Geophysical Research Abstracts
Vol. 12, EGU2010-1503, 2010
EGU General Assembly 2010

SOURCE, MANAGEMNT AND QUANTIFICATION OF UNINTENTIONAL POPs (PCDDD/Fs) IN NEPAL

Ram Charitra Sah

Executive Director, Center for Public Health and Environmental Development (CEPHED), Kathmandu, Nepal, tel/Fax 977-1-5201786, Email: cephed04@yahoo.com

The aim to prepare and present this paper is to highlight the source, management and quantification of the unintentional POPs in an unindustrialized least developing landlocked small country Nepal. The methodology adopted for this is the review of the relevant research documents and national initiative towards addressing this issues complemented with sharing of the first hand experience from the implementation of the POPs management activities undertaken by our organization. Nepal is a small country of size 147181 sq.km but having large sources of POPs including unintentional POPs (PCDD/Fs) mainly because of weak enforcement of the existing environment related laws, standards and international commitment including POPs Convention. Country became homes to about 75 tons of Obsolete Pesticide since last 30 years including about 44 percent (33 tons out of 75) are of known POPs. These obsolete pesticides including identified POPs have been poorly stored in some about 25 locations throughout the country. The major warehouse accommodating about 50 tons at Amlekhgunj has been located just in front of a high school where about 1000 children are being studying and found to have some health related problem due to the gasses emission from the warehouse as well as school playground field contaminated with these POPs pesticides. The playground soil contamination has been found from routine examination of the soil samples.

In addition to pesticides including POPs were used in the agriculture and public health field in the past, there are several other practices as well as anthropogenic activities producing PCDD/Fs. The annual inventory of countrywide emission of unintentional POPs was estimated to be 312.55 g TEQ for Nepal (MOE 2004). This is very high for a country like Nepal least developing in terms of industrial and economy. This estimation was based on the UNEP Toolkit which has included the broad categories of waste such as waste incineration, ferrous and non ferrous metal production, power generation and cooking using biomass, production of mineral products, transportation, uncontrolled combustion processes production of chemicals and consumer goods, disposal and land filling and miscellaneous. However, it does not account all the sources of the unintentional POPs emission. There are increasing amount of PCDD/Fs emission from other unidentified and/or under estimate sources. An another estimates just for medical waste incineration amount to be 57.37 g TEQ / year based on the current rate of medical waste generation, incineration proportion and considering small box-type batch incinerator with no afterburner as it is mostly adopted in all individual health care institutions.

Toward management of POPs, earlier government is not found to be serious as there is still provision of waste incineration in its waste management guidelines including medical waste and has also given Environment Impact Assessment (EIA) clearance to some of the project with waste incineration components. It is important to make the highlight here that the waste incinerator no matter of its art of standards is the indentified major source of unintentional POPs such as PCDD/Fs the known human carcinogen. However, in the recent years, there was increasing concerned of the government as it has come up with the National Implementation Plan (NIP) for Stockholm Convention on Persistent Organic Pollutants with clear identification, prioritization as well as developed program of action linked with monitoring and reporting mechanism. Some of the recent development projects with FAO and GTZ towards realization of the few prioritized plan of action about the sound management of obsolete pesticides including POPs can be considered as remarkable positive progress towards overall development in this field which upon successful implementation will help to improve the country situation.

Key words: unintentional POPs, source, management