.⁷³ He

67. *Ibid.*

68. *Australian*, 30 November 1964, p. 16.

69. Minutes of the Inaugural Meeting of the N.W. Planning Authority, 15 January 1965. North West Department file 7/63.

70. *Ibid.*

71. *Ibid.*

72. *Ibid.*

73. *West Australian*, 9 January 1965, p. 4.

anticipated a favourable decision, as "any other decision would make a laughing stock of the new Northern Division of the Department of National Development."⁷⁴ When, two months later, there was still no decision on the Ord, Premier Brand spoke critically of Commonwealth slowness and demanded an answer.⁷⁵ Court too, expressed his impatience. He wrote, "if this case does not warrant support - backed by the soundly prepared case and all the other good reasons for making a start - then we must regard the concept of vigorous northern development as being doomed."⁷⁶ He calculated that the scheme only required an average of £2 million a year from the Federal Treasury's £2,000,000,000 a year budget.⁷⁷

The question of the delayed Commonwealth decision on the Ord case was also raised in Federal Parliament. Senator H. G. J. Cant (Western Australia) moved for the adjournment of the Senate to discuss "the need for the Commonwealth government to make an immediate favourable decision to grant the request of the Western Australian government for financial assistance to complete the Ord River Irrigation Scheme and associated works and housing."⁷⁸ He was supported by Senators F. Dittmer

74. *Ibid.*

75. *Australian*, 10 March 1965, p. 3.

76. *West Australian*, 18 March 1965, p. 5.

77. *Ibid.*

78. *C.P.D.* Senate Volume 28, 16 March 1965, p. 19.

(Queensland), J. A. Cooke (Western Australia) and Senator L. K. Murphy (N.S.W.) but Western Australian Senators S. D. Paltridge, M. F. Scott and T. C. Drake-Brockman claimed that in asking for time to investigate the case, the Commonwealth was doing the right and reasonable thing. On the same day, when asked by Mr. F. W. Collard in the House of Representatives whether any definite decision had been made on the request for financial assistance to complete Stage II of the Ord River Scheme, Sir Robert Menzies answered, "I cannot say at present when a decision will be made; but it will be made as soon as possible after a complete examination of the project has been made."⁷⁹

The delay was seen by some as a result of Dr. B. Davidson's influence. Senator M. F. Scott asked the Minister for National Development, represented by Senator S. D. Paltridge, to assure him that the government would ignore Davidson's "continued unrealistic attacks" on the Ord Scheme and would instead rely on information supplied by the experts at Kimberley Research Station.⁸⁰ Paltridge replied that the government, "in considering this important matter and in reaching its decision will take into account options which it considers are valuable and for which there is a scientific basis. This will not necessarily exclude the opinion of Dr. Davidson."⁸¹

79. *C.P.D. H. of R.* Vol. 45, 16 March 1965, p. 9.

80. *C.P.D. Senate*, Vol. 28, 24 March 1965, p. 62.

81. *Ibid.*

Two months later, one year after the Western Australian government's submission, Prime Minister Menzies announced his decision to defer a decision on the matter.⁸² He said:

despite the agricultural and engineering research work that has been undertaken over the years, the government considers that more detailed information needs to be known about such issues as the profitability of cotton production, the ability of the farmer to control insect pests which apparently abound in the area, and the behaviour of these tropical soils after intensive production has been commenced.⁸³

He claimed that in view of the "many unknowns" associated with the project the government had taken the wisest decision; to wait for more information.⁸⁴

Premier Brand expressed his disappointment with the decision but said that the state government did not regard Federal Cabinet's deferment of the scheme as final.⁸⁵ In fact, the state government already had plans to approach the Commonwealth with an amended case for financial assistance for the Ord River Scheme - an initial request for £8,300,000 to build the Main Ord Dam with less emphasis on associated development.⁸⁶ A few days later, Court and Brand said that private capital to develop the Ord would

82. *C.P.D.* H. of R., Vol. 46, 5 May 1965, p. 1201.

83. *Ibid.*

84. *Ibid.*

85. *West Australian*, 7 May 1965, p. 1.

86. *Ibid.*

be considered only as a last resort.⁸⁷ Court claimed that during a recent trip overseas he had told inquirers that he felt the Commonwealth would eventually back the scheme and he did not think it would be acceptable, politically or otherwise to give an overseas corporation access to the land.⁸⁸

An opposition urgency motion was moved in the House of Representatives on the matter of "the Government's failure to cooperate with the Government of Western Australia in the development of Stage II of the Ord Irrigation Project."⁸⁹ F. W. Collard, who submitted the motion, claimed that the Prime Minister's statement was close to the views expressed by Dr. Davidson. He said, "it seems to me that the government has seized upon his view or expressions of opinion as a means by which it can, at least for some period of time, delay or avoid granting further finance for the development of the Ord River Project."⁹⁰ National Development Minister Fairbairn replied that it was one of the government's responsibilities to the taxpayers in general, that the government should examine a project closely before deciding whether to spend £30 million on it.⁹¹ He also said

87. *West Australian*, 11 May 1965, p. 8.

88. *Ibid.*

89. *C.P.D.*, H. of R., Vol. 46, 12 May 1965, p. 1382.

90. *Ibid.*

91. *Ibid.*, p. 1385.

that

no one foresaw that at the end of the first year's harvest, or actually before the first harvest had been collected, a request would be made to the Commonwealth government to go ahead with the full scale project. There was to be a series of pilot farms; then, as we gained knowledge and experience so the scheme would be broadened.⁹²

The *West Australian* described the House of Representatives as "a lamentable picture" during the urgency debate.⁹³ Only four of the eight available Western Australian members spoke (D. W. Maisey, R. Cleaver, C. H. Webb and F. W. Collard), and for most of the eighty minute debate the nineteen members in the House were outnumbered by spectators.⁹⁴ G. Freeth and F. C. Chaney were not present and the two Western Australian members representing the government side (R. Cleaver and D. W. Maisey) were, the *West Australian* claimed, "abjectly conformist."⁹⁵ R. Cleaver saw the Commonwealth government's decision as "a sound and businesslike approach,"⁹⁶ and D. W. Maisey questioned the wisdom of the Western Australian government's attempt to "bulldoze its partner in the Ord project into rushing ahead of schedule with the programme instead of following the plan to solve the problems

92. *Ibid.*

93. *West Australian*, 14 May 1965, p. 6.

94. *Ibid.*

95. *Ibid.*

96. *C.P.D.* H. of R., Vol. 46, 12 May 1965, p. 1391.

of the pilot farms before embarking on the more ambitious final stages of the Ord scheme."⁹⁷

Late in May, before the harvesting of the 1964/5 cotton crop had been completed, the Western Australian government made a new submission to the Commonwealth. In his letter to the Prime Minister, Premier Brand stated that the Western Australian government respected the Commonwealth's decision on the Ord, but felt that there were, in fact, good reasons why the present position could be modified in the national interest.⁹⁸ The attached submission divided the reasons into three parts. First, it claimed that further information was available on yields, pest control, repeated cropping on Kununurra soils and the benefits to the cattle industry. Harvesting of the 1964/1965 cotton crop was proceeding and there was evidence that yields would, in general, be 50 per cent higher than the 1963/1964 crop. A number of farmers intended to obtain a second crop from the 1964/1965 plants and this could well mean a total annual yield in excess of 3,000 lbs. seed cotton per acre. The cost benefit analysis, the submission claimed, had shown that the project was economically justifiable with such yields and without any cotton bounty. Secondly, the submission put forward new proposals for financing future work. It was suggested

97. *Ibid.*, p. 1394.

98. D. Brand to R. G. Menzies, 28 May 1965. P.W.D. file 774/62.

that at least one-third of the cost and possibly more, could be financed by the state through loans and other means on the following basis:

- Main Dam etc. £10 million (Commonwealth grant)
- housing, hydro power up to £10 million (Loan)
- irrigation channels, drainage £10 million (with Commonwealth assistance)

(including the Northern Territory part of the project involving approximately £6 million).

Thirdly, the submission explained that there existed a case for proceeding urgently with the Main Dam, a new main irrigation channel and diesel power station to protect and maximise the existing investment. It was claimed that flood and silt damage to the Diversion Dam storage could occur if the Main Dam did not provide the essential protection in reasonable time. It was stressed too, that any delay would impair confidence in the progress of the area.⁹⁹

In November 1965, the Western Australian government presented a revised case based on the results of the 1965 cotton growing season.¹⁰⁰ The case was the original request for £30 million, with updated statistics. The estimated cost of the hydro-electric power station was cut from £6 million to £3,600,000, £7,800,000 was requested to meet the cost of the Main Dam and £22 million for

99. *Ibid.*

100. *West Australian*, 10 March 1966, p. 1.

irrigation works.¹⁰¹

Meanwhile, Dr. Patterson's acceptance in August 1965 of Labor endorsement for the Country Party seat of Dawson, North Queensland, at the next election, served to focus public attention on Patterson's dissatisfaction with the government's attitude to northern development and the decision to delay further support for the Ord River Scheme. On 19 August 1965, the *Australian* reported that the Northern Division of the Department of National Development was "near collapse" because its senior officers were disillusioned by the government's neglect of northern development in the Commonwealth budget.¹⁰² On the previous day, Dr. Patterson had informed the Secretary of the Department of National Development that he intended to stand as Labor candidate for Dawson in the next election.¹⁰³ On 20 August 1965, Dr. Patterson defended the economics of the Ord River Scheme in a paper read to the Hobart meeting of Anzaas.¹⁰⁴

The sitting Country Party member for Dawson, Mr. G. Shaw died on 9 January 1966 after a short illness, and the Speaker announced that a by election would be held on 26 February 1966.¹⁰⁵ Dr. Patterson resigned to contest

101. *Ibid.*

102. *Australian*, 19 August 1965, p. 3.

103. *C.P.D. H. of R.*, Vol. 47, 19 August 1965, p. 219.

104. See chapter 6.

105. C. A. Hughes, "The Dawson By Election 1966," *Australian Journal of Politics and History*, Vol. XII, No. 1 (May, 1966), p. 13.

the election and won the seat with a majority of 55.1 per cent as compared with the A.L.P. vote of 41.4 per cent in 1963.¹⁰⁶ The loss of the seat by the Liberal Country Party coalition was its first at a by election since 1952.¹⁰⁷

Patterson used his maiden speech in the House of Representatives to warn against delay on the Ord River Scheme:

if this Government does not make a positive statement on the Ord River Scheme before long, then I warn the Government that in Western Australia at the end of this year it may have a repetition of the result in the Dawson by-election.¹⁰⁸

He claimed that with the exception of the amount provided for the Mt. Isa Railway and the amount of £1.6 million for the development of Weipa, every other project in northern Australia had been "associated with some electoral reverse or some crisis in an electorate."¹⁰⁹

One month later, the *West Australian* editorial commented that it was to be doubted whether the government had learnt anything about northern development since its reverse in the Dawson by election.¹¹⁰ This was in view of

106. *Ibid.*, p. 21.

107. *Ibid.*

108. *C.P.D.* H. of R., Vol. 50, 15 March 1966, p. 250.

109. *Ibid.*, p. 251.

110. *West Australian*, 18 April 1966, p. 6.

Interior Minister J. D. Anthony's statement to a meeting of N.S.W. cotton growers at the opening of a cotton gin plant at Merah North.¹¹¹ He said:

What I have seen here is making me think again about our policy of growing cotton in the Ord River area. What we have got to think about now is whether it is economic to continue to subsidise the north. When I see what you have done here with limited government assistance I wonder about the Ord.¹¹²

When in Perth a few days later, Prime Minister H. E. Holt assured Western Australians that Mr. Anthony came from New South Wales and had a special interest in that place; he, however, as Prime Minister, represented Australia as a whole and an "objective and dispassionate judgement" could be expected on the matter of the Ord Scheme.¹¹³

Prime Minister Holt said that he expected a report on the Ord from National Development Minister Fairbairn by the budget session (usually August) at the latest.¹¹⁴

On 10 May 1966, Collard moved an urgency motion criticising the government's "failure to proceed with the next stage of the Ord River Irrigation Project as requested by the Western Australian government."¹¹⁵ The urgency debate itself indicated that the issue was not of great

111. *West Australian*, 16 April 1966, p. 1.

112. *Ibid.*

113. *West Australian*, 22 April 1966, p. 1. [Prime Minister Menzies had resigned from office 20 January 1966.]

114. *Ibid.*

115. *C.P.D. H. of R.*, Vol. 51, 10 May 1966, p. 1612.

interest to the Federal Parliament. Five members spoke, beside Collard who was the only Western Australian speaker. National Development Minister Fairbairn reiterated the view that his government needed to know the full facts, and must make an assessment of the future of cotton profitability before making a decision.¹¹⁶ Dr. Patterson on the other hand, claimed that now that \$8.4 million had been spent, Western Australia should not have to listen to any further arguments to justify delay by the government.¹¹⁷ He also said that if the government had any doubts about the Ord Project it should never have commenced it in the first place.¹¹⁸ The *West Australian* commented that the debate reflected the sorry state of affairs into which the Ord Scheme had been allowed to drift.¹¹⁹ It went on to say that "instead of looking at the scheme on its merits as a pioneering national venture, the Federal government is letting it become a sawhorse for political lobbying by sectional interests."¹²⁰ Fewer than 30 of the 124 members of the House of Representatives were present, and the debate lasted only 75 minutes until Fairbairn successfully moved that the House resume normal business.¹²¹ About 9 of 18 Country Party members were

116. *Ibid.*, p. 1617.

117. *Ibid.*, p. 1618.

118. *Ibid.*

119. *West Australian*, 12 May 1966, p. 2.

120. *Ibid.*

121. *Ibid.*

present and at times there were only 5 Liberals in a House of 47. The number of Labor members present during the debate fell as low as 10 including 4 front bench members of the Party and Collard.¹²²

Federal Cabinet met one week later, to discuss the findings of the interdepartmental committee established to examine the Ord Project.¹²³ On the first day Cabinet met from 11 a.m. to 11.45 p.m. but failed to reach a decision.¹²⁴ The Minister for Trade and Industry, J. McEwen, was not present at the discussion, however, Interior Minister J. D. Anthony, not a Cabinet member, was present for at least part of the discussions.¹²⁵ At the end of the second day of Cabinet talks, Prime Minister Holt issued the following statement:

The Commonwealth government approaches the question of second stage development on the Ord in a helpful spirit. It has noted however, that the latest estimates of cost are of the order of \$70 million and this amount seems likely to escalate against a background of rising costs in Western Australia as it moves through the greatest industrial boom in its history. There are some problems associated with

122. *Ibid.* The next day an urgency motion on the Ord was debated in the Senate. In the three hour debate 12 Senators spoke and almost half the Senate members were present. Four Western Australian Senators spoke: Dr. Willessee, H. G. J. Cant, M. F. Scott, D. M. Tangney. *C.P.D. Senate Vol. 31, 11 May 1966, pp. 929-961.*

123. The identities of the committee members were never revealed. *C.P.D. H. of R., Vol. 52, 16 August 1966, p. 92.*

124. *West Australian, 18 May 1966, p. 1.*

125. *Ibid.*

depending on cotton as a single crop and these need to be carefully considered.¹²⁶

He went on to add that it would not be wise to establish a community dependent on a single crop which faced falling world market prices, and which either had to rely indefinitely on subsidised production or would prove unprofitable if the subsidy was withdrawn.¹²⁷ He said the Commonwealth government had noted a good deal of pressure on resources in Western Australia, including shortage of labour for construction purposes, and it was therefore an inappropriate time to launch another major construction project.¹²⁸ Holt said further talks would take place between Commonwealth and state ministers in the following week.

After the Canberra talks on 25 May 1966, Court felt that Western Australia had gained considerable ground.¹²⁹ He said that now, at least, Western Australia had "an authoritative understanding of the questions the Commonwealth wants answered before it will support extension of the Ord Scheme."¹³⁰

126. *West Australian*, 19 May 1966, p. 1.

127. *Ibid.*

128. *Ibid.*

129. *West Australian*, 27 May 1966, p. 2. The Western Australian representatives were J. E. Parker, T. C. Dunne, G. Oliver (Economist, Department of Agriculture), Acting Premier C. Nalder, C. W. Court and Under Treasurer J. Ewing.

130. *Ibid.*

Holt's statement however, created resentment and discontent amongst the Ord River farmers who appeared to believe that the state government had not presented its case as well as it might have done, and had not pressed the matter as hard as it should have done.¹³¹ At a meeting in Kununurra with representatives of Ord farmers, Court claimed that it was both "untrue and unfair" to make this allegation or even infer that this was the case.¹³² "The simple fact was," he said, "that the State government had pressed the matter as hard as it possibly could and we were not prepared to resort to the same tactics as the Namoi cotton growers had done."¹³³ He told the farmers that it was "well known in political circles that the Namoi people as well as the Queensland people had lobbied very heavily leading up to the decision, made by the Commonwealth in the statement made by the Prime Minister."¹³⁴

A further meeting of Commonwealth and state Ministers was held in Canberra on 25 August 1966.¹³⁵ Holt reported a "useful interchange of views" and some

131. C. W. Court, *Minute*, 10 June 1966. North West Department file 104/65.

132. *Ibid.*

133. *Ibid.*

134. *Ibid.*

135. Representatives for the Commonwealth were - Treasurer W. McMahon, National Development Minister D. Fairbairn, Primary Industry Minister C. F. Aderman, Interior Minister J. D. Anthony and for the state - C. W. Court, C. Nalder and D. Brand.

additional information for the Commonwealth ministers.¹³⁶ The talks ended with an undertaking from Federal Treasurer W. McMahon to submit the West Australian request with its new detail, to the government. No immediate decision was made as a result of the meeting, and the *West Australian* commented, "it is disappointing that this week's ministerial meeting in Canberra failed to move the Federal government from its chronic procrastination over the Ord scheme."¹³⁷ However, Prime Minister Holt had announced that a firm decision could be expected before the next Federal election, fixed tentatively for November 26, 1966.¹³⁸

The Commonwealth decision to again defer a decision on the Ord, was made at a two and one half hour Federal Cabinet meeting on 18 October 1966.¹³⁹ Premier Brand was notified by telephone and then a letter, in which Prime Minister Holt said that there were still major uncertainties about the future prospects of the scheme which could be clarified only by further experience in its pilot phase.¹⁴⁰ Brand's immediate response was to send an indignant telegram - "What more could be done to satisfy you on the Ord? What more evidence do you want? Our

136. *C.P.D., H. of R.*, Vol. 52, 22 September 1966, pp. 1248-9.

137. *West Australian*, 27 August 1966, p. 6.

138. *West Australian*, 12 August 1966, p. 1.

139. *West Australian*, 19 October 1966, p. 1.

140. *West Australian*, 21 October 1966, p. 1.

belief is that the Ord River Project could be the forerunner of similar developments in the north."¹⁴¹ Court's reaction was one of amazement. He felt that the Commonwealth decision was more than a deferment - it was a clear indication that the Commonwealth was not going to press on with any major northern development of a similar nature.¹⁴² He said, "we find ourselves in an intolerable position - one which should not be allowed to persist between two governments."¹⁴³

Prime Minister Holt's *Ministerial Statement* on 21 October 1966 expanded the reasons for the Commonwealth deferment of the decision.¹⁴⁴ He stated that "in the context of the project itself, our uncertainties are closely tied in with unresolved doubts about the viability of the scheme."¹⁴⁵ He said that when considering a project involving upwards of \$70 million the Commonwealth government was bound to examine it closely. He saw the major difficulties as first, the world market outlook for cotton. The Ord was a strictly monoculture project, standing or falling as a cotton project. Cotton, Holt claimed, was a surplus commodity in world markets and prices had fallen

141. Quoted in *C.P.D.*, H. of R., Vol. 53, 21 October 1966, p. 2073.

142. *West Australian*, 21 October 1966, p. 1.

143. *Ibid.*

144. *C.P.D.*, H. of R., Vol. 53, 21 October 1966, pp. 2073-4.

145. *Ibid.*

in the United States. Secondly, although cotton yields had improved, Holt felt that "it remains to be seen whether the farmers can attain a level at which, without the cotton bounty, they would be protected against likely increases in farm costs and possible further falls in world cotton prices." Thirdly, with regard to Western Australian advice that stub cotton could improve the overall economics of the scheme, the Commonwealth government felt that the experiment had been tried on only 35 acres, and investigations overseas suggested that the method was not at all widely favoured. There was in fact, evidence to suggest that it could attract additional pests and could weaken the prospects of the venture over the long term. Finally, Holt reiterated the fact that the market outlook for cotton was uncertain and that there had been no attempt to argue that there was any alternative viable crop. "In this situation," he concluded, "there is a need to be clearer on the future possibilities of cotton before committing ourselves or potential Ord farmers to the larger Ord project."¹⁴⁶

One week later, National Development Minister Fairbairn, in reply to the question, "what more can be done to satisfy you?" listed further uncertainties.¹⁴⁷ He felt that the cotton yield per acre, though improved, was "still not at a level that we would like to see and which

146. *Ibid.*, p. 2074.

147. *C.P.D.*, H. of R., Vol. 53, 28 October 1966, p. 2089.

we think it could be sold at export prices without some kind of subsidy."¹⁴⁸ The Western Australian case, he claimed, was based on half the area growing stub cotton; only 35 acres had been grown so far and the Commonwealth felt the need for further information. The case, he said, was also based on the growing of wheat and sorghum as additional crops over and above the 450 acres of cotton. Until now, no single farm had grown 450 acres of cotton and, in addition, wheat and sorghum had not been grown on the farms at all - only on the Kimberley Research Station. Fairbairn also stressed the Commonwealth's desire for further trials of beef production using tropical pastures or cotton seed cake. He told of a couple of small encouraging experiments in this area but added, "this is certainly not something on which we could base a decision to spend a large sum of about \$65 million."¹⁴⁹

North West Minister Court felt that he was speaking for the people of Western Australia, "whether supporters of the Government or supporters of the Opposition," when he said they "would be less than human if they did not feel some sense of disappointment and, possibly a feeling of frustration at the Commonwealth's announcement to defer still further a decision on financial assistance for this great project."¹⁵⁰ A. R. G. Hawke, Leader of the

148. *Ibid.*

149. *Ibid.*

150. *W.A.P.D.*, Vol. 174, 2 November 1966, p. 1954.

Opposition in the Western Australian Parliament, moved the motion, "that in the opinion of this House the Federal Government deserves to be condemned strongly for its recent refusal to grant financial help to the State of Western Australia to enable the vitally important Ord River Irrigation Scheme to be completed.¹⁵¹ In speaking on the motion, Court defended the government's emphasis on cotton production. He said that it was a cash crop that could be grown successfully and profitably and, he added, it came within the government's existing subsidy for cotton.¹⁵² He moved an amendment to the motion so that it would include the reasons for Western Australian concern at Commonwealth deferment of the decision.¹⁵³ The amendment was put and passed, and the reasons for the concern of the House were listed as:

1) Research and farming experience has proceeded to a point where there is adequate proof of the economic viability of the project.

2) The conservation and economic use of water in the north is an important and urgent national responsibility in view of the need to anticipate the time - which time is not far distant - when the known potential water supplies of the more southerly parts of the continent and particularly in the south-east of the continent, will need to be carefully conserved and controlled to keep up with population and industrial growth and at the same time enable Australia to continue to make an increasing contribution to the world's need for food and fibre.

3) The project is economically viable on cotton but at no stage has it been the intention to base the project only on a monoculture. Other cash crops are

151. *Ibid.*

152. *Ibid.*, p. 1958.

153. *Ibid.*, p. 1960.

practicable to give diversity and in any case the original concept - which is still valid - included benefits to the cattle industry as well as production of cash crops.

4) In the interests of the State, the farmers and their families and all others associated with the project, it is not desirable to allow the present uncertainty to exist. A firm decision should have been made to proceed even if the Commonwealth made it a condition to delay commencement of the work for a year because of other commitments.

5) The advance made in the Western Australian economy and finances through increased royalties and other revenue is such that the reduced demand on the Commonwealth through the special grant would in effect only mean a transfer of funds to the Ord project rather than an additional demand on Commonwealth resources.¹⁵⁴

In Kununurra the farmers were concerned about the decision and its effect on their future. The President of the Ord River Growers Association, D. Clune, commented after the Commonwealth announcement - "We feel like school-boys who have done our homework, passed our exams and then got a belt over the ear."¹⁵⁵ When in Kununurra in December 1966, Court advised the Ord farmers to "keep pressing on as a tightly knit and efficient community. Your greatest contribution can be through efficient farming and solidarity. Propaganda and pressure groups are not your role."¹⁵⁶ Court spoke frankly on the necessity for alternative crops. He said that the Commonwealth had declared themselves against a monoculture and obviously,

154. *W.A.P.D.*, Vol. 175, 17 November 1966, pp. 2541-2.

155. *West Australian*, 24 October 1966, p. 2.

156. Minutes of C. W. Court's meeting with farmers, 14 December 1966. North West Department file 34/62, Vol. I.

if Western Australia sought to negotiate further without additional information on alternative crops and benefits to the cattle industry, their representations would be rejected. He concluded that:

under the circumstances we have no alternative but to try and arrive at a basis which will give us some additional alternative crop information before we next confer with the Commonwealth, even though from a hard headed business point of view, this might be an unnecessary diversion of our technical and manpower resources which could be better employed in concentrating on methods for further improving the efficiency of farming and ways of increasing general productivity and improving the economics of cotton.¹⁵⁷

Court also told the farmers that the state government had to develop alternative ways of developing Ord Stage II without Commonwealth financial assistance.¹⁵⁸ He had already publicly stated that some insurance companies and financial institutions were willing to provide money for development.¹⁵⁹ However, when speaking to the Kununurra farmers, Court said that the state government would wait until June 1967 before deciding how it would go about seeking private capital to complete the Ord Project. "First," he said, "we will give the Commonwealth all the information it needs, but in the light of past experience we will also use the time to develop an alternative."¹⁶⁰

157. *Ibid.*

158. *Ibid.*

159. *West Australian*, 25 October 1966, p. 7.

160. *West Australian*, 15 December 1966, p. 9.

Court himself was obviously thinking seriously about the problems of private development of the Ord. As he outlined the situation in some private notes entitled "confidential," the prospects for the private investor did not look good.¹⁶¹ He examined the problem from the aspect of the individual farmer, the investor and the state. Under the aspect of the individual farmer Court listed four points. First, it was considered that he would need a net return of \$10,000 per annum before tax, to make farming on the Ord attractive (including the operator's allowance). Secondly, provided water was stored and supplied to his boundary at \$3 per acre foot (operating and maintenance costs only) and he could buy virgin land at \$2 per acre plus survey fee, a farmer needed on the average a yield of 800 lbs. of lint cotton per acre from 450 acres. The average district yield for the 1966 crop was a little under 800 lbs. lint per acre from an acreage of probably 300 acres. Thirdly, if the individual farmers were to pay capital charges on the headworks and distribution system (storage dam and channels only) and the Northern Territory area was included (i.e. total area of 170,000 acres) they would need to pay about \$14,000 per annum each, to return 6 per cent per annum vide government practice. On 1966 parity prices this would require a yield of about 980 lbs. per acre over 450 acres. Court felt that an investor

161. C. W. Court, "Notes re problems of private development," December 1966. Ord River Project - General Correspondence. Stack 19.

would look for more than a 6 per cent return. Fourthly, the prospects of obtaining an average yield of 1,000 lbs. per acre over 450 acres were quite good but there was still, he said, some distance to go.¹⁶²

As for the aspect of the investor, Court felt he would look for more than a 6 per cent return on such a big outlay. The investor would have the dam money out for perhaps fifteen years before getting even a 6 per cent return. He would need to feel sure that all farms could be taken up promptly, and he would need to be certain of at least an average yield of 1,000 lbs. lint per acre over 450 acres by each farmer.¹⁶³

As for the state, a consequential expenditure of say \$40 million could be required for growth over 15-20 years. Much of this, however, Court said, would be normal state expansion.¹⁶⁴ Thus the prospects for a private investor as painted above by Court, did not look rosy at this stage and no more appears to have been said about the use of private capital for the construction of the Main Dam.

Late in December 1966 the Ord Project Committee discussed the matter of the Commonwealth decision to defer a decision on Stage II of the Ord River Scheme.¹⁶⁵ The

162. *Ibid.*

163. *Ibid.*

164. *Ibid.*

165. Minutes of Ord Project Committee, 20 December 1966. North West Department file 34/62, Vol. 1.

committee resolved that in order to have additional information available when the Commonwealth gave further consideration to Stage II, three actions were necessary. Larger acreages of stub cotton should be grown; commercial growing of wheat and grain sorghum should be undertaken by approved farmers, to obtain information on the financial and practical implications of alternative crops; and further work must be undertaken on the integration of the cattle industry with the Ord River Project.¹⁶⁶

When in Perth after a quick tour of the North West in March 1967, Commonwealth Treasurer W. McMahon (Liberal, New South Wales) stressed the fact that the real problem the Commonwealth saw in the scheme was the problem of finding economically viable crops other than cotton.¹⁶⁷ Court replied that the Commonwealth's assessment of "economically viable" appeared to be a "moving target."¹⁶⁸ McMahon later claimed that he had not found sufficient extra information during his visit to the Ord River Scheme to recommend a start on Stage II.¹⁶⁹

The Ord farmers themselves were obviously worried about the emphasis the Commonwealth was placing on alternative crops, in the face of their heavy financial commitment to cotton and the lack of appropriate research being

166. *Ibid.*

167. *West Australian*, 20 March 1967, p. 2.

168. *Ibid.*

169. *C.P.D.*, H. of R., Vol. 54, 4 April 1967, p. 535.

carried out in the area. In May 1967 the Ord District Growers' Association wrote to National Development Minister D. Fairbairn about these problems.¹⁷⁰ The letter claimed that a progressive programme on the Ord was largely dependent "on proper research work being carried out in this area by other than the local farmers."¹⁷¹ Fairbairn forwarded the letter to Court¹⁷² who took the opportunity to reply; stressing the fact that one thing causing the growers' apprehension was the fact that the Commonwealth was demanding proof of the economic viability of alternative crops at a time when the growers were very heavily committed, both financially and physically, to the production of cotton.¹⁷³

Two months later the Chairman of the Federal Government Members Food and Agriculture Committee (H. J. Bate, Liberal, N.S.W.), at the start of a 10-day tour to the North, announced that the committee would recommend that the Stage II of the Ord River Scheme go ahead.¹⁷⁴ A week later National Development Minister Fairbairn, in the face of a steep rise in export prices, and the success of several small commercial plantings, announced that sorghum

170. K. W. Forrest (Hon. Secretary, Ord District Growers' Association) to D. E. Fairbairn, 13 May 1967. P.W.D. file 167/66.

171. *Ibid.*

172. D. E. Fairbairn to C. W. Court, 13 June 1967. P.W.D. file 167/66.

173. C. W. Court to D. E. Fairbairn, 20 June 1967. P.W.D. file 167/66.

174. *West Australian*, 20 July 1967, p. 8.

could be grown on a large scale in the Ord River Irrigation Area.¹⁷⁵ He claimed that "with the sorghum prospect backing up cotton, I am now less worried that the Ord Scheme would have to depend on one product."¹⁷⁶ In September 1967, Fairbairn (in Perth) claimed that the Ord case was being increasingly strengthened by the improvement in results from Ord farmers, and Holt said that his government would be considering a new submission from the Western Australian government on Stage II of the Ord Scheme, before the end of the year. He added that he hoped the state government submission would persuade him.¹⁷⁷

Late in October 1967, the Western Australian government presented its new submission, answering, Brand claimed, the doubts expressed by the Commonwealth when rejecting the previous Ord proposals.¹⁷⁸ Brand stated that the submission claimed a good future for cotton as the main crop, and for grain sorghum and the enrichment of the cattle industry with protein fodders.¹⁷⁹ The revised request stated that Stage I of the scheme had "already proved the feasibility of commercial tropical irrigated agriculture" and had indicated that "even without regional

175. *Australian*, 31 July 1967.

176. *Ibid.*

177. *West Australian*, 14 September 1967, p. 2.

178. *West Australian*, 1 November 1967, p. 1.

179. *Ibid.*

development the Ord in its own right will make a substantial contribution to northern development."¹⁸⁰ The revised request was for \$55,180,000 of which \$48,180,000 was a grant for the construction of the Main Dam and associated works in Western Australia, and \$7 million a loan for housing. The Main Dam was now estimated to cost \$27,250,000 compared with the 1965 estimate of \$15,600,000.¹⁸¹

On 1 November 1967, four days after receiving the amended Western Australian government submission, the Federal government decided to grant the financial assistance necessary for Stage II of the Ord Scheme to proceed. In a Ministerial Statement to the House of Representatives, Fairbairn claimed that, in the light of the further information made available in the latest submission, the government considered that the economic prospects for the project had greatly improved.¹⁸² He told of satisfactory results in the current season with an increased area of stub cotton, promising trials on Kimberley Research Station and private farms with the new cotton variety Stoneville 7A, and prospects for the commercial production of grain sorghum with a growing market in Japan.¹⁸³ It was the prospect for sorghum which apparently persuaded

180. *Ord Irrigation Project - A Case for Financial Assistance to complete that portion of the Ord Irrigation Project within the State of Western Australia.*

181. *Ibid.*, p. 2.

182. *C.P.D.*, H. of R., Vol. 51, 1 November 1967, p. 2522.

183. *Ibid.*

the government. A few days later, in answer to a question, Fairbairn stated that the Ord Project had become more economic - "the plain fact of the matter is that sorghum now appears as a suitable alternative to cotton."¹⁸⁴

The Commonwealth government's financial assistance totalled \$48,180,000 - a \$20,930,000 non repayable grant for the construction of the Main Ord Dam and a \$27,250,000 interest bearing loan for associated irrigation works in the area. At the same time, Fairbairn announced a maximum grant of \$20 million for the construction of the Nogoia dam at the Emerald irrigation project in central Queensland.¹⁸⁵

The Western Australia Agreement (Ord River Irrigation) Act 1968, providing the above financial assistance, was assented to on 21 June 1968.¹⁸⁶ The loan was to be repaid in 30 equal consecutive half-yearly payments, the first repayment to be made 9½ years after the end of the financial year during which the first advance was made. Interest on the loan was to be at the long term Commonwealth bond rate applying at the time each advance was drawn by the state.

Reactions to the Commonwealth's decision were varied. Patterson declared the announcement to be a political

184. *C.P.D.*, H. of R., Vol. 57, 8 November 1967, p. 2772.

185. *C.P.D.*, H. of R., Vol. 57, 1 November 1967, pp. 2522-3.

186. *Acts of the Australian Parliament 1901-1973*. Vol. 12, pp. 503-507 (Canberra, 1975).

gimmick for the Senate election to be held on 25 November 1967.¹⁸⁷ The *West Australian* editorial claimed that "Canberra's acceptance of the Ord scheme means that Australia has at last closed the gap in the pegging of a new frontier in the north."¹⁸⁸ Court described the announcement as a "very pleasant birthday present even if a little belated."¹⁸⁹ He went on to add that "these projects are never easy to get off the ground. They are always vulnerable to attack from those who do not understand the practical considerations of developmental work and techniques."¹⁹⁰

It is a relatively simple matter to explain the Commonwealth's willingness to defer a decision on Stage II of the Ord River Irrigation Scheme, but more difficult to see why the Commonwealth saw fit to give financial assistance on November 1, 1967. Patterson's claim that there were few friends of the north in Canberra would appear to be correct.¹⁹¹ Court observed:

I find a very lukewarm attitude in most official quarters in Canberra. This is a pity as tremendous wealth is waiting to be unlocked to the nation if

187. *C.P.D.*, H. of R., Vol. 57, 1 November 1967, p. 2526.

188. *West Australian*, 3 November 1967, p. 6.

189. C. W. Court to A. F. Deer (General Manager, Mutual Life and Citizens Assurance Co.), 8 November 1967.

190. *Ibid.* North West Department file, Stack 19. Ord River Project - General Correspondence.

191. Minutes of the Inaugural Meeting of the N.W. Planning Authority, 15 January 1965. North West Department file 7/63.

only they will give it a kind smile. I am afraid the government in Canberra these days is virtually a 'housekeeping' job and there seems very little inspiration to get out and break open some of the new territory and to get to grips with the wonderful new opportunities.¹⁹²

Despite the fact that Dr. Patterson and his Northern Division of the Department of National Development was fully in favour of the Ord River Scheme, its influence on the final decision to grant financial assistance to the Ord was negligible. Patterson's resignation was seen as a protest against Federal government inaction in the north. The People the North Committee claimed:

When a man so knowledgeable about the north and so dedicated to its development, steps down from the very post specifically created to promote that development, we can only infer that the Northern division was getting nowhere and that Dr. Patterson was up against a brick wall.¹⁹³

Dr. Patterson himself expressed some of the reasons for his dissatisfaction within the Northern Division, once in Parliament. He described the Division as "toothless, clawless and completely devoid of power" and claimed that:

every major action it contemplates which could lead to some positive approach to development is vetted by the so called interdepartmental committee of wise men. Make no mistake about it, these wise men of the Public Service exert tremendous influence on Ministers, particularly if the Ministers are apathetic.¹⁹⁴

192. C. W. Court to Sir William Gunn, 1 December 1967. North West Department file 54/67.

193. *Australian*, 23 August 1965, p. 3.

194. *C.P.D.*, H. of R., Vol. 52, 25 August 1966, p. 451.

Patterson spoke of the Treasury domination of the inter-departmental committee in the field of development, and its role as an influential opponent of the Ord River Irrigation Scheme.¹⁹⁵

National Development Minister D. Fairbairn appears to have been caught between his Department and an unenthusiastic Cabinet. He himself was in favour of assistance for the scheme, and spoke out publicly against Davidson's view as expressed in *The Northern Myth*.¹⁹⁶ Interior Minister J. D. Anthony, on the other hand, questioned the wisdom of assistance for the north.¹⁹⁷ In fact the Country Party was frequently blamed for the Commonwealth's continued deferral of the Ord River Scheme. Writing in his *Canberra Diary* about the Federal government's decision to defer a decision on 19 October 1966, M. C. Uren said that McEwen withheld his support as did two other Cabinet ministers C. F. Adermann and C. E. Barnes.¹⁹⁸ Country Party Interior Minister J. D. Anthony, he claimed, switched and gave National Development Minister Fairbairn support for an immediate Commonwealth commitment to the scheme, as did another junior minister G. Freeth. These three, Uren claimed, were the only Ord advocates in the Cabinet room.

195. *Ibid.*, p. 450. See also D. Munro to J. Parker, 19 June 1964, *op. cit.*

196. *West Australian*, 5 April 1965, p. 2.

197. *West Australian*, 16 April 1966, p. 1.

198. *West Australian*, 22 October 1966, p. 5.

McEwen was criticised by the *West Australian* editorial of 25 October 1966, for his claim that the fate of many of his fellow soldier settlers in Victoria's Goulburn Valley after the Great War, was a strong reason for doing nothing in the Kimberleys in 1966. The editorial claimed that "McEwen's attempt to couple the two suggests that he has no understanding of the Ord and is at a loss to find a plausible reason for his opposition."¹⁹⁹ When in Perth during the 1966 election campaign, McEwen explained that the Commonwealth decision to defer the Ord had been a collective decision of Cabinet, and he himself had declined to speak on the matter in Cabinet until other ministers had been heard - to avoid any suggestion that he had influenced the decision.²⁰⁰ Prime Minister Holt too, claimed that there had not been a party line-up in Cabinet. When asked in Parliament whether the decision of Cabinet not to commit itself to provide financial assistance for Stage II of the Ord River Project could be attributed to Country Party Ministers in Cabinet, Holt replied, "in the period in which this coalition has been in office since my predecessor took office at the end of 1949 I do not think I can recall a single issue on which there was a party line-up in Cabinet."²⁰¹

It would appear that the lobbying tactics of the

199. *West Australian*, 25 October 1966, p. 6.

200. *West Australian*, 11 November 1966, p. 1.

201. *C.P.D.*, H. of R., Vol. 53, 27 October 1966, p. 2259.

Namoi cotton growers were a further influence in persuading Cabinet to defer a decision on the Ord River Scheme. Interior Minister Anthony had brought government and public attention to the area when he told the Namoi growers that their work caused him to think again about the Ord.²⁰² The Namoi-Gwydir region was the main cotton producing area in New South Wales. From the first commercial cotton sowings in 1961/1962, plantings had expanded quickly reaching an estimated 20,000 acres in 1965/1966 with an output of 36.25 million lbs. (about 75 per cent of total Australian output).²⁰³ Maxwell Newton commented in *Nation*:

While the Western Australian government has been leaning more and more heavily on the Commonwealth to find the \$60 to \$70 million needed to complete stage 2 of the Ord, a small group of cotton farmers in the Namoi have gone ahead in an expansion programme of such speed that they have now placed themselves in a position to question the whole validity of expanding the production of cotton on the Ord.²⁰⁴

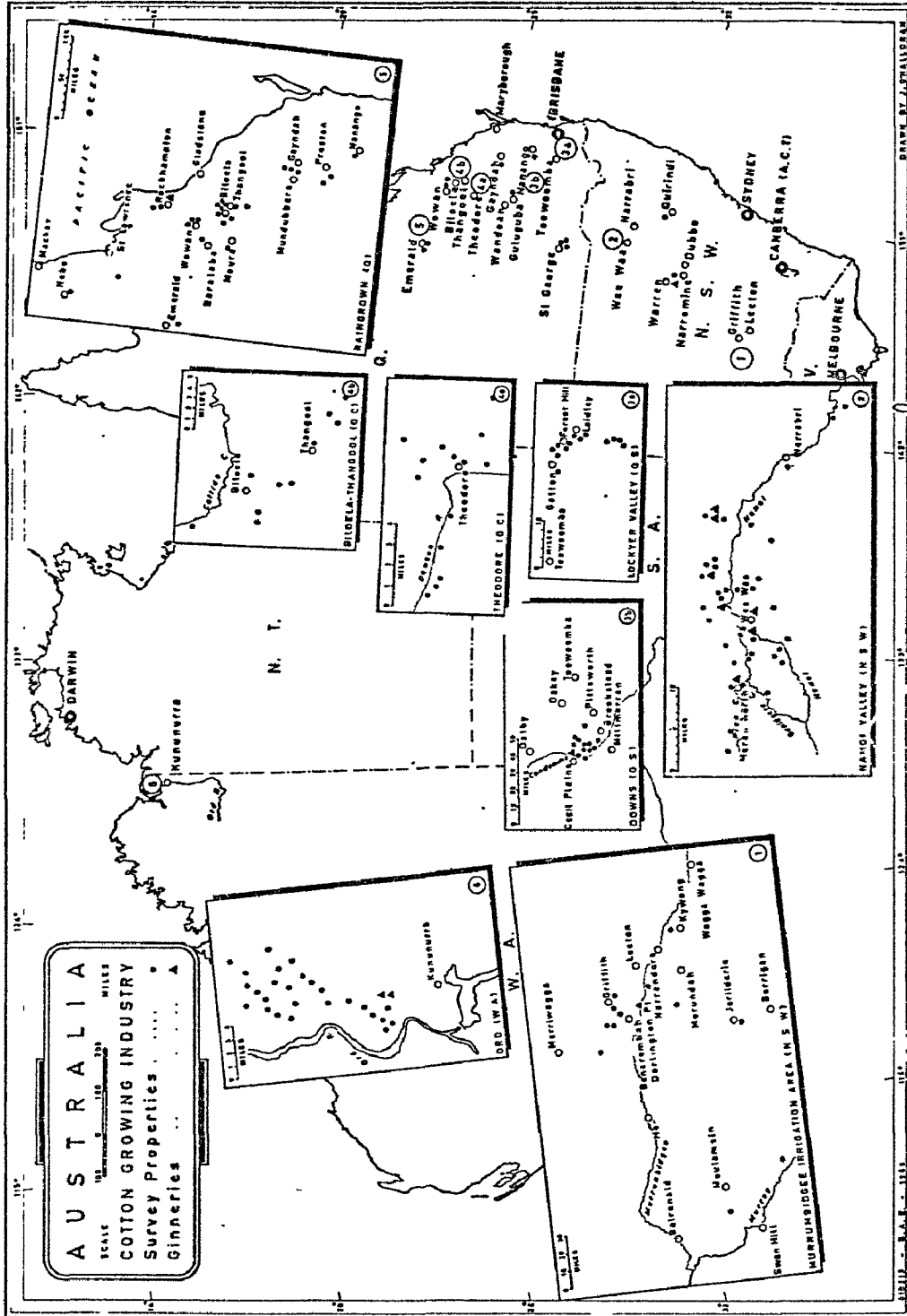
Representatives of the Namoi farmers spent two days in Canberra in May 1966, before the Commonwealth's third decision to defer financial assistance for Stage II of

202. *West Australian*, 16 April 1966, p. 1.

203. W. J. Kerridge, "Cotton: The Effect of Current Trends on Producer Prices," *Quarterly Review of Agricultural Economics*, (B.A.E. Canberra), Vol. XIX, No. 2 (April, 1966), p. 59.

204. M. Newton, "What Price Ord?" *Nation*, No. 194 (May 14, 1966), p. 10.

COTTON GROWING AREAS OF AUSTRALIA



Source: *The Australian Cotton Growing Industry, An Economic Survey 1964-65 to 1966-67*, B.A.E., (Canberra, May 1970), frontispiece.

the Ord.²⁰⁵ Their case was a persuasive one, based on detailed statistical information. According to Newton, the Namoi deputation pointed out first, that the growth of domestic spinners' cotton requirements was more or less in line with the combined growth curve of production from the Namoi and Ord River Stage I Development (also including some rain grown cotton in Queensland). Secondly, even this close correlation would only be achieved by a considerable substitution of medium staple local cotton for imported shortstaple. Thirdly, when Ord Stage II cotton became available, about 1971, it would be entirely surplus to Australia's cotton requirements, and would have to be entirely exported in competition with United States cotton which was already subsidised. Newton commented:

The Ord Stage 2 requires a vast act of faith because it is not expected to yield significant quantities of cotton until the early 1970's. Meanwhile, the people on the Namoi, taking advantage of existing water resources and requiring no expenditure of Commonwealth money beyond the Namoi share of the \$4 million bounty, will be able to keep on expanding their production to a level marginally short of projected domestic requirements.²⁰⁶

205. *Ibid.* Representatives included Mr. Paul Kahl (Chairman of Namoi Cotton Co-operative), Mr. Ben Dawson (Director, Namoi Cotton Co-operative and Managing Director, Australian-American Development Company), Mr. Jim Fisher (Manager, Auscott Pty. Ltd.), Mr. John Parker (Accountant and Auditor to the Namoi Co-operative) and John Howse (General Manager of the Co-operative).

206. *Ibid.*, p. 11.

The statistics provided by the Namoi representatives were as follows:

Projection of Estimated Production by
Australian Cotton Industry

	<u>Bales</u>		
	<u>1966</u>	<u>1971</u>	<u>1976</u>
Namoi	65,000	100,000	100,000
MIA	2,000		
Queensland	9,000	10,000	10,000
Ord Stage I.	12,000	30,000	30,000
Total Above	88,000	140,000	140,000
Ord Stage II		20,000	150,000
Total including Ord Stage II.	88,000	160,000	290,000

Estimates of Spinners' Requirements

	<u>Bales</u>		
	<u>1966</u>	<u>1971</u>	<u>1976</u>
Medium staple	49,055	56,500	64,000
Short staples capable of sub- stitution from longer staples grown.	55,540	62,000	72,000
Total local usage of Australian production	104,595	118,500	136,000
Imported requirements	19,070	23,000	26,000

Source: M. Newton, "What Price Ord?" *op. cit.*, p. 11.

Between 1964 and 1967, the Commonwealth government continually stressed their concern at the lack of information on prospects for crops other than cotton, at a time when the market outlook for cotton was uncertain. The above figures, and the achievements of the Namoi growers, must surely have strengthened the Commonwealth government's resolve to continue to defer a decision on

financial assistance for Stage II of the Ord River Scheme until additional information became available. Why then did the Commonwealth decide to grant financial assistance for Stage II of the Ord River Scheme on 1 November 1967?

Patterson claimed that the eventual Commonwealth decision to help finance Stage II was simply "grandstanding in the worst sense of the word for the Senate election."²⁰⁷ It was however, he continued, "consistent with every decision that this government has made in respect to northern development. Each decision has been announced either as a matter of political necessity or as a result of an election promise."²⁰⁸ He felt that in late 1967 the Commonwealth government was in a desperate political position and, as a result, was virtually forced to make a decision regarding water conservation in both Queensland and Western Australia.

A brief analysis of the timing of various decisions affecting northern Australia over the years 1961 to 1967 would suggest that Patterson's conclusions were correct. The joint Senate and House of Representatives election of 9 December 1961 resulted in a gain of fifteen seats by the Australian Labor Party, leaving the Liberal and Country Party Coalition government with a majority of two which, after the election of a Speaker shrank to one.²⁰⁹ The

207. *C.P.D.*, H. of R., Vol. 57, 1 November 1967, p. 2526.

208. *Ibid.*

209. D. W. Rawson, "Australian Political Chronicle, July-December 1961," in *Australian Journal of Politics and History*, Vol. VIII, No. 1 (May 1962), p. 102.

Australian Labor Party regained the two Western Australian seats (Kalgoorlie and Stirling) which it had lost in 1958, and in Queensland it won eight new seats, a gain of almost 10 per cent.²¹⁰ The subsequent 1962/1963 budget, provided funds for Beef Roads in Queensland and Western Australia and for the Brigalow Lands in Queensland.

The Northern Division of the Department of National Development was formed as the result of an election promise before the election of 30 November 1963.²¹¹ In the 1963 election the government parties' effective majority in the House of Representatives increased from two to twenty two.²¹² The Liberal Party regained three of the eight seats it had lost in Queensland in 1961; in Western Australia it gained in a majority of seats although the Labor Party retained Kalgoorlie and Stirling.²¹³

Before the next House of Representatives election (26 November 1966), the Federal government had announced three times that it had decided to defer a decision on financial assistance for Stage II of the Ord River Scheme.²¹⁴ From late 1964, every Gallup Poll conducted,

210. *Ibid.*, p. 104.

211. See chapter 5.

212. "Australian Political Chronicle, July-December 1963," in *Australian Journal of Politics and History*, Vol. X, No. 1 (April 1964), p. 96.

213. *Ibid.*, p. 102.

214. May 1965, May 1966 and October 1966.

gave the government parties an absolute majority over the opposition, and it was predicted that the government would be returned with a majority of thirty.²¹⁵ The November 1966 election was, in fact, the "greatest electoral triumph" for the coalition since 1949.²¹⁶ The Liberal Party won 61 seats with 40.1 per cent of the vote (compared with the previous 52 seats and 37.1 per cent), the Country Party won 21 seats and the A.L.P. won 41 seats with 40.0 per cent of the vote (compared with 52 seats and 45.5 per cent of the vote).²¹⁷ Western Australia was the exception in an otherwise Australia wide swing to the government, with a 2½ per cent improvement in the Labor vote.²¹⁸

The Gallup Polls between June and November 1967 however, prior to the 1 November 1967 decision to assist the Ord Scheme, and the Senate election of 25 November, showed that the Liberal-Country Party coalition government had lost all the gains it made at the last Federal election.²¹⁹ The Gallup Poll of 12 September 1967 showed the A.L.P. vote up 5 per cent on the House of

215. *Australian Gallup Polls, Finding Sheets, 1964-1967.*

216. "Australian Political Chronicle," September-December 1966, *Australian Journal of Politics and History*, Vol. XIII, No. 1 (May 1967), p. 104.

217. D. Aitken, "Political Review" in *The Australian Quarterly*, Vol. XXXIX, No. 1 (March 1967), p. 84.

218. *Ibid.*

219. *Australian Gallup Polls, Finding Sheets, June-November 1967.*

Representatives election, but still trailing the government vote 40 per cent to 45 per cent.²²⁰ The next poll, published on 21 October 1967 showed the government still weaker and only 1 per cent ahead of the A.L.P. (46 per cent to 45 per cent).²²¹

In the closing months of 1967 the Liberals also failed to win a by-election for the Queensland seat of Capricornia, held by the Liberals from 1949 to 1961.²²² Most debate in the election campaign centred on the government's record in development in central and north Queensland and on what a Labor government, led by E. G. Whitlam with Dr. R. Patterson as Minister for Northern Development, might do.²²³ The 30 September poll resulted in little change, Dr. Douglas Everingham, the A.L.P. candidate retained the seat for Labor. However, "the result showed that Whitlam's leadership and an issue on which the government was weak could bring electoral success to the A.L.P. despite the debacle of the previous November."²²⁴

The V.I.P. aircraft issue and the associated parliamentary scandal, the Capricornia by-election, the decline

220. *Ibid.*

221. *Ibid.*

222. C. A. Hughes, "Australian Political Chronicle," September-December 1967, in *Australian Journal of Politics and History*, Vol. XIV, No. 1 (April 1968), p. 102.

223. *Ibid.*

224. *Ibid.*

in government support indicated by public opinion polls, and the impending Senate election, could all have been contributory factors in the government's sudden decision to give financial assistance for Stage II of the Ord River Scheme, the Emerald Irrigation project in Queensland and for beef roads in both Queensland and Western Australia.²²⁵

From late 1964, the Federal government had consistently claimed that it lacked adequate information on which to base a decision about further financial assistance for the Ord River Scheme. It claimed first, that more information was needed as to the profitability of cotton production, insect control and the behaviour of tropical soils after intensive production had begun.²²⁶ Then, one year later, the Federal government claimed that it was the dependence on a single crop which worried them, as well as the fact that, with the shortage of labour for construction purposes in Western Australia, now was not the time to launch another project.²²⁷ Five months later, in May 1966, it was asserted that there were still doubts as to the economic viability of the scheme, in the face of the surplus of cotton on the world market, the falling cotton prices in the United States and the lack of a viable alternative crop.²²⁸

225. *Ibid.*, p. 101.

226. *C.P.D.*, H. of R., Vol. 46, 5 May 1965, p. 1201.

227. *West Australian*, 19 May 1966, p. 1.

228. *C.P.D.*, H. of R., Vol. 53, 21 October 1966, pp. 2073-4.

Then on 1 November 1967, National Development Minister Fairbairn was confidently able to announce that his government was now satisfied that the economic prospects for the Ord had considerably improved.²²⁹ He claimed later that he had been persuaded by the fact that there was now a suitable alternative crop available in the form of sorghum.²³⁰

The next chapter will examine the situation at Kununurra as regards the success of various crops, the financial situation of the farmers and the state of research at Kimberley Research Station - in an attempt to ascertain whether the prospects for the scheme had, in fact, drastically changed for the better between 1966 and 1967. The chapter will attempt to discover whether the Federal government had cause for its change in attitude or whether the decision was, in fact, simply a political one made in the face of possible electoral defeat.

229. *C.P.D.*, H. of R., Vol. 57, 1 November 1967, p. 2522.

230. *C.P.D.*, H. of R., Vol. 57, 8 November 1967, p. 2772.

CHAPTER VIII

THE BASIS FOR THE DECISION TO PROCEED WITH STAGE II - THE POSITION AT THE ORD IN THE LATE 1960's

All that is needed for a fully viable venture is reasonable time.¹

Until late 1967, when the Commonwealth government agreed to give increased financial assistance for the Ord River Scheme, commercial production on the Ord had been limited almost exclusively to the production of cotton. The commercial production of rice, begun on the pilot farm in 1960 and continued by the Mallumbar Irrigation Company, had failed by 1966.²

The Mallumbar Irrigation Company, allocated land too flat for cotton farming in 1964, was refused financial assistance by the Commonwealth Development Bank.³ In October 1964 the State government agreed that the

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1. D. Brand to J. Gorton, 23 August 1968. North West Department file 57/67.
 2. Shareholders in the company were E. S. Emanuel (£4,000), J. Hotzappfel (£1,000) and G. B. Thompson (£5,000). North West Department file 135/64.
 3. B. B. Callaghan (General Manager, Commonwealth Development Bank) to S. F. Emanuel, 11 September 1964. North West Department file 135/64.

Department of Agriculture would assume responsibility for the operation of the rice farm until June 1965, with the Department meeting all expenses, and retaining the proceeds associated with cropping 200 acres of rice.⁴ By June 1965 half the crop had been harvested. The quality was poor, moisture content at the time of harvesting being 14 per cent instead of between 22 and 26 per cent; problems were also met at the rice mill which was unable to receive the crop at an adequate rate.⁵ The experiment resulted in a loss of approximately £1,200.⁶ In August 1965 a further agreement was reached between the Department of Agriculture and Mallumbar Irrigation Company to grow 100 acres of rice on the Mallumbar farm.⁷ This crop was discontinued in February 1966, and commercial production of rice at the Ord was abandoned. Heavy freight costs limited the expansion of this crop commercially, as did the rice "disorders" which were found to affect the growth and yields of rice. The cause of these "disorders" was

4. C. W. Court to G. A. Wilkinson (Secretary, Mallumbar Irrigation Company), 7 October 1964. North West Department file 25/63.

5. Minutes of Ord Project Committee, 21 June 1965. North West Department file, *Ord River Development Project Committee*, Stack 20.

6. Minutes of Ord Project Committee, 21 July 1965. North West Department file, *Ord River Development Project Committee*, Stack 20.

7. Minutes of Ord Project Committee, 25 August 1965. North West Department file, *Ord River Development Project Committee*, Stack 20.

initially sought in diseases, however, later evidence pointed to chemical problems associated with high pH and a high level of bicarbonates and chlorates in soil and water.⁸

At the time of the Commonwealth decision to finance Stage II of the Ord Scheme, grain sorghum appeared as "the new wonder crop on the Australian primary producing scene - the answer to an irrigator's dream."⁹ The 1966 *Annual Report* of the Western Australian Department of Agriculture had reported the completion of a wide range of forage plant tests and predicted the emergence of sorghum as a possible alternative crop for either grain or forage.¹⁰ It would seem to be this fact, and the general glowing reports of a rapidly expanding market for grain sorghum in Japan, that finally persuaded the Commonwealth government to grant funds for the Main Ord Dam. However, a market survey released later by the Bureau of Agricultural Economics stressed the need for caution.¹¹ Imports of feed grains by Japan were fully expected to rise sharply - the numbers of poultry and pigs, the largest consumers of feed grains, would, it was predicted, almost double during the next decade. Significant increases were

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8. *Annual Report*, Department of Agriculture, Year ending 30 June 1972, p. 102.
 9. *Australian Financial Review*, 3 November 1967, p. 3.
 10. *Annual Report*, Department of Agriculture, Year ending 30 June 1966, p. 32.
 11. J. L. Sault, "The Market for Grain Sorghum in Japan," *Quarterly Review of Agricultural Economics*, Vol. XX, No. 4, pp. 165-177.

also predicted in dairy and beef herds (120 per cent and 70 per cent).¹² The article went on to say that even if Japanese imports of grain sorghum and maize were to double during the next decade, the United States would be fully able to supply this increase in Japanese requirements.¹³ It warned that if Australia, or any other country, should gain a significantly larger share of the Japanese feed grain market in a situation where the United States was fully able to meet any increase in requirements, then "some depression in prices could be expected in the competitive environment of the Japanese market."¹⁴ Two firms had, in fact, already announced contracts to supply the Japanese market with grain sorghum. Sir William Gunn had organized the Tipperary Land Corporation which proposed eventually to plant 190,000 acres of grain sorghum in the Northern Territory, and Australian Fertilizers Ltd. had contracted with New South Wales irrigation farmers to buy their sorghum output and had also vastly expanded its production in central Queensland.¹⁵

It would appear then, that at the time of the Commonwealth decision in 1967, there was little cause to be optimistic about sorghum as a second crop for the Ord Scheme. Market research advocated caution; the local

12. *Ibid.*, p. 176.

13. *Ibid.*

14. *Ibid.*, p. 177.

15. *Australian Financial Review*, 3 November 1967, p. 2.

demand for sorghum was small, and consequently any new production would be for the unpredictable export market. In the 1966/1967 season there was 100 acres of grain sorghum growing in the area, 57 acres of which was on farmers' properties.¹⁶ The area planted increased to 1,800 acres in the 1967/1968 season, and declined to 1,200 acres in the 1968/1969 season.¹⁷ Production proved disappointing, and this, combined with high transport and wharf handling costs and a drop in international sorghum prices, meant that farm gate returns were reduced and the crop was unattractive for export.¹⁸ On 12 November 1969, a combined meeting of the Ord River District Growers' Association and farmer shareholders of the Ord River District Co-operative discussed the problem of freight and handling charges.¹⁹ It was claimed that the problem was one of the biggest single factors affecting the economy of the area. Storage and loading charges of \$9 per ton, imposed by Co-operative Bulk Handling, contributed greatly to farmers' reluctance to plant crops such as sorghum.²⁰

16. *Annual Report*, Department of Agriculture, Year ending 30 June 1967, p. 47.

17. *Annual Report*, Department of Agriculture, Year ending 30 June 1968, p. 51.

18. *Annual Report*, Department of Agriculture, Year ending 30 June 1969, p. 44.

19. Minutes of meeting of Ord River District Growers' Association and farmer shareholders of Ord River District Co-operative, 12 November 1969. North West Department file, *Ord River Project* (not numbered).

20. *Ibid.*

The poor facilities at the port, it was felt, meant that farmers were unable to attract shippers to consider favourable freight rates. The meeting also concluded that the Federal government decision to protect Australian nitrogenous fertilizer manufacturers had led to a \$24 per ton rise in the cost of urea, representing a \$5 per acre increase in growing costs.²¹

The Ord Project authorities did not appear anxious to branch out into commercial activities other than cotton. Despite the fact that one of the stated objectives of the scheme was to benefit the pastoral industry, Hooker Pastoral Company had difficulty persuading the authorities to agree to their plans for integrating the area with the cattle industry. As early as 1963, the General Manager of the company, H. C. Bladwell, wrote to North West Minister Court after an applicant sponsored by Hooker Pastoral Company had been refused one of the first five farms.²² The company's plan was to grow fodder under irrigation for use on the pastoral holdings of Rosewood, Carlton Hill and Legune Stations. Bladwell commented:

Without wishing to criticise the overall plan under which the project is governed, we do submit that the scheme generally should be more flexible and more closely allied to the cattle industry which has been and will continue to be the main source of income for the Kimberleys for many years to come.²³

21. *Ibid.*

22. H. C. Bladwell to C. W. Court, 15 November 1963. The applicant was a Mr. G. McQuie. North West Department file 17/62.

23. *Ibid.*

The later application by Hooker Pastoral Company, for the leases of three lots in the irrigation area for agricultural and experimental purposes associated with the pastoral industry, was also rejected.²⁴ The Director of Agriculture was not in favour of making the proposed area available to the company because of the danger, from the viewpoint of insects, to the cotton industry.²⁵ The company offered to overcome this objection by growing cereal crops only, by not irrigating the block in question after the date nominated by the Department of Agriculture, by adequately fencing the area, keeping stock under close control, and engaging a competent and acceptable agriculturalist to handle the project.²⁶

North West Minister Court pressed the case for Hooker Pastoral Company after being told by Dr. R. Patterson (head of the Northern Division, Department of National Development) of the concern both he and Sir Alan Westerman (Secretary, Department of Trade) felt at the rejection of the company's application because of the great importance they placed on the work the company intended to do.²⁷ Patterson told Court that he was very anxious

24. H. C. Bladwell to J. E. Parker, 4 November 1965. North West file, *Pastoral Industry* (not numbered).

25. J. Parker, Note for File, 3 December 1965. North West Department file, *Pastoral Industry*.

26. H. C. Bladwell to J. Parker, 8 December 1965. North West Department file, *Pastoral Industry*.

27. C. W. Court, *Minute* (after meeting with Dr. R. Patterson at Sydney Airport), 12 November 1965. North West Department file, *Pastoral Industry*.

to retain the interest and support of Sir Alan, "who was one of those keen on the Ord provided we could demonstrate we were going to develop in the areas other than cotton."²⁸ North West Minister Court wrote to the Chairman of the Ord Project Committee late in December 1965, stating that the integration of the Ord area with the beef industry was a high priority in the minds of senior officers within the Commonwealth Department of Trade and Industry.²⁹ He said that as much of the best land belonging to Hooker Pastoral Company was to be absorbed into the scheme, there was a moral reason why they should be given some consideration.³⁰ Court later claimed:

If we do not help these people to undertake pasture development either in the form of pastures or crops, such as oats and other coarse grains, we are not being very sincere in our claims that the Ord Scheme is meant to benefit the pastoral industry.³¹

Court suggested to L. J. Hooker, H. C. Bladwell and K. Campbell (Chief General Manager, Hooker Pastoral Company) that they talk with Northern Developments regarding the former pilot farm property at Kununurra. "There were," he said, "approximately 2,300 acres of valuable land in a first class location and Farley and his people have not

28. *Ibid.*

29. C. W. Court to J. E. Parker, 20 December 1965. North West Department file, *Pastoral Industry*.

30. *Ibid.*

31. C. W. Court, *Minute*, 25 February 1966. North West Department file, *Pastoral Industry*.

demonstrated their capacity to work this land properly."³²

Late in 1967, Hooker Pastoral Company confirmed their purchase of the whole of the issued and paid up capital of Northern Developments (Ord River) Pty. Ltd. controlling the pilot farm area.³³ The company intended to utilize the whole of the pilot farm area for the production of grain sorghum for export, and to graze the stubble from time to time.³⁴ However, Court felt that a programme involving only grain sorghum for the pilot farm would be embarrassing to the government for two reasons.³⁵ First, the government did not want a "wholesale exodus" from cotton farming at this critical stage, and Court felt that the spectacle of the whole of the farms going under sorghum could encourage other farmers "to take the easy line and either reduce or abandon cotton growing."³⁶ Secondly, the economics and finance of the ginneries was largely related to the amount of cotton grown.³⁷ Court also pointed out that a very large quantity of grain sorghum, in addition to that planned by the existing farmers, could produce some

32. *Ibid.*

33. H. C. Bladwell to C. W. Court, 7 November 1967. North West Department file, *Northern Developments Ord River Pty. Ltd.*, Stack 13. The sale price was approximately £110 per acre including fixed assets but not the farm plant.

34. *Ibid.*

35. C. W. Court, *Minute*, 14 November 1967. North West Department file, *Northern Developments Ord River Pty. Ltd.*, Stack 13.

36. *Ibid.*

37. *Ibid.*

difficulties in respect of bulk handling which had been planned on the basis of about 1,000 acres from all farmers.³⁸ The Hooker Pastoral Company's project would almost certainly treble this quantity. It was suggested that, despite their protestations about the poor shape of the pilot farm, the company should grow a cotton crop of at least between 400 and 600 acres.³⁹

It was not until 1968 that a Research Officer was appointed at K.R.S. to investigate cotton production from irrigated forages, crops and pastures; and it was not until 1969 that a formal attempt was made to plan the integration of the Kimberley pastoral industry with the Ord Irrigation Scheme.⁴⁰ This came about as a result of pressure from the Pastoralists and Graziers Association which had written to Court late in 1967, asking for the formation of an official study group to plan the integration of the Kimberley cattle industry with the Ord Project. The Association claimed that the cattle industry had been almost entirely overlooked in the planning of the project.⁴¹ Late in 1968, E. H. Lee Steere (President of the

38. *Ibid.*

39. J. E. Parker to J. K. Campbell, 27 November 1967. North West Department file, *Northern Developments (Ord River) Pty. Ltd.*, Stack 13.

40. *An Outline of the Ord Irrigation Project, op. cit.*, p. 54.
C. G. Blythe to C. W. Court, 24 November 1967. North West Department file, *Ord River Project - General Correspondence*, Stack 19.

41. *Ibid.*

Pastoralists and Graziers Association) called for the formation of a committee to consider the best way of integrating the cattle industry.⁴² As a result, nominations were called for membership of a cattle integration committee, to be set up as an ad hoc committee of the Ord Project Committee.⁴³ The terms of reference were: that the committee report to the Ord Project Committee on:

proposals for raising the productivity of the cattle industry in the East Kimberley region (including the parts of the Northern Territory which came within the East Kimberley/Ord influence) with particular reference to the scope for integration with irrigated agriculture in the Ord River District.⁴⁴

The committee was asked to consider the feasibility of different systems of integration; to specify changes which would be involved in existing agronomic, managerial, marketing practices and transport facilities; and to report on prospects for diversification of markets in terms of both type of product and market destination.⁴⁵

The committee, which comprised D. C. Munro (Chairman), E. H. Lee Steere, L. G. Blythe, G. H. Savell (Pastoralists and Graziers Association), A. C. Bennett (Department of National Development), J. F. Morgan (W.A. Department of

42. D. C. Munro to J. E. Parker, 19 December 1968. North West Department file, *Pastoral Industry*. Stack 13.

43. J. Parker to C. W. Court, 10 January 1969. North West Department file, *Pastoral Industry*. Stack 13.

44. *Ibid.*

45. *Ibid.*

Lands and Surveys), W. M. Nunn (Department of Agriculture) and D. Bryden (P.W.D.),⁴⁶ held its first meeting on 29 January 1969 and presented its report in September 1969.⁴⁷ The committee saw the development of irrigated crop and pasture grazing, and the availability of feed supplements from irrigation cropping enterprises, as possibly "a key factor in affording an opportunity, hitherto not open to Kimberley pastoralists, to raise husbandry standards and increase productivity."⁴⁸ The committee specified a number of cattle production systems involving integration with irrigation farming, and discussed their feasibility, noting the changes in management, organization and transport which would be necessary.⁴⁹ The report stated that the production potential of the Ord irrigation area seemed to be "bound up with increased diversification, with sorghum or other grain crops the main alternative or supplementary crop to cotton."⁵⁰

In the face of the current cotton situation both in Australia and on the Ord, the demand that Hooker Pastoral Company grow at least a small acreage of cotton would seem strange. The period 1962/1963 to 1967/1968 had seen an unparalleled period of expansion in the Australian cotton

46. Ord Project Co-ordinating Committee - *Report of the Cattle Integration Sub Committee*, September 1969.

47. *Ibid.*

48. *Ibid.*, p. 2.

49. *Ibid.*, p. 37.

50. *Ibid.*, p. 2.

industry. Within the space of five harvests, the area of plantings trebled, rising from approximately 26,000 acres to 77,000 acres.⁵¹ The Australian production of lint increased from 5.7 million lbs. in the 1963/1964 season to a total of 72 million lbs. in the 1967/1968 season.⁵² Before 1962/1963 there had been some irrigation in Queensland, but by 1964/1965 there was a swing to larger scale cotton production under irrigation in the Namoi region of New South Wales, the new Ord irrigation area, and also the greater use of irrigated methods in some areas of Queensland.⁵³

In the early years of the expansion, the domestic spinning industry provided a relatively stable market for the total Australian harvest. However, as output increased, production of the medium staple length cottons exceeded the spinners' requirements.⁵⁴ In 1964/1965 the Australian crop had provided less than 10 per cent of spinners' requirements; the 1967/1968 crop provided spinners with all their requirements of raw cotton except for imports of 12.5 million lbs. mainly of the longer stapled combing cottons.⁵⁵ This exportable surplus, especially in the face of plans for the further expansion of Australia's

51. *The Australian Cotton Growing Industry, op. cit.*, p. 74.

52. *Ibid.*

53. *Ibid.*

54. *Ibid.*, p. 79.

55. *Ibid.*

raw cotton production with Ord Stage II and the Emerald Scheme in Queensland, gave rise to marketing problems previously non-existent. An exportable surplus meant a decline in producers' returns both from raw cotton and cottonseed sales, and from the Commonwealth bounty payment.

The *Raw Cotton Bounty Act* 1963, introduced a ceiling of £2 million on the total annual bounty payment.⁵⁶ Originally the standard rate of bounty payment was 16.125d. per lb. for middling grade white raw cotton of 1" staple, with premiums and discounts for quality differentials. The annual output up to which the standard rates applied was some 30 million lbs., and when production rose above this level, as it did in 1966 and 1967, the unit rates of bounty payments to growers fell as the maximum £2 million was spread over larger quantities of lint.

Before production exceeded domestic requirements, the Australian cotton crop was sold to domestic spinners at prices broadly reflecting the level of import parity and, in accordance with the trend in world quotations, there was a fall in the general level of domestic prices between the 1962/1963 and 1966/1967 seasons.⁵⁷ The effect on producers' incomes of the drop in the general price level was, at first, more than offset by the increase in their average returns from producing higher quality cotton. However, returns from the world market tended to be

56. See chapter 5, p. 188.

57. *The Australian Cotton Growing Industry. An Economic Survey, op. cit.*, p. 78.

significantly below domestic levels, the difference between local prices and export prices for the same quality of raw cotton being as much as 5¢ per lb. As growers had to rely more on the export market, there was a marked decline in their overall returns per lb. of cotton produced.⁵⁸ Also, as most processors had to hold stocks for longer periods before shipment, final payments to producers were delayed.⁵⁹

The marketing difficulties sketched above, and the decline in returns from cotton growing, tended to affect Ord cotton growers more than other producers. Growers in the Ord area for example, had to look to the lower priced export market to sell a greater proportion of their 1967/1968 crops than did other growers. The number of Ord River cotton growers had by this time increased from six in 1963/1964, to a total of 29 in the 1966/1967 season.⁶⁰ The area under cotton now represented 95 per cent of the total irrigated area, and cotton yield per acre had increased from 920 lbs. in 1963/1964 to 1,950 lbs. in 1965/1966, followed by a decline to 1,876 lbs. in 1966/1967.⁶¹ The situation facing Ord farmers at the end of 1967, when the Commonwealth government agreed to give financial assistance for the Main Ord Dam, was not bright.

58. *Ibid.*

59. *Ibid.*, p. 77.

60. *An Outline of the Ord Irrigation Project Western Australia, op. cit.*, p. 47.

61. *Ibid.*

The poor quality of Ord cotton was an added problem.

In 1965 and 1966 Australian spinners had complained that they were not satisfied with the quality of Ord River cotton.⁶² Late in 1967, C. F. Massey (Chairman, Ord River District Co-operative) wrote to North West Minister Court summarising the situation.⁶³ He said that all mills had condemned the current Ord product, saying they could use only between 4 and 15 per cent maximum of Ord cotton in mixes, to produce a satisfactory yarn.⁶⁴ This, he claimed, meant that at current levels of Australian production about 40 per cent of Ord cotton would remain unsold. The fact that the mills were reluctant to buy Ord River cotton created, he felt, a serious situation - cotton being the region's only proven commercial crop.⁶⁵ Massey described the situation as "chaotic" and incapable of solution with current resources. He suggested that at Research Station level, a quality orientated cotton agronomist research scientist be appointed, local cotton fibre testing facilities be upgraded, and sufficient research staff be appointed.⁶⁶ At the farm level, he felt that a scientist should be appointed for a three year detailed

62. C. F. Massey to C. W. Court, 28 December 1967. North West Department file, *Ord River Project - General Correspondence*. Stack 19.

63. *Ibid.*

64. *Ibid.*

65. *Ibid.*

66. *Ibid.*

investigation of the relationship between farm practices and resultant fibre quality prior to ginning.⁶⁷ Massey also advocated the appointment of a scientist to investigate the effect on fibre quality of harvesting and ginning procedures. These solutions were, he said, only short term, and he claimed that farmers were deeply perturbed that no long range planning and very little extension or research work was being undertaken.⁶⁸

North West Minister Court and C. Bayly (Shipping and Export Manager, Wesfarmers), spoke by telephone about Massey's letter.⁶⁹ Bayly said he agreed with Court who apparently felt that the letter was "somewhat terse and not very diplomatic," though Bayly thought that perhaps it "could be attributed to temperatures of around 110° at Kununurra."⁷⁰ However, Bayly felt that whatever the shortcomings of Massey's letter, there was "no doubt that cotton grown on the Ord last year was of a much poorer quality than in the past."⁷¹ The basic problems were, he said, associated with a reducing staple length over the season, poor results from Micronaire and Pressley tests, and an undue proportion of short fibres.⁷² In his reply

67. *Ibid.*

68. *Ibid.*

69. C. Bayly to C. W. Court, 5 January 1968. North West Department file, *Ord River Project - General Correspondence*. Stack 19.

70. *Ibid.*

71. *Ibid.*

72. *Ibid.*

to Bayly, Court said that the farmers would get much further in their dealings with the government if they genuinely desired to have improvements effected, if they were "prepared to sit down and talk to those of us who have always shown a desire to be of assistance."⁷³

Meanwhile, the C.S.I.R.O. had begun a research programme: "regarding some aspects of Ord cotton, designed to reveal the influence of genotype, environment, and seed cotton processing on the lint and yarn quality of Ord cotton."⁷⁴ In April 1968, G. Alan Stewart of the C.S.I.R.O. Division of Land Research wrote to the Director of the Northern Division, Department of National Development, to report on the first stage of the research programme - a visit by B. Ellis of C.S.I.R.O., Textile Industry Division, to three of the main spinning mills, to assess complaints made by spinners about the 1967 Ord cotton crop.⁷⁵ The preliminary report stated that all spinners had complained of poor administration by the Ord River District Co-operative, particularly in respect of incorrect invoices, wrongly marked bales, and misdescribed bales.⁷⁶ All spinners agreed that the preparation of lint

73. C. W. Court to C. Bayly, 10 January 1968. North West Department file, *Ord River Project - general correspondence*. Stack 19.

74. G. Alan Stewart to W. J. Ricketts, 16 April 1968. North West Department file, *Ord River Project* (no number).

75. *Ibid.* The mills visited were Bradford Cotton Mills, Bonds Spinning Mills and Davies Co-operative.

76. *Ord River Cotton Investigations Confidential*, C.S.I.R.O. Division of Textile Industry, Geelong. North West Department file, *Ord River Project*.

left something to be desired, and two of the three mills complained that farming practice was below the standard achieved at Namoi and Auscott, principally in respect of weed control and the contamination of the lint with grasses.⁷⁷ The performance of Ord cotton in yarn form was unanimously condemned, and one mill complained of a sticky deposit in the lint. It was not clear whether excessive short fibre, reduced staple length, or low fibre strength were the main factors responsible for the low yarn strength and appearance - all were possibly contributory factors.⁷⁸ The report concluded that the problem was, in fact, a series of problems which together resulted in a variable and unsatisfactory product.⁷⁹ The report claimed that in consequence:

the Ord product has fallen into serious disrepute and unfortunately has been allowed to drift into the role of a diluent which, in this critical year of an adequate supply from other producers, might not be required except at heavy discount and in limited quantity.⁸⁰

On receiving the C.S.I.R.O. report, North West Minister Court commented that it was "timely even though disturbing," and he suggested joint approaches to the spinners by the Ord River District Co-operative and state government representatives, to show that they were anxious to

77. *Ibid.*

78. *Ibid.*

79. *Ibid.*

80. *Ibid.*

co-operate and overcome the disabilities reported by C.S.I.R.O.⁸¹

The Commonwealth decision to finance Stage II of the Ord River Scheme, meant that the immediate situation for Ord growers was all the more serious. The total irrigated area would thus be expanded, cotton was still the only available commercial proposition, and the total Australian cotton crop already exceeded spinners' requirements. The Ord farmers were also faced with an increasingly serious financial position. The financial results from the 1966/1967 crop (taking into account all debt charges, depreciation etc.) showed nine farmers making profits ranging from \$71,705 to \$4,230.⁸² Thirteen farmers showed losses ranging from \$23,780 to \$116.⁸³ The bounty rate paid to Ord farmers on the 1966/1967 crop varied between 9.17 cents per pound lint to 10.23 cents per pound, depending on quality. There was only one farmer whose return per lb. lint (14 cents) would have given him a profit of about \$20,000 without the bounty.⁸⁴ The net return of the other farmers who made the information available, varied between 8.75 cents per lb. lint to minus 13.76 cents per lb.⁸⁵

81. C. W. Court to J. Parker, 21 October 1968. North West Department file, *Ord River Project*.

82. D. C. Munro (Chief Engineer P.W.D.) to J. E. Parker, 2 August 1968. North West Department file, *Ord Farms*. Stack 14.

83. *Ibid.*

84. *Ibid.*

85. *Ibid.*

By 1967 most farmers were finding the raising of loans for crop finance a serious annual problem. Trading banks had shown reluctance to enter the field of crop finance on the Ord and refused to recognize Ord farming property as having sufficient collateral against which to lend money.⁸⁶ The Ord farmer clients of the Commonwealth Development Bank, claimed that their activities were hindered by delays in the acceptance of loans and the provision of funds for the next season.⁸⁷ Some farmers complained that the Development Bank appeared reluctant to advise them of their financial arrangements for the next season until they had completed their current harvest, when in fact, they had to commit themselves to their requirements well ahead of the actual completion of the harvest. Court realised the serious nature of the problem and arranged discussions with T. A. Ottaway, the Western Australian Manager of the Commonwealth Development Bank.⁸⁸ Court felt that "any failures at this juncture could be disastrous in our negotiations for Main Dam finance."⁸⁹ However, he felt too that the farmers should be realistic. Many, he said, were expecting too much and some were

86. D. M. Clune (President, Ord District Growers Association) to C. W. Court, 28 October 1967. North West Department file 57/67.

87. *Ibid.*

88. C. W. Court, *Minute*, 26 September 1967. North West Department file 57/67.

89. *Ibid.*

spending too much on living, including travelling.⁹⁰ The Main Dam, Court said, had no chance if the farmers weakened at this stage. He spoke of a breakdown somewhere between the Department of Agriculture and the farmers, Dr. T. C. Dunne having complained that some farmers would not act on Departmental advice.⁹¹ Court also said that it was important to maintain stability in the area and to get a proper assessment of the position; he had little faith in the local leaders (C. Massey in particular).⁹²

The situation at Kununurra was all the more critical, in that local business people were affected by farmers' problems. The President of the Kununurra Chamber of Commerce (G. Warnock) wrote to Court stating that the present method of financing cotton crops meant that small businesses, with limited capital, were faced with extending credit to farmers who were unable to obtain bank finance to allow them to carry on.⁹³ He concluded, "unless the farmers' financial situation is altered many must be refused credit by us which will not be well for the area generally."⁹⁴

On 1 November 1967, ironically the day of the Commonwealth announcement of financial assistance for Stage II

90. C. W. Court, Notes on Ord Farmers' Finance, 14 October 1967. North West Department file 57/67.

91. *Ibid.*

92. *Ibid.*

93. G. Warnock to C. W. Court, 28 October 1967. North West Department file 57/67.

94. *Ibid.*

of the Ord Project, C. W. Court, T. C. Dunne, D. Bryden (representing J. Parker), C. Bayly and J. O'Rourke (Wesfarmers) met with J. Arbuckle, P. Kimpton, K. Forrest and J. Oliver from the Ord District Growers Association.⁹⁵

Kimpton outlined the two main financial problems confronting the farmers. First, the financing of the second gin- nery which involved a repayment of approximately \$13 per bale by the farmers. This amount was not tax deductible, involving a direct loss of cash from cotton proceeds.⁹⁶

Secondly, the restrictions on credit by merchants, and the indecision in respect of Commonwealth Bank advances placed a burden on the farmers.⁹⁷ Wesfarmers' representative

C. Bayly explained, that at the Ord, the length of time, from when orders were placed until when materials such as fertiliser were delivered, the crop harvested and the proceeds actually received, was much longer than for other farming communities.⁹⁸ Court told the meeting that

he felt that the worst financial problems were directly related to the indecision arising from the Commonwealth refusal to back the Main Dam.⁹⁹ He said that it was only natural that bankers, merchants and finance houses

95. C. W. Court, *Minute*, 1 November 1967. North West Department file 57/67.

96. *Ibid.*

97. *Ibid.*

98. *Ibid.*

99. *Ibid.*

generally were tighter in their credit control during this period of uncertainty. Court referred again to cases where farmers "had not taken much notice of their budgets but had spent money on things far removed from their farming responsibilities on what could be called a fairly extravagant basis."¹⁰⁰ He also said that it was only to be expected that certain farmers would make the grade and others would fail - "the pace settlers were the ones who established the real value but others would find they could not keep up and would ultimately drop out and be replaced by others."¹⁰¹ At the conclusion of the meeting, T. C. Dunne and D. Bryden agreed to arrange for the Treasury representative on the Ord Project Committee (J. Ewing) to look at alternatives for lengthening the time of repayment and thus reducing the cash burden of repayments on the second ginnery.¹⁰²

The fact that the 1968 harvest was to mark the end of the *Raw Cotton Bounty Act 1963*, was an added problem with which the Ord farmers and the Western Australian government were faced, at the time of and following the Commonwealth decision to help finance Stage II of the Ord Scheme. On the results of the 1966/1967 Ord cotton crop, it was obvious that a continuation of the bounty was essential.¹⁰³ The Bureau of Agricultural Economics'

100. *Ibid.*

101. *Ibid.*

102. *Ibid.*

103. D. C. Munro to J. E. Parker, 2 August 1968. North West Department file 57/67.

survey of the Australian cotton growing industry provides an interesting table showing the average net farm incomes and rates of return excluding the cotton bounty, for the years 1964/1965, 1965/1966 and 1966/1967.¹⁰⁴ The table shows that without the bounty, the average net Ord farm income and rate of return would have been negative for all three periods:

	<u>Net farm income \$</u>					
	<u>Region</u>					
	<u>N.S.W.</u>		<u>South</u>	<u>Queensland</u>		<u>W.A.</u>
<u>Namoi</u>	<u>M.I.A.</u>	<u>Central</u>		<u>Raingrown</u>	<u>Ord</u>	
1964/5	32,911	9,294	8,584	3,374	3,182	-2,195
1965/6	45,081	- 527	10,514	6,184	2,855	-8,826
1966/7	15,445	10,187	6,595	7,796	6,259	-6,563

	<u>Rates of return to capital and management</u>					
	<u>%</u>					
	<u>N.S.W.</u>		<u>South</u>	<u>Queensland</u>		<u>W.A.</u>
<u>Namoi</u>	<u>M.I.A.</u>	<u>Central</u>		<u>Raingrown</u>	<u>Ord</u>	
1964/5	11.9	4.5	6.4	3.5	2.8	- 5.7
1965/6	17.1	- 1.9	8.7	9.3	1.9	-13.2
1966/7	4.1	5.9	3.7	11.9	10.2	- 9.3

Source: *The Australian Cotton Growing Industry*, B.A.E. (May 1970), Table No. 47, p. 71.

Late in July 1968, C. W. Bayly (Director, Ord River District Co-operative) wrote to the Commonwealth Minister for Primary Industry, J. D. Anthony, expressing the view that the continuation of bounty payments to Ord River farmers was of vital importance to the future of cotton

104. *The Australian Cotton Growing Industry*, op. cit., p. 71.

growing in the area.¹⁰⁵ The remoteness of the area, he said, meant that all costs for Kununurra farmers could be assumed to be higher than elsewhere in Australia.¹⁰⁶ Most farmers had had little or no experience of cotton growing prior to their arrival at Kununurra and, Bayly said, the first couple of years had meant learning by their mistakes.¹⁰⁷ He suggested that any extension to the present *Raw Cotton Bounty Act* include the suggestions that the bounty be paid on total Australian production rather than on domestic sales, and that the bounty year be extended to June 30 (instead of February 28).¹⁰⁸

During the following week, Bayly had talks in Canberra with Primary Industry Minister J. D. Anthony, and Senior personnel of the Departments of Primary Industry, Trade and Industry, National Development, Customs and Excise and the Bureau of Agricultural Economics.¹⁰⁹ Anthony confided to Bayly that the cotton growing areas of New South Wales and Queensland were relatively prosperous, hence he felt that there would be difficulty in getting through a new *Raw Cotton Bounty Act* giving additional support to those areas.¹¹⁰ Anthony suggested that whilst

105. C. W. Bayly to J. D. Anthony, 23 July 1968. North West Department file 57/67.

106. *Ibid.*

107. *Ibid.*

108. *Ibid.*

109. C. W. Bayly to C. W. Court, 2 August 1968. North West Department file 57/67.

110. *Ibid.*

continuing to press the Commonwealth government for some form of assistance by way of a bounty, Ord growers ought also to approach the Western Australian government, to request some form of special assistance for the Ord by way of a grant from the Commonwealth government.¹¹¹

Late in August, Premier Brand wrote to Prime Minister Gorton, requesting his support for "the continuance of the cotton bounty or assistance in such other form as you may deem advisable for the cotton growing project at Kununurra."¹¹² Brand admitted that there had been considerable variability in the efficiency of application of cotton growing techniques among Ord farmers. However, he said that obviously this was unavoidable "within a group of variable backgrounds and unknown managerial ability. Obviously a number of farmers have been ambitious beyond their capacity and have extended operations too rapidly."¹¹³ He gave his assurance that additional supervision would be given to farmers in the latter category. Brand went on to explain that when the cotton project was initiated, taking into account the history of Commonwealth assistance to the Australian cotton industry, it was expected that the home market would be available for Ord cotton producers for at least ten years, and that a

111. *Ibid.*

112. D. Brand to J. G. Gorton, 23 August 1968. North West Department file 57/67.

113. *Ibid.*

bounty would be paid for a somewhat similar period.¹¹⁴ He admitted that perhaps the Western Australian government ought to have accepted the application received from an American organization for an area of 5,000 acres on which to produce cotton - "our decision against this proposition," he said, "was based on the concept that the investment of funds by both Commonwealth and state governments should be basically in the interest of Australians who wished to farm in the area."¹¹⁵ Brand concluded his letter by saying that he had based his request for continuance of the bounty or some other form of assistance, on the fact that the environment was well suited to the production of cotton, efficient farming techniques had been developed, cotton ginning plants had been established, and the farmers and the project needed the financial assistance from the Commonwealth "which there was no reason to expect would not be available when the enterprises were initially established."¹¹⁶

114. *Ibid.*

115. *Ibid.* The company involved was the Delta Company. The details of the refusal of their offer, given in the Ord Project Committee minutes, were that the request was refused at that time because 5,000 acres was no longer available in the Stage I area in one block. The company could, it was said, resubmit its application when more land was available in 1969. Minutes of Ord Project Committee, 18 May 1964. North West Department file, *Ord River Development Project Committee*, Stack 20.

116. *Ibid.*

The Commonwealth government decision, announced on 25 September 1968, was to continue the bounty for a further three years, phasing it out during that period.¹¹⁷ Primary Industry Minister Anthony said that the first phase in the development of a self contained and economic raw cotton industry in Australia had been completed.¹¹⁸ The government's objective in the second and final phase, to commence with the 1969 crop, was to "assist the industry to consolidate that development."¹¹⁹ A total payment of \$4 million was to be provided for the 1968/1969 crop, \$3 million for the 1969/1970 crop and \$2 million for the 1970/1971 crop.¹²⁰

The Western Australian government's response to the Commonwealth government announcement of the new bounty arrangements, was to ask for \$250,000 special area assistance for the 1968 crop.¹²¹ Premier Brand explained, in a letter to Prime Minister Gorton, that because of the location of the Ord and the fall of seasons, Ord cotton was harvested later than Namoi and other Eastern States crops.¹²² It was anticipated, he said, that by the time

117. *C.P.D.*, H. of R., Vol. 60, 25 September 1968, p. 1450.

118. *Ibid.*

119. *Ibid.*

120. *Ibid.*

121. D. Brand to J. G. Gorton, 27 September 1968. North West Department file 57/67.

122. *Ibid.*

the 1968 crop was sold, at least half of it would have to be sold on the export market. This meant that Ord growers would receive only approximately half the rate of bounty they would have received had they sold their full share on the Australian market.¹²³ Brand claimed that many Ord farmers had not had a chance to develop and consolidate their farming activities, having been in production only a short time and having faced two unfavourable seasons.¹²⁴ The current costs of production and returns on the Ord, were such that the average farmer would need approximately eight cents per pound bounty to break even, after allowing for the normal living allowance of \$4,000. "We feel," he wrote, "that it is possible for both the farmers and the ginning operation to become more efficient to the extent of one cent and with this in mind we are requesting special Commonwealth assistance to maintain the bounty at seven cents per pound on all Ord cotton produced in 1969, 1970 and 1971."¹²⁵

In October 1968, Prime Minister Gorton notified the Western Australian government of the Commonwealth decision to pay the cotton bounty on the basis of total Australian production rather than on domestic sales, to ensure that Ord growers received an equitable share of the bounty.¹²⁶

123. *Ibid.*

124. *Ibid.*

125. *Ibid.*

126. J. G. Gorton to D. Brand, Telegram, 11 October 1968. North West Department file 57/67.

As far as the requested special area assistance was concerned, Gorton later explained that, in view of the \$70 million Commonwealth financial commitment to the Ord Scheme, his government believed that "any government responsibility for crop failures or other temporary setbacks should be undertaken by the state."¹²⁷ He added,

I am informed that at discussions in August 1966 with Commonwealth ministers about stage two, you gave an undertaking to my colleague the Treasurer, who was chairman of the meeting, that the state would accept responsibility for economic setbacks in the scheme.¹²⁸

Meanwhile the Ord farmers were becoming very restless, and it was said that only the efforts of a few "kept the more headstrong of them from running to the Press with the story."¹²⁹ By August 1968, when the cotton crop was being harvested, it appeared that six of the growers were unlikely to be able to plant crops for the 1968/1969 season.¹³⁰ The return to growers from the 1967/1968 crop looked to be barely sufficient to cover costs. The lower return was a combination of lower yields per acre (affected to a certain extent by a prolonged wet season), a fall in the price of cotton seed, a reduction in the

127. J. G. Gorton to D. Brand, 6 February 1969. North West Department file 57/67.

128. *Ibid.*

129. S. J. Lewis (Senior Investigating Officer) to G. H. Cooper, (Director, Department of Industrial Development), 21 August 1968. North West Department file, *Ord Farms*, Stack 14.

130. *Ibid.*

bounty from 7 cents to 5.4 cents per pound lint, the greatly increased Australian production and the later season at the Ord which allowed growers in the Eastern states first access to the Australian market.¹³¹ Approximately 90 per cent of the requirements of Australian spinners had been forward sold by Eastern states' growers, which meant that Ord River cotton had to be sold on the export market or else stored for an indefinite period to satisfy any future Australian demand.¹³² The government survey of the position concluded that something had to be done quickly to convince the majority of growers that they should plant a cotton crop in the coming season. It was said that:

on existing circumstances a grower could carry on, provided he had large financial resources or access to working capital finance. However; just as the return was not sufficient to allow growers to service additional borrowings, neither was it sufficient to justify an increased level of equity investment.¹³³

On August 30, 1968, the Ord Project Committee special meeting to discuss the farmers' financial position, concluded that some form of special state assistance would be justified.¹³⁴ The committee recommended that the possibility of refinancing the ginneries be investigated - it

131. *Ibid.*

132. *Ibid.*

133. *Ibid.*

134. *Ibid.*

appeared that in many cases, farmers' shareholdings in the Ord River District Co-operative represented the major portion of the capital with which they had commenced cotton farming.¹³⁵ The farmers themselves were already agitating for government assistance.

The following motion was unanimously passed by all members of the Ord District Growers' Association early in September 1968:

That with consideration to the serious financial situation existing amongst farmers on the Ord Scheme and following recent investigations by members of the North West Department, we propose that

- a) the state government take over the immediate capital responsibility of the farmers' co-operative and any future extensions or improvements relative to the ginnery.
- b) the state government immediately refund all monies held by the co-operative being those shares concerned in the capitalisation of both gins and their associated facilities.
- c) the co-operative to continue the operation of both ginneries, store and associated facilities.
- d) the state government ensure that ginning charges do not exceed 1.5 cents per pound for seed cotton, and handling charges for seed did not exceed 0.5 cents per pound.
- e) the state government guarantee a bounty to a figure based on middling to 1 inch with premiums and discounts, that covers all cotton sold from the Ord whether placed in Australia, under the present Bounty Act (or possible future Bounty Act) or sold overseas.
- f) the state government give a reduction of one third on present irrigation water charges on 'after harvest' terms.
- g) the state government use its Rural and Industry Bank facilities for the following purposes:

135. Minutes of Ord Project Committee, 30 August 1968. North West Department file, *Ord Farms*, Stack 14.

- to advance 90 per cent of the value of the crop, the remaining 10 per cent to be paid immediately after adjustments, when the sale of cotton is made.
- to make finance available to growers for 'carry on.'

The motion also contained proposals that the state government upgrade Wyndham wharf facilities to accommodate more efficient handling, loading and larger storage of present and future crops, and that the government use its resources to proceed with large scale research on new varieties of cotton, alternate crops and marketing. The farmers also requested the right to repurchase the ginneries at their depreciated capital value, at the end of seven years.¹³⁶

The above motion was submitted to North West Minister Court with the request that he receive a deputation of three Ord District Growers' Association members, and possibly three grower directors of the Ord River District Co-operative, before 10 September 1968.¹³⁷ A farmers' deputation led by the President of the Ord District Growers' Association (K. S. B. Coster) met with J. Parker, C. W. Court, T. C. Dunne and R. Clayton on 5 September 1968.¹³⁸ Court pointed out the "overall impracticability

136. J. G. Grime (Hon. Secretary, Ord District Growers' Association) to C. W. Court, 3 September 1968. North West Department file, *Ord Farms*, Stack 14.

137. *Ibid.*

138. C. W. Court, *Minute*, 9 September 1968. North West Department file, *Ord Farms*, Stack 14.

of the farmers' position" and stated that, "quite apart from the precedent that would be involved throughout the whole of the primary producing industry, it was financially beyond the resources of the state."¹³⁹ Court felt that the demands were tantamount to subsidising the most inefficient farmer to make a profit. He claimed that obviously some form of financial assistance would be necessary to make it profitable for the middle and top group of growers to continue with cotton, however it was equally as obvious that those in the bottom group should be sorted out quickly as they had "little, if any, prospect to proceed either now or in the future."¹⁴⁰ The government estimate on the farmers' request totalled \$5,761,000 over seven years, comprising:¹⁴¹

capital take over	\$ 590,000
share refund	245,000
ginning subsidy	130,000
seed subsidy	133,000
bounty make up	520,000
water subsidy	<u>40,000</u>
	1,658,000
Subsidy component	823,000
over 7 years	\$5,761,000

139. *Ibid.*

140. *Ibid.*

141. Figures prepared by Ord Project Committee, 4 September 1968. North West Department file, *Ord Farms*, Stack 14.

Court, on behalf of the state government, offered the following financial assistance:

- 1) To rearrange the number 2 ginnery finance so that \$297,000 of loans would be spread over fifteen years.
- 2) To take over redeemable preference shares and spread them over fifteen years also.
- 3) To discuss the possibility of temporary relief in respect of water payments.
- 4) To give one year's rental holiday on number 1 gin, if twenty farmers planted a crop in the next season.
- 5) To assist with negotiations for bank finance, to try to arrange a more realistic approach to the spread of seasonal finance.
- 6) To press for Commonwealth assistance in the form of the bounty or other arrangement.
- 7) To investigate drainage problems.¹⁴²

The government proposals were put to a full meeting of farmers later the same evening, and at 10.30 p.m., K. S. B. Coster, J. G. Grime and K. Forrest called to see Court, to report that the government's counter proposals were unacceptable to the meeting.¹⁴³ The next day, Court telephoned a message to Premier Brand in Perth:

I made our position clear, even if it meant no cotton grown. Unfortunately, the growers are virtually under the spell of an influence well known to us.

142. C. W. Court, *Minute*, 9 September 1968. North West Department file, *Ord Farms*, Stack 14.

143. *Ibid.*

However, events of yesterday belatedly highlighted the position to several more responsible growers who now acknowledge his influence and the possibility he could wreck their prospects through his disruptive objective. These people are already taking action to influence a more realistic approach.¹⁴⁴

Court claimed that carry-on finance was the key to the problem, together with a Commonwealth decision within two weeks, as to the future of the bounty or other financial assistance to Ord growers.¹⁴⁵

Farmers' representatives C. Massey and K. S. B. Coster were flown to Perth early in October 1968, to meet with representatives of the Western Australian and Commonwealth governments, Wesfarmers and the Commonwealth Development and National Banks.¹⁴⁶ Massey and Coster saw financial assistance for Ord farmers in 1969 as being valued at approximately 7.19 cents per pound: comprising 5.21 cents bounty, a ginnery rental holiday representing 0.67 cents per pound, a reduction in power charges to 5 cents per unit or 0.31 cents per pound and special area assistance from the Commonwealth of 1.00 cents per pound.¹⁴⁷ In reply, the state government offered the following.¹⁴⁸ First, a rental holiday on the number 1 gin

144. C. W. Court to D. Brand, Message telephoned through by P. Williams, Broome, 6 September 1968. North West Department file, *Ord Farms*, Stack 14.

145. *Ibid.*

146. October 3, 1968, *Ord Farmers' Financial Assistance Summary*. North West Department file 57/67.

147. *Ibid.*

148. C. W. Court to K. S. B. Coster, October 9, 1968. North West Department file 57/67.

for 1968 and 1969. Secondly, a reduced charge from 7.5 cents to 5 cents per unit for power used in connection with the ginnery. Thirdly, the government, Court said, had asked the Commonwealth for a special area assistance grant of \$250,000 and fourthly, had also asked for an area assistance payment of 1 cent per pound over and above the 1969 bounty payment.¹⁴⁹

At a meeting on 11 October 1968, the Ord farmers refused the government's offer because it had not fulfilled the aims of the 3 October 1968 meeting - the level of assistance wanted was approximately 8 cents per pound lint for 1968.¹⁵⁰ The meeting also claimed that at 1½ bales actual current (1968) production in the area, farmers required 10.88 cents per pound bounty for 1969, and for each subsequent year they felt that assistance should be calculated on a formula basis according to the costs, returns and yields of the previous year.¹⁵¹ Court replied, modifying the government's attitude, and agreeing that provided about twenty farmers grew a cotton crop, the state would review the audited ginning and marketing costs for the 1969 crop, with a view to giving some additional assistance if costs satisfactorily reflected the savings resulting from the ginnery rental holiday and

149. *Ibid.* The area assistance was refused. See p. 331.

150. C. F. Massey to C. W. Court, 12 October 1968. North West Department file 57/67.

151. *Ibid.*

power cost reductions.¹⁵² If, under these circumstances, costs did not exceed the 1967 figure of 13.79 cents per pound lint, the state, Court said, would make a contribution of 1 cent per pound lint towards the further reduction of ginning and marketing costs for the 1969 crop.¹⁵³

The Director of Agriculture, T. C. Dunne, went to Kununurra to discuss the above offer. In reporting his visit, Dunne wrote:

It seems advisable to take action to lift the morale of the growers, even though it is possible that the next season may virtually see the end of cotton production. In the absence of rapid satisfactory developments in the production of cotton or of all crops, agricultural production must cease and most growers be bankrupted. Such a situation may only be avoided by supporting growers over a difficult period.¹⁵⁴

The growers were still dissatisfied with the level of government support. The president of the Ord District Growers' Association gave a statement to the Australian Broadcasting Commission, alleging that the latest government aid for growers was not enough to prevent himself and a number of other growers from having to sell up.¹⁵⁵

152. C. W. Court to K. S. B. Coster, 17 October 1968. North West Department file 57/67.

153. *Ibid.*

154. T. C. Dunne to C. Nalder, 22 October 1968. North West Department file 57/67.

155. K. S. B. Coster to A.B.C. News, 30 October 1968. North West Department file 57/67.

Court replied:

Our objective is to give all the assistance we can and not only encourage farmers to grow, but to make it practical to proceed by logical steps to the final implementation of this great scheme. Certain members of the association seem more interested in carrying on a public controversy with the government.¹⁵⁶

The Western Australian state cabinet obviously felt ill informed as to the progress of government negotiations with the farmers. A cabinet meeting of 28 October 1968 called for "a quick and comprehensive survey of the current position in which we find ourselves with the Ord Project."¹⁵⁷ Court assured J. Parker, T. C. Dunne and D. Munro that there was no lack of desire on the part of cabinet to back the project, both during the present difficult period and when the Main Dam was completed.¹⁵⁸ However, Court said, the cabinet sought clarification of the situation both now and in the future.¹⁵⁹

The *West Australian* was critical of the way in which the state government had handled the situation. The editorial of 15 October 1968, claimed that the government had had little sense of the urgency of the situation, and asked why so little progress had been made to diversify

156. C. W. Court, comment to A.B.C., 30 October 1968. North West Department file 57/67.

157. C. W. Court, *Minute*, 29 October 1968. North West Department file 57/67.

158. *Ibid.*

159. *Ibid.*

the scheme.¹⁶⁰ It said:

the writing has been on the wall long enough with the big increase in production in the Eastern States and Canberra's reluctance to subsidise a surplus that would have to be sold on over-supplied world markets.¹⁶¹

The editorial went on to say that the state government needed to do some serious thinking:

it has a moral responsibility to the farmers who have been taking part in a public experiment and it has a duty to the state - with or without Commonwealth cooperation - to produce practical results in crop diversification and beef fattening.¹⁶²

In November 1968 the Ord growers asked that negotiations with the government be reopened. In his letter to Court, Coster explained that at first the growers had not understood the government's point of view, in particular that of Court. However, the growers, he said, now had a real appreciation of the problems facing the state in assisting them.¹⁶³ Court later spoke to Coster, explaining "with the utmost frankness the predicament the farmers had brought upon themselves through militant and uncooperative attitudes they have adopted in recent months."¹⁶⁴ Court

160. *West Australian*, 15 October 1968, p. 6.

161. *Ibid.*

162. *Ibid.*

163. K. S. B. Coster to C. W. Court, 10 November 1968. North West Department file 57/67.

164. C. W. Court to C. D. Nalder, 11 November 1968. North West Department file 57/67.

claimed that Coster professed to be aware of the wrong tactics followed by the farmers, and agreed that one of the major weaknesses in the farmers' case was the fact that they had never spoken to the government, or the press, about any self help efforts (e.g. cost reduction or improved yields) they proposed to make to supplement government assistance.¹⁶⁵ The Ord District Growers' Association handed over negotiations with the government to the Management of the Ord River District Co-operative for a four week period.¹⁶⁶

The financial assistance given to Ord farmers in respect of the 1968 and 1969 seasons was:

- 1) a rental holiday on the number 1 gin for 1968 and 1969.
- 2) a reduction on ginnery and power charges from 7.5 cents to 5 cents per unit.
- 3) assistance equal to 1 cent per pound lint cotton produced for 1968 to be available to those farmers planting a crop of reasonable and approved acreage for 1969.
- 4) an additional 1 cent per pound lint for the 1969 crop to be granted if ginning costs were kept below the audited 1967 figure of 13.79 cents per pound.
- 5) the state government agreed to station a special officer at Kununurra to give assistance with the

165. *Ibid.*

166. K. S. B. Coster to P. L. Kimpton (Chairman, Ord River District Co-operative Pty Ltd.), 14 November 1968. North West Department file 57/67.

administration and supervision of farming activities in the area, and also to assist with an acceleration of research into new strains and diversified crops ready for 1972 when water from the Main Dam would become available.

- 6) the state government to finance commercial farm trials of grain crops of about 200 acres for the 1969 season.
- 7) the Minister for Transport agreed to a new contract covering the shipment of the 1968 Ord cotton crop to the Eastern states. This was to result in a decrease of 60 cents per bale in freight charges.¹⁶⁷

The state subsidy of 1 cent per pound lint for the 1968 crop (to those farmers who agreed to grow a cotton crop in 1969) was paid direct to farmers, following application to the Ord Project Committee with a statement of production as certified by the Ord District Co-operative, and certification by an Agriculture Department officer at Kununurra that the claimant was actually growing a crop.¹⁶⁸ Twenty four growers, in fact, planted a 1968/1969 cotton crop. Claims by way of state subsidy on the 1967/1968 cotton crop ranged from \$7,266 claimed by B. T. Arbuckle and Co., who proposed planting 769 acres in the 1968/1969 season, to \$4,812 claimed by J. Arbuckle and

167. "Summary of assistance to Ord cotton farmers in respect of 1968 and 1969 seasons." North West Department file, *Ord Farms*, Vol. 3.

168. D. C. Munro (Convenor, Farmers' Finance Sub Committee) to J. Parker (Chairman, Ord Project Committee), 14 November 1968. North West Department file 57/67.

Sons, who proposed planting 600 acres, to \$343 by J. B. and E. Goodwin who planned to plant thirty acres in 1968/1969.¹⁶⁹ Treasury representative on the Ord Project Committee, J. Ewing, agreed to payment unwillingly.¹⁷⁰ He pointed out that assistance appeared to be necessary if growers were to be encouraged to grow cotton, however, total assistance for twenty four growers, including the rental holiday and reduction in power charges would, he said, total approximately \$280,000 for the 1969 crop, an average of approximately \$12,000 per grower.¹⁷¹

The Farmers' Finance Sub Committee of the Ord Project Committee felt that there was little option but to give assistance of the same type for the 1970 crop.¹⁷² Assistance took the form of a fixed sum to cover capital repayments due in 1970 for the number 2 gin, and principal payments outstanding for 1970 on the number 1 gin.¹⁷³ A fixed payment of 1.7 cents per pound lint produced was also given, to reduce ginning and delivery costs to farmers. Payment was to be made only on lint which qualified for the cotton bounty, and both payments were

169. D. C. Munro to J. Parker, 10 December 1968. North West Department file 57/67.

170. J. Ewing to D. Brand (Premier and Treasurer), 3 April 1969. North West Department file 57/67.

171. *Ibid.*

172. D. C. Munro to J. Parker, 20 August 1969. North West Department file 57/67.

173. *Ibid.*

dependent on costs being kept below 13.79 cents per pound.¹⁷⁴ The same level of assistance was recommended for the 1970/1971 crop.¹⁷⁵ The Treasury representative on the Ord Project Committee and the Farmers' Finance Sub Committee once again expressed reluctance to assist to the extent recommended.¹⁷⁶ Ewing pointed out that the level of subsidy was not justified. The subsidy for the 1969 crop, he said, was set at an overall 3 cents per pound lint, as a result of claims that ginning and marketing costs would amount to 13.79 cents per pound and that the Commonwealth subsidy would amount to 5 cents per pound.¹⁷⁷ As it happened, ginning and marketing costs were only 8.4 cents per pound and the Commonwealth subsidy was 5.7 cents per pound. Ewing commented that if these figures had been known at the time, it was probable that no subsidy would have been paid. He claimed too, that the subsidy for 1970 was set at the same level for 1969 because the results of that year were unavailable when the 1970 crop was planted.¹⁷⁸ The cash position of the Ord District Co-operative was also so sound that the payment of that part of the subsidy relating to the capital charges on the

174. *Ibid.*

175. D. C. Munro to J. E. Parker (Chairman, North West Planning and Coordinating Authority 1969-1971.), 19 August 1970. North West Department file 57/67.

176. J. Ewing to D. Brand, 13 October 1970. North West Department file 57/67.

177. *Ibid.*

178. *Ibid.*

number 2 gin, was obviously an embarrassment to them; the Co-operative, Ewing said, expected to have a surplus of funds at 31 March 1971, of over \$250,000.¹⁷⁹ "Clearly," he concluded, "this is a situation that should not be allowed to continue and if the subsidy for the 1971 crop is to be set at the level recommended by the committee, I suggest that the whole position be thoroughly reviewed in the course of the year when the 1970 results are known."¹⁸⁰ The Premier however, decided that the government should go ahead with the 1970/1971 subsidy as recommended by the Ord Project Committee, but said that it must be clearly stated that the basis of the subsidy would be reviewed in the light of the results of the 1969 and 1970 crops.¹⁸¹

Accordingly, financial assistance for the 1972 and 1973 crops was given on the following basis.¹⁸² The capital repayments due in 1972 and 1973 for the number 2 ginnery were to be met, and a continued rental holiday on the number 1 gin was to apply. As before, a fixed payment of 1.7 cents per pound lint produced was made, to reduce ginning and delivery costs to farmers. In addition,

179. *Ibid.*

180. *Ibid.*

181. D. Brand to C. W. Court, 13 October 1970. North West Department file 57/67.

182. D. Bryden (Convenor Farmers' Finance Sub Committee and Chairman Ord Project Committee) to D. C. Munro (Acting Chairman North West Planning and Coordinating Authority), 13 October 1971. North West Department file 57/67.

incentive payments were to be made for lint of specified quality characteristics. Assistance was to be limited to a maximum of \$12,000 to any one grower and to be phased out over five seasons beginning with the 1974 crop.¹⁸³

Financial problems were not the only problems with which farmers and Ord authorities had to grapple in the late 1960's. Despite many complaints about irrigation and drainage deficiencies in the area, the problem had not been remedied. The Ord District Growers' Association alleged that the area administration lacked practical knowledge and understanding of the irrigation and drainage requirements associated with agriculture in a tropical region.¹⁸⁴ K. S. B. Coster claimed that when he took up his farm in 1963, and in the two following years, his drains were adequate as rainfall was low. However, in the 1966/1967 wet season, heavy rainfall and lack of adequate design and maintenance of the D4 drain caused overloading and backflooding over 100 acres of his farm for two weeks.¹⁸⁵ The design of outlet 40 to D4 was found to be too high and according to Coster, he complained for eighteen months before the Public Works Department took

183. *Ibid.*

184. Minutes Combined meeting of Ord River District Growers' Association and farmer shareholders of Ord River District Co-operative, 12 November 1969. North West Department file, *Ord River Project*.

185. K. S. B. Coster, "Drainage," 29 November 1969. North West Department file, *Ord River Project*.

remedial action.¹⁸⁶ The heavy wet season of 1967/1968 also highlighted a number of weaknesses in the drainage system, approximately 1,000 acres of cotton crop being badly waterlogged.¹⁸⁷ Serious drainage problems were also seen in the Kununurra townsite as a result of the heavy wet season. Due to the lack of defined drainage routes, sections of the townsite became waterlogged and septic tanks ceased to function.¹⁸⁸

Principal drains D4, D4C and D6 were redesigned, and reconstruction was largely completed prior to the 1969 wet season. However, the 1968/1969 wet season proved even more severe; other deficiencies were found, and crop losses resulted.¹⁸⁹ In April 1969, the growers submitted by farm, a general report on farm drainage deficiencies.¹⁹⁰ As a result, an official from the Public Works Department inspected the alleged deficiencies and agreed that 95 per cent of complaints were genuine.¹⁹¹ At a meeting of the Ord District Growers' Association in November 1969, it was claimed that three farmers

186. *Ibid.*

187. T. C. Dunne, *Agriculture Report*, 5 April 1968. Appendix D to Minutes of Ord Project Committee, June 1968. North West Department file, *Ord Project Committee*, Stack 19.

188. *Ibid.*

189. J. E. Parker to C. W. Court, 29 April 1969. North West Department file, *Ord River and Main Dam*, Stack 17.

190. *Ibid.*

191. *Ibid.*

(D. Morrissey, J. Grime and D. Clune) had been forced to abandon farming due to the low returns caused by poor drainage on their farms.¹⁹² However, a substantial improvement programme had begun prior to the 1969/1970 wet season, and the Public Works Department undertook to ensure that a minimum of 250 acres of each farm was suitably graded to ensure satisfactory growth of cotton.¹⁹³ By February 1970, the Chairman of the Ord River District Co-operative was able to write to Court expressing the farmers' gratitude for the work on water supply and drainage carried out over the last dry season.¹⁹⁴ He added that the growers felt that "improved production would more than compensate for the extra expense that must have been incurred by the P.W.D. to carry out this work."¹⁹⁵

However, the overall situation at the Ord had not improved in the two years from November 1967 when the Commonwealth announced financial assistance for the proposed Main Ord Dam. When speaking of the timing of the Commonwealth decision, D. Fairbairn (Minister for National Development) said that in September 1967, members of the Western Australian cabinet had been told that as soon as

192. Minutes of Combined Meeting of Ord River District Growers' Association and farmer shareholders of Ord River District Co-operative, 12 November 1969. North West Department file, *Ord River Project*.

193. J. E. Parker to C. W. Court, 29 April 1969.

194. P. L. Kimpton to C. W. Court, 9 February 1970. North West Department file, *Ord River Project*.

195. *Ibid.*

they submitted final results for the 1966/1967 Ord cotton crop, the Commonwealth would decide on finance for Stage II of the scheme.¹⁹⁶ In the second half of October, he claimed, Commonwealth officials looked at results and saw two improvements. First, sorghum appeared to be emerging as an alternative to cotton and secondly, greatly increased returns were expected from a new variety of cotton, Stoneville. "The net effect," he said, "was that the government was in a position to make a decision and it made a decision in favour of the scheme."¹⁹⁷

This chapter has attempted to show that these two reasons were insufficient basis for the Commonwealth decision in 1967, and the situation did not improve in the two years following the decision. By 1967, Ord farmers were already under financial strain and small business people in Kununurra were also suffering. The future of cotton on the Ord did not appear bright in the face of increased Australian production and the low quality of Ord cotton. The principal complaint of Australian spinners from as early as 1965 was that the Ord lint produced a weaker yarn than desirable.¹⁹⁸ It seemed possible that this weakness was the fault of the variety Rex being cultivated, since its reputation in this regard was poor in

196. *C.P.D.*, H. of R., Vol. 60, 29 August 1968, p. 759.

197. *Ibid.*

198. C. F. Massey to C. W. Court, 28 December 1967. North West Department file, *Ord River Project - General Correspondence*, Stack 19.

the United States.¹⁹⁹ However, the 100 bales of Stoneville variety grown in the 1967 season, and mentioned as one reason for the favourable Commonwealth decision, again produced harsh criticism from Australian spinners.²⁰⁰ The 1966/1967 cotton crop was in fact, poorer in quality and the yield fell from 793 lb. per acre in 1965/1966 to 759 lbs. per acre in 1966/1967.²⁰¹ Results with sorghum were not, as Fairbairn said, "remarkable" - in fact, production was small and soon proved disappointing and the market situation was unattractive.

In 1969, when construction work began on the Main Ord Dam, the scheme was still entirely dependent on cotton. Since 1966 the state government had found it necessary to provide direct and indirect assistance to Ord cotton growers. This assistance totalled \$56,649 in 1966, \$55,310 in 1967, \$151,121 in 1968 and \$290,012 in 1969.²⁰² The Western Australian Treasury was obviously becoming worried about the level and the need for financial assistance. By 1969, farmers were leaving the Ord area and morale was low enough for Ord authorities to be concerned. In March 1969, J. O'Rourke (Manager of Ord River

199. *Ibid.*

200. *Ibid.*

201. *An Outline of the Ord Irrigation Project Western Australia, op. cit., p. 47.*

202. J. E. Parker to D. G. May (Minister for the North West), 24 August 1971. North West Department file 20/70.

Department, Wesfarmers) wrote to D. C. Munro concerning the impending departure of farmer D. Revell who had arranged to purchase a farm at Wee Waa, New South Wales.²⁰³ He described Revell as "consistently one of the better farmers at the Ord, producing superior grades and above average yields."²⁰⁴ The general feeling at Kununurra appeared to be, O'Rourke said, that "if a farmer of Mr. Revell's calibre has decided to quit, what chance do they themselves have of ultimate survival."²⁰⁵

The state government saw the completion of the Main Dam as the solution to the problems of the area. It was felt that once the Main Dam was operative, the economics of the Ord area would alter - "the economics of scale will start to operate as more farms can be developed and present farms used to their maximum capacity without water restrictions."²⁰⁶

203. J. O'Rourke to D. C. Munro, 10 March 1969. North West Department file, *Ord Farms*, Vol. 3.

204. *Ibid.*

205. *Ibid.*

206. D. Brand to J. G. Gorton, 23 August 1968. North West Department file 57/67.

CHAPTER IX

STAGE II OF THE ORD RIVER SCHEME

It should be noted that the state government has complete faith in the ability of the area to eventually become a major food and fibre producing region, and we will continue to give encouragement and financial support to further research.¹

Until 1967, when the Commonwealth granted funds for Stage II of the Ord Scheme, there had been no overall review of the scheme and its progress. Western Australian government thinking was that the construction of the Main Dam would solve all problems; there was never any suggestion that perhaps its construction at this time was unjustified. When the request for financial assistance for Stage II was submitted to the Commonwealth, the engineering plans for the construction of the Main Dam were not yet finally prepared.

The *Stage II Development Engineering Report* claimed that from a strictly engineering point of view, Stage I could continue to operate as a small irrigation project, but in so doing it would suffer from several disabilities.²

1. W.A.P.D., Vol. 204, 22 August 1974, p. 830.

2. *Ord Irrigation Project: Stage II Development Engineering Report*, P.W.D. Perth, October 1967, pp. 7-8.

These were:

- a) the maximum possible flood for which provision should be made had been estimated at 2,500,000 cubic feet per second, but floods even half this magnitude could cause considerable damage to levees, farmlands, channels, drains, roads and structures by overtopping of the eastern levee. After the completion of Stage II, flood storage would reduce the maximum flow to an estimated 434,000 cubic feet per second.
- b) the storage capacity of the Diversion Dam, the report claimed, was insufficient for effective quantities of water to be carried over from one year to the next, and a severe drought could restrict supplies.
- c) while the Diversion Dam was being used for storage, the level was soon drawn down below the level of gravity command of the channel system. For the rest of the dry season water had to be pumped into irrigation channels, using electric power generated in the diesel power station. Stage II, the report stated, would eliminate considerable operating costs.
- d) special precautions had to be taken to protect gate seals from trees during major flows of the Ord River. A large reservoir would tend to trap trees and the smaller flood flows would also reduce the danger from this source.

e) as yet, the report claimed, there had been no evidence of serious silting affecting the storage capacity of the Diversion Dam. However, on the completion of Stage II, siltation of the Diversion Dam would no longer cause concern, as it would not then have to serve as storage, except on a very minor scale.³

The Main Dam design details provided for a rockfill embankment 200 feet high impounding 13,300,000 acre feet of water, and a spillway to the right of the abutment providing a discharge capacity of 434,000 cubic feet per second.⁴ Towards the end of 1966, a review of the design had indicated that a modification of the spillway size and location, coupled with a slightly higher dam, could achieve some saving in cost and also an increased storage capacity. However, in view of the state government decision to submit a fully documented case for financial

3. *Ibid.* The Department of Agriculture catchment regeneration project, was being undertaken to minimise the threat of siltation of the Dam, and to slow down the rate of erosion. The project was begun in 1960 to rehabilitate about 750,000 acres (3,000 sq. km) of totally eroded country along the upper reaches of the Ord River. The technique of regeneration involved fencing and closing to cattle, cultivating and re-seeding. To 1976, approximately 3,000 sq. miles (7,800 sq. km) of catchment were resumed, and areas totalling 1,800 sq. miles (4,700 sq. km) fenced and closed to cattle. Small scale grazing studies are monitoring the effect of controlled grazing on regenerated pastures. See Department of North West files 81/60 and 27/61 and K. Fitzgerald, *The Ord River Catchment Regeneration Project*, Department of Agriculture Bulletin No. 3599.

4. *Ibid.*, chapter 3, pp. 11-20.

assistance from the Commonwealth for Stage II not later than 30 October 1967, the original design for the 200 feet high dam was used.⁵ The estimated cost of this dam was \$20,930,000.⁶ Only after Commonwealth approval for Stage II was announced, did the P.W.D. urgently complete details of the alternate design. The overall effects of the modification were: that the embankment was raised 25 feet, storage capacity was increased by 1,100,000 acre feet, spillway capacity was reduced to 80,000,000 cubic feet per second and, because of this restricted discharge, the average level of water in the reservoir was increased by approximately 20 feet.⁷ J. E. Parker suggested to Premier Brand that the revised design be submitted to the Prime Minister urgently, "in view of impending legislation covering financial assistance to be introduced into the Federal parliament."⁸

Sir Russell Dumas, ex-Director of Works for Western Australia, had been fearful about the proposed design of the Main Dam since early 1966.⁹ His main argument was

5. J. E. Parker to D. Brand, 19 April 1968. North West Department file Stack 19 - *Ord River Main Dam*, Minutes of Sub Committees Only.

6. *Ibid.*

7. *Ord Irrigation Project Stage II Development Engineering Report*, P.W.D. Perth, May 1968, p. 14.

8. J. E. Parker (Chairman, Ord Project Committee) to D. Brand, 19 April 1968, *op. cit.*

9. Notes on Discussion with J. E. Parker, June 1967. Sir Russell Dumas Papers.

that if, during construction, the rockfill dam was overtopped, it would release a surge wave of stored water which could destroy the Diversion Weir and the town of Kununurra, and flood the established cotton fields. Dumas later claimed that he had discussed the matter with Dr. H. Olivier, consulting engineer, asking him if a rockfill dam on the Ord could safely withstand overtopping. Dumas prepared a sworn statement that Olivier had replied that a rockfill dam could not withstand overtopping, the flow of the Ord River being too great.¹⁰ Dumas stated that his objective in raising the matter with the state government was to demonstrate that the rockfill project was not safe engineering, and to seek an alternative.¹¹ He wrote, "I am an age of 81 years - all I desire is that the right thing be done."¹²

Possibly as a result of pressure from Dumas, the state government appointed Sir Alexander Gibb and Partners to give their views on the suitability of the site on the Ord River for a 200 feet high rockfill dam; with regard to geological and topographical conditions, the practicability of constructing a rockfill dam at the site in three seasons, and the adequacy of the rockfill dam and spillway

10. R. Dumas, Sworn Statement, 20 February 1968. Sir Russell Dumas Papers.

11. R. Dumas to M. Gibb (Alexander Gibb and Partners, Consulting Engineers, London), June 1968. Sir Russell Dumas Papers.

12. *Ibid.*

design for such a large flooding river.¹³ The Gibb report confirmed the government opinion, stating "we consider from the geological evidence presented that the site is suitable for the construction of a 200 feet high rock-fill dam."¹⁴ The report stressed the need for adequate precautions if the dam was to be completed in three dry seasons; however, the conclusion was that there was "no practical concrete dam alternative which would prove more economical than the rockfill solution."¹⁵

Tenders were invited on 29 June 1968, and in November 1968 Dravo Pty. Ltd., Perth, W.A. was awarded the contract for the Ord Irrigation Project - the largest job of its kind ever undertaken in Western Australia.¹⁶ The Dam was constructed over three dry seasons. During the first season (1969) work was confined to the tunnels, spillway excavations and foundation preparation of the abutments above streambed level. In the second season (1970) 356,000 cubic metres (466,000 cubic yards) of sand and shingle were removed from the river bed, foundations were cleaned down and grouted and the embankment partly constructed by placing 50,000 cubic metres (65,000 cubic

13. *Ord River Main Dam. Report on Design Alternatives.* Sir Alexander Gibb and Partners, November 1967. Sir Russell Dumas Papers.

14. *Ibid.*, p. 3.

15. *Ibid.*, p. 4.

16. *Ord Irrigation Project Tender Document for Construction of Ord River Dam and Appurtenant Works*, P.W.D., Perth, June 1968. *West Australian*, 20 November 1968, p. 2.

yards) of fill material.¹⁷ Flood flows during the 1970/1 wet season were passed over the top of the partially completed embankment. Most rockfill for the dam was obtained from a quarry approximately half a mile upstream from the dam wall and also from the spillway.¹⁸ During the third dry season (1971) the dam was raised to crest level by the placing of a further 1,522,000 cubic metres (1,990 cubic yards) of material, and two tunnels were built, each some 300 metres (approximately 1,000 feet) long, in the right abutment. The first tunnel, concrete lined, was to release water for irrigation purposes; the second was to provide additional water for the hydro-electric power station planned as Stage III of the project.¹⁹

By late November 1971, a team from the Western Australian Museum had completed their biological survey of the Ord River Basin and submitted a preliminary report to the Western Australian Wildlife Authority.²⁰ The aims of the biological survey were:

- 1) to survey and record habitat and species of vertebrate animals, molluscs and spiders.
- 2) to determine what animals would require rescuing when the dam began to flood, and where they were likely to

17. *An Outline of the Ord Irrigation Project, op. cit.*, p. 25.

18. *Ibid.*

19. *Ibid.*, p. 24.

20. *Press Release*. Department of Fisheries and Fauna, 20 December 1971. North West Department file, *Ord River Project*.

be stranded.

- 3) to accrue information which would enable some predictions to be made on the ecological changes that could occur in the area.²¹

As a result of the survey party's observations, it was discovered that the area contained only a limited number of species of mammals, but 149 different species of birds were identified.²² The actual rescue operation, whereby animals were rescued as the waters began to rise from late December to January 1972, was named Operation Noah.

The Main Ord Dam was opened by Prime Minister W. McMahon on 30 June 1972, with the words:

Before us, as you can see, stretch the waters of the greatest man made lake ever made in Australia, or ever built here. It is a unique and I believe an imaginative enterprise. This is the place I believe where man and nature can live in harmony.²³

The *West Australian* had already asked:

When the great dam has been filled from its catchment area of 17,800 square miles and the last reptiles and marsupials have been rounded up by the Ord Noah rescue team, an embarrassing question will remain to be answered - when will Australia draw a dividend from its mammoth venture into tropical irrigation?²⁴

21. *Ibid.*

22. *Ibid.*

23. Speeches on the opening of the Main Dam, P.W.D. Newspaper file. The first development of irrigable land under Stage II of the project was on Packsaddle Plain, an area of "black" Cununurra clay and red levee soils adjacent to Lake Kununurra but on the opposite side to the Kununurra township. Five holdings totalling 1,948 hectares were allocated in 1973.

24. *West Australian*, 17 January 1972, p. 6.

Two years after the opening of the dam, cotton growing in the area was abandoned with no viable alternative crop to offer the farmers.

It was only after the commencement of construction of the Main Dam that the state government, and later, other bodies, began to review progress of the scheme to date i.e. to the end of Stage I. In August 1970 the Ord Project Committee set up a working group, the Stage I Ord Review Sub Committee, to prepare papers on aspects of the project which would assist the Committee in its consideration of plans for future development.²⁵ In November 1970, the group (comprising representatives of the Public Works Department, Department of Agriculture, Treasury, North West Planning and Co-ordinating Authority and the Commonwealth Department of National Development), was requested to review all aspects of the development of Stage I of the Ord Project which would have a bearing on Stage II. The terms of reference were:

1. a) collate available data on technical, financial and institutional matters which have influenced the pattern of development to date at the Ord and the results of individual farmers.
- b) prepare for the Ord Project Coordinating Committee a paper which provides a systematic presentation of this material and identifies factors which appear to have had particular significance.
2. ... identify those factors which would appear to be of particular significance for further development.²⁶

25. *Stage I Ord Review, op. cit.*

26. *Ibid.*

The *Stage I Ord Review*, submitted on 3 November 1971, provided a detailed and useful history of the Ord Scheme, but there was little analysis of problems which had arisen during the Stage I years. It did point to several mistakes made by the Ord authorities during the period. These included: the problems of the pilot farm, and the fact that the Land Board did not place sufficient emphasis on starting capital, except for the first allocation of five farmers. The Review stated that the drainage problems were due to inadequate planning of layout and facilities, primarily "the result of there being inadequate time from the decision to proceed before the components were required to be in operation."²⁷ The *Stage I Ord Review* was not publicly released, nor was it used as a basis for a "rational" decision on the timing or nature of Stage II development.

At the same time, the Ord Project Committee produced a similar document for the incoming Labor government: summarising the essential features of the scheme at the end of 1971, and making recommendations for the future, following the completion of the Main Dam.²⁸ To this stage, a total of \$40,500,000 had been spent on the Ord Project, and the Project Committee report estimated that a further

27. *Ibid.*

28. J. E. Parker to C. W. Court, 24 August 1971. North West Department file 20/70. The W.A. Labor party under J. T. Tonkin took office on 3 March 1971, with D. G. May as North West Minister.

\$4,509,000 would be required to complete the Main Dam (the revised estimate for the Dam then being \$21,350,000).²⁹ An estimated \$26,830,000 would, it was claimed, be necessary to complete the irrigation scheme. Under the *Western Australia Agreement (Ord River Irrigation) Act* 1968, this amount would have to be drawn from interest bearing loans which would add a significant sum to debt charges in the Consolidated Revenue Account. In addition, capital would have to be provided, from State General Loan Funds, for housing and townsite facilities. The 1969/70 losses on services - the irrigation scheme, water supply, sewerage and hostel at the Ord (in the past, the state also operated the electricity supply, airport and caravan park, and was still meeting a loss on the airport) - amounted to \$954,600, including a loss of \$757,900 on irrigation.³⁰ The state also paid \$344,000 from the Consolidated Revenue Fund in 1969/70, to meet the non productive debt charges and certain minor miscellaneous items.³¹ Since 1966, the state government had had to provide direct and indirect assistance to growers on the Ord. The report concluded that the construction of the entire irrigation works would require the state to borrow \$27.25 million under the appropriate Act, and to involve the state in interest and capital repayments on this sum.

29. *Ibid.*

30. *Ibid.*

31. *Ibid.*

In addition, \$7 million for housing and townsite facilities was needed from the General Loan Funds. The report continued:

Treasury is concerned that in the light of the experience to date, the doubtful agricultural outlook for the area and the heavy capital programme that would be required to complete the scheme, the state will be committed to heavy expenditure in future years by way of subsidies and debt charges with little compensating return.³²

It was recommended that:

greater emphasis must be placed on agricultural research and development and improved farm management practice in an endeavour to solve the present problems of the Ord before further major capital expenditure is undertaken.³³

As a result of the Ord Project Committee report, State Cabinet approved that the state: carry on with the committed development of Packsaddle Plains; defer decisions regarding Weaber Plains development; continue surveys and investigations in Carlton areas and complete section surveys currently in progress in Weaber Plains; continue to intensify agricultural research with particular reference to cotton, grain sorghum and peanuts; and step up consideration of other economic factors which constituted a handicap to viable farm production on the Ord.³⁴

32. *Ibid.*

33. *Ibid.*

34. *Ibid.* Cabinet approved on 13 September 1971.

The Ord farmers too, were obviously concerned about the uncertain future of the area. In January 1971, both the Chairman and Manager of the Ord River Co-operative Pty. Ltd. (P. L. Kimpton and D. O'Brien) met with Kimberley Manager R. Hamilton and North West Minister C. W. Court. They told of their concern about the lack of progress in producing alternate crops and, in particular, their desire to see work done on alternative oil seed crops, so that sufficient oil seed would be produced to warrant an oil mill.³⁵ In March 1970, the farmers had been told that, as far as Stage II of the Ord Scheme was concerned, the government would encourage a large operator who could stand establishment costs for a greater period and who would have the advantage of economy of scale.³⁶ This, Court explained, would be of direct benefit to the farmers, who would eventually have 50 per cent of any large holdings involved.³⁷

The Ord Project Committee had recommended, in September 1968, that the government agree in principle to consider proposals from individual organizations for the development of large areas (5,000 to 10,000 acres) of irrigable land, provided such proposals were supported by

35. C. W. Court, *Minute*, 29 January 1971. North West Department file 20/70.

36. Report of a meeting of Ord farmers with C. W. Court, 13 March 1970. North West Department file - *Ord River Project, Ord Project Co-ordinating Committee*.

37. *Ibid.*

feasibility studies from the farming and financial aspects.³⁸ The government had, in fact, already received a submission from a consortium of four companies, for each company to individually take up 10,000 acres of irrigable land in the Ord irrigation area.³⁹ The Consortium, comprising Mitsui and Company (Australia) Ltd., the Australian Agricultural Company, Hawaiian Agronomics (International), and Hooker Pastoral Company Pty. Ltd., was formed in April 1969 to undertake research into large scale cropping on the Ord, with a view to the possible development of land in Stage II of the project.⁴⁰

The Commonwealth government attitude to the proposal was one of concern about the large proportion of overseas ownership of the Consortium. The Secretary, Department of National Development (R. W. M. Boswell), pointed out in a telephone conversation with Court, that there was "a very large amount of Commonwealth money involved in the Main Ord Dam and it could be politically and otherwise embarrassing if the main farming interests were from

38. J. E. Parker (Chairman, North West Planning and Coordinating Authority) to C. W. Court, 30 May 1969. North West Department file - Stack 17, not numbered. The Ord Cabinet Sub Committee endorsed the recommendation.

39. J. N. Epworth (Assistant General Manager, Hooker Pastoral Company Pty. Ltd.) to J. E. Parker, 31 December 1969. North West Department file - *Ord River Project, Ord Project Co-ordinating Committee*.

40. *Ibid.*

overseas."⁴¹ Court commented:

I had to admit that this point about foreign ownership of these areas could be a significant factor, having regard for all the circumstances. He [Boswell] seemed to think there was a degree of urgency with the matter, in order to make sure the Commonwealth government was informed through official channels before they had questions raised with them from other quarters.⁴²

However, in writing to the General Manager, Hooker Pastoral Company Pty. Ltd., Court said:

I will seek an early opportunity, to try and clarify the position within the Prime Minister's Department and find out if at all possible what was worrying the Prime Minister. For the life of me I cannot see why they should be anything but enthusiastic about the proposition.⁴³

The Australian Agricultural Company subsequently withdrew from the Consortium, its share being taken up by the Hooker Pastoral Company Pty. Ltd., who now had a 51 per cent interest in Ord Agronomics, as the Consortium was known.⁴⁴ The Hooker Pastoral Company embarked on an ambitious programme of commercial trials on their 270 hectare (2,400 acre) pilot farm. They aimed to experiment

41. C. W. Court, *Minute*. Reporting a telephone conversation with the Secretary, Department of National Development (R. W. M. Boswell), 30 April 1969. North West Department file - Stack 17, *Ord River and Main Dam*.

42. *Ibid.*

43. C. W. Court to H. Bladwell, undated but dealing with a press release 24 July 1969. North West Department file - Stack 17, *Ord River and Main Dam*.

44. J. Parker to C. W. Court, *Memo*, 30 May 1969. North West Department file - *Ord Farms*, Vol. III.

with the growing of cash crops, in particular, grain sorghum and maize, and to investigate cattle grazing, in order to establish the economic viability of large scale operations in the Ord area. The Consortium planned to work in close co-operation with the Western Australian Department of Agriculture, the C.S.I.R.O., and a team of agricultural scientists and economists from the University of New England. The latter were appointed to evaluate the research work, which was to take two years.⁴⁵ The Western Australian government agreed that the project could proceed, subject to certain conditions, and offered to contribute \$25,000 toward the 1969 research programme, provided that the results were made available to the state.⁴⁶ The state government also agreed that if, by the end of the first year of operations, it had been proved that the growing of selected crops on a broad acre basis was economically viable, the state would negotiate an agreement with the Consortium relating to approximately 12,000 hectares (30,000 acres) of land under certain conditions.⁴⁷

45. *Ibid.*

46. C. W. Court to H. C. Bladwell, *op. cit.*

47. H. C. Bladwell to C. W. Court, 11 July 1969. North West Department file - *Ord Farms Vol. III*. The state agreed to supply and charge for water, provide and maintain the primary canal system and drainage channels. In the long term, not before five years from the date of releasing the large area holdings, the Consortium must take steps to make available to small farmers under conditions of cost approved by the state government, 50 per cent of the land contained in the large area parcels.

Court felt that the arrangement was encouraging. He wrote:

It was the only firm proposal we could negotiate to a stage of getting some positive research work done on the pilot farm as a stepping stone to having a solid core of people able and willing to undertake development of farms when the main dam becomes operative at the end of 1971. From our point of view it also satisfies the Commonwealth that work is being done on diversification of crops, which is a crucial matter in the future of the Ord Project.⁴⁸

Prime Minister W. McMahon was satisfied with the majority Australian interest in the Consortium. However, he stated that the Commonwealth government did not wish to see this type of large area development dominating the whole of Stage II of the Ord Scheme. He was worried that there did not appear to be "any firm assurance written into the arrangements with the state for the maintenance into the future of this majority Australian ownership."⁴⁹

By August 1972, the Consortium had spent more than \$750,000 on the pilot farm, and the state had contributed \$35,000 towards the research programme, on the understanding that full research data would be made available.⁵⁰

The Ord Agronomics report, completed in May 1973 told of

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48. C. W. Court to W. S. Bovell (M.L.A. Vasse, Minister for Lands, Forests and Immigration), 16 July 1969. North West Department file - *Ord Farms Vol. III*.
49. W. McMahon to J. Tonkin, 17 May 1971. North West Department file - *Ord Agronomics*.
50. *W.A.P.D.*, Vol. 195, 16 August 1972, p. 2538.

disappointing sorghum yields, and the general conclusion was that average yields of the current temperate varieties could not at the present time be expected to exceed 6.3 tonnes per hectare (2.5 tons per acre) under commercial conditions at the Ord.⁵¹ This level of yield was not sufficiently high for sorghum to be an attractive proposition, except under very high price conditions. The low level of yield also made the commercial use of sorghum as a major feed component in cattle lot feeding, a doubtful proposition.⁵²

In August 1974, it was announced that the Hooker Pastoral Company planned to withdraw from the Ord irrigation area.⁵³ It was reported that the Company's pilot farm was now "economically unsuitable" - the farm had not grown a grain sorghum crop in 1974 and had stopped beef feedlotting.⁵⁴ Several problems which had beset the company's project were highlighted:⁵⁵

- the deteriorating situation of the beef market.
- the only possible "fall-backs" for the company - the use of the property as a drought reserve for its other stations in the region, or as a beef fattening property, had proved uneconomic because of

51. *An Outline of the Ord Irrigation Project, op. cit., p. 51.*

52. *Ibid.*

53. *Australian Financial Review, 19 August 1974, p. 55.*

54. *Ibid.*

55. *Ibid.*

- distance and transport costs.
- grain prices in relation to beef market prices, and the cost of fertilizers - primarily urea, had made beef feed-lotting unprofitable.
 - the problems of beef growing on the Ord were compounded by the threat of D.D.T. spray drift from cotton crops. In 1972, an export ban on cattle grazed on irrigated pastures or fed in green chop feed lots, had been imposed because of high D.D.T. concentrations which accumulated in irrigated pastures as a result of spray drift from nearby cotton crops.
 - the problems of sorghum growing would probably rule out another attempt by the company to grow beef - should beef prices rise.⁵⁶

Sorghum growing was also a financially unattractive crop for Ord farmers. By 1974, the only profitable market for Ord River sorghum was in Darwin where there was a regular demand for some 4,000 to 6,000 tonnes annually.⁵⁷ There were some 6,000 tonnes available from Willaroo (Northern Territory) to Darwin, and other Northern Territory growers produced about 2,000 tonnes of sorghum annually.⁵⁸ Thus, any sorghum grown by the Ord cotton

56. *Ibid.*

57. Department of Agriculture, *Report*, 12 September 1974. Department of Agriculture.

58. *Ibid.*

farmers would be in excess of the local and Darwin requirements, and would have to be shipped through Wyndham, either to Perth or Japan, at an estimated handling and shipping cost of about \$60 per tonne. It was estimated that the growing of sorghum for export would incur a loss of about \$140 per tonne or \$250 per hectare (\$101 per acre).⁵⁹

The Hooker Pastoral Company's withdrawal from the Ord area in 1974, only two years after the opening of the Main Dam, was evidence of the worsening situation in the area and as a result, the state government was forced to seriously reassess the situation. The number of cotton growers at the Ord had declined from 28 in 1967/1968 to 16 in 1973/1974.⁶⁰ In 1966/1967 the area under cotton represented 98 per cent of the total irrigated area, but by 1974 it had fallen to 64 per cent.⁶¹ Yield had declined from 1,026 kg. per hectare (915 lb. per acre) in 1969/1970 to 660 kg lint per hectare (560 lb. per acre) in 1973/1974.⁶² The staple length of Ord cotton had also reduced - to 1971 the average staple length was 1 1/16", however, the 1972 and 1973 crops produced a high percentage of 1" staple.⁶³ At the same time the market paid

59. *Ibid.*

60. *An Outline of the Ord Irrigation Project, op. cit., p. 47.*

61. *Ibid.*

62. *Ibid.*

63. *A Report on the Ord Irrigation Area. Westralian Farmers Co-operative Ltd., 7 October 1974, p. 3.*

less for lower grade cotton.

The main reason for the decline in yield and the increase in costs of cotton production on the Ord was the problem of *Heliothis armigera*. To 1968 the three major pests of cotton were *Spodoptera litura*, *Heliothis punctigera* and *Earias huegeli*.⁶⁴ The latter two, could be controlled by spraying with D.D.T. and Endrin, but *Spodoptera litura* was resistant to this treatment and became a major pest. In the 1964/1965 season, farmers, spray operators and chemical companies experimented with Bidrin and methyl Parathion against *Spodoptera*.⁶⁵ Parathion became the standard control against *Spodoptera*, and accounted for an increase in the daily cost of protection from 22 cents for 1964 and 1965, to 27 cents for 1966 and 1967.⁶⁶ The last heavy infestation of *Spodoptera* occurred in 1968. *Heliothis punctigera* was dominant in 1969, and in 1970 *Heliothis armigera* became dominant, associated with the widespread planting of graminaceous plants.⁶⁷ *Heliothis armigera* became more difficult to control from 1970 on, as it became increasingly resistant to D.D.T. Insect control costs rose as heavier and more frequent

64. *Ibid.*, p. 6.

65. A. B. Hearn, "The Ord Valley Cotton Crop: the Development of a Technology," *Annual Report*, K.R.S. 1973-4, p. 14.

66. *Ibid.*

67. *Ibid.*

sprays became necessary,⁶⁸ and, by 1974, insect control costs represented approximately 50 per cent of a grower's total costs.⁶⁹

Resistance to D.D.T. cannot be said to be the only cause of the problems in the Ord cotton industry in 1974. It has been claimed that the technological changes, which increased profitability in the industry to 1971, brought with them the problems facing the industry in 1974.⁷⁰ All changes aimed at improving yield or quality by prolonging the growth of the crop or delaying the harvest. According to this argument, prolonged growth and delayed harvest "led to weathered cotton, costly insect control and an unstable situation with *Heliothis*."⁷¹ Other possible causes of the Ord cotton industry's problems were, "the destruction of predators and parasites, the increase in graminaceous crops, the practice of ratooning and a succession of four dry years."⁷²

68. *Ibid.*

69. *A Report on the Ord Irrigation Area, op. cit.*, p. 6. The increasing resistance by *Heliothis armigera* to commercial pesticides has also been noted in the N.S.W. and Queensland cotton growing areas. However, the degree of resistance is less than that encountered at the Ord. [*An Outline of the Ord Irrigation Project, op. cit.*, p. 50.]

70. A. B. Hearn, "The Ord Valley Cotton Crop," *op. cit.*, p. 18.

71. *Ibid.*

72. *Ibid.* Ratooning was first practised on a limited scale in the 1965/6 season. The crop is left unwatered after picking the previous season until January when, over a two month period, it is

The high transport and marketing costs faced by Ord cotton farmers placed them at a disadvantage in relation to the processors in Eastern Australia. Despite favoured treatment as to storage and wharfage charges at Wyndham, the freight charges in 1974 represented approximately two-thirds of the total Ord marketing costs.⁷³ Facilities at the port of Wyndham were inadequate. The limited labour and wharf facilities resulted in high wharfage and handling rates; the priority berthing system whereby state ships and scheduled liners had priority over other vessels, and overseas vessels had to be induced into the port to collect cargo, meant high freight rates; and the long history of industrial disputes at Wyndham resulted in high demurrage costs and delays in cargo delivery.⁷⁴

The Ord Project Committee's Ginning and Marketing Study Group investigated the nature and extent of ginning and marketing problems of Ord River cotton in 1972.⁷⁵ The group found that Ord ginning and marketing costs were substantially higher than those incurred by processors in Eastern Australia. The following table illustrates the difference in costs:

slashed, treated with herbicide, fertilized, cultivated and watered. Thereafter it is treated as a sown crop. This method saves on land preparation costs and can give high yields. However, concern was expressed in 1974 that the technique might contribute to the insect problem - more pupae could survive in the undisturbed soil of the ratoon crop.

73. *Ibid.*, p. 10.

74. *Ibid.*, p. 11.

75. *Report to the Ord Project Co-ordinating Committee by the Working Group on Ginning and Marketing Costs of Ord River cotton*, undated.

Average lint processing, marketing and seed handling
costs in cents/lb. lint 1968/1971

<u>Item</u>	<u>N.S.W.</u>	<u>Queensland</u>		<u>Western</u> <u>Australia</u>
	<u>Namoi</u> <u>Co-</u> <u>operative</u>	<u>Glenmore</u>	<u>Cecil Plains</u>	<u>Ord River</u> <u>Co-</u> <u>operative</u>
Ginning				
a) direct costs	1.75	1.49	1.28	2.85
b) indirect costs	1.65	1.07	1.94	1.88
Marketing	2.56	2.43	2.14	4.33
Administra- tion	.41	1.27	.97	1.28
Seed handling ^a	.16	1.48	.81	1.94
Total cost/ lb. lint	6.53	7.74	7.14	12.28

a. Seedhandling costs averaged over 2 years 1970/1971 only.

Source: *Ginning and Marketing Report, op. cit.*

The Ord Co-operative, the study group claimed, incurred higher ginning costs than processors in Eastern Australia because unit electricity costs and material costs were high, gins had a high labour requirement per unit of gin stand capacity and tended to be overmanned due to uncertainties of labour supply and retention.⁷⁶ It was found too, that despite favoured treatment regarding storage and wharfage charges at Wyndham, and low back

76. *Ibid.*

loading rates from Wyndham to Perth, the remote location of the Ord resulted in high freight costs which placed the Ord at a cost disadvantage on the domestic market.⁷⁷ The Ord also suffered several disadvantages in the disposal of cotton seed, the by-product of the ginning operation. The only market for Ord cotton seed was overseas, facilities at the port of Wyndham were inadequate, and buyers insisted on the seed being bagged in 90 lb. bags for transport.⁷⁸

The report also pointed to the reduction in the use and importance of cotton as a fibre to Australian spinners.⁷⁹ This reduced domestic demand, at a time of expanding production, would, it was suggested, force the Australian cotton industry to emphasise the production and marketing of cottons suitable for export. The report stated that:

the poor competitive position of the Ord on the domestic market, aggravated by the lateness of the area's harvesting season compared to Eastern States producers, will make it difficult for the Ord to retain a share of the oversupplied domestic market unless the present market sharing arrangements are maintained.⁸⁰

77. *Ibid.*

78. *Ibid.*

79. *Ibid.*

80. *Ibid.* In 1972, the Ord Co-operative entered into an agreement, on a trial basis, with private N.S.W. processor Auscott Pty Ltd. to rationalise their marketing arrangements to minimise transport costs. The estimated saving to Ord growers was 1.2 cents per lb. lint.

The probable avenues for reducing costs were, the report concluded: an improvement in handling methods, the continuation of the Ord-Auscott agreement, improved port facilities and bulk handling at the port of Wyndham.⁸¹

The Wesfarmers' *Report on the Ord Irrigation Area* was prompted by the Hooker Pastoral Company's withdrawal from the area.⁸² In addition to outlining the general situation at the Ord, the report presented a detailed picture of the financial problems facing the farmers at the end of 1974. The general rundown in the liquidity of the farmers was, the report claimed, due to:⁸³

- a) the timing of sales. Final proceeds from the domestic market of the crop harvested between July and October, were not available until October or November of the next year at the earliest. Domestic sales were delivered through the year following the crop harvesting, according to the spinners' requirements.
- b) the reduced staple length of Ord cotton had been accompanied by a reduction in the price paid for lower grades of cotton.
- c) the difficult 1974 season had meant a further reduction in yield which, accompanied by the fall in market values, meant a lower than anticipated first

81. *Ibid.*

82. *Report on the Ord Irrigation Area, op. cit.*

83. *Ibid.*, p. 12.

advance from the Reserve Bank.⁸⁴

- d) rural credit was becoming more difficult and expensive to obtain.
- e) interest rates had increased, adding approximately \$25 per hectare to production costs.⁸⁵
- f) currency realignments between Australia and the United States had hit Ord cotton growers. Prices on the world cotton market were quoted in U.S. currency, and the December 1972 revaluation of the Australian dollar by 7.05 per cent, reduced gross returns to the cotton grower by \$11 per bale. The February 1973 devaluation of the U.S. dollar decreased grower returns by a further \$16 per bale, and the September 1973 revaluation of the Australian dollar removed a further \$23 per bale from growers' returns, though the effect of this revaluation was cushioned by a price rise.⁸⁶

The state government had provided financial assistance for the Ord cotton growers since 1969. This assistance included direct price support on a per kg basis, and indirect assistance including deferment from 1968 of rental payments on the number 1 ginnery, payment by the

84. Growers received a first advance on their crop from the Reserve Bank equal to approximately 75 per cent of the estimated revenue from cotton lint and cotton seed.

85. *Ibid.*, p. 13.

86. *Ibid.*

state from 1969, of capital payments on the co-operatively owned number 2 ginnery, subsidisation of ginning power charges, and low water charges.⁸⁷ The basis of this financial assistance was not re-examined in the light of results, until 1974.⁸⁸

At its meeting on 16 August 1974, the Steering Committee of the Planning and Co-ordinating Authority, concluded that because of the escalating costs and the financial problems of the Ord farmers, it might not be reasonable for the state government to support the farmers into a cotton crop in 1975.⁸⁹ The Steering Committee requested that the Department of Agriculture report on alternative cropping possibilities which might be subsidised by the government to maintain agricultural activity in the Ord Valley "at less cost to the government than the support of a cotton crop."⁹⁰ A working party met on 20 and 21 August and reviewed all the crops for which there was sufficient experience on the Ord to base some judgement about the possibility of large scale cropping for the 1974/1975 season.

The report concluded that sorghum was not an economic possibility at the present time, and wheat would be

87. See chapter VIII.

88. *Ibid.* The state Treasury had pointed to the need for a review of the basis for financial assistance as early as 1970.

89. Department of Agriculture, *Report*, 12 September 1974. Department of Agriculture.

90. *Ibid.*

"grossly uneconomic."⁹¹ It was also claimed that the technology of large scale rice production on the Ord was not sufficiently advanced to recommend to cotton farmers. There was, the group found, no realistic market for unmilled rice - a rice mill would therefore be required. Experimental rice yields had been variable, and commercial yields low. Research however, was continuing, and an experimental rice mill was being installed.⁹² The group also examined peanut production on the Ord. Research on peanuts had resumed in the 1968/1969 season, and a small commercial crop was grown in 1971, when a market for confectionery nuts appeared likely to open up in Japan. Yields were disappointing, with problems of plant stand, weed control, and soil moisture levels at digging time. Trials were continuing on black soils, where it had not yet been possible to mechanically separate nuts in the shell from the clay. It was felt that farmers could possibly be encouraged to grow peanuts on black soil in the next dry season, but a subsidy would be required to cover costs, and each farmer would require additional machinery costing approximately \$15,000.⁹³ Work on safflower had also been continuing, although the crop was still susceptible to root rot and insect attack. Despite failure of the 1971, 1972 and 1973 plantings of safflower,

91. *Ibid.*

92. *Ibid.*

93. *Ibid.*

the Agriculture Department report claimed that if the boom in oilseed prices continued through 1975, a crop in the next dry season could be "marginally economic."⁹⁴ The report stated that:

the cost to the government of maintaining the cotton industry for a further season could be substantially reduced on the estimated projection, if the total area cropped to cotton was reduced and if the assistance was geared to allow only the successful farmers to grow cotton.⁹⁵

It was estimated that if a \$0.5 million government advance on operating costs was not made available for the next season, depending on their attitudes, five farmers could grow cotton on a total area of about 1,400 hectares (3,460 acres) using normal credit sources. This group would comprise the most financially sound farmers and would also include the three best operators.⁹⁶ The report concluded that:

with the possible exception of peanuts next dry season, there is little to be gained towards achieving a 'least cost' situation by encouraging farmers to grow crops other than cotton. This exercise furthermore, does not take into account the individual attitudes of the fifteen farmers towards gearing up for a new crop with which they have little or no experience and which has to be heavily supported from the outset in an area where agriculture is unstable without promise of immediate improvement.⁹⁷

94. *Ibid.*

95. *Ibid.*

96. *Ibid.*

97. *Ibid.*

In late October 1974, the Ord cotton farmers told the state government that they did not want to produce cotton in 1975. Instead, they wished to plough in their crops and eradicate any other plants that could harbour *Heliothis armigera*.⁹⁸ On 12 November 1974, Premier Court announced that no commercial cotton crops would be produced next season, in accordance with the growers' recommendations.⁹⁹ Instead, the state government would back a 600 acre cotton growing experiment in the Ord district to see if natural predators could control cotton pests.¹⁰⁰ He felt that there was "every reason to be optimistic that major pests of Ord River cotton production may be controlled in the future by natural predators."¹⁰¹ In December 1974, Premier Court announced that the state government was about to decide on an offer by C.S.R. Ltd. to update its earlier research into the feasibility of sugar production at the Ord.¹⁰²

The year 1974, which saw the end of commercial cotton

98. *West Australian*, 29 October 1974, p. 3.

99. *West Australian*, 13 November 1974, p. 49.

100. *Ibid.* This decision was the result of a visit to Central and South America by P. Nelson (Officer in Charge, Department of Agriculture, Kununurra) and R. Kinsey (cotton grower) where they investigated prospects for biological control in areas where cotton pests had caused serious harm to the cotton industry.

101. *Ibid.*

102. *West Australian*, 3 December 1974, p. 12.

growing at the Ord, was also a turning point for the Ord Scheme in other ways. It was a time for the examination of other important issues which had been neglected in decision making. Two such issues were the administration of the scheme, and the ecological changes brought about by the scheme.

The principal state government committee dealing with the Ord Project (the Ord Project Committee), was established in 1959, to be reconstituted as a sub committee of the North West Planning and Co-ordinating Authority in 1971. Its members, all part-time, represented the Departments of Public Works, Lands and Surveys, Agriculture, Treasury, the Commonwealth Treasury and the Department of National Development. Sub committees were established as required, to deal with specific problems. The farmers were generally critical of the lack of understanding and knowledge of the problems of the Ord area, displayed by the members of the Ord Project Committee. A combined meeting of the Ord River District Growers Association and farmer shareholders of the Ord River District Co-operative in November 1969, concluded that although it had been adequate in the engineering aspect, the Ord Project Committee had been totally inadequate in its understanding and handling of farmers' problems.¹⁰³

103. Minutes of Meeting, Ord River District Growers Association, 12 November 1969. North West Department file - *Ord River Project. Ord Project Co-ordinating Committee.*

As a result, the meeting felt that the Ord Project Committee had "greatly contributed to the present economic problems in the area and the loss of confidence by farmers."¹⁰⁴ It was felt that due to distance, lack of communication, and the fact that its members had other major responsibilities, the Ord Project Committee was not always conscious of the gravity of the situation presented to them.¹⁰⁵ It was claimed that in a recent conversation with farmer C. Massey, Dr. T. C. Dunne, a Project Committee member, had said that he did not get any information on the Ord, and as such did not know what was happening in the area.¹⁰⁶ The meeting recommended that the Ord Project Committee be disbanded and replaced by a Statutory Authority (including a farmer representative), resident in Kununurra.¹⁰⁷

In December 1968, North West Minister Court had expressed the need for a single body to administer schemes such as the Ord River Scheme.¹⁰⁸ He said, "as a result of our experience over recent years with the Ord Project I am of the opinion that schemes of this kind are of such magnitude that they call for a special

104. *Ibid.*

105. *Ibid.*

106. *Ibid.*

107. *Ibid.*

108. C. W. Court to R. Hutchinson (Minister for Works), 19 December 1968. North West Department file - *Ord River Project.*

organization to deal with them ..."¹⁰⁹ He added that at one stage he had felt that a special authority for the Ord Project was justified, however he now felt that the Ord should be looked at within the total concept of water and irrigation throughout the state.¹¹⁰ He felt that, in the long term, there was a good case for the establishment of a water and irrigation commission, however, as a preliminary step towards the wider concept, an Ord Project Authority should be considered.¹¹¹ The need for a single body to plan and co-ordinate development in the Ord area, was also stressed in the Wesfarmers' *Report on the Ord Irrigation Area*.¹¹² It was not until mid 1975, that plans were announced for an authority to manage the Ord River Project.¹¹³

The arrangement between the state and the Australian government for the joint operation of K.R.S., also came under review in the period 1973-1974. The ord farmers had long been critical of the Department of Agriculture and K.R.S. in Kununurra. It was generally felt that the work being carried out by the two establishments was not

109. *Ibid.*

110. *Ibid.*

111. *Ibid.*

112. *Report on the Ord Irrigation Area, op. cit.*, p. 16.

113. *West Australian*, 14 July 1975, p. 11 and more detailed plans, 4 September 1975, p. 36. The Ord Project Advisory Committee, headed by a resident Project Manager was appointed in April 1976 - *West Australian*, 28 April 1976, p. 58.

(except for the work of the entomology section and the beef extension officer), beneficial to the existing farmers.¹¹⁴ The farmers complained that after years in Kununurra, and after the expenditure of thousands of dollars, there was as yet no viable crop, no acceptable variety of cotton available to enable quick disposal of the harvest, and no resident cotton breeder or cotton agronomist in the area.¹¹⁵ They considered that the results of the experimental work were not being conveyed to farmers, and the extension service as such was non-existent.¹¹⁶ It was felt that crop trials should be conducted on a commercial scale instead of being restricted to a small acreage, a permanent cotton agronomist should be appointed, and K.R.S. should be conducted solely by the C.S.I.R.O.¹¹⁷

Between June and November 1973, a K.R.S. Review Committee, chaired by A. G. Bennett (First Assistant Secretary, Department of Northern Development) received submissions on the future role of K.R.S.¹¹⁸ Submissions from K.R.S. itself, included personal submissions from

114. *Minutes.* Meeting between Directors of the Ord River District Co-operative and the Executive of the Ord River District Growers' Association, 9 February 1970. North West Department file 20/70.

115. *Ibid.*

116. *Ibid.*

117. *Ibid.*

118. *Submission to K.R.S. Review Committee, June 1973 to November 1973.* (At K.R.S.)

D. F. Beech and A. B. Hearn, and a joint submission from D. F. Beech, C. C. Blunt, A. L. Chapman, A. J. Millington and I. M. Wood.¹¹⁹ These submissions highlighted some of the problems which had arisen at K.R.S. A. B. Hearn stated that any future organization must recognize the need for wider research. He felt that team research, which did not consist of simply appointing scientists in several disciplines, must be encouraged.¹²⁰ The present system, he claimed, led to "fragmented, water tight disciplinary programmes, each the potential nucleus of an independent unit."¹²¹

The submission from the Technical Staff at K.R.S. put forward the case for the abandonment of the dual system of administration.¹²² They said:

We feel that resources are often poorly arranged for the effective conduct of research programmes resulting in such things as overstaffing in certain areas, lack of attention to equipment, and lack of personal involvement in research work leading to lower efficiency.¹²³

As a result of the K.R.S. Review Committee's assessment, the arrangement between the Western Australian and

119. *Ibid.*

120. A. B. Hearn, "Submission to K.R.S. Review Committee," *op. cit.*, 10 July 1973.

121. *Ibid.*

122. Submission from K.R.S. Technical Staff to K.R.S. Review Committee, *op. cit.*, 7 July 1973.

123. *Ibid.*

the Australian government for the joint operation of K.R.S. was terminated, and the administration of the station was taken over by the C.S.I.R.O. Division of Tropical Agronomy.¹²⁴ The State Department of Agriculture was to carry out extension work and farm-scale research, including work on biological pest control techniques on cotton. The research projects planned for K.R.S. under the Division of Tropical Agronomy included work on sorghum breeding, irrigated pastures, tropical grain legumes, dryland pastures and the fertilizer requirements of crops and pastures.¹²⁵

A further important issue, neglected in decision-making on Stage I of the Ord River Scheme, was the effect the scheme was having on the ecology of the Ord River area. The ecological importance of the Ord Project, essentially a pilot study in the utilization of water resources in northern Australia, was formally acknowledged by the establishment, in December 1971, of the Ord Ecology Sub Committee of the Ord Project Committee.¹²⁶ The committee, initially under the chairmanship of Dr. D. Snow of the Public Health Department, sent out questionnaires to obtain details of all studies being undertaken by

124. *Report*, Kimberley Research Station Review Committee, prepared for K.R.S. Liaison Committee meeting, 5 August 1974. (At K.R.S.)

125.

126. *A Proposal for a Tropical Ecology Study Group*, Compiled by the Office of the North West, 1974.

institutions throughout Australia relevant to Ord ecology.¹²⁷

The problem of human health was one of the main ecological problem areas being investigated. In 1972 Professor N. F. Stanley (Department of Microbiology, University of Western Australia) told of the possible effect of human activity on environmental change.¹²⁸ He claimed that it was firmly established elsewhere, that irrigation and dam construction, particularly in tropical environments, had resulted in increased human disease.¹²⁹ Ecological changes likely to take place in the Ord area were, he stated, increased mosquito breeding, and increased numbers of water birds, most being vertebrate host reservoirs for arboviruses.¹³⁰ With the expected increase in human population in the area, the avoidance of arbovirus infection of man would, he felt, be almost impossible. Other possible human infections were malaria, schistosomiasis (the schistosome having part of its life cycle in the freshwater snail in high concentration in the Ord rice fields), and other bacterial diseases such as leptospirosis and gastro-intestinal infections.¹³¹

127. *Ibid.*

128. N. F. Stanley, "Ord River Ecology," *Search*, Vol. 3, No. 1-2 (Jan-Feb 1972), pp. 7-12.

129. *Ibid.*, p. 7.

130. *Ibid.*, p. 11.

131. *Ibid.*

The Ord Ecology Sub Committee, under its policy of fostering various ecological studies of the Ord area, gave Professor Stanley financial assistance to continue his work on arbovirus and mosquito studies. Research work conducted in the area in 1974 was principally concerned with the identification of different varieties of mosquitoes with their associated diseases, and the potential health problems existing with molluscs and snails which acted as hosts for parasites. It was found that both the wet and dry seasons were characterized by a distinct mosquito fauna, and that a total of 24 mosquito species occurred in the Ord region.¹³² The numerous swamps and marshes around the edges of the Diversion Dam allowed year-round breeding of mosquito species.¹³³ Four different types of arboviruses (including the Murray Valley encephalitis virus), were found in the first identification of six viruses isolated from *Culex* mosquitoes.¹³⁴ Professor Stanley pointed out that although malaria was not endemic in the north of Western Australia, the death in 1934 of some 200 people from this disease, proved the efficiency of the local anophelines as vectors, at least

132. *An Outline of the Ord Irrigation Project, op. cit.*, p. 62.

133. N. Stanley, "Ord River Ecology Studies," January 1974, in *A Proposal for a Tropical Ecology Study Group, op. cit.*, Appendix 7.

134. S. Leivers, "Ord River Ecology - Arbovirus Studies" in *A Proposal for a Tropical Ecology Study Group, op. cit.*, Appendix 4.

under some conditions.¹³⁵

The W.A. Museum collected fresh water snails in the Kimberleys in 1974, and a preliminary assessment was made of the potentialities of the known species as vectors for diseases such as schistosomiasis. The conclusion was that "no known snails in the Kimberley are likely hosts for the most severe of these diseases but several are likely hosts for other diseases."¹³⁶

The second main area of ecological study fostered by the Ord Ecology Sub Committee was the study of the bird population in the area. The waters of the Ord dams provided a virtual oasis for many species of birds. Since late 1969 and early 1970, the little Corella had emerged as a major pest of grain sorghum; flocks of between 10,000 and 32,000 birds removing up to 2 tons sorghum per day from large scale cropping areas.¹³⁷ Beside the corellas, there were ducks of various kinds, galahs, broilgas and magpie geese, to add to the problem of crop destruction.¹³⁸ The threat to public health of birds acting as

135. N. Stanley, *Ord River Ecology Studies, op. cit.*

136. B. R. Wilson (Curator of Molluscs), "Fresh and brackish water molluscs as hosts for parasites," 16 July 1974, in *A Proposal for a Tropical Ecology Study Group, op. cit.*, Appendix 3.

137. "Bird Populations," in *A Proposal for a Tropical Ecology Study Group, op. cit.*, Appendix 9.

138. In the four years to 1976, the numbers of geese built up to a peak of about 50,000 birds during the late dry season (October to November), to depart during the wet season. *Ibid.*

reservoirs for various viruses able to infect man, and the possibility of migratory birds introducing exotic diseases to livestock, were two additional problems which needed investigation.¹³⁹

The physical effect of the Ord dams was to block the free movement of barramundi upstream - the water flow in the Ord River Dam spillway, and through the Diversion Dam gates being too fast for the barramundi to move upstream. Until 1974 there was little known about the effect of the Ord Dams on the populations of small fish which formed part of the foodchain of the barramundi.¹⁴⁰ In the downstream reaches of the Ord River, a number of fish deaths had been reported - insecticide poisoning appeared to be the cause, fish deaths occurring at about the period of maximum pesticide application.¹⁴¹ Research was also needed on the effect of the Ord Dams on plant life, and the identification and control of pest type plant species such as *Salvinia*.¹⁴² Heavy weed growth tended to form floating cover over large areas of water, blocking out sunlight, reducing pH and oxygen content of water,

139. *Ibid.*

140. "Report on Pesticide Residues," Pesticides Sampling Study Group. *A Proposal for a Tropical Ecology Study Group, op. cit.*, Appendix 11.

141. *Ibid.* In the U.S. heavy fish mortalities had been observed following the application of chlorinated pesticides at rates of up to 3 lbs. per acre - in 1973 application of D.D.T. at the Ord was 22 lbs. per acre.

142. *A Proposal for a Tropical Ecology Study Group, op. cit.*, p. 6.

providing ideal breeding conditions for mosquitoes and reducing fish yields.¹⁴³

By the beginning of 1974, a major ecological problem facing the Ord region was the problem of pesticide residues. In 1964 the P.W.D. had begun monitoring drainage water at weekly intervals for pesticide content; by 1967 herbicides were being used and from 1968, drainage water was monitored for both pesticide and herbicide content, on a seasonal basis at each of the drainage outlets from the farm areas.¹⁴⁴ Throughout the same period, the Department of Agriculture was sampling and analyzing the soils for chemical residues. D.D.T., Dieldrin and in some cases Parathion residues were increasingly detected in soils from 1971-1973.¹⁴⁵ However, according to Professor J. P. Quirk there had been no attempt to effectively monitor drainage water on a daily basis, or to correlate its pesticide content with the spray formulations used.¹⁴⁶ Quirk felt that there was need for improvement in sampling techniques, and methods of sample storage and transport in use.¹⁴⁷ The problem of spraydrift was also demanding attention, as residents of the area became

143. *Ibid.*

144. *Ibid.*, Appendix 11.

145. *Ibid.*

146. J. P. Quirk, to B. J. O'Brien (Acting Chairman, Ord Ecology Committee), 31 January 1974. *Ibid.*, Appendix 12.

147. *Ibid.*

concerned as to the possible effect of pesticides on human health.¹⁴⁸ The Shire Clerk of Wyndham (C. T. Cassidy) wrote in March 1974:

Council is becoming concerned at the increasing toxicity of pesticides used in aerial spraying of crops in the Ord irrigation area and the possible effects of such pesticides on people living in or near the area. It seems that each year the wogs attain some immunity to the pesticides used, mainly organo-phosphates, and accordingly a stronger or more effective pesticide is used to counter this immunity to pesticides, it possibly follows that within a few years the toxicity of the pesticides used could become exceedingly dangerous to human life.¹⁴⁹

Tests were obviously needed to determine the extent of the problem, and to examine the possible creation of a 1,500 metre buffer zone between the town residential area and the farms.¹⁵⁰

In 1974 the Office of the North West compiled a submission to the Australian government, for funds for a Tropical Ecology Study Group to co-ordinate research, review in depth the ecological research needs of the Ord River area, consider the role of both the Australian and the state governments, universities and other research organizations and, at the end of two years, to report on

148. C. T. Cassidy to Town Planning Board, 14 March 1974. *A Proposal for a Tropical Ecology Study Group*, *op. cit.*, Appendix 13.

149. *Ibid.*

150. *Proposal for a Tropical Ecology Study Group*, *op. cit.*, p. 9.

problems and indicate necessary lines of action.¹⁵¹ The study group would be staffed by a Director and two professional research staff, operating from K.R.S. at an estimated cost of \$200,000 per annum.¹⁵² The proposal was accompanied by a comprehensive survey of ecological problem areas and the state of research in each area. The Ord River Project, the submission stated, represented "a most dramatic man-induced change and an opportunity and a challenge for science and Government in Australia to make an important contribution."¹⁵³ The document continually emphasized the general lack of knowledge about the various ecological problem areas, and the inadequacy of scientific measures to assess and study these areas. It stressed too, the fact that there was no state department able to undertake a thorough examination of the ecological impact on the Ord region of the Ord Project.¹⁵⁴

This lack of knowledge about ecological and other problem areas as far as Ord decision-making was concerned, did not deter the state government from pressing ahead. Now, in 1974, when many problems which had arisen during Stage I of the scheme were only just being acknowledged, the state government requested an additional \$2.39 million in loan money under the *Western Australia Agreement (Ord*

151. *Ibid.*, p. 15.

152. *Ibid.*

153. *Ibid.*, p. 10.

154. *Ibid.*, p. 13.

River Irrigation) Act 1968 for the development of five more holdings totalling 2,380 hectares (5,880 acres) in Stage II.¹⁵⁵ The Australian government deferred the request, arguing that it was difficult at the time to justify the substantial outlay of funds, particularly in the face of Prime Minister Whitlam's appeal for restraint in public works programmes during the current financial year.¹⁵⁶ Premier Court claimed that in rejecting the request for \$2.39 million to proceed with the next phase of the Ord Scheme, Dr. R. Patterson "might not have slammed the door completely, but he certainly made it difficult for us to get it fully reopened."¹⁵⁷ The *West Australian* commented, "There is no justification for a penny pinching delay that would halt the impetus and cause a bold \$44 million Commonwealth-state venture to become a languishing asset."¹⁵⁸

However, it was not the rejection of the request for Australian government finance that caused the Ord venture to become a "languishing asset." The impetus of the Ord Scheme had been grinding to a halt from as early as 1967, when the Commonwealth government gave financial assistance of \$48.18 million towards the cost of Stage II of the scheme. The *West Australian* was to comment later, "The

155. *An Outline of the Ord Irrigation Project, op. cit.*, p. 10.

156. *West Australian*, 18 July 1974, p. 4.

157. *Ibid.*

158. *West Australian*, 18 July 1974, p. 6.

Ord, always a problem child, has become a difficult teenager. Though some of its experimental crops have looked promising its history has been one of failed commercial plantings, pest problems, isolation difficulties, prohibitive production costs and limited potential."¹⁵⁹

The scheme's history was also one of incrementalism. It was as late as 1974, when cotton was about to be abandoned, and the annual cost of the scheme to the state government totalled \$1,470,800, that the state government began to examine the problems which had arisen either before or during Stage I of the scheme.¹⁶⁰ These problems included the ecological impact of the scheme, transport and shipping costs, ginning and marketing methods, administrative and research inadequacies, and above all, the lack of a commercially viable alternative crop to replace cotton.¹⁶¹ At no stage before 1974, had the state government stopped to make a "rational" decision on the future of the scheme: by precisely defining the problem in the light of past experience, by listing all possible solutions and choosing the most appropriate with the general objectives of the scheme in mind. Stage II

159. *West Australian*, 7 February 1976, p. 6.

160. *W.A.P.D.*, Vol. 204, 22 August 1974, pp. 829-830.

161. The state government was in the process of making a decision on an offer by C.S.R. Ltd. to update its earlier research into the feasibility of sugar production on the Ord. However, there was still much research needed before sugar could be seen as a commercial crop for the Ord. *West Australian*, 3 December 1974, p. 12.

of the Ord Scheme was well under way before the *Stage I Ord Review* was commenced. In 1974 the state government had no option but to examine the future of the scheme, in the light of the Ord farmers' demands for an end to cotton growing, and the reports of outside bodies such as Wesfarmers, Hooker Pastoral Company, and the work of Professor Stanley, which attracted publicity and drew attention to the problems of the area. Premier Court's statement to the East Kimberley Development Conference in 1974, explained the state government's "muddling through" approach to decision-making on the Ord Scheme over the past three decades. He said that the Ord Project must go on: "we have come a long way. We are not turning back."¹⁶²

162. *West Australian*, 23 July 1974.

CONCLUSION

I still believe in the potential of the Ord, but there has been a monumental boo-boo. It should not have happened. The water resources are there. I believe that the soil resources are there. But gross errors have been made in what crops to grow there, how to grow them and how to protect them ... I know that in a venture like this trial and error are necessary ... in this kind of situation we should be speeding up the scientific back up of the trial and error performances.¹

Although the development and discussion of theories of decision-making - analytical and prescriptive - have increased in recent years, there is still a paucity of case studies of decision-making in Australia. This thesis attempts to fill that gap. The Ord River Scheme is a major Australian resource investment. It is studied here, in the light of some well established theories of decision-making - in particular the "rational" and the "incremental."

The primary requirements of a conventional model of rational decision-making are well known, and have been explained above.² They include: the specification of a particular problem, the definition and arrangement of all objectives according to an agreed order of priority, the

1. W. C. Wentworth, *C.P.D.*, H. of R., Vol. 97, 8 October 1975, p. 1853.

2. *Introduction*, p. 2.

listing of all possible alternative strategies together with their consequences, a comparative evaluation of the strategies and their consequences, and the selection of the highest ranking option.³ The criticisms of this model are legion. It is claimed that it can never be fully applied as a working method: complete information is frequently unobtainable; the objectives of public policy are not always amenable to quantitative measurement; and the costs of an exhaustive "rational" analysis are prohibitive.⁴

The cost-benefit system of policy analysis is an application of "rational" decision-making theory. It identifies the benefits and costs arising from a particular policy proposition, and chooses the most worthwhile policy by comparing benefits to costs.⁵ The Ord River Scheme illustrates its shortcomings. One assumption of cost-benefit analysis, is that all cost factors involved in establishing a project can be identified in advance, and their consequential effects predicted. However, the costs involved, fiscal and non fiscal, are subject to inflation and changing values; moreover all requirements cannot be known until after the project has begun.⁶ With the Ord River Scheme, the difficulties of quantification in the

3. *Ibid.*

4. *Ibid.*, p. 3.

5. Chapter VI, p. 206.

6. *Ibid.*, pp. 208-209.

cost-benefit studies are seen in the differing results obtained by Patterson and Davidson.⁷ Another assumption of cost-benefit analysis, is that policies have objectives, and that these objectives are identifiable and quantifiable. This involves the decision-maker in fundamental questions of values in a society of goods not sold in the market place, for instance, Cannegeiter's examination of the secondary benefits of the Ord Scheme.⁸ The very act of such an evaluation is a subjective, and not a measurable judgement, and any result from such a study is wide open to criticism.

Had a "rational" model of decision-making been pursued in the case of the Ord Scheme, it would have been carried out *before* the scheme was under way. In fact, the cost-benefit studies were instigated after the state government was committed to the project. They were an attempt to justify a prior political commitment. The studies added nothing to decision-making on the Ord except a false appearance, after the event, of quantitative science having been used.

The "incremental" model of decision-making on the other hand, is a reaction to the quantitative difficulties involved in the "rational" model. Charles Lindblom has claimed that in fact decision-makers usually take only one

7. *Ibid.*, pp. 218-225.

8. *Ibid.*, 228-233.

small step at a time.⁹ Thus he converts empirical observation to prescriptive theory. His incremental approach includes the following observations and stratagems: the decision-maker only compares and evaluates policies differing marginally from existing policies; analyses and decisions are limited to solutions that leave the decision-maker unconstrained to move again; there is no one correct solution for all time; any problem is subject to an endless series of approaches particularly as more is learnt about the objectives and the alternative means for achieving them.¹⁰ Outcomes result from "partisan mutual adjustment," in which a number of individual decision-makers each pursues his own goal and adapts slowly to the goals of other decision-makers (partisans) or those of central supervision.¹¹

The incremental approach to decision-making has several perspectives. First it is descriptive - explaining how a decision-maker behaves. Secondly, it is explanatory - showing a decision-maker's behaviour to be both intentional and unintentional. In its third, prescriptive, sense its proponents assert that it produces the most sensible and feasible decisions. Braybrooke and Lindblom assert that:

non-incremental alternatives usually do not lie within the range of choice possible in the society

9. *Introduction*, p. 7.

10. *Ibid.*, p. 8.

11. D. Braybrooke and C. E. Lindblom, *A Strategy of Decision*, *op. cit.*, p. 82.

or body politic ... Political democracy is often greatly endangered by non incremental change, which it can accommodate only in certain limited circumstances.¹²

The incrementalist approach provides explanatory appeal as far as the Ord River Scheme is concerned. The process of decision-making was continuous and complex, with initiatives tending to be disjointed and incremental, rather than synoptic or planned. The nature of the problems faced on the Ord, and the multiplicity of participants in the decision-making process, resulted in great complexity. The decisions required extensive Commonwealth-state negotiation, thereby widening the number of participants and increasing the volume of documentation. It has proved impossible however, to gain a detailed insight into the detailed decision-making process within the Commonwealth Government, because of the limitation that Government places upon access to its archival material.

At the state level however, the main government departments with an interest in the Ord, were the Agriculture Department, the North West Department, the Public Works Department and the Treasury; at the Commonwealth level, the main influences on decision-making were the Departments of National Development, Trade, Primary Industry and Treasury. Other important bodies with regard to decision-making were the C.S.I.R.O., Kimberley Research Station, the Bureau of Agricultural Economics, the

12. *Ibid.*, p. 73.

University of Western Australia, Wesfarmers and the farmers' Ord River District Co-operative. The multiplicity of departments, both Commonwealth and state, each with its own specific interest in the Ord Scheme, each with different goals and perspectives, tended to militate against comprehensive planning, and encouraged incrementalism. The lack of an on-site administrative body for the Ord, or at least a permanent body with detailed knowledge of the area, also meant that decision-making tended to lack a comprehensive overview of the situation. Such an overview was expected of the *Stage I Ord Review*, however it was provided too late - Stage II was already underway, and the *Review* itself was purely a history of the scheme, which failed to present comprehensive guidelines for Stage II of the scheme, in the light of Stage I.¹³

The multiplicity of interested parties also meant that decision-making, instead of being collective and based purely on the partisan-mutual adjustment of Lindblom's model, tended to be forced upward. The strategic position for influencing decision-making, on the Ord River Scheme, was that of the state Minister for the North West, the position held by C. W. Court from 1959-1971, which was virtually the whole period of the implementation of the Scheme. The task of the Minister for the North West involved co-ordination and interaction with state cabinet, state public servants, Commonwealth politicians and public

13. *Stage I Ord Review, op. cit.*

servants, and farmers. The considerable impact Court had on all aspects of decision-making on the Ord was a result of his dedication to the ideal of northern development, his technical competence and his strength of personality. However, a major portion of his policy making was conditioned by the interests of the Commonwealth government, and the need for mutual accommodation. Court interacted with departmental officers and politicians at the Commonwealth level, using a variety of techniques to find acceptable decisions. These techniques included problem reformulation, searching for other alternatives (such as another source of funds for the Ord Scheme), and changing positions. Court was dependent on Commonwealth government financial support for his proposals. This meant that there was a tendency to alter submissions so that requests were likely to be approved. For instance, the request for funds for the Main Ord Dam was changed first, to include details of further cotton plantings, as requested by the Commonwealth and secondly, to include mention of the prospects for crops other than cotton on the Ord.¹⁴ Court realised that if there was to be any hope of Commonwealth government assistance, other crops had to be mentioned. In October 1967, the Western Australian government presented an amended submission: claiming a future for cotton as the main crop, but stressing the importance to the scheme, of grain sorghum and the enrichment of the cattle industry

14. Chapter VII, pp. 264-5.

with protein fodders.¹⁵ This dependence on the Commonwealth government militated against comprehensive planning and, in part, explains the "disjointed" nature of the decision-making processes for the Ord Scheme.

The history of decision-making on the Ord Scheme also exhibits the "continuous" characteristic of incrementalism - that is, each individual decision relied heavily on what had happened before, and in turn influenced future decisions. There was no break in the continuity of the process, so as to carry out a major review of the situation before taking further action. The progression on the part of the Commonwealth government was from minor to major decisions, early low cost decisions such as the establishment of K.R.S. and the £5 million grant for northern development, created precedents which made the later, higher cost decision - the provision of finance for the Main Dam - an almost compulsory commitment in the long run. It was argued that, having made the initial decision to allow the grant for general northern development to be spent on the Ord Irrigation Scheme, the Commonwealth government had committed itself to the scheme.¹⁶

On the part of the state government, the "development" of the north west had been a slogan of politicians since the early 1900's and there were various attempts to put this ideal into practice. The low cost commitment to a

15. *Ibid.*, p. 284.

16. *Ibid.*, p. 269.

research station at Carlton Reach, led in turn to a higher cost commitment at K.R.S. and then to the decision to go ahead with Stage I. For instance, Court stated when justifying the state government decision to go ahead with the Diversion Dam, that surely it would be better to gain experience in the area at a cost of £3 million, than to wait and perhaps take a risk on a £20 million project.¹⁷ Once committed to the scheme, despite failures and increasing problems, the state government continued to move forward incrementally, committing itself to Stage II, and to increasing levels of financial assistance for Ord farmers.

Decision-making on the Ord Scheme also demonstrates the nature of the incremental model, in that decisions did not emerge as a result of extensive examination of many possible causes of action, but were frequently made without complete information. The state government's decision to request Commonwealth permission for the Ord Scheme to be approved as a proposal under the *Western Australia Grant (Northern Development) Act 1958-1959*, was a clear example of a government "muddling through" without full knowledge of the situation, but with a vague commitment to an ideal.¹⁸ In 1959, despite fourteen years of research at K.R.S., there were still many problems concerning agriculture in the area which required further research, and

17. *West Australian*, 3 September 1959, p. 6.

18. Chapter IV, p. 161.

there was no one obvious crop for the success of any irrigation scheme.¹⁹ The Ord Scheme it seemed, was submitted only because of the lack of other well researched schemes for the north west.²⁰ The application, in 1964, for funds for Stage II of the scheme, was also made before any detailed knowledge of the farming capabilities of the area was available. The first farmers had not yet harvested their first cotton crop, their safflower crops had been disappointing, and the pilot farm had failed to add to the existing knowledge of crop possibilities for the area. The Commonwealth government too, in both of these instances, acted with insufficient information. When announcing its decision in 1959, to allow the major portion of its £5 million grant for northern development to be spent on the Ord Scheme, Prime Minister Menzies stated that the Commonwealth government remained unconvinced as to the economic soundness of the scheme.²¹ The eventual Commonwealth decision in 1967, to finance Stage II of the Ord Scheme, deferred to direct electoral implications, rather than the considerations demanded of any "rational" process.²² It was made in the face of declining cotton yields, insect problems, farmers' dissatisfaction with their financial situation and the administration of the

19. Chapter V, p. 187.

20. Chapter IV, p. 161.

21. *Ibid.*, p. 159.

22. Chapter VII, pp. 295-99.

area, and without agreement on a viable alternative crop.²³

Apart from the political pressures of elections, the precipitator of decisions throughout the history of the scheme was often farmers' dissatisfaction, rather than any systematic review of the situation. Pressures tended to increase in a certain area, until the state government saw that a problem existed and was forced to consider and take some action. For instance, it was the pressure of the farmers, and the agitation of Wesfarmers which brought the attention of the state government to the major drainage problems of the irrigation area; created by the lack of attention to detail, in the haste to establish the scheme.²⁴ It was too, the dissatisfaction of, and pressure by the farmers, which forced the government to re-examine the situation in 1974, and to make the decision to abandon cotton growing in the area.²⁵

In its descriptive and explanatory perspectives then, incrementalism offers a useful interpretation of decision-making on the Ord Scheme. Decisions did not emerge as a result of extensive, detailed examination of possible courses of action. Inadequate vision prevented the recognition at each stage of the decision-making process, that the performance to date was unsatisfactory and needed

23. Chapter VIII, pp. 350-52.

24. *Stage I Ord Review, op. cit.*

25. Chapter IX, pp. 383, 399.

reassessment; and an emotional bias in favour of northern development tended to blind state government decision-makers. However, in the face of the nature of the Ord Scheme and of the political processes of the Australian federal system, it is difficult to see how decision-making in this case could have been anything but incremental. The scheme involved agricultural, entomological and economic problems, to name just a few; and given the lack of a permanent, full time administrative body to coordinate the varying aspects of the scheme, the knowledge of decision-makers on the Ord could never have been better than imperfect. The history of the scheme is also a study of one aspect of Commonwealth-state relations. The federal arrangement has tended to have a conservative influence on decision-making, increasing the number of participants, with each tending to be interested in a different aspect of the scheme, and contributing thereby to its disjointed and incremental quality.

In its prescriptive sense however, it cannot be said that incrementalism produced, or would have produced, the most sensible and successful decisions on the Ord Scheme. In 1974, when cotton was abandoned at the Ord, the state government was no closer to producing a viable commercial crop for the area than it had been in 1959, when negotiations commenced for Stage I of the scheme. When explaining the position at the Ord in 1975, Premier Sir Charles Court claimed that "the Ord's high potential was up against the three enemies of intensive agriculture - high

costs, unpredictable prices and an abundance of pests and diseases."²⁶ To this list could be added - it was up against the incremental nature of the decision-making process of modern governments - particularly of federal governments.

26. *Sunday Times*, 13 July 1975, p. 3.

APPENDIXES

- I. Commonwealth Government Capital Expenditure on the Ord River Project.
- II. Western Australian State Government Capital Expenditure on the Ord River Project.
- III. Cotton Production at the Ord River Irrigation Area 1960/61 to 1973/74.

APPENDIX I

Commonwealth Government Capital Expenditure
on the Ord River Project

<u>Stage I</u>	<u>Financial Yr.</u>	<u>Grant</u> \$'000	<u>Loan</u> \$'000
	1958-59	87	
	1959-60	42	
	1960-61	1,859	
	1961-62	3,280	
	1962-63	2,865	
	1963-64	1,466	
	1964-65	1,468	
	1965-66	1,112	

Stage II

1966-67		
1967-68	100	
1968-69	5,100	
1969-70	5,850	
1970-71	5,707	140
1971-72	4,593	167
1972-73	339	409
1973-74	38	1,405
1974-75	35	313

			<u>Exp. to 30 June 1975</u>		
<u>Stage</u>	<u>Date of Decision</u>	<u>Amt Allocated</u>	<u>Grant</u>	<u>Loan</u>	<u>Total</u>
<u>I</u>	August 1959	\$ 8.134m.*			
	August 1963	\$ 4.046m.**	12.2		12.2
<u>II</u>	October 1967	\$48.18m.	21.76	2.43	24.19***

* Part of \$10m Grant for Northern Development.

** Part of \$7m Grant for Northern Development.

*** \$23.99m outstanding under Act. Available as loan to develop Stage II irrigation areas.

Source: *An Outline of the Ord Irrigation Project, op. cit., p. 79.*

APPENDIX IIWestern Australian State Government Capital ExpenditureOrd River Projectto 30 June 1974

<u>Public Works Department</u>	\$'000	\$'000
Stage I Works		
Irrigation Scheme	3,968	
Farm Development	737	
Cotton Ginnery	558	
		<u>5,263</u>
Stage II Works		
Ord River Dam	-	
Irrigation Channels etc.	-	
Services		
Electricity Supply	1,590	
Kununurra Water Supply	508	
Kununurra Sewerage	398	
		<u>2,496</u>
Infrastructure		
Kununurra Town Development	2,149	
Main Roads Development	944	
Kununurra Airport Extensions	747	
Public Buildings	935	
Minor Works	300	
		<u>5,075</u>
<u>Department of Agriculture</u>		
Ord River Catchment Regeneration	<u>1,327</u>	<u>1,327</u>
Total Capital Expenditure by State		14,161

Source: *An Outline of the Ord Irrigation Project, op. cit., p. 80.*

APPENDIX IIICotton Production at the Ord River Irrigation Area1960/61 to 1973/4

Year	Total Area of crops irrigated	Area of Cotton hectares	No. of Cotton growers No.	Mean cotton area per grower hectares	Yield kg/ha	Federal State direct subsidies ¢/kg lint	Price Received ¢/kg lint
1960/1	68	3	exp.				
1961/2	255	12	exp.				
1962/3	89	72	exp.				
1963/4	1388	708	6	103	417	29.3	61.7
1964/5	2879	2234	20	110	712	31.1	60.0
1965/6	4715	3401	25	132	889	19.9	62.4
1966/7	4892	4778	29	159	851	20.1	59.8
1967/8	5539	4775	28	166	823	14.6	59.1
1968/9	4104	3388	20	170	955	16.5	54.7
1969/70	3843	2883	19	150	1026	14.8	66.6
1970/71	4774	3632	18	202	1082	14.8	75.4
1971/72	5368	3861	20	191	917	3.8	66.6
1972/73	5446	3449	16	215	888	3.8	90.4
1973/74	5196	3217	16	216	660	3.1	79.4

Source: *An Outline of the Ord Irrigation Project, op. cit., p. 47.*

APPENDIX IVA Chronology of significant events

- November 1941 Establishment of experimental site on the Ord River, at Carlton Reach.
- April 1946 Inaugural meeting of Ivanhoe (later to be known as Kimberley) Research Station Technical Supervisory Committee. Foundation of joint Commonwealth-state administration of K.R.S.
- November 1957 Announcement of £2½ million general development grant to Western Australia, for area north of the 20th parallel of latitude.
- November 1958 Second £2½ million general development grant.
- May 1959 State government decided to submit proposals for the Ord River Scheme to Commonwealth for approval.
- August 1959 Commonwealth Government approval for Ord Scheme as a proposal under the *Western Australia Grant (Northern Development) Act 1958-1959*.
- July 1963 Diversion Dam opened by Prime Minister Menzies.
- February 1964 *A Case for Financial Assistance from the Commonwealth Government to complete the Ord Irrigation Project*, submitted to the Commonwealth government.
- May 1965 Commonwealth government decision to defer a decision on the matter of finance for the Main Dam.
- November 1965 State government presented revised case for the Main Dam.
- October 1966 Commonwealth government decision to again defer a decision on the Ord Scheme.
- October 1967 Western Australian government presented a new submission to the federal government.
- November 1967 Commonwealth government decision to give financial assistance for the second stage of the Ord Scheme.
- November 1971 *Stage I Ord Review* completed.
- June 1972 Opening of Main Ord Dam.
- November 1974 State government announced cessation of cotton growing at the Ord.

APPENDIX V

Significant Committees involved in the development of the Ord Scheme

Name and purpose	date established	State or Commonwealth sponsored	Chairman or membership when appropriate i.e. not mentioned in text
Committee appointed to investigate measures necessary to promote the development of the North West.	1945 Reported September 1945.	State	R. J. Dumas Director Works (W.A.)
Rural Reconstruction Commission to inquire into and report on	February 1943 8th Report December 1945.	joint Commonwealth/ State.	F. J. S. Wise (Labor) W.A. Minister for Lands and Agriculture
1) organisation of Australian rural economy for purposes of defence of Commonwealth and prosecution of the war.			
2) reorganisation and rehabilitation of Australian rural economy in post war period.			
Northern Australia Development Committee - to plan in a coordinated way the development of Northern Australia (above the 26th parallel, excluding a strip along East coast of Queensland).	January 1946 Reported February 1947.	joint Commonwealth/ State.	H. C. Coombs Director General Post-War Reconstruction
Kimberley Research Station (K.R.S.) Policy Committee - to coordinate work of C.S.I.R.O. and Western Australian Department of Agriculture.	inaugural meeting November 1951.	joint Commonwealth/ State.	Various. An ongoing committee

Ivanhoe Research Station Technical Supervisory Committee. From 1952, known as K.R.S. Supervisory Committee
- to give effect to research requirements of K.R.S. Policy Committee.

Kimberleys Development Committee
- to review the possibility of development in North Western Australia, particularly the Kimberleys, and to report on the steps which could be taken to increase production in the area.

inaugural meeting April 1946.

joint Commonwealth/State.

Various. An ongoing committee.

April 1951
Reported November 1951.

joint Commonwealth/State.

G. M. Dimond
(Engineer, N.W. Dept of P.W.D.)

W. M. Nunn
(O.I.C. N.W. Branch W.A. Agric. Dept.)

G. Rudduck
(Director, Division of Regional Devt., Commonwealth Dept. of National Development)

P. A. Reid
(Acting Assistant Director, Commonwealth B.A.E. Dept Commerce and Agriculture)

All Party Committee

- to propose a programme for the development of that part of the state north of the 26th parallel of latitude.

August 1954.
Reported
June 1958.

State.

A. R. G. Hawke
(Premier
A.L.P.)

H. C. Strickland
(Minister for
North West)
A.L.P.

R. McLarty,
Leader of
Opposition
L.C.L.

A. F. Watts
(Leader Country
Party)

A. J. Rodoreda
(Speaker, member
for Pilbara)

W.A. Liberal and Country League Committee on North West - to prepare a comprehensive policy for the North West of Australia.

May 1958.
Reported
September 1958.

State.

C. W. Court
L.C.L. (Convener)

Ord River Diversion Dam Project Committee - to assist in co-ordination and planning of Ord Project. From 1964 known as Ord River Development Project Committee.

3 December 1959.

joint
Commonwealth/
State.

Various. Ongoing
committee.
J. E. Parker
Chairman
1959-1969.

Cattle Integration Sub Committee of Ord Project
Committee - to put forward proposals for raising
the productivity of the cattle industry in the
East Kimberley region with particular reference
to scope for integration with irrigated
agriculture in the Ord district.

January 1969
Report
September 1969.

joint
Commonwealth/
State.
D. C. Munro
Convenor, Ord
Project Co-
ordinating
Committee.

Ord Review Sub Committee - to review all aspects
of project which would assist Ord Project
Committee in its consideration of plans for
future development.

November 1970
Reported
3 November 1971.

joint
Commonwealth/
State.
J. Abbott
(P.W.D.)

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