



ANNEX 1

Report Stakeholder Consultation Program



Dissemination, Improvements and Effective Implementation of NIP of Nepal

Submitted By

**Center for Public Health and Environmental Development
(CEPEHED)**

**Nayabasti, Imadol, Lalitpur
Kathmandu, Nepal**

Tel/Fax: +977—5201786

Web: www.cephed.org.np

Email: info@cephed.org.np

May 28, 2018

Program Schedule

Interaction Program on Dissemination, Improvements and Effective Implementation of NIP of Nepal

Date: May 23, 2018 Wednesday

Plant Protection Directorate (PPD), Hahrihar Bhawan ,Lalitpur

Jointly Organized by Plant Protection Directorate (PPD), Department of Agriculture (DoA), Ministry of Agriculture, land Management and Cooperatives (MoALMC) and Center for Public Health and Environmental Development (CEPHED)

Time	Activities/Programs	Resource Person
2:00-2:20	Registration and Tea	Ms. Anjana Suwal , Program Officer CEPHED
2:20-2:25	Chair Taking and inviting the guest in podium	Mr. Achyut Prasad Dhakal Program Director Plant Protection Directorate (PPD)
2:25-2:30	Invitation of Guests on Podium and Welcome Speech	Mr. Ram Krishna Subedi Information Officer Plant Protection Directorate
2:30-2:35	Program Highlight and Objectives	Mr. Ram Charitra Sah, Executive Director , CEPHED
2:35 -2:40	Inauguration by Chief guest by Airing Radio Jingle on Pesticides and lighting Lamp	Mr. Durga Pd. Dawadi, Director General, Department of Environment, Ministry of Forest and Environment (MOFE), Government of Nepal
TECHNICAL SESSION		
2:40 – 3:00	Present Status of Pesticide Use in Nepal	Mr. Achyut Prasad Dhakal, Progreem Director, PPD
3:00 to 3:30	New NIP (National Implementation Plan): Dissemination, Review and Way forward for Effective implementation	Ram Charitra Sah , Executive Director , CEPHED
3:30 to 4:00	Interaction and Question /Answer	
4:00 to 4:30	Closing Ceremony	
	Closing Remark: Pesticide Registration and Management Division	Mr. Bed Prasad Chaulagain, Pesticide Registrar ,
	Closing Remarks : Chief Guests	Mr. Durga Prasad Dawadi, Director General, Department of Environment, Ministry of Forest and Environment.
	Closing by Chairperson	Mr. Achyut Prasad Dhakal Program Director Plant Protection Directorate (PPD)
4:30 onward	Refreshment and Departure	

Interaction Program

Dissemination, Improvements and Effective Implementation of

National Implementation Plan (NIP) for Stockholm Convention on Persistent Organic Pollutants (POPs) of Nepal

Date: May 23, 2018

Plant Protection Directorate, Lalitpur, Nepal

Jointly Organized by



Plan Protection Directorate (PPD),
Department of Agriculture,
MOAgLMC, <http://ppdnepal.gov.np>



Center for Public Health and
Environmental Development
www.cephed.org.np

Supported By



A. Inaugural Session

Ms. Anjana Suwal, Program Officer of CEPHED started the program welcoming all the participants and inviting the Chair of the Interaction Program Mr. Achyut Pd. Dhakal, Program Director, Plant Protection Directorate (PPD), Department of Agriculture (DoA), Ministry of Agriculture, land Management and Cooperatives (MoALMC); Chief Guest Mr. Durga Prasad Dawadi, Director General, Department of Environment, Ministry of Forest and Environment (MOFE); Director of Plant Quarantine, Pesticide Registrar Mr. Bed Pd. Chapagain; Director Mr. Ram Krishna Subedi; Mr. Ram Charitra Sah, Executive Director, CEPHED as well as welcoming all the participants from different stakeholders including Pesticide Association of Nepal, Journalists, Ministry of Agriculture representatives, department food test and quality control, NAARC etc.

With the formal approval of Chair and chief guest, the technical session started with two detailed presentations by Program Director of Mr. Achyut Pd. Dhakal, Program Director, Plant Protection Directorate (PPD), Department of Agriculture (DoA), Ministry of Agriculture, land Management and Cooperatives (MoALMC); and Mr. Ram Charitra Sah, Executive Director, CEPHED.

B. Technical Session

A technical paper presentation by Program Director of Mr. Achyut Pd. Dhakal, Program Director, Plant Protection Directorate (PPD), Department of Agriculture (DoA), Ministry of Agriculture, land Management and Cooperatives (MoALMC) entitled "**Present Status of Pesticide Use in Nepal**" was presented. His presentation can be summarized as follows;

- Presentation outlines
- Defining pesticides and its scope
- History of pesticide use in Nepal since 1950s for Malaria Eradications and DDT was the first chemical pesticide introduced in Nepal in 1952 by Ministry of Health. DDT uses in Agriculture sectors in 1956.
- The first pesticide production factory, Nepal Pesticide and Chemical Industries Private Ltd. (NEPCIL) was established in 1977
- Function of Plant Protection Directorate :
 - Advisory services,
 - Plant health information management
 - Diagnostic Services
 - Research and Technology Development
 - Input supply
 - Policy, Regulation and Control
- Pesticide problems: resistance, bio accumulation and bio magnifications
- Introducing POPs (Persistent Organic Pollutants)
- DDT case study and its impacts
- 12 Initial POPs
- 16 New POPs
- Introducing POPs Convention, Annex A, B and C
- Status of Nepal on POPs, already banned 16 Pesticides including 11 POPs Chemicals
- Major laws directly relating POPs in Nepal: Pesticide Act, Regulation, EPA, EPR, Solid Waste Management Act 2011.
- National Implementation Plan (NIPs)

- Rapid bio monitoring of Pesticide Residues (RBPR): **RBPR** does not calculate amount of pesticide or gives name of pesticides. RBPR only analysis the Organo Phosphate and Carbamate group of pesticides. RBPR is purely based on *enzymatic reaction* in toxicological sense.
 - It gives only inhibition percentage from which the result is withdrawn
 - Below 35% is edible
- 35- 45% need quarantine for few days and warning
 - More than 45% is considered as not edible in toxicological sense
- Now able to conduct fungicide (**Dithiocarbamates fungicide**) and **Synthetic pyrethroids** insecticide residue analysis also.

Year wise (Over all) RBPR Result

RBPR laboratory, Kalimati, Kathmandu

S.N.	Year	Inhibition %			Total
		<35%	35%-45%	>45%	
1	Asar 2071	155 (82.89%)	6 (3.21%)	26 (13.9%)	187
2	FY 2071-2072	1551 (98.79%)	15 (0.96%)	4 (0.25)	1570
3	FY 2072-2073	1918 (99.07%)	8 (0.41%)	10 (0.52%)	1936
4	FY 2073-2074	1904 (98.6%)	5 (0.26%)	21 (1.14%)	1930
	Total	5528 (98.29%)	34 (0.60%)	61 (1.10%)	5623

RBPR Laboratories

- Kathmandu (Kalimati)
- Jhapa (Birtamod)
- Sarlahi (Nawalpur)
- Kaski (Pokhara)
- Rupandehi (Butwal)
- Banke (Nepalgunj)
- Kailali (Attaria)



- Problems and risks on pesticides
 - Health Hazards (Acute, Chronic)
 - Food Contamination due to undesirable residues
 - Development of resistance by pests to pesticides,
 - Resurgence of pests, outbreak of secondary pests
 - Environmental pollution (Air, Water, Soil)
 - No or inadequate use of PPE
 - Harvesting of crops without following pre harvest interval (PHI)
 - Overdoses and frequencies in pesticide use
 - Inappropriate storage and disposal of used containers
 - Pesticide retailers are not sound in pesticide handling
 - Open border causes entry of unregistered and harmful pesticides
 - No or inadequate consultation with technician on pesticides

The Second technical paper entitled " **New NIP (National Implementation Plan): Dissemination, Review and Way forward for Effective implementation**" were presented by Mr. Ram Charitra Sah, Executive Director/Environment Scientist of CEPHED, the Team Leader for this Country Situation Report of POPs project of IPEN/CEPHED. His presentation broadly summarized as follows.

- Introduction to CEPHED : research, publication, awareness raising, model development and policy influence with a lot of national and international recognitions,
- POPs, POPs Convention, Provision of 30 Article and 7 Annexes
- Old Dirty Dozen POPs with their classification under annexes A, B, & C
- New 16th POPs with their classification under annexes A, B, & C
- COPs of POPs Convention and its major decisions
- Aims of the POPs Convention
- Key Objectives of POPs Convention

- Major obligation of the Party Country
- Coals of NIP Review and Updates (Article 7) of the Convention
- NIP (National Implementation Plan) background of Nepal
- Major Completion of First NIP
 - 100% Safe Disposal of all obsolete pesticide including POPs Pesticide but sites remain contaminated , yet to be remediated.
 - Status of further accumulation need to be regulated?
 - PCB: De-Chlorinated of Available PCB contaminated transformer Oil 36.73% (54 out of 147) tons and Equipment's (40.26%) (155 out of 385 tons)
 - Endosulfan: totally banned, PPD Gazette Notice.
 - Lindane : Totally banned in Ag but still used in Health
 - PFOS: some might be available in Nepal
 - PBDE and HBCD: Neither produced not imported in Nepal
 - EEE products: 15870 Kg to 46333 kg
 - Transportation Sector: 3079.3 kg
 - BDE has been also found in Children Toys in Nepal not included into the updated NIP
 - DDT: Disposed of old and no new import
 - PCDD/F: 335.972gTEQ=237.6 (2012) =175.1 gTEQ
 - Incinerator 12 g TEQ to 25.9g TEQ
 - Gazette Incinerator Standard, SWM Act 2011, SWM Rule 2013, Hazardous Regulation (upcoming), New Constitution 2015 with health and environment right ensured. Labor Act 2017
 - Radio and Video program on stop using & burning plastic bag to reduce PCDD/F from DOE, Nepal Radio and PPD
- NIP Priority (First NIP & Updated NIP)

NIP Priority 2007 (2007 to 2028)

Activities	Final Priority
Pesticides	1
<ul style="list-style-type: none"> • Safe packaging , safe storage, and disposal of obsolete pesticide • Remediation and site stabilization 	
PCBs	2
<ul style="list-style-type: none"> • Manage stockpiles of PCBs and appropriate measures for handling and disposal of articles in use • Identification of Stockpiles of PCB contaminated article in use and waste • Ban on sell of PCB contaminated transformer oil 	
POPs	2
<ul style="list-style-type: none"> • Public awareness raising, information and education 	
PCDD/F	3
<ul style="list-style-type: none"> • Complete ban on elemental chlorine bleach to start with pulp industries • Integrated waste management policy, legislation with special reference to reduce, reuse, and recycle of wastes • Complete ban on open burning of kitchen and garden waste in municipality area aimed to put complete ban on open burning throughout the country 	
Legislative framework/ Capacity building	4
<ul style="list-style-type: none"> • Institutional strengthening, legislation/policy formulation on POPs • Harmonization of sector legislation • Human resource development, research and development 	
Environmental monitoring (pre and post disposal)	5
BAT/BEP	6
<ul style="list-style-type: none"> • Alternative energy program for household energy need 	
Promotion of intermediate technological solution on hazardous waste disposal	7
Release reduction from industrial process/establishment with the utilization of CPEEM technology	8
Establishment of electrical crematoria	9

Compliance Status

Table 3.1: Final Priorities as in initial NIP and status of their implementation		
Activities	Final Priority	Status
Pesticides (Safe packaging, safe storage, and disposal of obsolete pesticide; Remediation and site stabilization)	1	Completed
PCBs (Manage stockpiles of PCBs and appropriate measures for handling and disposal of articles in use; identification of Stockpiles of PCB contaminated article in use and waste; ban on sell of PCB contaminated transformer oil)	2	Completed
POPs (Public awareness raising, information and education)	2	Partially completed
PCDD/F (Complete ban on elemental chlorine bleach to start with pulp industries; integrated waste management policy, legislation with special reference to reduce, reuse, and recycle of wastes; Complete ban on open burning of kitchen and garden waste in municipality area aimed to put complete ban on open burning throughout the country)	3	No significant development
Legislative framework/ Capacity building (Institutional strengthening, legislation/policy formulation on POPs; Harmonization of sector legislation; Human resource development, research and development)	4	Partially completed
Environmental monitoring (pre and post disposal)	5	Partially completed
BAT/BEP (Alternative energy program for household energy need)	6	Partially completed
Promotion of intermediate technological solution on hazardous waste disposal	7	No significant development
Release reduction from industrial process/establishment with the utilization of CP/EE/EM technology	8	No significant development
Establishment of electrical crematoria	9	Partially

NIP Priority 2017 (2017 to 2030)

Priorities for the Updated NIP Implementation in Nepal	
Activities	Final Priority
Legislative framework: Institutional strengthening, legislation/policy formulation on POPs; Harmonization of sector legislation	1
POPs in general : Public awareness raising, information and education & training	2
Establish research and laboratory facilities with focus on chemicals and developing PRTR	3
Environmental monitoring (pre and post disposal)	4
Capacity building at Custom, Quarantine offices and Armed Police	5
Establishment of network for inter-institutional information sharing (focusing on Coordination, Responsibilities and Authorities)	6
PCDD/F emission control	7
BAT/BEP : Renewable energy program for household energy need	8
CP/EE/EM technology : Release reduction from industrial process/establishment	9
Promotion of intermediate technological solution on hazardous waste disposal	10
Decontamination and site remediation for POPs contaminated sites	11
Promotion of electrical crematoria	12

-
- Compliance Status of First NIP
- Legal and Institutional Arrangement of NIP Implementation
- NIP REVIEW : GAP Analysis of First NIP

Inclusion of POPs in NIPs

First NIP (2007)	Updated NIP 2017 inclusion	Updated NIP 2017 doesn't included
<ol style="list-style-type: none"> 1. Aldrin 2. Chlordane 3. Dieldrin 4. Endrin 5. Heptachlor 6. Mirex 7. Toxaphene 8. Hexachlorobenzene 9. PCBs 10. DDT 11. Chlorinated dioxins 12. Chlorinated furans 	<ol style="list-style-type: none"> 1. Pentachlorobenzene (PeCB),, 2. Alpha HCH 3. Beta HCH), 4. Chlordecone 5. HBB, 6. Lindane, 7. OctaBDE, 8. PentaBDE, 9. Perfluorooctane sulfonate (PFOS), 10. Endosulfan , 11. Hexachlorobutadiene (HCBd) 	<ol style="list-style-type: none"> 1. Pentachlorophenol (PCP) and its salts and esters 2. PolyChlorinated Naphthalene(PCN) 3. Hexachlorobutadiene 4. Short-chain chlorinated Parafins (SCCPs) 5. Decabromodiphenyl ether (Deca BDE)

-
- Gaps in NIP Updates
 - No real stakeholder consultation (e.g. CEPHED is only NGO working on POPs issues has been invited only once during the whole series of updates)
 - No Actual Reviews of Success / Failure 1st NIP.
 - Association between **POPs and Climate change** need to be included.
 - Soil Contamination in Pesticide Warehouses repeatedly informed to MOPE. Not included, would have enriched the updated NIP.
 - Study of PBDE in Children Toys were also formally informed to MOPE . Not included, would have enriched the updated NIP.
 - Under estimates of U POPs (PCDD/F) just because data has not been available? Most of the data has been taken from First NIP without any updates.
 - Not inclusion of all new potential POPs : **28 : 23 included 5 Left out**
 - Article 15, Reporting: Poor Reporting done (2010 and 2014) lacks a lot of data and information. 2018 is dues next round of reporting?
 - No declaration and reporting systems of the release of POPs

POPs Contamination in Warehouses

Organic/Inorganic compound	Comparison of the Measured pesticide contamination with the globally acceptable guideline value Target Value (mg/kg)										
	Target Value (Netherlands)	Austria		Nepal		Bhutan		Lanka		Bhutan	
		Measured value	times more than acceptable	Measured value	times more than acceptable	Measured value	times more than acceptable	Measured value	times more than acceptable	Measured value	times more than acceptable
DDT/DDE/DD	0.01	92.07	9207	2.47	247	12.24	1224	3.92	392	2.22	222
Beta BHC	0.009	72.04	8004	82.79	9189.9	-	-	-	-	-	-
Gamma BHC	0.00005	3.377	67540	6.33	126600	-	-	30.65	613000	16.61	332200
BHC-compounds	0.01	75.42	7542	89.12	8912	-	-	30.65	3065	16.61	1661
Endosulfan	0.00001	2.67	267000								

Source: Pesticide Residue Analysis Results, CEPHEC 2014 (carried out at WETC Pvt. Ltd's Laboratory)

BDE-POPs in Toxic Toys , not included in New NIP



Samples/ Id	Octa BDE	Deca BDE
Puzzle Cube(NPI04)	34	234
Cube Block(NPL-01)	17	38
Cube Block (NPL02)	58	19
Brominated flame retardants (BFR) Pentabromodiphenyl ether (PentaBDE)		

- Improvements

(a) Error Correction (more than 20)

- Simple error is typo to calculation and summation
- Dates of COPs are mismatched

Executive Summary, COP5 (2009), COP6 (2011) and COP 7 (2013), given where as it should be COP4 (2009), COP5 (2011) and COP 6 (2013), COP 7 (2015) pg I, 1, 117

(b) Inclusion of the research / study report

- PBDE in children toys
- Study of POPs Contamination level in Pesticide warehouses and recommend for the reclamation
- Major Challenges & Obstacles of NIP implementation and updates
 - weak institutional memory
 - not updating of information,
 - Lacking adequately trained human resources
 - inadequate legislations and weak implementation.
 - inadequate infrastructure and capacity presently.
 - Lack of adequate funding's allocations for the NIP activities
 - Geographic challenges of the country.
 - Time, funds & infrastructure constraints
 - Lack of harnessing capacity of international funding
- Recommendations for effective implementation
 - **Use of Lindane for Pharmaceutical purpose should be immediately stopped.**
 - **Contaminated site assessment and remediation**
 - **Massive public awareness**
 - **Study of health and environmental impacts of POPs including that of New POPs**
 - **Formation of the required institutional set up (e.g. POPs Unit) as envisioned in the NIP towards effective implementation of the updated NIP.**
 - **Allocate and ensured enough budget to realize the updated NIP etc.**
 - Evidence of presence of POPs in the environment, food, feed and humans needs to be raised.

C. Question Answer

After two technical presentations, forum was open for discussion and question answers. Some very important question like evidence of the public health impacts, impacts on the vegetation, aquatic and terrestrial fauna and flora, avifauna, etc. were exclusively asked by the journalist. Other important question were reason of not inclusion of BHC in POPs lists as it exhibits most of the POPs Chemicals criteria. Answer given from the presenters explained about the existing evidence of POPs contamination in air, water, soil, vegetation, animals and even human milks and bloods. Also explained about the process of listing of any chemicals into the Convention.

D. Closing Session

Mr. Bed Prasad Chapagain discussed the other two important Convention like Basel Convention that control transboundary movement of the toxic waste and Rotterdam Convention that regulate highly hazardous chemicals import and export. Today he talks about the POPs Convention, which is very informative and successful in providing information including NIP and educate us. He however feels the need of strengthen the Pesticide Registration and Management Office in order to make the Nepal's robust participation in the international

convention meeting by ensuring the appointment of chemist in the pesticide registration office and their participants in the international forums.

Chief Guest remarks (paraphrased): He clearly mentions the need of safer alternatives, we need to accelerate our process of addressing all 28 POPs instead of only including 23 POPs even in the updated NIP that was developed in 2017. We do need to move towards organic farming and at the same time we need to go for the effective implementation of the POPs Convention. We have already adopted 23 POPs through our updated NIP. Ministry of Environment as focal ministry have prepared this updated NIP as focal ministry however we all need to ensure its effective implementation especially the Ministry of Agriculture and this PPD should also play the effective implementation by making strong monitoring and effectively implement the NIP. If we are not able to implement it effectively it will not serve our purpose and hence there are urgent needs of effective implementation of the planned and prioritized plan of actions in this updated NIP as a party country to the POPs Convention.

Finally, In my opinion today interaction program was one of the successful and fruitful in the sense that it educates us and updated us on Pesticides, POPs and NIP, its prioritized plan of action, gaps and way of improvement towards its effective implementation. Much work has been done however more has yet to be done. We have been doing work on POPs well before being a party to the convention by banning the POPs pesticide. Though there are some traces of POPs found in soil that needs to be remediated but the good thing is that there were no POPs traces found in blood, which is good for all of us. Finally, we all need to work hard towards effective implementation of the NIP and its prioritized plan of actions.

Interaction Program
Dissemination, Improvements and Effective Implementation
of
National Implementation Plan (NIP) for Stockholm Convention
on Persistent Organic Pollutants (POPs) of Nepal

Date: May 23, 2018
Plant Protection Directorate, Lalitpur, Nepal

Jointly Organized by

Supported By

Plan Protection Directorate (PPD),
Department of Agriculture,
IOAgLMC, <http://ppdnepal.gov.np>

CEPHED
Center for Public Health and
Environmental Development
www.cephed.org.np

IPEN
a toxics-free future

UNDP
Nepal

GEF

SGP The GEF
Small Grants
Programme

25
YEAR

The following images were taken by CEPHED staff and depict effective engagement of CSOs and government officials of Nepal seeking efficient implementation of the Stockholm Convention





