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The International POPs Elimination Project

*Fostering Active and Effective Civil Society Participation in
Preparations for Implementation of the Stockholm Convention*

Nkayi and Ouesso: Site contaminated with pesticides and persistent organic pollutants in Congo

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**ASSOCIATION POUR LA PROTECTION DE
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L'AGRICULTURE BIOLOGIQUE**

About the International POPs Elimination Project

On May 1, 2004, the International POPs Elimination Network (IPEN <http://www.ipen.org>) began a global NGO project called the International POPs Elimination Project (IPEP) in partnership with the United Nations Industrial Development Organization (UNIDO) and the United Nations Environment Program (UNEP). The Global Environment Facility (GEF) provided core funding for the project.

IPEP has three principal objectives:

- Encourage and enable NGOs in 40 developing and transitional countries to engage in activities that provide concrete and immediate contributions to country efforts in preparing for the implementation of the Stockholm Convention;
- Enhance the skills and knowledge of NGOs to help build their capacity as effective stakeholders in the Convention implementation process;
- Help establish regional and national NGO coordination and capacity in all regions of the world in support of longer term efforts to achieve chemical safety.

IPEP will support preparation of reports on country situation, hotspots, policy briefs, and regional activities. Three principal types of activities will be supported by IPEP: participation in the National Implementation Plan, training and awareness workshops, and public information and awareness campaigns.

For more information, please see <http://www.ipen.org>

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This report is available in the following languages: English language summary and full report in French.

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SUMMARY

In Congo, various types of pesticides, including POPs have been used for 40 years. The bulk of these products have been used in agriculture at the time when cash crops (coffee and cocoa) and certain industrial crops (palm oil) were promoted; in forestry by companies specialised in reforestation and in health field by hygiene services to combat certain disease vectors. Although these products are banned, they are still used in the country. Indeed, works carried out within the framework of the GF/PRC14/02 project relating to activities on POPs in Congo have revealed that certain POPs such as heptachlor and chlordane are still smuggled in countries and are used under other appellations in Nkayi and Ouesso. Indeed, many agricultural and industrial activities (wood treatment, orchards, intensive maize and paddy cultivation, plantations of sugar cane, cotton, cassava and cement works) are led in these two cities. Besides POPs, agricultural activities led in these areas result in an intensive use of a various range of chemicals that are hazardous to human health and to the environment. To date, very little information about the impacts of pesticides and POPs used in the country are available, mainly in Nkayi and Ouesso.

1- Objectives of the study

This study globally aims at contributing to better inform Congolese people and government about problems relating to POPs and pesticides in the areas of Nkayi and Ouesso.

It sets itself the following objectives:

- To inform Congolese people and government about POPs-related problems in Nkayi and Ouesso.
- To collect data relating to pesticide use in general and to POPs in particular
- To assess impact on human health
- To provide NGOs, CSO and other groups with information for use during awareness-raising activities
- To build operational capacities among ALPEPAB members concerning the awareness-raising among decision-makers, public interest groups and the large public
- To put at Congolese people disposal data on impacts of POPs use and make recommendations for a better management of this burning problem

II- Methodology

Besides the documentary research, information collection has been completed by a retrospective investigation. Direct interviews have been the technique used for investigation. Investigations were led among governmental institution leaders (customs, statistics, police, agriculture and the environment) and public and private companies located in the study area. On the basis of an indicative list of institutions developed in advance, investigations have been exhaustive.

The table beneath shows the dividing-up according to the nature of institutions interviewed per region

Nature Region/city	Hospitals	Company	Surrounding village
Brazzaville	1	-	
Bouenza	5	1	5
Ouessou	2	2	2
Total	8	3	7

Results obtained in Nkayi

3-1 Use of POPs and other pesticides in Nkayi

High quantities of pesticides have been used in the different structures of Nkayi before their ban. Suppliers' registries and catalogues have revealed high quantities of dieldrin, aldrin, endrin, heptachlor and DDT. Thus, POPs have been used in agricultural, forestry and health fields in the city of Nkayi and its surroundings. Currently, other pesticides are used in the area. Nevertheless, the intensive use of pesticides in the area has certain impacts on human health and on the environment. Indeed, powerful means such as aviation are used to spread products, which is hazardous to populations living in the plantations (4 villages) and in the surroundings.

3-2 Dioxins and furans

Dioxins and furans equally constitute a real source of pollution in Nkayi stemming from:

- The burning of the **BAGASSE: Bagasse** feeds two boilers: the sugar refinery of Nkayi and SARIS (agricultural and industrial sugar refining company). The quantity of **bagasse** used in 1996 is estimated at 137,696 tons; that is 613.23 mg TEQ of dioxins released in the air per year.
- Waste incineration: the quantity of wastes incinerated is estimated at 70% of the total wastes in dumpsites, that is 147,997 tons. To that may be added, hospital wastes treated in burners and estimated at 45,625 tons, which gives a total of 148,033 tons per year. This category must be taken into account because all household and hospital wastes are incinerated in the open air and dioxins stemming from this activity contribute doubtlessly to the deterioration of health among people living in this area.
- Dumps in watercourses: wastewaters (domestic and industrial) dumped in watercourses equally contain dioxins. This problem has drawn ALPEPAB attention. The organisation deems that there is a real hazard on human health considering the absence of an appropriate drinking water supply system. Indeed, populations use these polluted waters for drinking and washing purposes.

3-3 PCBs

The inventory of PCBs and PCB-containing equipments has revealed 17 transformers of which 4 contain askarel in Nkayi; that is 2% of PCB-containing equipments in Congo. The total mass of PCB-contaminated equipment is estimated at 15921 kg and the mass of PCB-contaminated dielectric fluid is at 3593 kg. Problems relating to oil-contaminated soils do exist and are caused by leaks in transformers. There is neither activity relating to oil recycling in the country, nor relating to PCB-contaminated transformers.

3-4 Impacts on health and on the environment

This study has not clearly established the relation of cause and effect between the exposure to POPs and lung diseases for lack of analytical laboratories.

To establish this relation, statistic data have been collected from some health districts in Nkayi (46, 586 inhabitants in 2000) which is a city highly contaminated by pesticides. These data have been compared with those of a big hospital located in Makelekele, a district in Brazzaville with 107,524 inhabitants in 2000.

Hospital data are very worrying. 1 person out of 29 suffers from lung diseases (1/29). Makelekele presents a ratio of 1/92, what can be explained by the fact that it is not a contaminated site and is 2.5 times more populated than Nkayi,

The medical staff interviewed links these infections to AIDS whose prevalence is high enough in Brazzaville.

Furthermore, wastewaters (both domestic and industrial) polluted by pesticides and dioxins are dumped in watercourses and its surroundings for lack of drinking water supply systems. This is a really hazardous to human health.

Thorough studies are needed to better assess impacts of POPs and other pesticides on people exposed to these toxic chemicals.

3-5 Viewpoints of Nkayi people

Four agglomerations are built in the middle of plantations, namely Dakar, Louari, Congo and Moufouma. Inhabitants live on subsistence crops (cassava, sweet potatoes and fruit) and suffer daily from many hazards, nuisances and feeling of faintness.

In their plots:

- Drying out of fruit tree leaves
- Drying out of plants of cassava which is a staple food for these populations

In rivers:

- Reduction of fishes in the river of Divouba where wastewaters are dumped from the sugar refining factory.
- Pollution of the main water supply sources

In the air:

- Perception of bad smells caused by the regular spreading (both air and manual spreading) of pesticides in plantations.
- Presence of enormous fumes during the burning of the plantations' biomass before cane harvest

Considering all these hazards, people of Nkayi demand:

- The ban of aviation as means of treatment in sugar cane plots
- A pharmaceutical assistance to people suffering from lung diseases
- The enforcement of the "polluter pays" principle by the government
- The removal of the four agglomerations out of plantations
- The decontamination of soils in the vicinity of Mont Decroix where 410 litres of obsolete gramoxone have been dumped.

IV- Results obtained in Ouesso

4-1 Use of POPs and other pesticides in Ouesso

Many companies involved in forestry use high quantities of pesticides. We can cite among others CIB located in Pokola, IFO located in the district of Sangha.

The main antiparasitical pesticide used by forestry companies is Cryptogil, a polyvalent insecticide (acting both as fungicide and nemacide) which is highly toxic. There are also Ceremul and Lindane.

Investigations have equally revealed that POPs such as heptachlor and chlordane are used in wood industry. Indeed, they are used by foresters as insecticide and termiticide (termite killer) in carpentry and wood treatment.

4-2 Impacts on human health and on the environment

ALPEPAB is really concerned about the wood industry and the use of these chemicals in timber industry. These activities can have very noxious impacts on health and on the environment:

- Destruction of autochthons' habitations
- Appearance of lung diseases and gastroenteritis. Hospital data are as worrying as those of Nkayi with a ratio of 1/15 for lung diseases and 1/74 for acute gastroenteritis.
- Pollution of water due to the immersion of the wood treated in watercourses
- Hazards to the wildlife

4-3 Viewpoints of Ouesso people

Inhabitants do not know about pesticides even less about POPs.

In the aftermath of awareness-raising meetings organised by ALPEPAB, populations collaborate with NGOs to solve this burning issue. Awareness-raising sessions will be organised in order to better understand the phenomenon and to seek solutions together.

Regarding this, ALPEPAB which is a NGO specialised in pesticide issues has provided some solutions that are further developed in this study. These are the following:

- The setting-up of a **national committee** in charge of managing contaminated sites. The mission of this committee will be among others: to assess pollution level, to assess risks, compensation costs and responsibilities and to propose a precautionary plan to prevent risks relating to pollutions caused by POPs.
- The setting-up of binding **legal and regulatory framework** for POPs import, transport, handling, stockpiling and use
- **National capacity building** in POPs analyses and a creation of an analytical laboratory for pollutants and pesticide residues.
- **Capacity building** among NGOs involved in environmental issue in general and pesticides in particular
- **Public awareness-raising** of hazards caused by POPs and other pesticides on health and on the environment
- **Poverty reduction** on the national territory and in the bordering countries (during the campaign, the labour is also made up of workers from neighbouring countries). In Nkayi for instance, people are aware of hazards. However they are bound to work in bad conditions because they need money to survive.