

Outline and history of POPs Monitoring Project in East Asian Countries

As of January 2026

Background of this project

This project has been launched since 2002 by Ministry of the Environment, Government of Japan, for contributing to the effectiveness evaluation under the Stockholm Convention.

- Sixteen workshops were held with the regional cooperative efforts.
- Background monitoring on ambient air and capacity building of air sampling have been carried out in participating countries.

Objectives of this project

- Objectives of POPs Monitoring Project in East Asian Countries are:
 - to know the **background levels of POPs in the environment at the East Asia Sub-region**;
 - to provide **comparable and scientifically sound data on the media considered as essential**; and
 - to **contribute to the effectiveness evaluation under the Stockholm Convention, Article 16**.

Structure of this project

Workshop on Environmental Monitoring of POPs in East Asian Countries

- All participating countries dispatch a delegation.
- Promote to establish a framework establish a framework for environmental monitoring of POPs that suits the East Asian region.
- Plan to monitoring plan and Capacity building.
- Review the obtain monitoring results.
- Develop the sub regional report

Regional Organization Group

Framework of POPs Monitoring and Capacity building on POPs monitoring in East Asia

Japan

- ✓ Super-site monitoring in Hedo Cape in Okinawa
- ✓ Target: **all POPs**

Cooperation & harmonisation

ROK

- ✓ Super-site monitoring in Jeju Island
- ✓ Target: **all POPs**

Technical support

Technical support for sampling

POPs analysis training course

Additional Core Labs.

- ✓ Super-site monitoring in background site with lower frequency
- ✓ Target: **all POPs**

Singapore

- ✓ Possible contribution

Rest of countries

- ✓ Cooperative monitoring in background
- ✓ Target: **initial POPs**

Data

Member countries



Kingdom of Cambodia



Mongolia



Republic of Indonesia



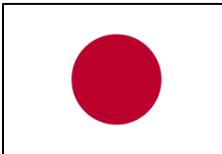
Republic of
the Philippines



Republic of Korea



Republic of Singapore



Japan



Kingdom of Thailand



Lao People's
Democratic Republic



Socialist Republic of
Viet Nam



Malaysia

History of the workshop

- Dec. 2002 First workshop (Tokyo, Tsukuba)
- Dec. 2003 Second workshop (Tokyo)
 - The need of Expert Working Group discussion was raised to implement trial phase of background air monitoring for the effectiveness evaluation of the Stockholm Convention, Article 16.
- Jan. 2004 First Expert Working Group meeting (Tokyo)
 - Implementation of the trial monitoring in Vietnam and Indonesia was decided.
- Oct. 2005 Third workshop (Tokyo)
 - First Policy Group meeting was held.
 - Trial monitoring was decided to shift to the actual activity.

History of the workshop

- Sept. 2006 Fourth workshop (Tokyo)
 - Preparation of the Sub-regional Report on the POPs Monitoring Project in East Asian Countries was decided.
- Nov. 2007 Fifth workshop (Kyoto)
 - Submission of the Sub-regional Report to the Asia-Pacific Regional Organization Group was endorsed.
 - Hedo (Japan) and Cheju (ROK) were endorsed as the Super-sites in East-Asia sub-region for the monthly monitoring.
- Nov. 2008 Sixth workshop (Tokyo)
 - Discussion on setting the additional Super-site(s) monitoring was started to cover South-East Asia region.

History of the workshop

- Sept. 2009 Seventh workshop (Tokyo)
 - Implementation of frequent monitoring in Tam Dao, Vietnam was agreed.
 - The application to the UNEP/GEF trust fund was considered.
- Sept. 2010 Eighth workshop (Yokohama)
 - Vietnam expressed its willingness to lead the UNEP/GEF trust fund project and to start the preparation of Project Identification Form (PIF).
- Jan. 2012 Ninth workshop (Bangkok, Thailand)
 - ROK expressed its willingness to hold the POPs Analysis Training toward the participating countries
- Nov. 2013 Tenth workshop (Manila, Philippines)
 - The significance of the coalition between POPsEA and UNEP/GEF projects are confirmed.
 - The significance of the building of the POPs monitoring capacity for the sustainability of the POPsEA project was raised

History of the workshop

- Jan. 2016 Eleventh workshop (Hanoi, Vietnam)
 - This workshop was held as back-to-back with the Inception Workshop of the UNEP/GEF GMP2-Asia project.
 - The collaborative activities and the harmonization of the technical matter were expected to be promoted.
- Jan. 2018 Twelfth workshop (Yokohama, Japan)
 - Significance of seamless cooperation after completing the UNEP/GEF GMP2-Asia project was recognised;
 - Significance of additional Core Laboratories was discussed and the implementation of capacity building program was accepted.

History of the workshop

- Jan. 2020 Thirteenth workshop (Bangkok, Thailand)
 - Preparation of the 3rd Sub-Regional Report by summarizing the obtained data and submission to the ROG were accepted.
 - Preparation of Terms of Reference describing the activities of the additional Core Laboratories through the consultation with the candidate countries was agreed.
- Mar. 2022 Fourteenth workshop (online)
 - Improvement of POPs monitoring framework consisting super-sites, strategic, and existing cooperative monitoring was accepted.
 - Participation of Mongolia in the capacity building programme on POPs monitoring was accepted after submitting its application form from the Ministry of Environment, Mongolia.

History of the workshop

- Nov. 2023 Fifteenth workshop (Manila, Philippines)
 - Significance of mutual cooperation and continuous communication among the member countries under the POPsEA Project as a framework of the POPs monitoring network in this region was recognised.
 - Monitoring frequency can be decided according to the capacity of each country considering the required frequency of POPs monitoring Implementation.
- Nov. 2025 Sixteenth workshop (Tokyo, Japan)
 - Participants exchanged the opinions the sustainable implementation of POPs monitoring in the East Asia sub-region.
 - Participants noted the significance of the collaboration of POPsEA project with UNEP/GEF GCMP project.
 - Preparation of the 4th Sub-Regional Report by summarizing the obtained data and submission to the ROG were accepted.

History of POPs monitoring

- The objective of the background air monitoring is finding suitable monitoring sites for the effectiveness evaluation of Stockholm Convention, Article 16 in East Asia Region.
- Trial phase background air monitoring was initiated in 2005.
- Full-scale implementation of the monitoring was started in 2007.
- Trial phase of passive air monitoring was started in
- Trial monitoring of hexachloro-1,3-butadiene (HCBD) was implemented in Lao PDR in 2017.
- Full-scale implementation of passive air monitoring from 2022 and of HCBD monitoring from 2024.

Classification of POPs monitoring

- Classification based on the implementation budget
 - Cooperative monitoring (indicated as “C”);
 - Sampling skill has been already trained and implemented by own activity.
 - The expert of Japan will be dispatched, if needed.
 - Sampling materials are provided by Japan.
 - Sample analysis is done by Japan.
 - Individual monitoring (indicated as “I”);
 - Whole monitoring procedures can be done by its own activities.

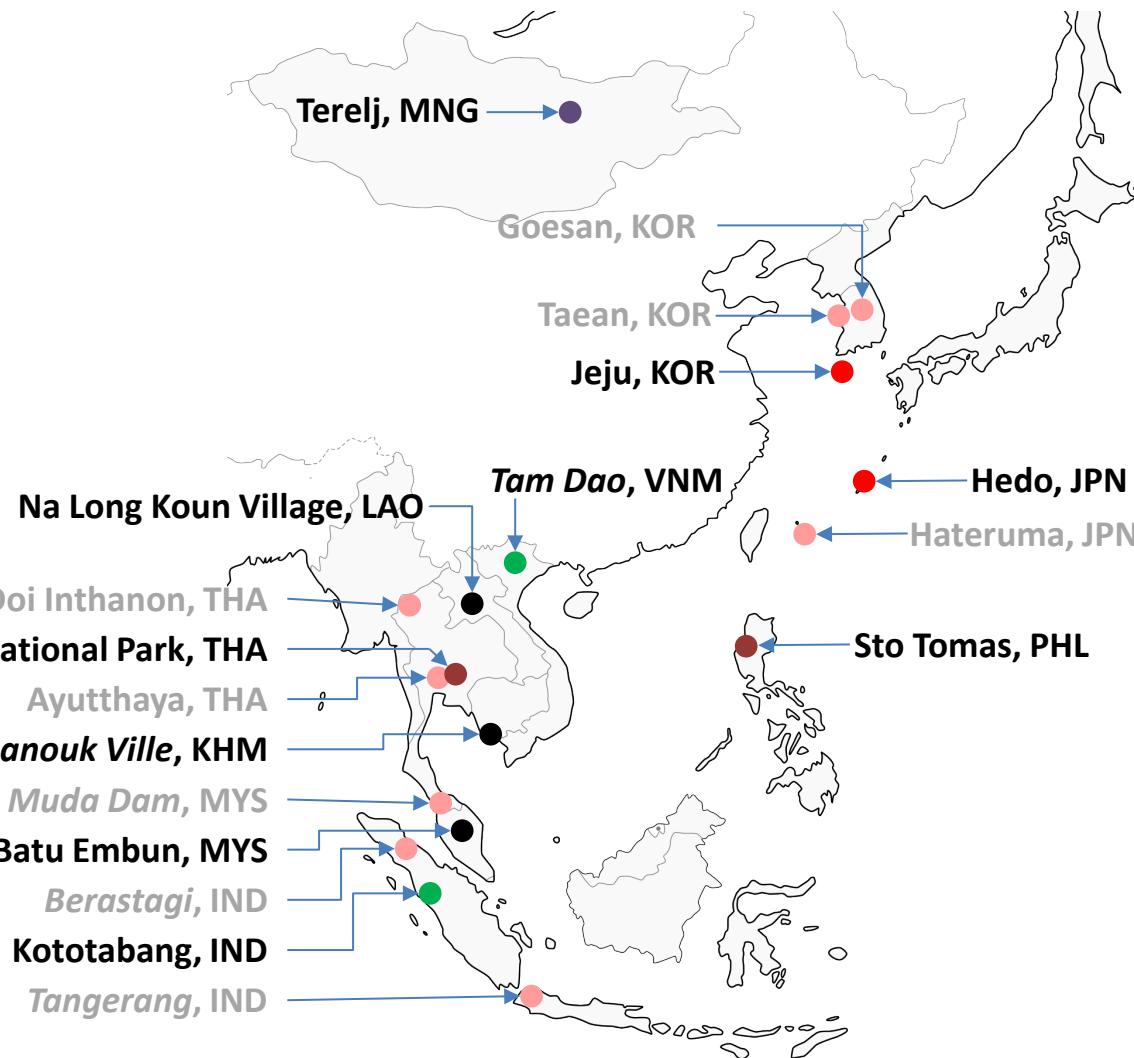
Classification of POPs monitoring

- Classification based on the monitoring frequency
 - Quarterly monitoring (“Q”)
 - Sampling is implemented by own activity.
 - Sample collections are carried out 4 times a year.
 - Monthly monitoring (“M”)
 - Sampling is implemented by own activity.
 - Sample collections are implemented in every month.

Classification of POPs monitoring

- **Super-site monitoring (“S”)**
 - Super-site is defined as the proper background site in the East Asian region.
 - The requirement for the monitoring frequency is expected to be monthly.
 - The workshop agreed and designated three sites for implementing Super-site monitoring.
 - The monthly monitoring is implemented at Jeju Island in ROK and at Hedo Cape in Japan.
 - Vietnam is implementing quarterly monitoring at Tam Dao site.

Location of monitoring sites



Cooperative monitoring

- *Sihanouk Ville*, Cambodia
- Na Long Koun Village, Lao PDR
- Batu Embun, Malaysia

Strategic cooperative monitoring

- Kototabang, Indonesia
- *Tam Dao*, Vietnam

Possible super-site

- Terelj, Mongolia

Future Super-site

- Sto Tomas, Philippines
- Khao Yai National Park, Thailand

Super-site

- Hedo, Japan
- Jeju, Republic of Korea

Past POPs monitoring activities

- First, second and third round monitoring were implemented before 2017.
- Fourth round of POPs monitoring was started in 2018 at Kototabang, Indonesia.
- Latest POPs monitoring is implementing in Na Long Koun Village, Lao PDR from October 2025.

History of POPs monitoring

Country	Site	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	22	23	24	25
Cambodia	Sihanoukville		C		C							C					C			
	Tangerang	C																		
Indonesia	Berastagi		C																	
	Kototabang									C						C				
Japan	Hateruma	I	I	I																
	Hedo				ISM															
ROK	Goisan		I	I	I	I														
	Taean			I	I	I														
	Jeju						ISM													
Lao PDR	Na Kong Koun		C					C							C					C
Malaysia	Muda Dam			C		C									C					
Mongolia	Terelj	C	C							C								C		
Philippines	Baguio	C				C										C				
Thailand	Ayuttaya	C																		
	Doi Inthanon		C																	
	Khao Yai									C								C		
Vietnam	Tam Dao	C	C			CSM	CSM		CSQ	CSQ										

Numbers in the column indicate the monitoring frequency in appropriate year.

Type of monitoring - C: Cooperative, I: Individual, S: Super-site, M: Monthly, Q: Quarterly

History of monitoring items

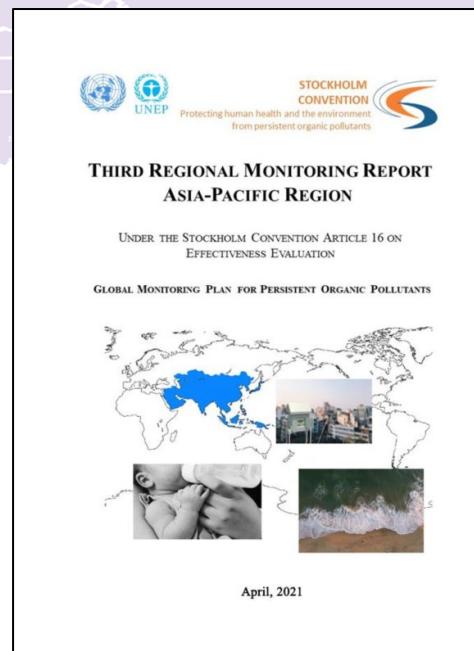
	'04	'05	'06	'07	'08	'09	'10	'11	'12	'13	'14	'15	'16	'17	'18	'19	'20	'21	'22	'23	'24
Drins																					
Aldrin, Dieldrin, Endrin	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Heptachlors																					
Heptachlor, <i>cis</i> -Heptachlor epoxide, <i>trans</i> -Heptachlor epoxide	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Chlordanes																					
<i>cis</i> -Chlordane, <i>trans</i> -Chlordane, Oxychlordane, <i>cis</i> -Nonachlor, <i>trans</i> -Nonachlor	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Hexachlorobenzene	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Mirex	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Toxaphenes																					
Parlar-26, Parlar-50, Parlar-62	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
DDTs																				●	
p,p'-DDT, o,p'-DDT, p,p'-DDE, o,p'-DDE, p,p'-DDD, o,p'-DDD	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Hexachlorobuta-1,3-diene																		●	●	●	

History of monitoring items

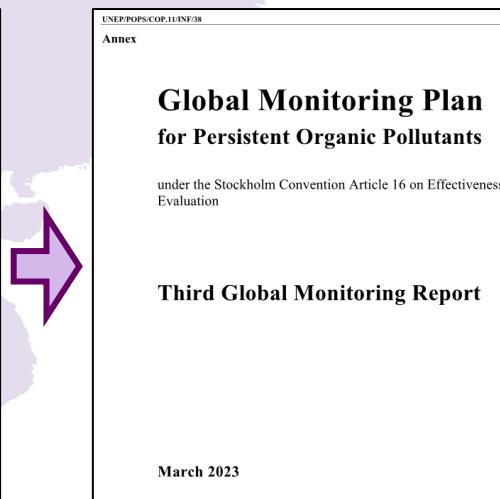
	'04	'05	'06	'07	'08	'09	'10	'11	'12	'13	'14	'15	'16	'17	'18	'19	'20	'21	'22	'23	'24
Polychlorinated biphenyls	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Indicator PCBs #28, #52, #69, #101, #118, #138, #153, #180																					
Dioxin-like PCBs #81, #77, #105, #114, #118, #123, #126, #156, #157, #167, #169, #189												●	●	●	●	●	●	●	●	●	
Polychlorinated dibenzo- <i>p</i> -dioxins																					
2,3,7,8- chlorine substituted												●	●	●	●	●	●				
Polychlorinated dibenzofurans												●	●	●	●	●	●				
2,3,7,8- chlorine substituted												●	●	●	●	●	●				

Major outcomes of this project

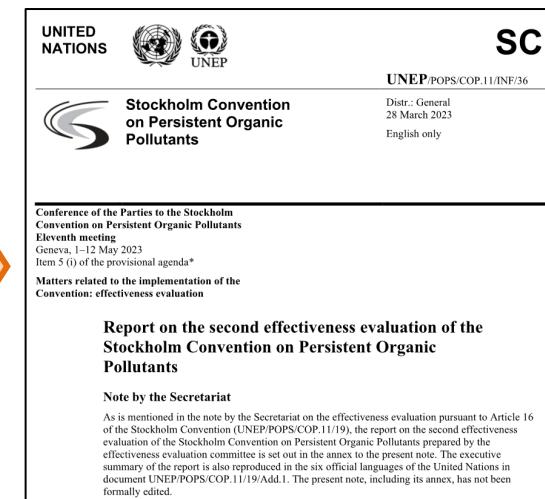
The data of our monitoring activities were collected and sub-regional report was created.



3rd Regional Monitoring Report
for Asia and the Pacific
(April 2021)



3rd Global Monitoring Report
(March 2023)



Report on the 2nd
Effectiveness Evaluation

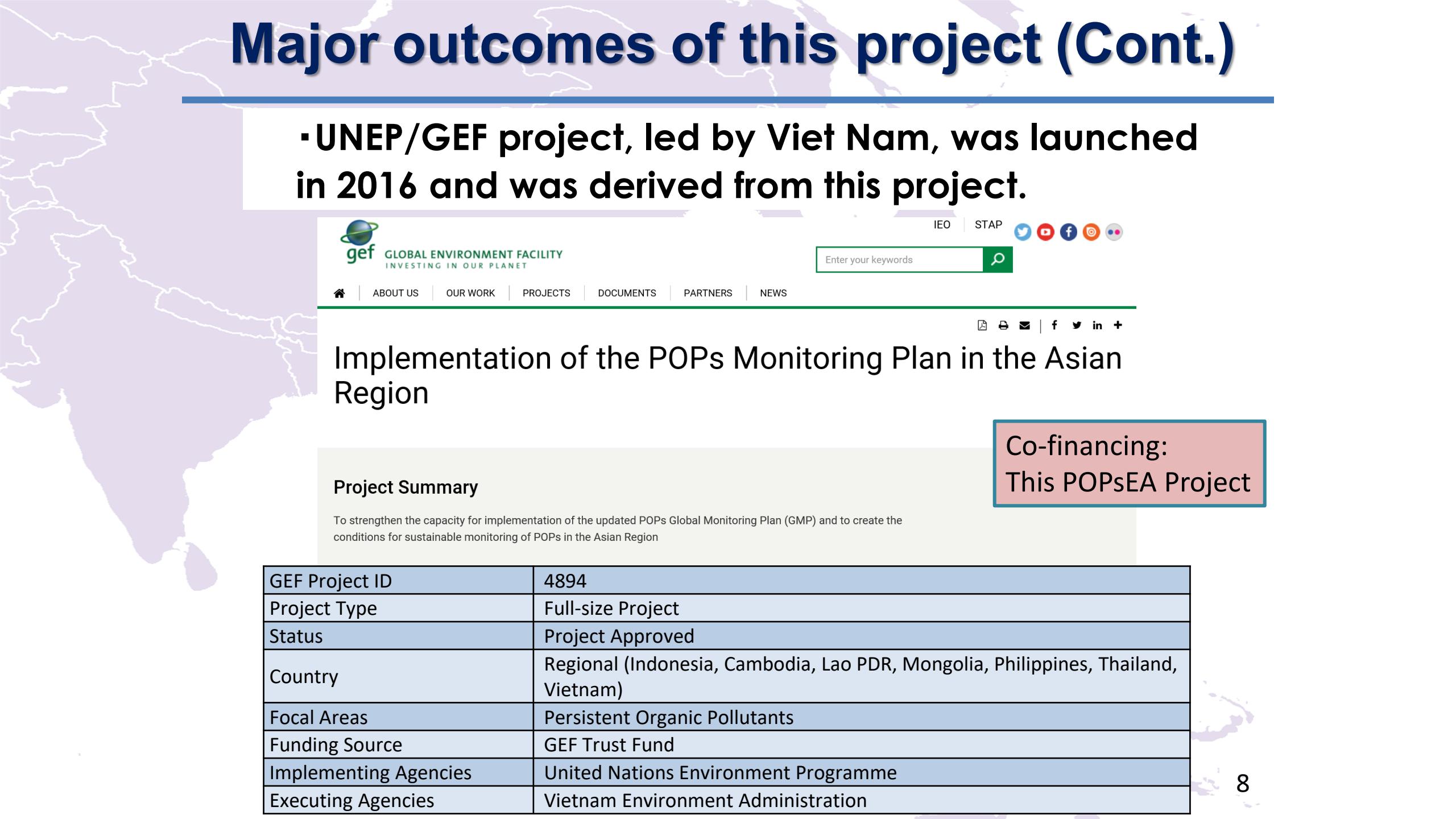
Submitted to COP11 (May 2023)

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3rd Effectiveness Evaluation (COP12, 2025 ~)

Major outcomes of this project (Cont.)

- UNEP/GEF project, led by Viet Nam, was launched in 2016 and was derived from this project.



Implementation of the POPs Monitoring Plan in the Asian Region

Project Summary

To strengthen the capacity for implementation of the updated POPs Global Monitoring Plan (GMP) and to create the conditions for sustainable monitoring of POPs in the Asian Region

Co-financing: This POPsEA Project

GEF Project ID	4894
Project Type	Full-size Project
Status	Project Approved
Country	Regional (Indonesia, Cambodia, Lao PDR, Mongolia, Philippines, Thailand, Vietnam)
Focal Areas	Persistent Organic Pollutants
Funding Source	GEF Trust Fund
Implementing Agencies	United Nations Environment Programme
Executing Agencies	Vietnam Environment Administration



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