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Update on Environmental Aspects of the Floods in Suriname

Emergency Services Branch
Joint UNEP/OCHA Environment Unit
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1 Introduction

This update provides information on environmental impacts of the floods in Suriname identified by the UN Disaster Assessment and Coordination team in collaboration with the Joint UNEP/OCHA Environment Unit (Joint Environment Unit). Most information has been provided through the 'Environmental Accident – Policy Supporting Team of the Netherlands (National Institute for Public Health and the Environment, Dutch Meteorological Institute, and Institute for Inland Water Management and Waste Water Treatment). They have also made extensive use of the information received from the National Institute for the Environment and Development in Suriname.

Torrential rains starting around 1 May 2006 have affected the entire South and parts of the Central Amazonian Lowlands of Suriname. The districts of Sipaliwini and Brokopondo are the hardest hit. The heavy rain caused several major rivers, in particular the Upper-Suriname, Tapanahoni, Lawa and Marowijne rivers, to rise rapidly and submerge large areas. Approximately 25,000 to 30,000 square kms have been inundated. While heavy rainfall is not uncommon during the rain season, rainfall of this magnitude has rarely been encountered. As a result, disaster preparedness and response mechanisms for such an event are reportedly extremely limited.

On the request of the Government of Suriname and the UN Resident Coordinator, an UNDAC team was deployed on 11 May. An environmental expert from the Netherlands is part of this team. He has been tasked, as part of the other UNDAC-related activities, to undertake a rapid environmental assessment.

All OCHA Situation Reports, together with the information on contributions and other ongoing emergencies, are also available on the OCHA Internet Website at http://www.reliefweb.int

2 Initial environmental assessment findings

- The affected area is sparsely populated with no major cities and with little to no industrialization. No secondary risks are expected from large quantities of hazardous materials.

- Potential pollution from small-scale depots of chemicals and oil products could theoretically have happened in some villages. However, it is conceivable that the abundance of water would have diluted any contaminations. Pesticides are apparently not used in the affected area.

- Large gold and aluminum mines (using cyanide) are not situated in the affected area. Small-scale (artisanal) mining of gold takes place, and mercury is used in the extraction process. Given the high-value of mercury and the relatively 'slow' onset of the disaster, it is assumed that small stockpiles of mercury have been saved. Mercury already in use would have spread and its concentrations diluted. River water is known to contain mercury and other heavy metals (in unknown concentrations). The most likely route of exposure would be through the food chain (fish, agricultural products), but it is hard to estimate. Any additional exposure due to the floods is expected to be of minor importance.

- The main source for drinking water is through rainwater harvesting. Following a meeting on water, sanitation and environment –held in Paramaribo on 17 May- a number of measures will be put in place to increase the provision of clean drinking water in the medium term. For more information on clean drinking water, see OCHA Situation Reports on http://www.reliefweb.int

- Waste management system in the affected area is non-existent (waste is dumped into the rivers). The supply of emergency relief items may lead to an increase of waste, and appropriate measures should be put in place to cope with this problem. The National Coordination Center for Disaster Control (NCCR) is in charge with setting up a collection system for the plastic waste.

3 Environmental considerations in post-emergency phase

Two non-emergency environmental follow-up activities are recommended.

- Further research is required into the background levels of heavy metal in the rivers, as well as on potential exposure to heavy metals through fish and agricultural products.

- An assessment of large mining activities should be undertaken to identify any potential for industrial accidents (in particular, potential collapse of mine tailings dams, and overflow of the 'red mud' lakes) in case of extreme weather conditions. The response capacity for such disasters should also be assessed.

4 Contact Information

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