AN INTRODUCTORY GUIDE FOR A CASE STUDY ON FIRE MANAGEMENT IN THE HAMERSLEY RANGE NATIONAL PARK

National Fire Management Workshop

Busselton

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AN INTRODUCTORY GUIDE TO THE HAMERSLEY RANGE NATIONAL PARK

1.0 LOCATION, SIZE AND TENURE

The Hamersley Range National Park of 617 606 ha was declared an "A" Class Reserve and National Park in 1969 and is the second largest National Park in Western Australia. The park is set in the heart of the Pilbara, in the North-West of Western Australia and is vested in the National Parks and Nature Conservation Authority.

2.0 TOPOGRAPHY, SOILS, CLIMATE

The Hamersley Range is part of a large tableland lying between the Ashburton and Fortescue rivers. Trending north-west to south-east, it is more than 320 kilometres long and is the highest, most extensive upland region of the State, culminating in Mt Meharry (1250m) and Mt Bruce (1227m).

Both the northern and southern limits of the range are marked by long, prominent escarpments towering up to 300m above the adjoining land. The northern Hamersley Scarp is much indented, and as most of the rivers draining the Hamersley flow northward, the section of the range beyond the scarp has been deeply dissected and contains the regions major gorges.

The most common rocks of the range are conglomerates, quartzites and shales, with thick layers of iron ore and seams of blue asbestos. They were deposited about 1800-2400 million years ago in a large sea, and later uplifted and warped by earth movements. A long period of erosion followed, during which time a mature plateau was formed. Further uplifting rejuvenated the drainage, causing rivers and streams to gouge through joints, faults and other weak sections of rock, thus forming the superb gorges of the present landscape.

The average annual rainfall for the Park is 300 mm, most of which falls in summer (November to April) and is brought by tropical thunderstorms and cyclones. The days during this time of the year are very hot with temperatures frequently in excess of 40°C. Winter days are generally warm and clear, but nights are cold and sometimes frosty.

3.0 FLORA AND FAUNA

The terrain is very dry and rocky, with a thin covering of hardy grasses, trees and shrubs. Tussocks of spinifex (*Triodia* spp. and *Plectrachne* spp) are dominant on the ridges and hills but on the heavier soils of the lower lying areas there is also a considerable amount of mulga (*Acacia aneura*) and various eucalypts. After the summer rains, numerous wildflowers, including the Sturt's desert pea (*Clianthus farmosus*) and the pink parakeelya (*Calandrinia polyandra*) transform the landscape into a sheet of vivid colour.

Many of the cool and sheltered gorges support luxuriant vegetation. River red gums (*Eucalyptus camaldulensis*), coolibahs (*Eucalyptus microtheca*) and cadjeputs (*Melaleuca teucadendra*) line the watercourses. A variety of ferns, reeds and other water plants thrive around the cool, permanent pools. These sheltered environments are a haven for abundant species of birds, reptiles and marsupials. Red kangaroos (*Macropus rufus*), euros (*Macropus robustus*), the brush tailed rock wallaby (*Petrogale penicillata*), echidna (*Tachyglossus aculeatus*) and several species of bats, including the ghost bat (*Macroderma gigas*) reside in the Park. Many species of native rodents and native carnivores are also resident. Reptiles such as geckoes, goannas , dragons, legless lizards, pythons and other snakes abound in the Park.

4.0 LEGISLATION AFFECTING MANAGEMENT

LEGAL RESPONSIBILITIES

Management of the conservation reserves in W.A. is to be undertaken according to an approved management plan. These plans when being developed, must be advertised publicly, copies given to the local authority, and sufficient time made available for members of the public to make written submissions on any aspect of proposed plan. In the case of National Parks management plans shall be designed to allow members of the public to recreate, consistent with the proper maintenance and restoration of the natural environment (i.e. the protection of indigenous flora and fauna and the preservation of any feature of historic, archaeological or scientific interest). In both the preparation and implementation of management plans, departmental staff must comply with the various Acts and legislation which impinge on operations. These are:

4.1 Acts administered by this Department

Conservation and Land Management Act, 1984

Timber Industries Regulations Act, 1926

Wildlife Conservation Act, 1950.

4.2 Acts under which the Department has specific responsibilities are:

Bush Fires Act, 1954

Land Tax Assessment, 1976

Mining Act, 1978.

4.3 Other Acts which affect the Department's land management responsibilities include:

Aboriginal Heritage Act, 1972

Aerial Spraying Control Act, 1966

Agriculture and Related Resources Protection Act, 1976

Agriculture Protection Board Act, 1950

Beekeepers Act, 1963

Control of Vehicles (Offroad Areas) Act, 1978

Country Areas Water Supply Act, 1947

Environmental Protection Act, 1986

Fisheries Act, 1905

Land Act, 1933

Local Government Act, 1960

Main Roads Act, 1930

Mining Act, 1978

Public Works Act, 1902

Rights in Water and Irrigation Act, 1914

Soil and Land Conservation Act, 1945

State Energy Commission Act, 1979

State Planning Commission Act, 1985

Water Authority Act, 1984

To date, few management plans have been completed. Where no formal management plan exists, interim management guidelines are applied. These ensure minimum disturbance and maximum protection of biota and landforms pending completion of the formal plan.

5.0 MANAGEMENT OBJECTIVES

5.1 Overall management objectives

The objectives for the management of national parks are laid out in Section 56(10 (c) of the Conservation and Land Management Act (1984):

"... to fulfil so much of the demand for recreation by members of the public as is consistent with the proper maintenance and restoration of the natural environment, the protection of indigenous flora and fauna and the preservation of archaeological, historic or scientific interest ..."

Basically, the purpose of a national park is to provide opportunities for recreation in natural surroundings and to conserve elements of the biophysical and cultural environment represented in the park. Recreational activities must be managed to minimise conflicts between the different types and to ensure that they do not jeopardise long-term conservation objectives.

5.2 Detailed management objectives

The following objectives are likely to be adopted for the Hamersley Range National Park when a management plan for the area is prepared:

1. To provide opportunities for recreation in the park, consistent with maintaining the environmental values of the park and the quality of recreation experience.

2. To promote the education opportunities of the park to provide for the proper use and management of the scientific and educational resources of the park.

3. To conserve rare fauna present in the park.

4. To conserve rare flora occurring in the park.

5. To conserve any identified, restricted assemblages of fauna and/or fauna present in the park.

6. To conserve the (representative) sample of the regional biota found in the park.

7. To conserve the landscape features of the park.

8. To protect the lives and property of visitors and Departmental staff without degrading other values of the park.

9. To minimise any undue detrimental effects of the park on neighbouring lands.

10. To conserve the archaeological, cultural, historical and scientific values of the park.

11. To maintain those values of the park that contribute to the regional nature conservation systems (network).

5.3 Departmental fire management objectives

The fire management objectives of the Department of Conservation and Land Management are:

1. To protect community and environmental values on lands managed by the Department from damage or destruction from wildfire.

2. To use fire as a management tool to achieve land management objectives, in accordance with designated land use priorities.

Policies for fire management are detailed separately in an attached document.

6.0 HISTORY AND ACTIVITIES WHICH INFLUENCE CURRENT MANAGEMENT

6.1 Historical notes

The Hamersley Range has a long association with Aboriginal man, as evidenced by the considerable artifacts to be found throughout the Park.

The range was first known to Europeans in 1861 when Frank Gregory, who, with a grant of L2,000 from the British Government, explored much of the north west. He named the range in honour of Edward Hamersley who promoted the expedition.

Gregory's discovery led to the opening of more than a million hectares of rich grazing land surrounding the river flats of the Ashburton, Fortescue, De Grey and Oakover rivers. Within a few years, pastoralists moved in with cattle and sheep.

The first mining venture in the Hamersley was for blue asbestos. Lang Hancock began mining the asbestos in Yampie Gorge in 1937. Operations were transferred to Wittenoom Gorge (outside the Park) and were taken over by the Colonial Sugar Refining Company. Mining of asbestos continued until 1966.

Enormous iron ore deposits were discovered in the Mt Tom Price and Mt Newman areas (outside the Park) and while miners were making advances, others were promoting the Hamersley Ranges as a scenic attraction. A local doctor, Gordon Oxer, discovered many of the spectacular gorges in the Hamersley.

Mining enterprises active within the boundaries of the Park has provoked widespread criticism from those who believe that such activity should not be allowed in Parks. In the case of the Hamersley Range area, the mining operations had been ratified by a special Act of Parliament well before the National Park was declared.

6.2 Existing Use

The rugged grandeur of the Hamersley Ranges, combining towering cliffs, spectacular gorges, quiet permanent pools, waterfalls and raging torrents is a major tourist attraction.

Campsites and other visitor facilities are provided throughout the Park.

Good gravel roads lead to most facilities which have walking paths, barbecues, tables, seats, rubbish bins and bush toilets.

7.0 OTHER INFORMATION

Further information concerning the Park, and relevant to fire management of the Park will be made available to syndicate members on arrival at the Workshop.