Continuing Regional Support for the POPs Global Monitoring Plan under the Stockholm Convention and new POPs tools and methods

GMP2 Asia Inception and New POPs Workshop

25-27 January 2015

Hanoi, Vietnam

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UNITAR Chemicals and Waste Management Programme

Tools and Methods for New POPs

Tools and Methods for New POPs

- 4th meeting of the Stockholm Convention COP: 9 new POPs were listed into the annexes A, B or C of the Convention
- COP requested updating of the guidance document for the GMP
- UNEP Chemicals and Waste Branch is executing the GEF-funded project 'Establishing the tools and methods to include the nine new POPs into the Global Monitoring Plan‘
- Developing/updating guidance documents for sampling and analysis of PFAS and polybrominated flame retardants (PBDE, HxBB, HBCD)

Tools and Methods for New POPs

Project partners: BRS Secretariat, Environment Canada (through co-finance), IVM-VU Amsterdam, CSIC Barcelona, MTM Örebro, CVUA Freiburg (UNEP/WHO Reference Laboratory for Human Milk)

Starting date: 08/2011; Expected completion date: 06/2016

Status: close to completion; POPs laboratory databank to be updated; final evaluation workshops

Tools and Methods for New POPs

Achievements:

- Amendment of the POPs analytical guidance document:
  - 10 new POPs included;
  - 1 new GMP matrix (water) included;
  - 1 new instrumentation level for PFOS included (LC/MS-MS);

  adopted by Stockholm Convention COP as endorsed by the global coordination group
- Training courses for new POPs and water analysis held
- Field testing of methodology for analysis of new POPs in abiotic and biotic matrices completed; data available
- National air/water and mother's milk/blood samples collected and analysed; expert labs for mirror analysis
- Sectoral reports (air, water, blood or PFOS, BFR) available

Tools and Methods for New POPs

Remaining activities:

- ***Final dissemination WS being held back to back with GMP2 inception WSs***
- POPs laboratory databank: new structure is online; refinement to be undertaken; module for time-resolved scoring still pending; tier definition to be amended (http://212.203.125.2/databank/Laboratory/Search.aspx)

Tools and Methods for New POPs

- PFAS analysis in water - Set-up and guidelines for monitoring
- Procedure for the Analysis of POPs – Protocol 1: Analysis of PFOS in Water and FOSA in Mothers' Milk Serum and Air, and the Analysis of some FOSAS and FOSES in Air
- Procedure for the Analysis of POPs – Protocol 2: Analysis of PCB and OCP in Human Milk, Air and Human Serum
- Procedure for the Analysis of POPs – Protocol 3: Analysis of PBDE in Human Milk, Air and Human Serum
- Move with instructions for the cleaning of PUF disks for passive sampling of ambient air


PFAS analysis in water for the Global Monitoring Plan of the Stockholm Convention

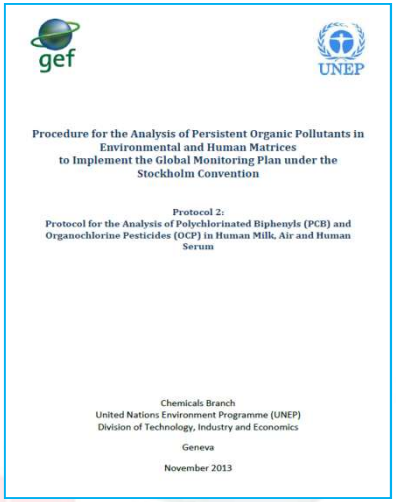
Set-up and guidelines for monitoring

Jana Weiss, Jacob de Boer, Urs Berger, Derek Muir, Ting Ruan, Alejandra Torre, Foppe Smedes, Branislav Vrana, Fabrice Clavien, Heidelore Fiedler

Chemicals Branch
United Nations Environment Programme (UNEP)
Division of Technology, Industry and Economics

Geneva

April 2015


Procedure for the Analysis of Persistent Organic Pollutants in Environmental and Human Matrices to Implement the Global Monitoring Plan under the Stockholm Convention

Protocol 2:
Protocol for the Analysis of Polychlorinated Biphenyls (PCB) and Organochlorine Pesticides (OCP) in Human Milk, Air and Human Serum

Chemicals Branch
United Nations Environment Programme (UNEP)
Division of Technology, Industry and Economics

Geneva

November 2013

http://www.unep.org/chemicalsandwaste/POPsandScience/AnalysisandMonitoring/MethodDevelopment/tabid/1059865/Default.aspx

Continuing Regional Support for the POPs Global Monitoring Plan under the Stockholm Convention

Objective

*To strengthen the capacity for implementation of the updated POPs Global Monitoring Plan (GMP) and to create the conditions for sustainable monitoring of the **23 POPs in each region***

Timeframe

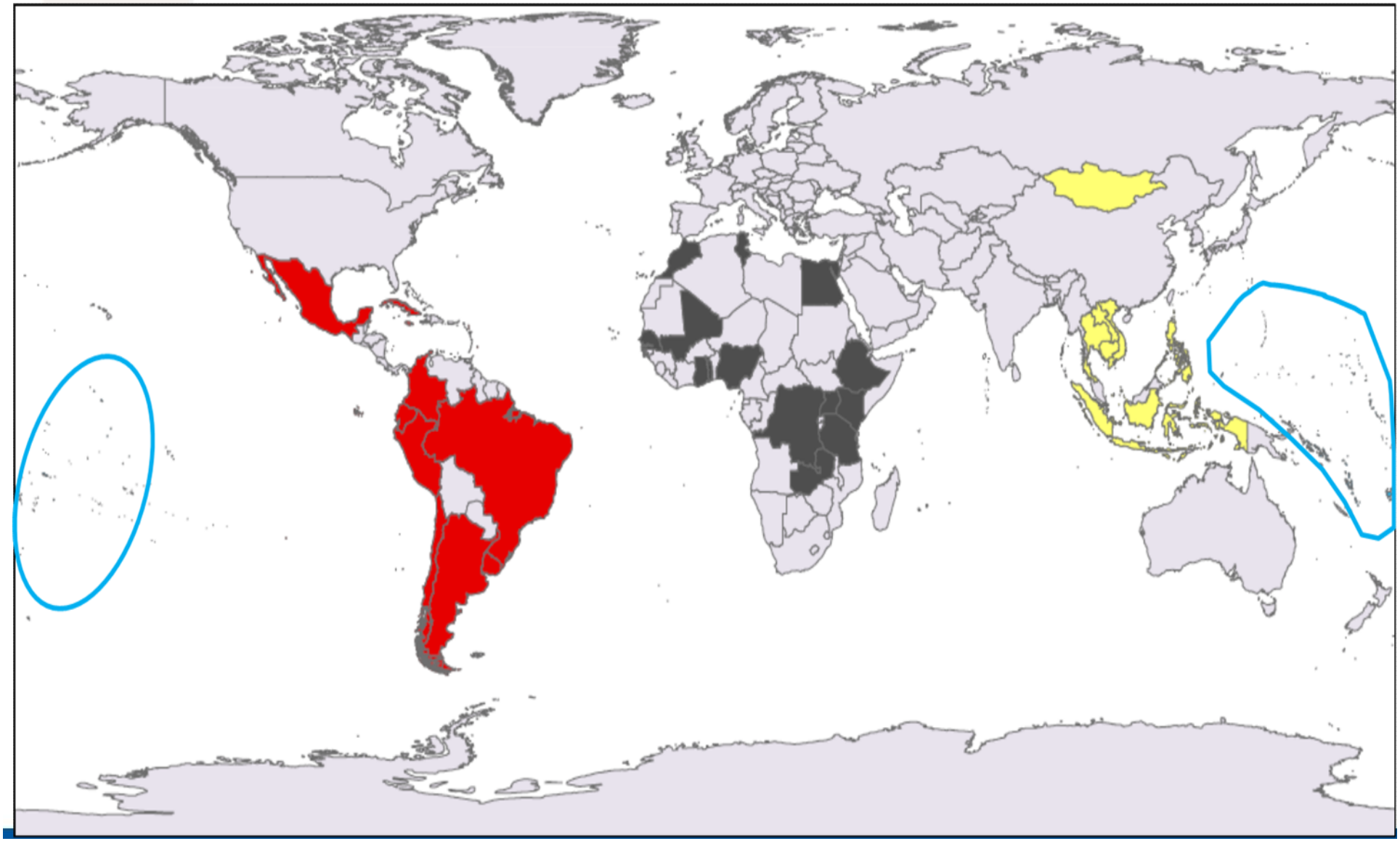
48 months (2015-2018)

Implementing Agency

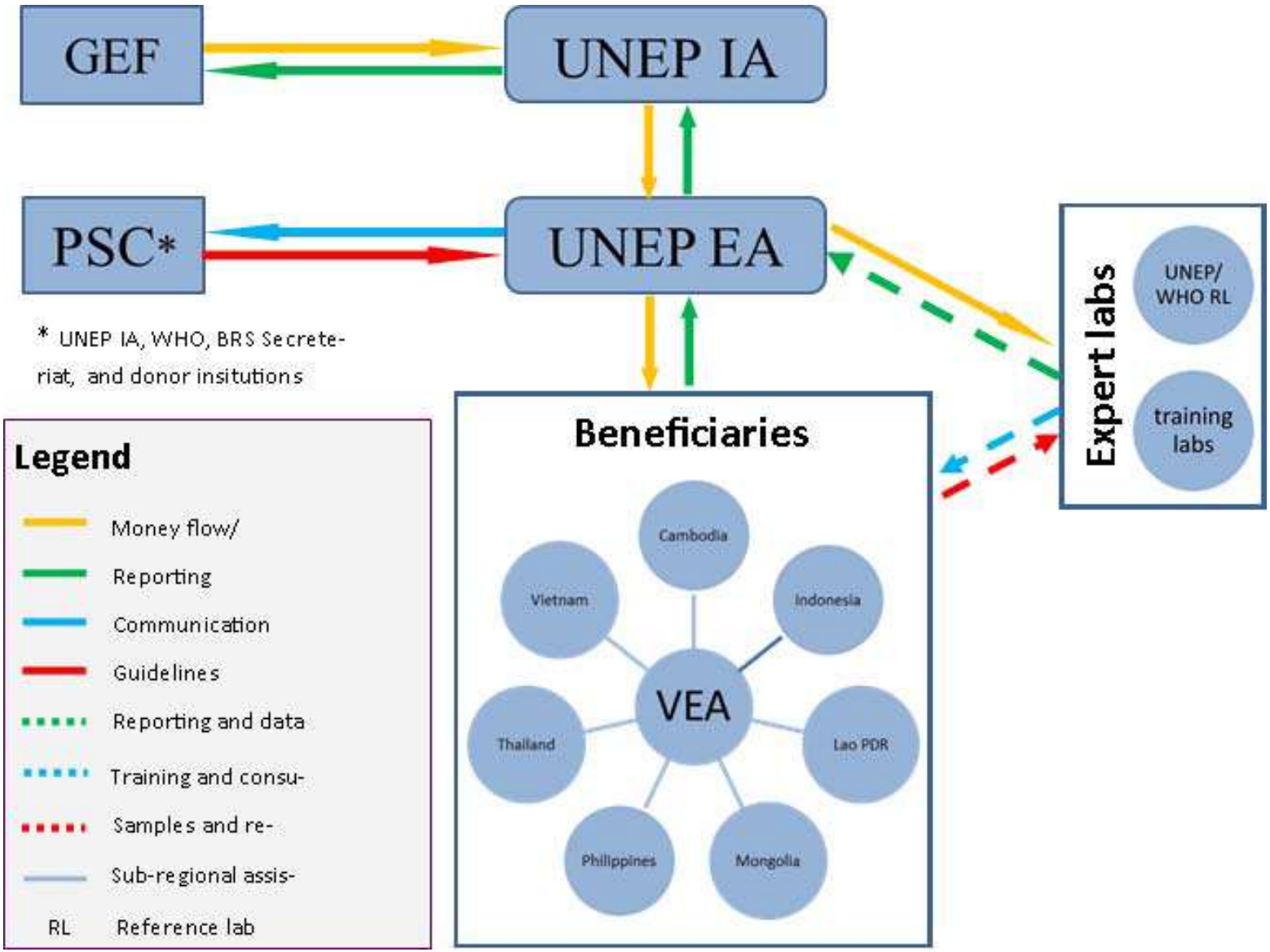
UNEP / DTIE / Chemicals and Waste Branch

Executing agencies

UNEP and SCRC-Uruguay for GRULAC



GMP2: Organigram



Each project will:

- ✓ **Component 1:** Securing conditions for successful project implementation
- ✓ **Component 2:** Capacity building and data generation on analysis of core abiotic matrices (air and water)

  (2 years of PAS and water sampling)
- ✓ **Component 3:** Capacity building and data generation on analysis of core biotic matrices (human milk)

  (1 round of human milk sampling)
- ✓ **Component 4:** Assessment of existing capacities and reinforcement of national POPs monitoring

  (2 rounds of interlaboratory assessments and national samples)
- ✓ **Component 5:** Securing conditions for sustainable POPs monitoring

Funding

Region	GEF funds	Co-financing	Total
Africa	4,208,000	10,190,200	14,398,200
Asia	3,936,000	13,164,900	17,100,900
GRULAC	3,636,000	13,375,401	17,011,401
Pacific Islands	1,995,000	6,448,604	8,443,604
Grand total	**13,775,000**	**43,179,105**	**56,954,105**

Cofinance committed:

- All participating countries
- Executing agencies (UNEP and Uruguay Centre)
- BRS Secretariat
- CVUA UNEP/WHO Reference Laboratory
- Recetox
- MTM Örebro University
- IVM VU University Amsterdam
- CSIC Barcelona
- EULA, Chile
- University of Queensland, AUS
- Government of Japan (MOEJ)

GMP2: POPs to be monitored

	Compounds to Be Monitored			
	Air	Human Milk	Human Blood	Water
Initial POPs				
Aldrin	Aldrin	Aldrin	Aldrin	Water has not been recommended as a core matrix for the lipophilic and nonpolar initial twelve POPs; therefore, analysis of surface waters is not included
Chlordane	*cis*- and *trans*-chlordane; and *cis*- and *trans*-nonachlor, oxychlordane	*cis*- and *trans*-chlordane; and *cis*- and *trans*-nonachlor, oxychlordane	*cis*- and *trans*-chlordane; and *cis*- and *trans*-nonachlor, oxychlordane	
DDT	4,4'-DDT, 2,4'-DDT and 4,4'-DDE, 2,4'-DDE, 4,4'-DDD, 2,4'-DDD	4,4'-DDT, 2,4'-DDT and 4,4'-DDE, 2,4'-DDE, 4,4'-DDD, 2,4'-DDD	4,4'-DDT, 2,4'-DDT and 4,4'-DDE, 2,4'-DDE, 4,4'-DDD, 2,4'-DDD	
Dieldrin	Dieldrin	Dieldrin	Dieldrin	
Endrin	Endrin	Endrin	Endrin	
HCB	HCB	HCB	HCB	
Heptachlor	Heptachlor and heptachlorepoxide	Heptachlor and heptachlorepoxide	Heptachlor and heptachlorepoxide	
Mirex	Mirex	Mirex	Mirex	
PCB	ΣPCB_7 (7 congeners): 28, 52, 101, 118, 138, 153, and 180	ΣPCB_7 (7 congeners): 28, 52, 101, 118, 138, 153, and 180	ΣPCB_7 (7 congeners): 28, 52, 101, 118, 138, 153, and 180	
	PCB with TEFs [1] (12 congeners): 77, 81, 105, 114, 118, 123, 126, 156, 157, 167, 169, and 189	PCB with TEFs* (12 congeners): 77, 81, 105, 114, 118, 123, 126, 156, 157, 167, 169, and 189	PCB with TEFs* (12 congeners): 77, 81, 105, 114, 118, 123, 126, 156, 157, 167, 169, and 189	
PCDD/PCDF	2,3,7,8-chlorosubstituted PCDD/PCDF (17 congeners)	2,3,7,8-chlorosubstituted PCDD/PCDF (17 congeners)	2,3,7,8-chlorosubstituted PCDD/PCDF (17 congeners)	
Toxaphene	Congeners P26, P50, P62	Congeners P26, P50, P62	Congeners P26, P50, P62	
New POPs listed at COP-4				
Chlordecone	Chlordecone	Chlordecone	Chlordecone	
α-HCH	α-HCH	α-HCH	α-HCH	
β-HCH	β-HCH	β-HCH	β-HCH	
γ-HCH	γ-HCH	γ-HCH	γ-HCH	
Hexabromobiphenyl	PBB 153	PBB 153	PBB 153	
Pentachlorobenzene	PeCBz	PeCBz	PeCBz	
c-penta BDE c-octa BDE	BDE 47, 99, 153, 154, 175/183 (co-eluting) Optional: BDE 17, 28, 100	BDE 47, 99, 153, 154, 175/183 (co-eluting) Optional: BDE 100	BDE 47, 99, 153, 154, 175/183 (co-eluting) Optional: BDE 100	
PFOS [2]	PFOS, PFOSA, NMeFOSA, NEtFOSA, NMeFOSE, NEtFOSE	PFOS, PFOSA	PFOS, PFOSA	PFOS, PFOSA
New POPs listed at COP-5				
Endosulfan	α-, β-endosulfan; and endosulfan sulfate	α-, β-endosulfan; and endosulfan sulfate	α-, β-endosulfan; and endosulfan sulfate	

Passive samplers - Jamaica

Shipment of glass bottles →

More than 85 national pools of human milk from 2000 to 2012 analysed

GMP2: Next Steps

- **Expert laboratories** in process to be contracted for training courses, provision of consumables, analysis of abiotic and biotic samples etc.

- **Regional inception workshops** to be held:
  - GRULAC: BCCC Uruguay (December 2015)
  - Asia Region: Vietnam Environment Agency (January 2016)
  - Pacific Islands: University of the South Pacific (April 2016)
  - Africa Region: University Nairobi (April 2016)

- Preparation of SSFAs for **national activities** (national workplans and budgets)

- Identification of **capacities and training needs** within countries

- Update of the **POPs laboratory databank**
- Others

Таны орой дуртай!

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