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INFORMATION FROM NON-SELF-GOVERNING TERRITORIES: SUMMARY AND ANALYSIS OF  
INFORMATION TRANSMITTED UNDER ARTICLE 73 e OF THE CHARTER  
REPORT OF THE SECRETARY-GENERAL

Summary of information transmitted by the Government of Belgium<sup>1/</sup>

On 17 March 1952, the permanent representative of Belgium to the United Nations transmitted a communication entitled The Problem of Fish in the Belgian Congo (Le Problème du Poisson au Congo Belge). This communication is herewith summarized.

THE PROBLEM OF FISH IN THE BELGIAN CONGO

In the Belgian Congo, particularly in the past decade, measures have been taken by the Government to increase the production of animal proteins in the form of fish, since increases in fish can be achieved far more rapidly than increases in meat. The measures taken by the Government may, for convenience of treatment, be divided into two fields, fisheries (fishing in natural waters) and fish farming. With regard to the former, this summary deals with inland fisheries only and does not include developments in marine fisheries.

Inland fisheries

The pre-war period was characterized mainly by the compilation of an inventory of the aquatic resources of the Territory. Production increased during these years; the catch in Kasenga, for instance, rose from 1,044,000 kg. of fresh fish in 1932 to 3,198,000 kg. in 1939. But the major developments in exploitation began in the period of the second world war, when meat was scarce and there was a rapid increase in the number of indigenous labourers, mostly in the mining areas; the catch in the province of Katanga, as a consequence, rose from 5,870,000 kg. of

<sup>1/</sup> This summary is also submitted to the Committee on Information from Non-Self-Governing Territories.

fresh fish in 1940 to 11,319,000 kg. in 1943. This great increase in production, which was effected in order to fill a temporary need, revealed the possibility of permanent increase in the future.

At about the same time a trend towards refrigeration of fish began, in order to bring it to the consumer in a fresh state. The number of ice factories in Luapula-Moëro rose from 1 in 1935 to 4 in 1950; and in 1947 the Union Minière du Haut-Katanga built a refrigeration plant in Kasenga with a capacity of 1,500,000 to 2,000,000 kg. of fish required for labourers of the industrial region of Haut-Katanga.

In order to establish a scientific basis for the development and rational exploitation of the aquatic resources of the Belgian Congo, the Mission Piscicole du Katanga was engaged in 1946-47, in research and surveys with respect to both fisheries and fish farming. The major contribution of the Mission to fisheries was in regard to exploitation; it included an outline of the first comprehensive programme for study of the Territory's natural waters.

The Mission Piscicole du Katanga was succeeded by the Mission Piscicole du Congo Belge, which continued the work on a more intensive scale. A fisheries programme was put into action, based mainly on the principle of safeguarding "fish capital" and at the same time permitting its rational exploitation, with due regard to the interests of both fishermen and consumers. Other developments included: the establishment of an Indigenous Professional Fishermen's School, probably the first of its type in Central Africa; a programme for public health in fishermen's communities; and improvements in fishing boats.

In 1949 the Mission Piscicole du Congo Belge was succeeded by the Service Piscicole, which continued to implement the programme by a number of measures such as the establishment of a Research Centre at Kilwa, operated jointly with the Institut de Recherche Scientifique en Afrique Centrale (IRSAC), and investigations into the potentials of lakes and other natural waters. A Hydro-biological Mission concluded that Lake Tanganyika alone had a potential production of 30,000,000 kg. of fresh fish. In 1950 the total production of the Territory was 29,669,000 kg. of fresh fish.

The significance of this amount of fish appears more clearly when it is compared with meat: a yearly production of 30,000,000 kg. of fresh fish is the  
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equivalent of 105,000 head of cattle, which would require a total "livestock capital" of 875,000 head.<sup>1/</sup>

#### Fish farming

Fish farming in the Belgian Congo began in 1944, when preparations were made for the transfer of fish from Luapula-Moëro to Elizabethville. Many fish were despatched, but only seven small Tilapia, weighing in all 100 grammes, survived the journey. In July 1944 they were placed in ponds; in June 1945, six of the seven were recovered, weighing together 4.1 kg.; there were also about 5,000 small fish weighing in all more than 10 kg. After this first success, 2 kg. of Tilapia fry were placed in a pond of 80 ares; eighteen months later the pond yielded 2,200 kg. of fish.

It was to the development of fish farming that the Mission Piscicole du Katanga brought to bear its main efforts. A Fish Farming Research Station was established in 1947; permanent facilities, comprising laboratory, ponds and housing, are being constructed twenty-five kilometres from Elizabethville in the valley of the Kipopo.

The first task was to discover a successful fish-cultural method. In view of the wealth of local fishes and the unforeseeable consequences of introducing exotic fishes, local species were investigated, particular attention being given to Tilapia melanopleura and Tilapia macrochir. In order to achieve rational exploitation of these fishes, detailed information was obtained on the following: the number of fry to be expected from a couple of (a) Tilapia melanopleura, (b) Tilapia macrochir; the number of spawnings, and the interval between spawnings; the optimum size of fry for transfer to ponds, and the number and size of fry available at each season of the year; the optimum rates of stocking of ponds; preliminary data on the optimum proportions in the combination of species with regard to different ages and feeding conditions.

By feeding the fish with flour mill sweepings, very high yields have been obtained; in a pond under the supervision of the Station des Recherches Piscicoles

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<sup>1/</sup> Inedible fish wastes are estimated at 30 per cent of the total weight of fresh fish: 30,000,000, - 30 per cent = 21,000,000 kg. of edible fish products. Five head of cattle are estimated to produce 1,000 kg. of edible meat products: 21,000 x 5 = 105,000 head of cattle would be needed to yield a yearly supply of 21,000,000 kg. of edible meat products. The annual yield of livestock capital being estimated at 12 per cent, the slaughter of 105,000 head yearly would require a livestock total of 875,000 head.

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production has been as high as 9,368 kg. of fish per hectare per year. This great success in the artificial feeding of Tilapia is of far reaching importance, since every Congolese peasant has a continual supply of wastes from manioc, maize or rice which can be fed to fish and thus converted into animal protein food.

In one area fish farming was applied not primarily to achieve high production but rather to clear the water of vast swamp; here Tilapia melanopleura fed on the vegetation growing in the water, removing it rapidly and completely.<sup>1/</sup>

As soon as the Service Piscicole was certain that Tilapia melanopleura and Tilapia macrochir were suitable for fish farming, fry from the Station des Recherches Piscicoles were distributed to various parts of the Belgian Congo and also to Northern Rhodesia, South Africa, the Sudan, Kenya, the Cameroons, and French Equatorial Africa; in addition, some were sent to Belgium, to be reared in the ponds of the Research Station at Linkebeek. But since it was soon clear that one station could not fill the demand, it was decided to establish Fry Rearing Centres in different parts of the Territory. At the end of 1950 four Fry Rearing Stations were in operation, one was being built, and four were being planned. Each area of the Belgian Congo will have its own Fry Rearing Centre, which will at the same time serve as a demonstration centre. In addition to producing fry, these centres will serve as pilot projects to guide the introduction of fish farming into the indigenous communities. Some of the centres will very likely also be stations for applied research.

The plan to introduce fish farming to the indigenous inhabitants is well under way. By the end of 1950 at least 15,000 ponds had been constructed, mostly in indigenous communities, with a total area of nearly 1,000 hectares. The yields of indigenes' ponds range from 1,000 to 2,000 kg. per hectare per year.

The Service Piscicole has recommended that, in the extension and development of fish farming in indigenous communities, emphasis be laid on: (a) the teaching

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<sup>1/</sup> Vegetation at the surface of water provides protection for mosquito eggs and larvae from their natural enemies - small fish which cannot get at them when the eggs are laid, or when the larvae take refuge, in minute water-spaces surrounded by dense algae or other water plants. Thus, if surface vegetation is removed, the egg-and larvae-eating fish (either occurring naturally in the pond, or expressly introduced) prevent the breeding of mosquitoes. Fish farming can thus be successfully combined with malaria control.

of fish farming in schools; (b) its development in cotton areas, where the Comité de Gérance du Coton (COGERCO) has the necessary funds and can publicize fish farming together with cotton; and (c) its development by commercial enterprises and settlers, whose interest in it is already considerable.

The Service Piscicole has found in Tilapia melanopleura and Tilapia macrochir fishes that are easy to feed and adaptable to most of the Territory's waters; and it has put into operation a technique of breeding and rearing which has already passed many tests in indigenous communities. There is every reason to believe that, in the carrying out of the plan of action, the Congolese peasants will quickly find by means of fish farming the animal proteins necessary to their diet. Thanks to financial aid from the territorial budget, from the Fonds du Bien-Etre Indigène and from COGERCO, and to the assistance provided by IRSAC in regard to scientific problems of fish farming, it is confidently expected that the Colony will soon achieve its objectives.

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