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# GREEN CHEMISTRY AND THE UN SYSTEM

## GREEN CHEMISTRY CHANGE MAKER COURSE 2024

17 JULY 2024

VIENNA

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## Content

1. Brief overview of the UN, its organs and institutions
  2. The UN System and "Green Chemistry"
  3. Engagement of key UN Agencies in this area
  4. Question and answers (anytime)
  5. Summary and conclusions
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# 1. Brief overview of the UN, its organs and institutions

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- Your perspective of the UN System and its role in the area of green chemistry
- Or more general any thoughts on International Conventions, UN Agencies , role of UN , efficiency, effectiveness, ...



# 1. Brief overview of the UN, its organs and institutions

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- **The United Nations** was established 1945 with 50 member states
- Founding document is the UN Charta
- **Three of the major objectives:**
  1. To maintain international **peace and security**;
  2. To achieve international cooperation in **solving international problems of an economic, social, cultural, or humanitarian character**;
  3. **To be a centre for harmonizing the actions of nations**
- Number of member states today 193
- World largest intergovernmental organisation



# 1. Overview of the UN, its organs and institutions

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## Actors and actions relevant for Green Chemistry

**UN**

Security Council  
Secretariat  
International Court of Justice

General Assembly (GA)

Economic and Social Council (ECOSOC)



## 2. The UN System and Green Chemistry

### Actors and actions relevant for Green Chemistry

International Organisations outside

UN

General Assembly GA

Economic and Social Council (ECOSOC)

World conferences

Agencies, programs

Funding institutions

Multilateral Environmental Agreements,  
Policy Frameworks



## 2. The UN System and Green Chemistry

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### Agencies, programs

<b>ILO</b>	<b>FAO</b>	<b>WHO</b>	<b>UNIDO</b>
Labour	Food and agriculture	Health	Industrial development

<b>WB</b>	<b>UNEP</b>	<b>UNITAR</b>	<b>UNDP</b>
Financing	Environment	Training and research	Development



## 2. The UN System and Green Chemistry

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### Agencies, programs

- ILO (1919), WB (1944), FAO (1945), WHO (1946),
- UNDP(1965), UNITAR (1965), UNIDO (1966),
- UNEP (1972)
- International organization related to the UN system : IAEA (1957), OECD (1960), WTO (1995)



## 2. The UN System and Green Chemistry

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Example for enhancing coordination and harmonizing actions:



- Creation of a coordination mechanism in the area of sound management of chemicals: IOMC Inter-Organization Programme for the Sound Management of Chemicals)
- Brings together nine intergovernmental organizations actively involved in chemical management and the Secretariat of the BRS Conventions
- Established in 1995 by an MOU among the Participating Organizations, following recommendations made by the **1992 UN Conference on Environment and Development** or also called the **Rio Conference**



## 2. The UN System and Green Chemistry

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### World conferences



- The **1992 UN Conference on Environment and Development**  
or also called the Rio Conference (Convention on climate, biodiversity and desertification were signed, mandate for GHS development (IOMC lead)
- The **2012 UN Conference Sustainable Development in Rio de Janeiro** ( Rio + 20 Conference) adopted of the 17 Sustainable Development Goals (SDGs), third UN Conference on Sustainable development



## 2. The UN System and Green Chemistry

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### Multilateral Environmental Agreements, Policy Frameworks

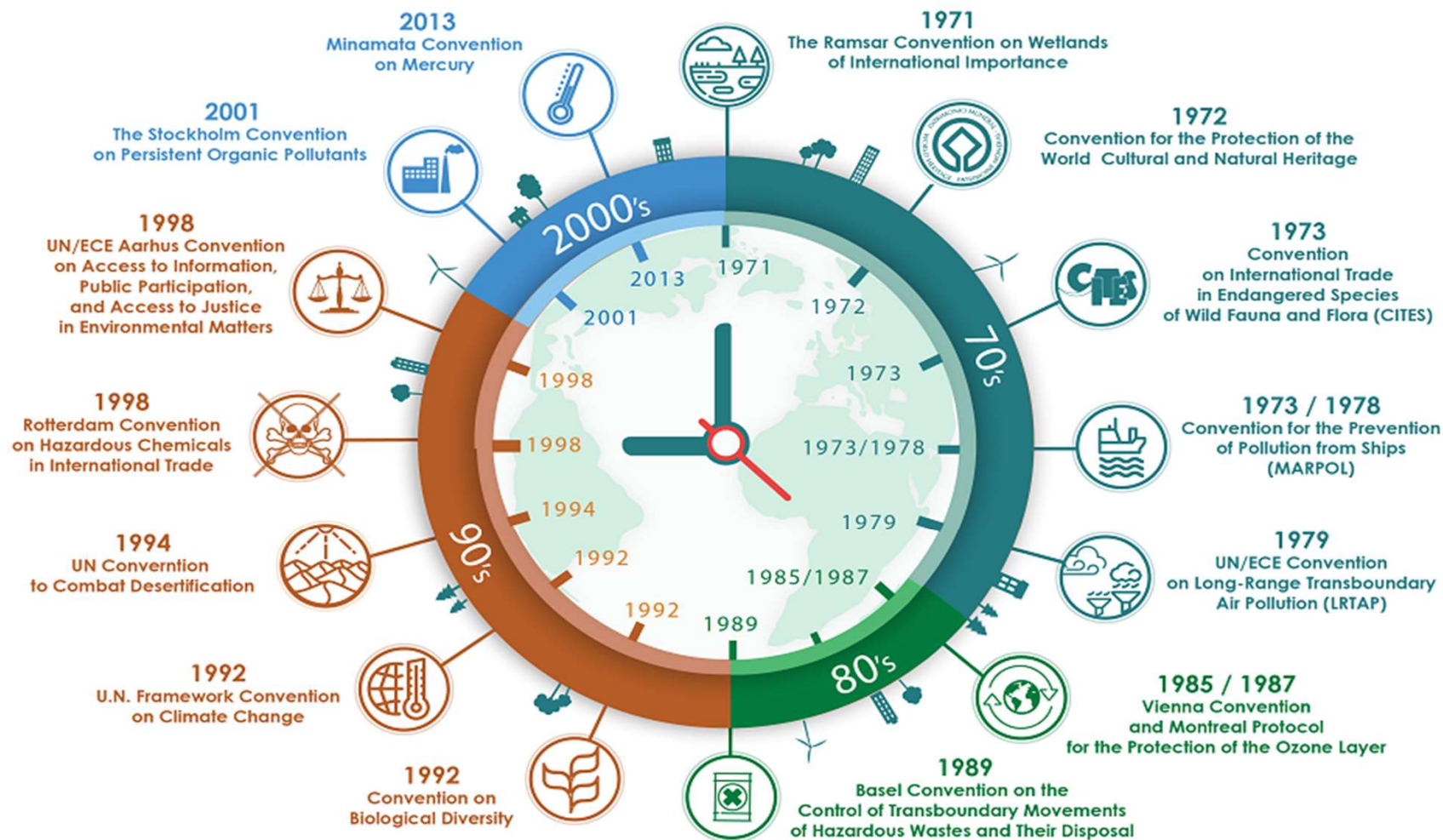
- Multilateral Environmental Agreements:



- Under development: Plastic convention
- Role of UNEP in the development of such agreements
- Synergy process to improve efficiency and effectiveness



# Multilateral Environmental Agreements, Policy Frameworks





## 2. The UN System and Green Chemistry

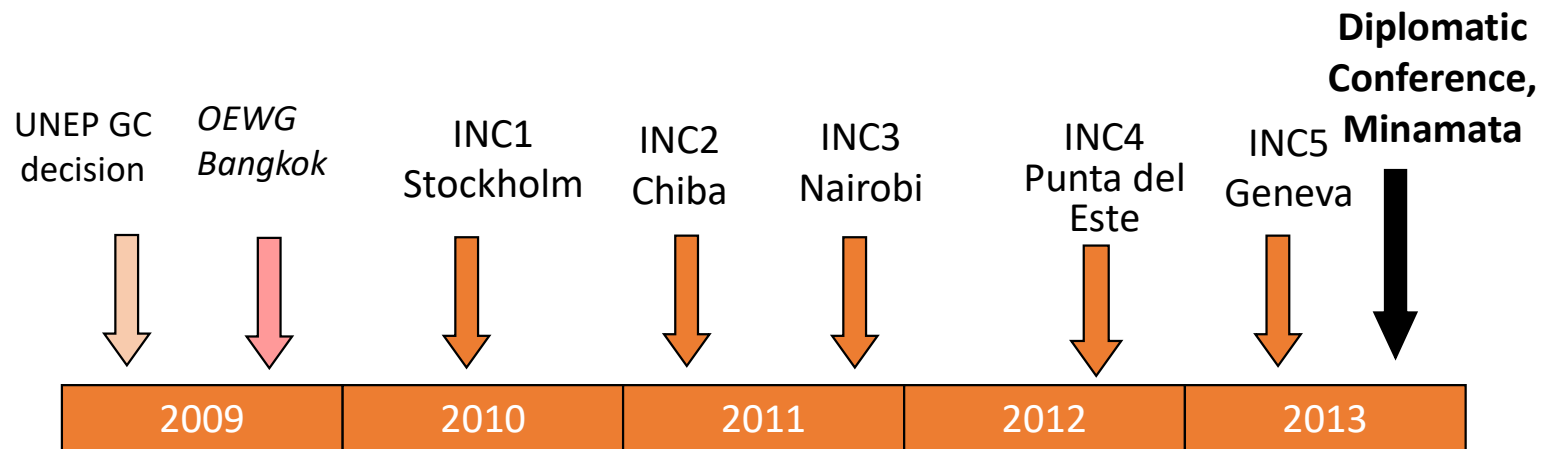
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### Concrete example

Development of and Multilateral Environmental Agreement in the area of chemicals management: **The Minamata Convention on Mercury**



# Negotiation of the Convention on mercury



INC of UNEP GC (Ministers of Environment)      International Negotiating Committee (representatives of governments the world)  
United Nations Environment Programme Governing Council







Full Resolution

CLOSE X

Chemicals-L

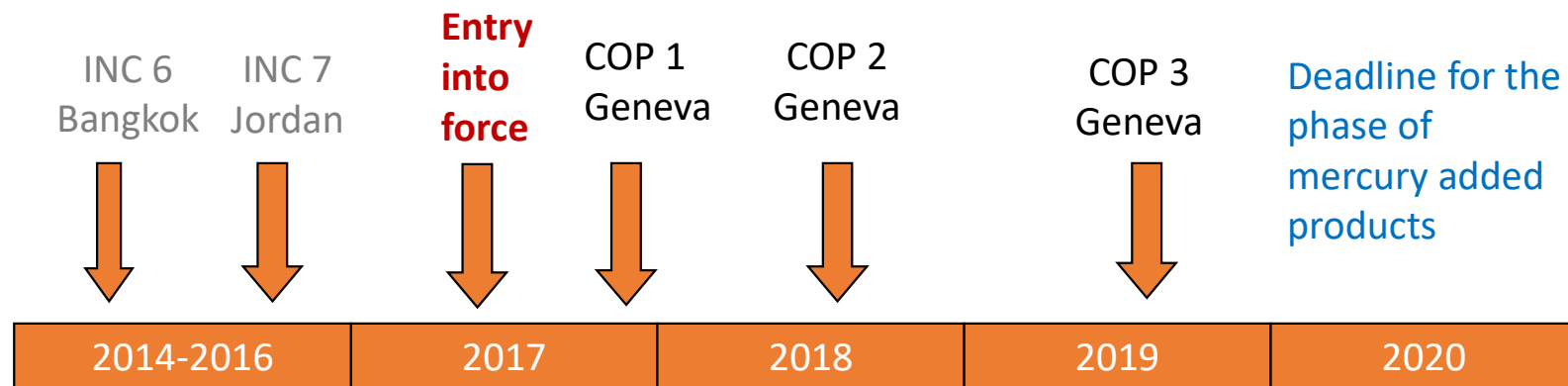








# Negotiation of the Convention on mercury



INC  
COP

International Negotiating Committee  
Conference of the Parties (after entry into force)



## 2. The UN System and Green Chemistry

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- Policy Framework (the Global Framework on Chemicals 2023)
- Science-Policy Panel to contribute further to the sound management of chemicals and waste and to prevent pollution (under development)



## 2. The UN System and Green Chemistry

Emerging issues addressed under the policy framework

- **Nanotechnology and nanomaterials**
- Chemicals in products, lead in paint
- Hazardous chemicals in electricals
- **Endocrine-disrupting chemicals**
- **Pharmaceutical pollutants**
- Perfluorinated chemicals
- Highly hazardous pesticides

>>> (IOMC lead agencies for these issues)



## 2. The UN System and Green Chemistry

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### Interpretations of Green chemistry in the UN System

- 12 principles of green chemistry (UNIDO)
- Sustainable and green chemistry (UNEP)
- Environmentally sound management of hazardous chemicals (Multilateral Environmental Agreements, SDGs, IOMC)

>> Overall aim: to protect human health and the environment from adverse impact of chemicals



## 2. The UN System and Green Chemistry

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### Funding institutions

- **Global Environment Facility** GEF (1991), administrated by the World Bank; fundings mechanism for Multilateral Environmental Agreements
- **Multilateral Fund** MLF(1987) funding mechanism for the Montral Protocol on ozone depleting substances

Other sources: bilateral Donors (EU, Germany, Switzerland, Austria, Norway, USA, Japan, Sweden,...)



### 3. Engagement of key UN Agencies in this area

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- **Support countries in the implementation** of Chemicals and Waste Conventions (Basel, Stockholm, Minamata Conventions and Montreal Protocol) and processes (Global Framework on Chemicals)
- Development of implementation programmes for the Global Framework on Chemicals

>> IOMC members



### 3. Engagement of key UN Agencies in this area

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#### **Guidance material, reports, studies, trainings**

- “Green and Sustainable Chemistry Framework Manual” (UNEP)
- “Chemicals in Plastics – A Technical Report” (UNEP)
- “Chemicals and Waste Issues of Concern: Summary Analysis of Stakeholders’ Views” (UNEP)
- **UNITAR and UNEP** started the development of a **Green and Sustainable Chemistry online course** (the online version of the UNEP Green and Sustainable Chemistry, Framework manual), the course to be ready and launched by October 2024.



### 3. Engagement of key UN Agencies in this area

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Greenchem GEF project (UNIDO)

Objective: To scale up green chemistry for POPs, mercury and microplastics replacement

Current activities: Development of a Green Chemistry knowledge network and its platform for knowledge sharing.

Partners: University of Yale, NCPCs, Indonesia, Jordan, Peru, Serbia, Ukraine

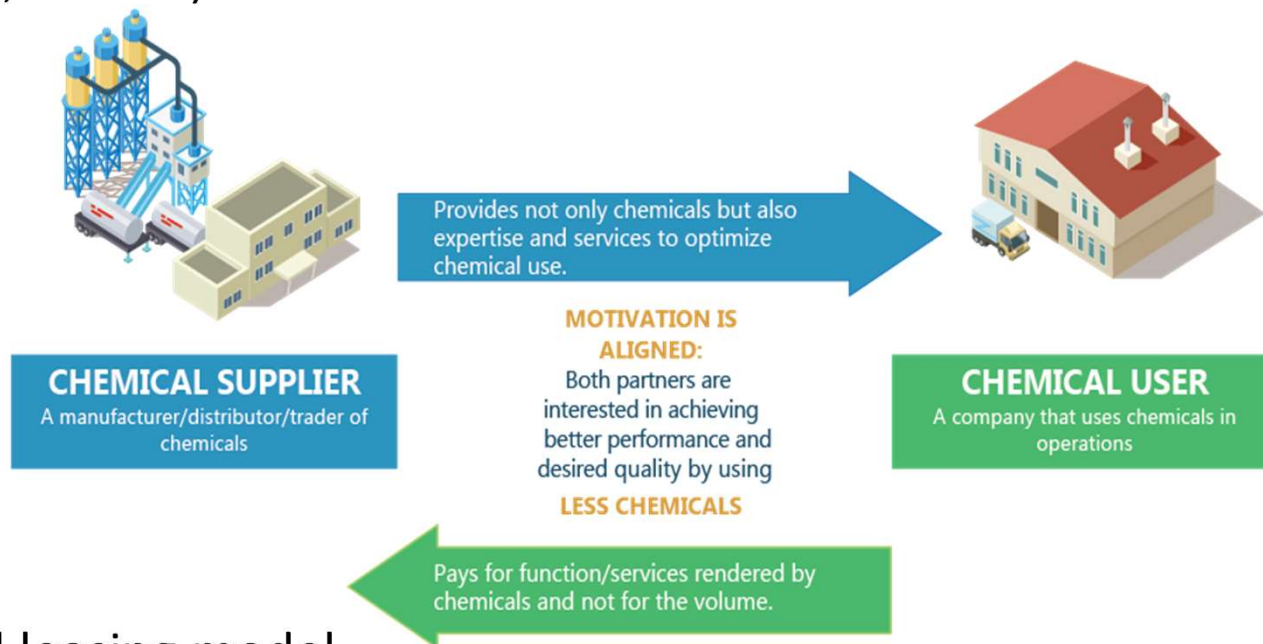


### 3. Engagement of key UN Agencies in this area

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Chemical leasing award (AT, UNIDO)

Development of  
a new award category  
for green chemistry



Integration of the chemical leasing model  
in other projects (UNIDO)



### 3. Engagement of key UN Agencies in this area

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- **Policy oriented work** and coordination
- **Member of Partnerships** (Mercury, Plastics, ...)
- **Observing international processes and developments** in the Chemicals and Waste management
- ...



## 5. Summary and some reflections

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- Under the UN system international policies, regulations, law (mandatory or voluntary) are set
- Funding mechanism are established
- Agencies support developing countries in the implementation of these policies and regulations
- Governments are the major decision maker, key player
- More involvement of the private sector, civil society needed - how?



## 5. Summary and some reflections

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- Political, economic and scientific perspective do often not converge  
>> science policy panel may address this
- Broad interpretation of "green chemistry"
- Dynamic sector > new Convention on Mercury entered recently into force (2017), another is currently under development



## 5. Summary and some reflections

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- Environment protection a "new" topic in the UN system (chemicals management is one area)
- This area has less political attention than in other areas (e.g. climate or biodiversity) as a consequence less funds
- The UN System has grown over time. It has become a complex and not always coherent system
- Coordination and cooperation is very important >> the synergy process among the chemicals management conventions facilitates this



## 5. Summary and some reflections

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Your reflections, thoughts,  
comments,...



**THANK YOU!**

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