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"USE OF WILDLIFE IN VILLAGE DEVELOPMENT"

By: N. KWAPENA

Wildlife Branch
Department of Agriculture, Stock and Fisheries
KONEDDBU
Papua New Guinea

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N. KUAPENA

Wildlife Branch, D.A.S.F., Papua New Guinea

Summary

Papua New Guinea is rich with a tremendous amount of Wildlife including plants and animals. The country is rugged with steep slopes and with abundant growth of natural vegetation. This makes it extremely difficult to travel from one place to another. Because of the remoteness of the country, much of the wildlife resources is unspoilt or untouched.

In Papua New Guinea all of the Wildlife habitat area is native owned by individual clans or under a complex form of Village ownership. This applies throughout Papua New Guinea.

Because the Wildlife Areas are native owned, the traditional use of wildlife habitat and natural resources will continue and be encouraged. However care must be taken to manage wisely the wildlife habitat with its resources.

Introduction

In Papua New Guinea there are abundant wildlife resources which should be developed for social and economic purposes. Since Papua New Guinea has a tremendous amount of wildlife there is a greater need to develop an appropriate technology to deal with the development of these resources.

The Wildlife Branch of the Department of Agriculture, Stock and Fisheries in Papua New Guinea has developed a pattern in which the wildlife resources should be managed and to be utilized. The major wildlife resources we are dealing with at this moment are as follows:

1. Crocodiles
2. Wallabies
3. Cassowaries
4. Birds of Paradise
5. Butterflies and Insects
6. Wildlife Management Areas

THE CROCODILE SKIN INDUSTRY IN THE VILLAGE DEVELOPMENT OF PAPUA NEW GUINEA

(1) Crocodiles

Species of Crocodiles

There are two species of crocodiles found in Papua New Guinea. These are the saltwater (Crocodylus porosus) and the freshwater (Crocodylus novaeguineae) crocodiles. The distribution of these two species are widespread in Papua New Guinea and in other Pacific regions.

Crocodile Habitats

The major habitats where the crocodiles can be found are in the alluvial riverine plains, swamps, tidal swamps, mangrove areas and where we have major river systems. Roughly the crocodile area covers about 40,000 square miles.

The major crocodile producing areas are the Fly River Basin, the Gulf delta area and the Sepik River, all within the lowlands of the main island.

Cultural Significance

Prior to European contact, there were areas where crocodiles were plentiful and the native people hunted them for food. But it was the eggs and younger stages which were most heavily used. Naturally such a large and dangerous animal was feared and played a dominant role in the folklore of traditional society. A clear distinction was made between the two species: in appearance, breeding habits, and danger to man.

Up until the time when the saltwater crocodile was greatly reduced in numbers, human deaths were frequent in the estuarine areas. During this time only a few special hunting communities especially men were skilled crocodile hunters.

The few areas were known to have a taboo on killing of crocodiles. After the rise of the crocodile industry this custom was modified to allow people to participate, because it was the only source of income available.

Notes on Village Crocodile Farming

Crocodiles - natural resource - however must be managed to remain viable for the future.

Large Wastage in the past

1. Uncontrolled killing of breeding adults.
2. Marketing of small crocodile skins.

Government Action so far

1. Legislation against commercialization of adult crocodiles and a system of licencing for traders and exporters.
2. Proposed development of Wildlife Management Areas for crocodiles so that the people can manage their resource and not have outsiders plundering their resource as in the past 20 years.
3. Introduction of farming of crocodiles at 3 levels.

4. Training of Government personnel in crocodile management.
5. Training of village people in crocodile farm duties and management.
6. Assistance to interested villages in establishing crocodile farms by trained D.A.S.F. personnel.
7. Development of a rural industry suited to some of the remotest locations in P.N.G. where little other industry exists.
8. Development of a marketing system that provides a service to the village hunter/farmer and thus bring economic development to rural areas with the efficient utilization of this natural wildlife resource.

Village Farms established so far (capacity 50 - 150 crocodiles)

Western District

Approx. 50 farms along the Fly, Aramia, Strickland and Bamu Rivers and associated swamps. Total number of crocodiles unknown at present - likely to be in the vicinity of 1000 following this dry season.

Gulf District

After only starting crocodile farming last year, already 25 separate village projects are now in operation. Number of crocodiles held at present only 40 - 50. Expect this number to increase tenfold during the next dry.

Milne Bay District

Crocodile farming just introduced this year. 5 projects under way. Number of crocodiles in the farms unknown at present.

East Sepik District

As a result of the Government demonstration farm at Pagwi commenced last year 8 village projects have been known to commence.

Government Farms

1. Moltaka (Central)

Capacity 1000 crocodiles - basic research into feeding and management etc. - training.

2. Lake Murray (Western)

Capacity 1000 crocodiles - at present holding 600 - district training station for village farmers and district extension staff.

3. Balamuk (Western)

Capacity 200 crocodiles - at present holding 50 - demonstration pens.

4. Aird Hills (Gulf District)
Capacity 300 - holding 100 - planned to increase to 300. District training station.
5. Kikori (Gulf) - demonstration farm (150 crocodiles)
6. Ihu (Gulf) - demonstration farm (150 crocodiles)
7. Baimuru - demonstration farm (150 crocodiles)
8. Bubuleta (Milne Bay District) - demonstration farm (300 crocodiles)
9. Kuiero (Milne Bay District) - demonstration farm (300 crocodiles)
10. Paqwi (East Sepik District) - demonstration farm (1000 crocodiles)
11. Vanimo (West Sepik District) - demonstration farm (proposed).
12. Aitape (West Sepik District) - demonstration farm (proposed).
13. Hoskins (West New Britain) - demonstration farm (100 crocodiles).

Main points to stress

1. Maximum utilization of bush materials for pen construction - no cost.
2. All required inputs for crocodile farms available from the bush.
3. For larger units i.e. more than 150 crocodiles, nets pump etc will be necessary. Finance can be arranged through Village Commercial Development Fund and/or Development Bank.
4. For efficient utilization of crocodiles provision for the trading in live crocodiles is necessary. Thus the establishment of a net work of farms that will trade in live crocodiles is essential.

(2) Wallabies

Species:

There are 3 species of wallabies found in Papua New Guinea. These are found in the coastal, savannah and on the plains. The Agile Wallaby is found in the lowland, forest edge and savannah. The Scrub Thylogale is found in the lowland, mid mountain forest whilst the Dorcopsis wallaby is mainly found in the rainforest.

Distribution:

The distribution of these wallabies are fairly spread especially in the lowland forest and the coastal, savannah grassland plains. A large population of these wallabies are found in the border between Papua New Guinea and Irian Jaya. There are areas where the population is decreasing in number because of the increase in hunting them with shotguns.

Importance

In Papua New Guinea most of the rural communities use wallaby meat as a source of protein food. The meat is cheap and which they get from the bush whenever they want to. There are areas facing problems in finding wallabies. Several areas approached Wildlife Branch to assist in controlling the existing wallaby population and starting wallaby farms.

Wallaby Management

The Wildlife Branch has already initiated steps to look at wallaby farming and marketing. Since the wallaby meat is mostly favoured by the village communities, the processing of meat for market and consumption should be developed. The process of dried wallaby meat or preserved meat should be developed. New Zealand has developed a system of drying meat for distribution or for market.

(3) Cassowaries (Casuaris)

Species

There are 3 species of cassowaries found in Papua New Guinea. These are Casuaris bennetti, C. casuaris and the C. unappendiculatus.

Distribution

These cassowaries are found in the Western District, Western and Southern Highlands, East and West Sepik and in other districts of Papua New Guinea.

Importance

The cassowaries are traditionally important to some districts of Papua New Guinea. There is a high demand of cassowaries for bride price in the Highlands. The plumes are equally important for ornamental purposes. The young and adult cassowaries are reared in many areas in the Highlands for bride price, ornamental and for economic purposes.

Cassowary Farming

The Wildlife Branch has already commenced a Cassowary Farming project in the Southern Highlands. The young chicks are bought from the Western District and the nearby areas where they are transported to the farming project at Mendi.

A New Zealand Wildlife Service Officer under an Aid Programme, is carrying out husbandry, breeding and conservation work in this project. The birds are of economic and social importance to the people of the area and it is hoped to improve traditional husbandry techniques and conserve wild populations.

Cassowaries are extensively utilized and the supply is not kept up with the demand. Prices are rising steeply as the birds become scarcer. Hunters have to travel long distances before they find any or not at all.

The Department is therefore finding out ways of rearing cassowaries in captivity and investigating the ways of breeding and developing and improving the traditional techniques of keeping cassowaries in the village situation. The village people have been encouraged to rear cassowaries.

(4) Birds of Paradise

Birds of Paradise are among the most beautiful creatures of nature, and of the 42 known species, 33 are endemic, native only to Papua New Guinea. This is indeed a major and magnificent part of our country's heritage. Today we proudly use the Bird of Paradise on our flag, new currency and crest as the official emblem of our country.

Widespread concern, however, is now being expressed about the continued survival of these renowned birds if action is not promptly taken to preserve them for the benefit of future generations.

A list of all the species of Birds of Paradise which are protected are included in the Fauna (Protection and Control) Act.

Distribution

The Birds of Paradise species can be found across the border between Papua New Guinea and Irian Jaya, in the Highlands, Western Highlands, Southern Highlands, Wau-Bulolo area, in the lowlands and as far as Sogerih and Brown River areas. There are few areas where these may be found.

Importance

In Papua New Guinea, the Birds of Paradise are traditionally important for their plumes and the associated cultures. The Bird of Paradise is significant in Papua New Guinea and used as a national emblem.

Today, however, Birds of Paradise continue to be adversely affected by:

- (a) hunting with guns
- (b) commercial sale of plumes
- (c) major changes in habitat

The laws have been made to stop the use of shotguns on the Birds of Paradise and to stop commercial sale of plumes.

Management of Birds of Paradise

In Papua New Guinea the local communities should be encouraged to reserve Wildlife Management Areas where they can make hunting, collecting and taking rules on Birds of Paradise. The Management Areas should be declared with committees to be formed and the rules to be made into law.

In this way the local people should conserve and preserve the population of the Birds of Paradise and have a long range benefit to the people. The traditional laws on the Birds of Paradise should be developed and encouraged to manage the Birds of Paradise population.

(5) Butterflies and Insect Trading

Species

There are numerous species of butterflies and insects in Papua New Guinea. Seven species of Birdwing Butterflies are protected.

Distribution

The butterflies and insects are common in lowlands, coastal areas, in the islands and in the Highlands to some extent. Numerous collecting trips have been made in Bougainville, Maprik, East Sepik, Madang, Popondetta, Sogeri, Brown River and around Port Moresby by commercial dealers and other people.

Importance

There are numerous insects and butterflies in Papua New Guinea and these could be used for cash income. Many local people are interested to do business on these resources which are available at hand. We have received many requests from the local people to assist them in butterfly farming and insect trading. We have taken steps already in assisting the people.

Farming and Trading

The Wildlife Branch is assisting Papua New Guinea to collect unprotected insects for the collectors trade, both internally and overseas. We have already started off some local people collecting and exporting butterflies and insects to get money. To get the business to go ahead we need to study the ways to determine the effects of such collecting on insect populations and the need for managing and controlling the activity as well as the need for protection of additional species or habitat.

(6) Wildlife Management Areas

Fauna (Protection and Control) Act

The Conservator (who is the Director of Agriculture, Stock and Fisheries) is responsible for putting this into effect. He may declare some species of wildlife protected, and in the Government Gazette of 31.10.68 the following were declared:

All Birds of Paradise, Manucodes, Rifle Birds and Trumpet Birds.
Three species of Egrets
All Goura Pigeons.
The New Guinea Eagle.
All Ospreys.
Salvadoris Teal.
Seven species of Birdwing Butterflies.
Brown and Rainbow Trout less than 8 inches long.

In the Government Gazette of 13th February 1975 the following species were added to the protected list:

Boelens Python.
The Long-snouted Echidna.

Areas Declared as Wildlife Management Areas

Baniara Island, in the Milne Bay District has now been declared a protected area for the Agile Wallaby. This means that this species cannot be killed on Baniara.

The Tonda Wildlife Management Area has been declared in the Western District and a committee appointed. Other areas will be declared soon.

The point here is that the areas may be declared Wildlife Management Areas, after the landowners have agreed. The landowners can nominate a committee to advise the Minister on making rules about hunting on the land and the payment of royalties to landowners. This arrangement has commenced in the Tonda Wildlife Management Area of the Western District.

What Major Species of Fauna are included in the Wildlife Management Areas.

The major species are in the following:

Wallabies, cassowaries, pigs, wildfowls, Goura pigeons, Birds of Paradise, butterflies and crocodiles.

Aims of Wildlife Management Areas.

To allow the land under the customary ownership.

The local people to continue hunting and have some rights on the use of the land and the wildlife.

The landowners to make rules on harvesting, collecting and hunting of wildlife and to get royalty payments.

To allow the wild population to increase and allow the landowners to exercise their rights in managing and utilizing the resources for subsistence and for cash.

Conclusion

All over Papua New Guinea the village people are encouraged to have village projects to go ahead with the help of the Wildlife Branch. It is found in Papua New Guinea that many people show concern on the status of Wildlife especially in providing some sort of money income. The main wildlife especially the animals which have been investigated and could provide money income, are crocodiles, cassowaries, wallaby, megapodes and turtles (which I did not talk about) and other wildlife.

However before we can talk about the use of wildlife resource in the village development in Papua New Guinea, it is always essential to find out what wildlife resources we have, what or how much do they occupy and what adverse ecological effects are influencing them from human activities. Both research and management are vitally important aspects of the Government Wildlife Service.

If we can find out all the information required, then we can ask ourselves, 'Are we capable of managing and using wisely the wildlife resources without altering too much or destroying the ecosystem?'