

UNEP and International Environmental Activities

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“Global Environmental problems”

- Local, subnational, or national environmental problems, which are faced with by all countries:
E.g., urban or industry-related pollution, soil contamination or loss, lack of water resources, waste disposal problems.
- Regional, or multi-national environmental problems, with international implications:
E.g., transboundary air pollution, acid rain, forest loss, expansion of desertification, soil degradation, contamination or degradation of internationally shared water bodies (lakes, rivers and coastal marine environment)
- Environmental problems with global significance:
E.g., climate change, stratospheric ozone layer depletion, loss of biological diversity, environmental contamination by persistent chemicals or trace contaminants.

Environment-development nexus

- Intrinsic relationships between insufficient development in developing countries, poverty and environmental degradation.
- Not-widely-spoken causes of under-development – corruption, civil war, incompetence of government.

<http://www.wfp.org/news/news-release/108-million-people-world-face-severe-food-insecuritysituation-worsening>

Environmental problems, “Kogai” in Japan – e.g., MINAMATA Disease Case

- Early official recognition (report to local health office) was in 1953, but government’s formal statement on its cause was made only in 1968 – organic mercury was generated in a chemical process using inorganic mercury, emitted to the sea, accumulated in fish stocks, and health damage resulted. Officially recognized patients are more than 7,500.
- Paralysis, body deformation, centric eyesight, etc.
- In the early years, it was called, “weird disease” and there were discrimination cases against patients.
- Prevention may have been difficult, but there were lots of unfortunate incidents.

From Mr. William Eugene Smith's book, "Minamata" –
While pregnancy, Methyl Mercury moved to embryo, thus
leaving rather healthy mother and a deformed daughter.



Serious Air Pollution Problems in Japan

- In 1960s and early 1970s, there were serious air pollution problems in many industrialized cities, such as Yokkaichi, Kitakyushu, Kawasaki, and Osaka.
- Causes were Sulfur Oxides (SO_x), Nitrogen Oxides (NO_x), Particulates matter (PM <-> PM_{2.5}), Photochemical Oxidants. In a few areas, Lead pollution (from automobile emission) and Carbon Monoxide pollution occurred.
- Air pollution patients, recognized under Environmental Pollution Compensation Law, reached the level of 100 thousands.
- There were strong public movements, some of which led to the prevention of further pollution.
- Especially by strong air control regulations (on both stationary and mobile sources), many air pollution control technologies were developed and widely introduced, such as Flue Gas Desulfurization or Denitrifications.
- In early 1970s, removal of Lead from gasoline was introduced, which was extremely unique in the world.

Success Stories

Kitakyushu in 1960s and current air quality
<http://www.city.kitakyushu.lg.jp/kankyoku/file_0264.html>



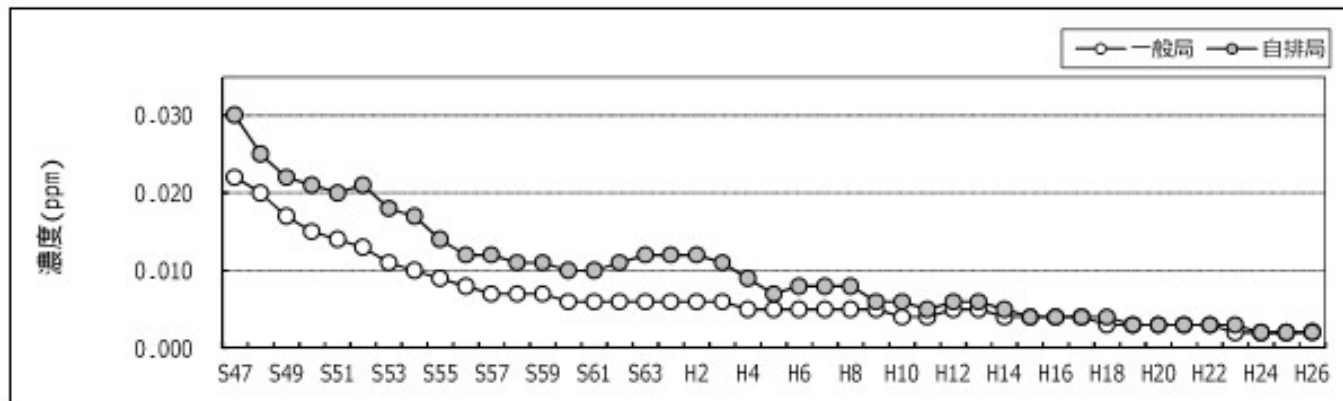
【1960年代】煙に覆われた空、多数のぜん息患者が現われた



【2010年代】清々とした青空

Ambient SO₂ Concentration (National Monitoring Station)

図 4 - 1 二酸化硫黄の環境基準達成率の推移

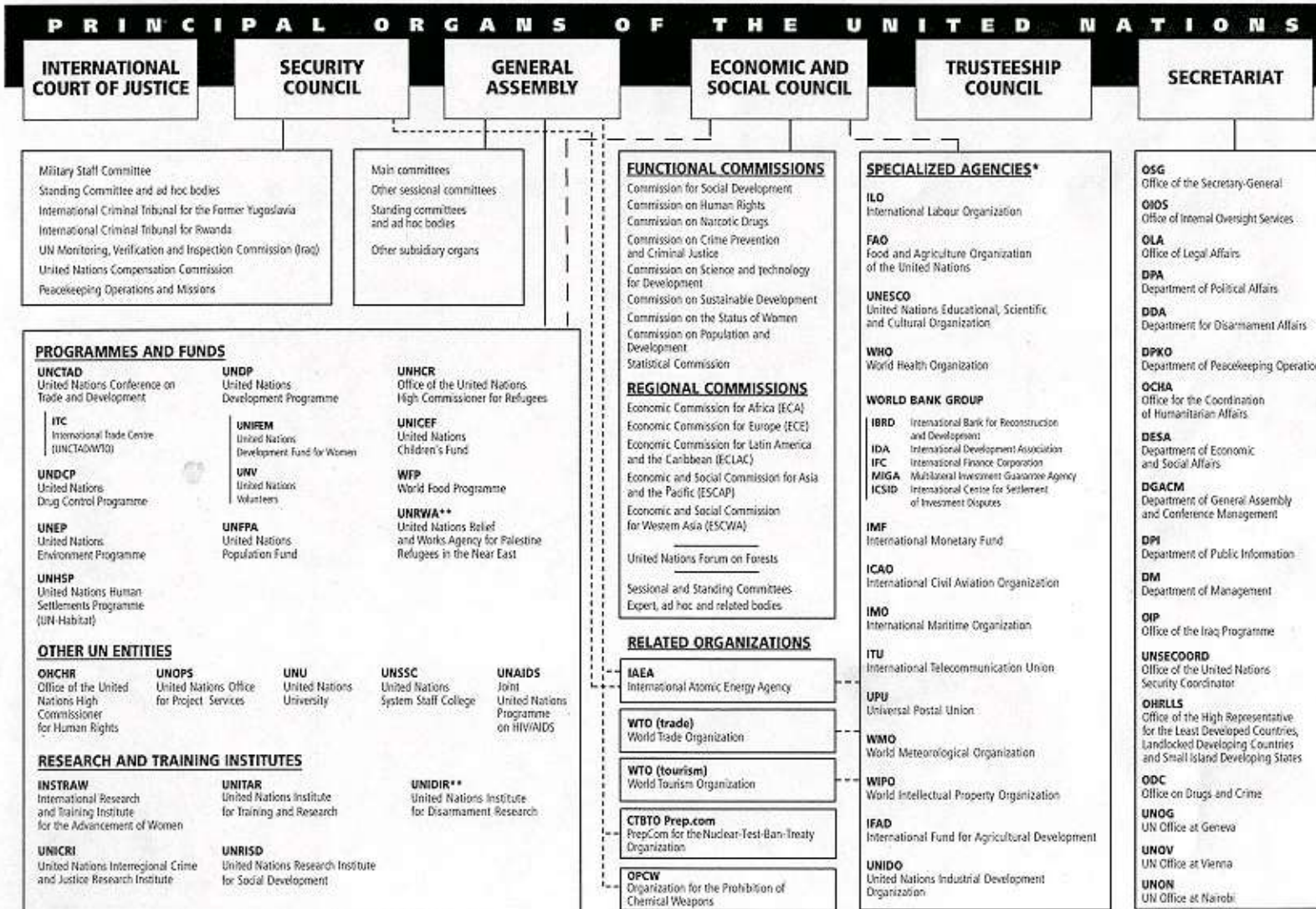


International cooperation – types of organizations and programmes

- Intergovernmental organizations
 - UN, UN Specialized Agencies and programmes, e.g., WHO, UNESCO, WMO, FAO, UNIDO, IAEA, ICAO, IMO, World Bank Group, and UN Programmes, e.g., UNDP, UNCTAD, UNICEF, UNEP
 - OECD (Trade, Development, Environment)
 - Regional banks
 - GEF, other environmental programmes
 - IPCC (Intergovernmental Panel on Climate Change)
- Intergovernmental agreements
 - UNFCCC, UNCBD, Basel Convention, CITES, Chemicals conventions, regional agreements (e.g., international rivers, trans-frontier air pollution).
- Bilateral cooperation organizations and programmes
- International organizations and programmes
- Non-governmental organisations
- Research institutions and programmes, RESEARCHERS.

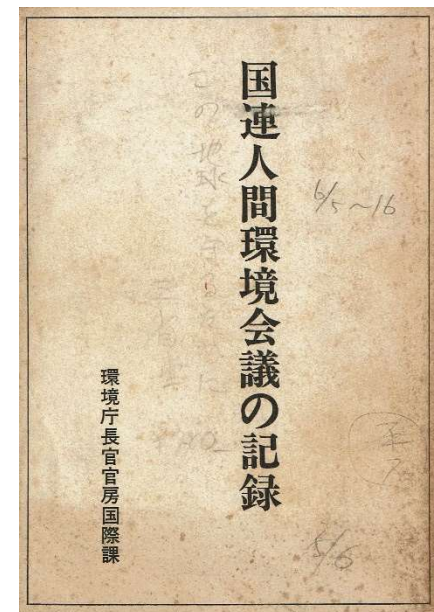


The UNITED NATIONS system



1972 United Nations Conference on the Human Environment

- From 5th June 1972, **United Nations Conference on the Human Environment** was held in Stockholm, which adopted **Human Environment Declaration, and Action Plan comprising of 109 recommendations and others.**
- Originally, Sweden and other developed countries proposed an UN Conference on Environmental Pollution, but developing countries argued poverty and insufficient development are more problematic. Thus, the conference was called, “. . . on the Human Development”.
- 5th June was named, “World Environment Day”. The month of June is “Environment Month” in Japan.



Establishment of UNEP

- By UN General Assembly resolution 2994 (XXVII) in December 1972, United Nations Environment Programme was established, composed of;
 - A Small Secretariat to be established in Nairobi, Kenya
 - Environment Fund (US\$ 100 million per 5 years)
 - Environmental Co-ordination Board (responsible for coordination of activities within UN System. UNEP Executive Director is its Chairman.)
- UNEP is not a UN Specialized Agency, but is a “programme” of the UN Headquarters, like UNICEF, UNHCR, or UNDP that have coordinating functions over the UN system.
- As a result of the United Nations Conference on Sustainable Development, “Rio+20” (in 2002) in Rio in June 2012, 58 member Governing Council of UNEP was changed to United Nations Environment Assembly (UNEA) , which are represented by all the UN member States. The first session of UNEA was held in June 2014. It will be held every two years..



UNEP Headquarters
(The most beautiful UN site!)

Mission and Mandate of UNEP

Mission

- “To provide leadership and encourage partnership in caring for the environment by inspiring, informing, and enabling nations and peoples to improve their quality of life without compromising that of future generations.”

(将来世代を害することなく生活の質を向上するために、環境対策のリーダーシップを提供、パートナーシップを促進する。)

Mandate

- "to be the leading global environmental authority that sets the global environmental agenda, that promotes the coherent implementation of the environmental dimensions of sustainable development within the United Nations system and that serves as an authoritative advocate for the global environment“

(全世界環境アジェンダを設定する主な地球環境権威となる。)

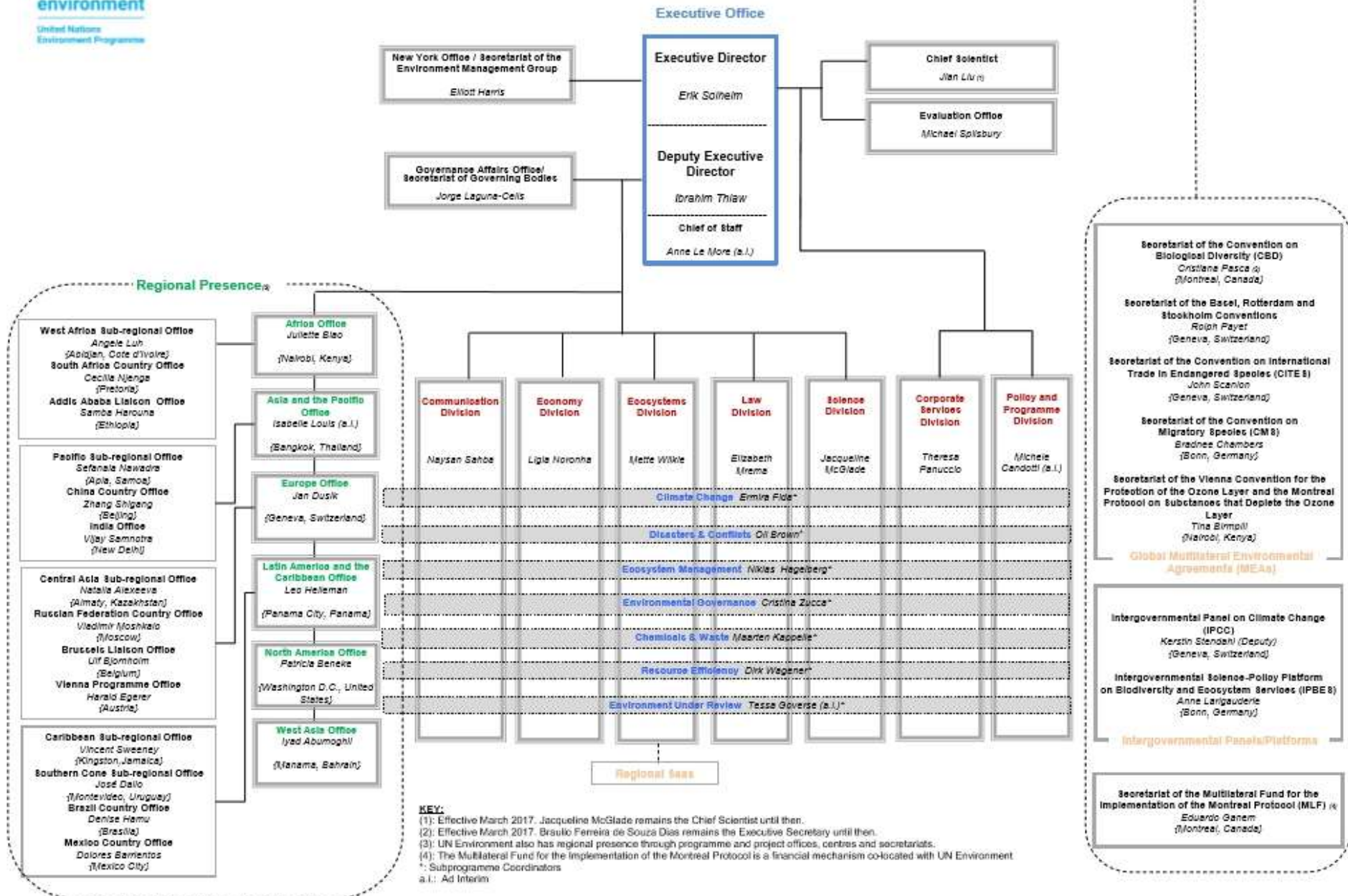
Major Achievements of UNEP

- Development of fundamental legal principles, such as on Shared Natural Resources.
- Production and dissemination of environmental Assessments, including, Global Environment Outlook (1-5), sub-regional assessments, sectoral assessments, and early warnings, and promotion of public awareness.
 - Central role in development of international law, such as;
 - Washington Convention on Protection of Endangered Wild Species.
 - Basel Convention on Transfrontier movements of hazardous wastes,
 - Vienna Convention on Protection of Stratospheric Ozone Layer (and its Protocols.)
 - Desertification Convention.
 - Hazardous Chemicals Control Conventions (Rotterdam on PICs, Stockholm on POPs.)
 - Biological Diversity Contention and its Protocols.
- International negotiation forums, such as those on;
 - Environmental economics, investment, insurance, trade, environmental technology.
 - Promotion of regional environmental cooperation.

Priority Areas of UNEP

- Climate change
- Disasters and conflicts
- Ecosystem management
- Environmental governance
- Chemicals and waste
- Resource efficiency
- Environment under review





Structure of UNEP Secretariat

<http://wedocs.unep.org/bitstream/handle/20.500.11822/22217/UNEnvironment-Organigramme.pdf?sequence=1&isAllowed=y>

Management Staff

<https://www.unenvironment.org/people/leadership>

- **Headquarters**

- Communication Division
- Economy Division
- Ecosystems Division
- Law Division
- Science Division
- Economy Division

- **UNEP Collaborating Centres**

- [Basel Agency for Sustainable Energy \(BASE\)](#)
- [BCA Centre for Sustainable Buildings \(CSB\)](#)
- [Frankfurt School of Finance and Management](#)
- [Global Efficient Lighting Centre \(GELC\)](#)
- [Global Reporting Initiative \(GRI\)](#)
- [Global Resource Information Database \(GRID\)](#)
- [UNEP Collaborating Centre on Water and Environment \(UCC-Water\)](#)
- [UNEP DTU Partnership](#)
- [UNEP World Conservation Monitoring Centre \(WCMC\)](#)
- [UNEP International Ecosystem Management Partnership \(UNEP-IEMP\)](#)

Global Biodiversity Outlook 4

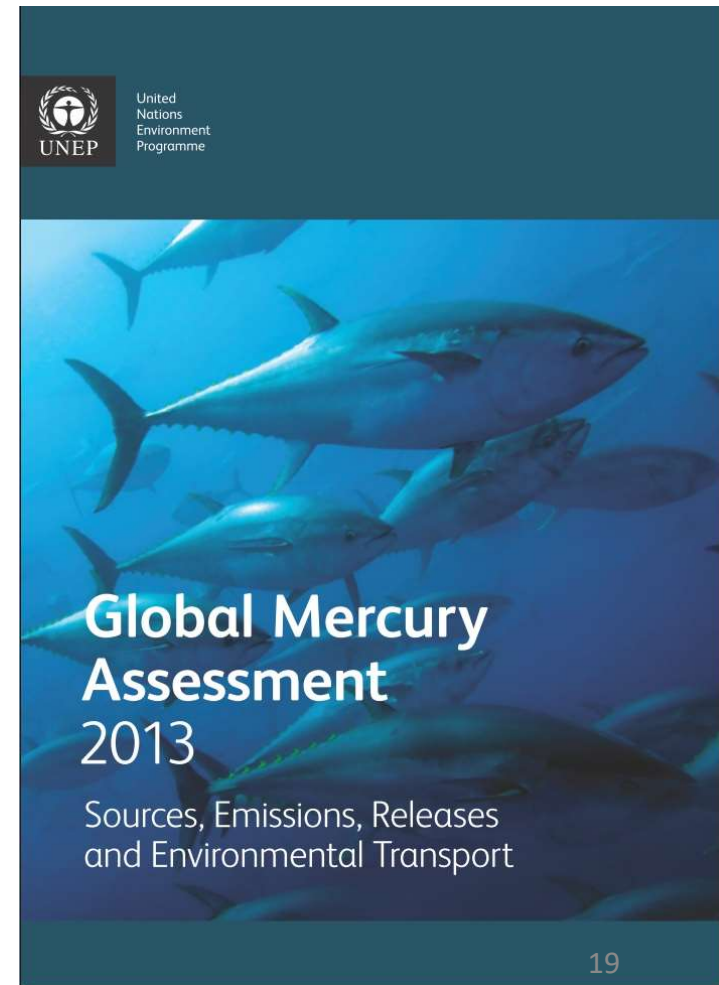
- <http://www.env.go.jp/nature/upload/upfile/gbo4/gbo4-jp-lr1.pdf>



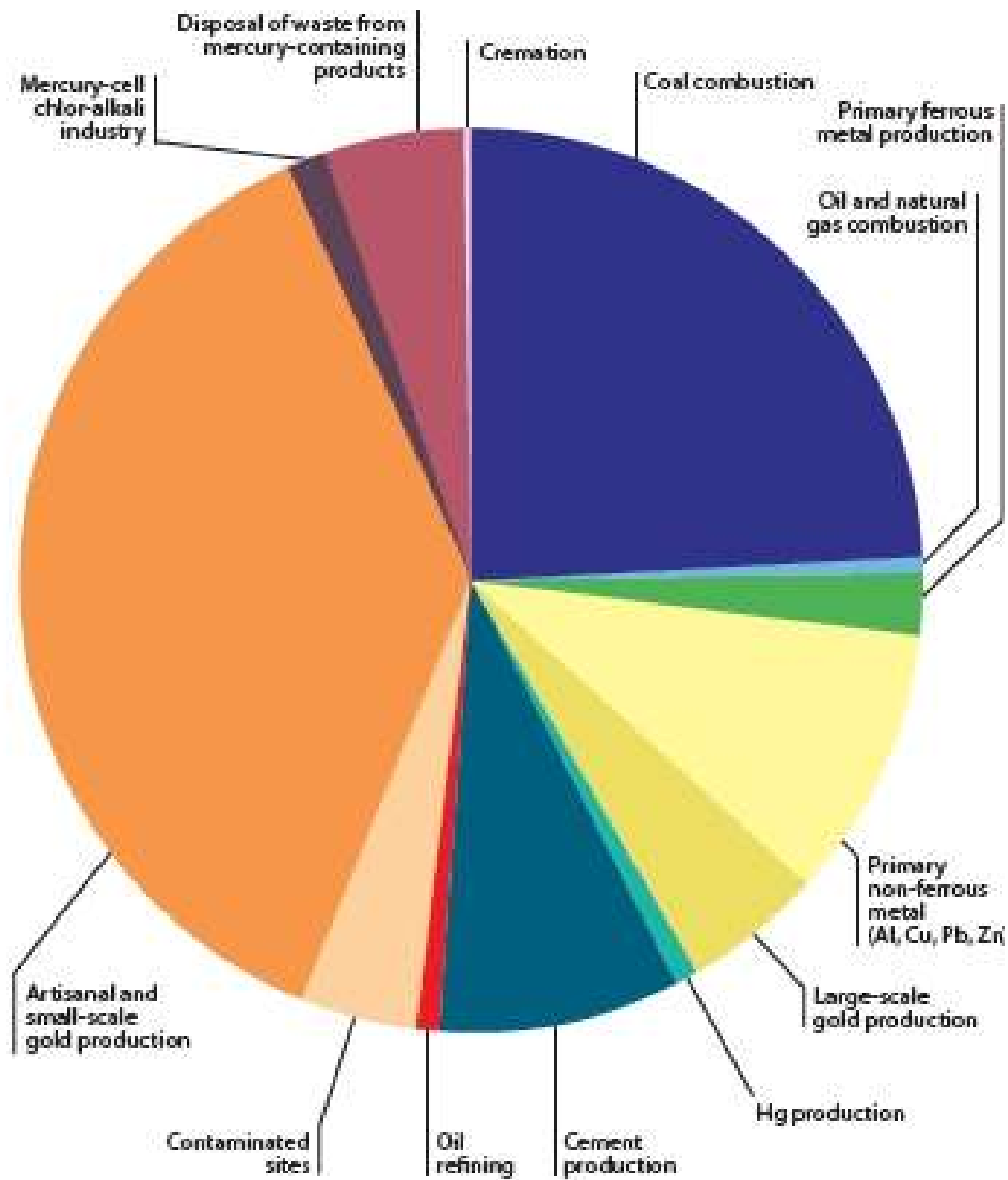
Global Mercury Assessment 2013 (UNEP)

- **“Global Mercury Assessment 2013: Sources, emissions, releases, and environmental transport” was an important background report for the negotiation.**

<http://wedocs.unep.org/bitstream/handle/20.500.11822/7984/-Global%20Mercury%20Assessment-201367.pdf?sequence=3&isAllowed=y>



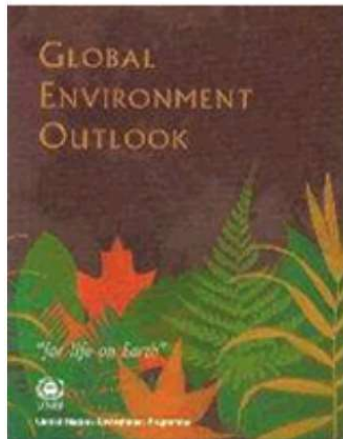
Emission sources of Mercury



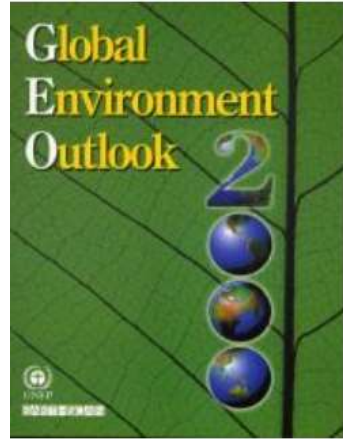
Relative contributions to estimated emissions to air from anthropogenic sources in 2010.

Assessment Report (1)

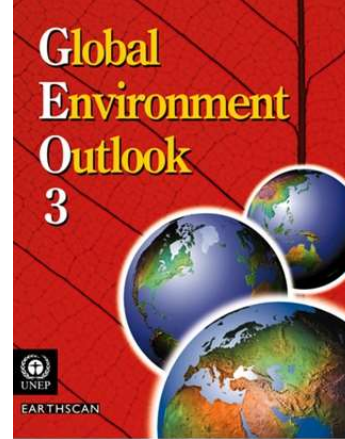
GEO: Global Environment Outlook



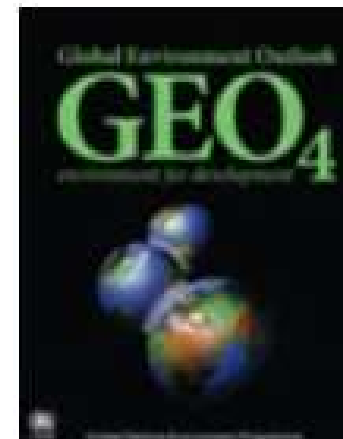
(1997)



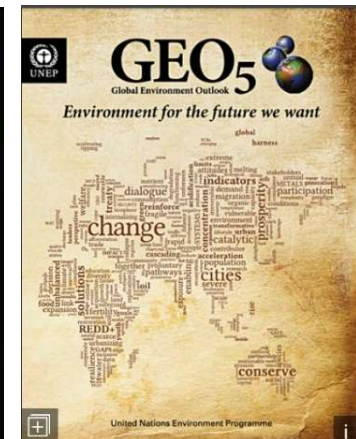
(1999)



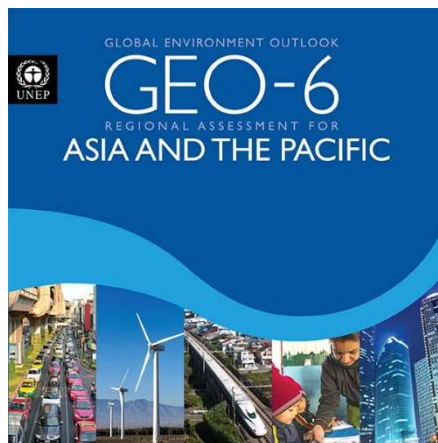
(2002)



(2007)



(2012)



Regional summaries of GEO6 were issued by May 2016.

<https://wedocs.unep.org/bitstream/handle/20.500.11822/7644/-Summary_of_the_sixth_global_Environment_Outlook_GEO-6_Regional_assessments_Key_findings_and_policy_messages_UNEP_EA2_INF_17-2016GEO-6_summary_en.p.pdf?sequence=3&isAllowed=y>
<<http://www.unep.org/geo/assessments/regional-assessments/regional-assessment-asia-and-pacific>>

International developments in environment and development

- 1972, June: United Nations on the Human Development
- 1982, June: Special Session of UNEP Governing Council
- 1987, April: World Commission on Environment and Development – Report - Our Common Future. “Sustainable Development”
- 1992, June: United Nations Conference on Environment and Development – Agenda 21 (in Rio de Janeiro).
- 1993 – 2011(?) annually: UN Commission on Sustainable Development
- 1997, June: United Nations General Assembly Special Session of RIO+5
- 2000. September: Millennium Development Goals (MDGs)
- 2002, August-September, World Summit on Sustainable Development (in Johannesburg)
- 2012, June: United Nations Conference on Sustainable Development (Rio+20) (in Rio de Janeiro)
- 2015, September: 2030 Agenda for Sustainable Development Goals

Environmental Conventions

- Ramsar Convention on **Wetlands** of International Importance especially as Waterfowl Habitat (1971)
- Washington Convention on International Trade in **Endangered Species** (1973)
- Vienna Convention for the Protection of the **Ozone Layer** (1985)
- Basel Convention on the Control of Transboundary Movements of **Hazardous Wastes** and Disposal (1989)
- Convention on **Biological Diversity** (CBD) (1992)
- United Nations Framework on **Climate Change** (UNFCCC) (1992)
- United Nations Convention on **Desertification** (UNCCD) (1994)
- Conventions for **Chemicals** Control (Rotterdam Convention (1998) and Stockholm Convention (2001))
- Minamata Convention on **Mercury** (2013)
- **Marine Pollution Conventions** (IMO)
- ...
- (There are more than 200 MEAs, including regional, or bilateral.)

Before talking of environmental agreements --- (1)

Vienna Convention on the law of treaties (with annex). **Concluded at Vienna on 23 May 1969**

- *Article 12.* CONSENT TO BE BOUND BY A TREATY EXPRESSED BY SIGNATURE
- *Article 14.* CONSENT TO BE BOUND BY A TREATY EXPRESSED BY RATIFICATION, ACCEPTANCE OR APPROVAL
- *Article 18.* OBLIGATION NOT TO DEFEAT THE OBJECT AND PURPOSE OF A TREATY PRIOR TO ITS ENTRY INTO FORCE

<https://treaties.un.org/doc/Publication/UNTS/Volume%201155/volume-1155-I-18232-English.pdf>

Ref: Vienna Convention on Diplomatic Relations, 1961

http://legal.un.org/ilc/texts/instruments/english/conventions/9_1_1961.pdf

Before talking of environmental agreements --- (2)

There are various types of environmental agreements!

- Most of them are inspirational/encouraging/advocating, and contain registration or reporting.
- Many are meant to facilitate inter-national/regional/oligo-national environmental actions.
- Some contain legal obligations, such as restrictions on international trade.
- Some provides for financial supporting mechanism.

IN RELATION TO JAPAN;

- International Environmental Technology Center (IETC) and its Collaboration Center in IGES.
- IGES also participates in the UNEP FI (Financial Initiative), and serves as one of its support centers.
- IGES supports, in particular, regional activities of GEO preparation.
- Japan strongly support and is an instrumental member of the UNEP NOWPAP (North Western Pacific Action Programme).

UN Environment Assembly 4th session

- UNEA-4 was convened pm 11th–15th March 2019 in Nairobi.

<http://web.unep.org/environmentassembly>

<http://web.unep.org/environmentassembly/theme-fourth-session-un-environment-assembly>

- Its main theme was “Innovative solutions for environmental challenges and sustainable consumption and production

[\[*UNEP/EA.4/17*\]](#)

<https://www.unenvironment.org/news-and-stories/press-release/media-advisory-world-zero-solutions-future-4th-un-environment>

- Side events (Sustainable Innovation Expo)

<http://web.unep.org/environmentassembly/sustainable-innovation-expo>

Ministerial Declaration of the 2019 United Nations Environment Assembly “Innovative Solutions For Environmental Challenges And Sustainable Consumption And Production

- We, the world’s ministers for the environment, ... are dedicated to addressing environmental challenges through advancing innovative solutions, and to moving towards sustainable and resilient societies through sustainable consumption and production patterns,
- innovative approaches and solutions are necessary to move our world closer to the vision set out in the outcome document of the United Nations Conference on Sustainable Development, held in Rio de Janeiro, Brazil, from 20 to 22 June 2012, entitled, “The future we want”, and in the 2030 Agenda for Sustainable Development
- We are, however, deeply concerned about the findings of relevant global environmental assessments
- ...
- **We request the Executive Director of the United Nations Environment Programme to track the implementation of the actions set out in this declaration**
- <http://wedocs.unep.org/bitstream/handle/20.500.11822/27701/Draft%20Ministerial%20Declaration%20Fifth%20Draft%20as%20of%2014.03.2019.pdf?sequence=1&isAllowed=y>

UNEA4 Outcome

[EA4 HLS 1 Ministerial declaration of UEA4n](#)
[EA4 Res 02 Promoting sustainable practices and innovative solutions for curbing food](#)
[EA4 Res 03 Sustainable mobility](#)
[EA4 Res 04 Addressing environmental challenges through sustainable business practices](#)
[EA4 Res 05 Sustainable infrastructure](#)
[EA4 Res 06 Marine plastic litter and microplastics](#)
[EA4 Res 07 Environmentally sound management of waste](#)
[EA4 Res 08 Sound Management of Chemicals and Wastes](#)
[EA4 Res 09 Addressing Single-use Plastic Products Pollution](#)
[EA4 Res 10 Innovations on biodiversity and land degradation](#)
[EA4 Res 11 Protection of the Marine Environment from Land-Based Activities](#)
[EA4 Res 12 Sustainable Management for Global Health of Mangrove](#)
[EA4 Res 13 Sustainable coral reefs management](#)
[EA4 Res 14 Sustainable Nitrogen Management](#)

[EA4 Res 15 Innovations in Sustainable Rangelands and Pastoralism](#)
[EA4 Res 16 Conservation and Sustainable Management of Peatlands](#)
[EA4 Res 17 Promote gender equality, and the human rights and empowerment of women and girls in environmental governance](#)
[EA4 Res 18 Poverty Environment Nexus](#)
[EA4 Res 19 Mineral resource governance](#)
[EA4 Res 20 Fifth Programme for the Development and Periodic Review of Environmental Law \(Montevideo V\) - Delivering for People and the Planet](#)
[EA4 Res 21 Implementation Plan - Towards a Pollution-free Planet](#)
[EA4 Res 22 Implementation and follow up of UNEA resolutions and related activities](#)
[EA4 Res 23 Keeping the World Environment under Review - Enhancing UNEP Science-Policy Interface and Endorsement of the Global Environment Outlook](#)

[EA4 Decision 4-1 Fund Programme for 2020-2021](#)
[EA4 Decision 4-2 Agenda_date_vemue of UNEA5](#)
[EA4 Decision 4-3 Management of Trust Funds and Earmarked Contributions](#)

UNEA4's Major Agenda Item (1) Marine Plastics

- Since UNEA3 (December 2017), marine plastics has been one of the central question in UNEA. See:
 - [ea-4-12_Progress in the work of the ad hoc open-ended expert group on marine litter and microplastics established by resolution 3/7](#)
 - [Ea-4-11 Analysis of voluntary commitments targeting marine litter and microplastics pursuant to resolution 3/7](#)
- UNEA4 Adopted [4/6. Marine plastic litter and microplastics](#), by which
 - **UNEA 5.** Requests the Executive Director, through the United Nations Environment Programme's 10-Year Framework of Programmes on Sustainable Consumption and Production Patterns,³ to develop guidelines for the use and production of plastics in order to inform consumers, including about standards and labels; to incentivize businesses and retailers to commit themselves to using sustainable practices and products; and to support governments in promoting the use of information tools and incentives to foster sustainable consumption and production;
 - 7. Decides to extend until its fifth session the mandate of the ad hoc open-ended expert group on marine litter and microplastics established by its resolution 3/7
 - 8. Invites the Environment Management Group to engage in and contribute to the work of the ad hoc open-ended expert group on marine litter and microplastics by providing, inter alia, mapping of all United Nations agencies, programmes, initiatives and other sources of expertise relating to marine litter, including plastic litter and microplastics

<http://www.env.go.jp/council/03recycle/y0312-04b.html>

<https://www.env.go.jp/council/03recycle/y0312-00/toshin.pdf>

<https://www.env.go.jp/press/106290.html>

<https://www.env.go.jp/council/03recycle/> 【資料%EF%BC%93】 海洋プラスチック問題について.pdf

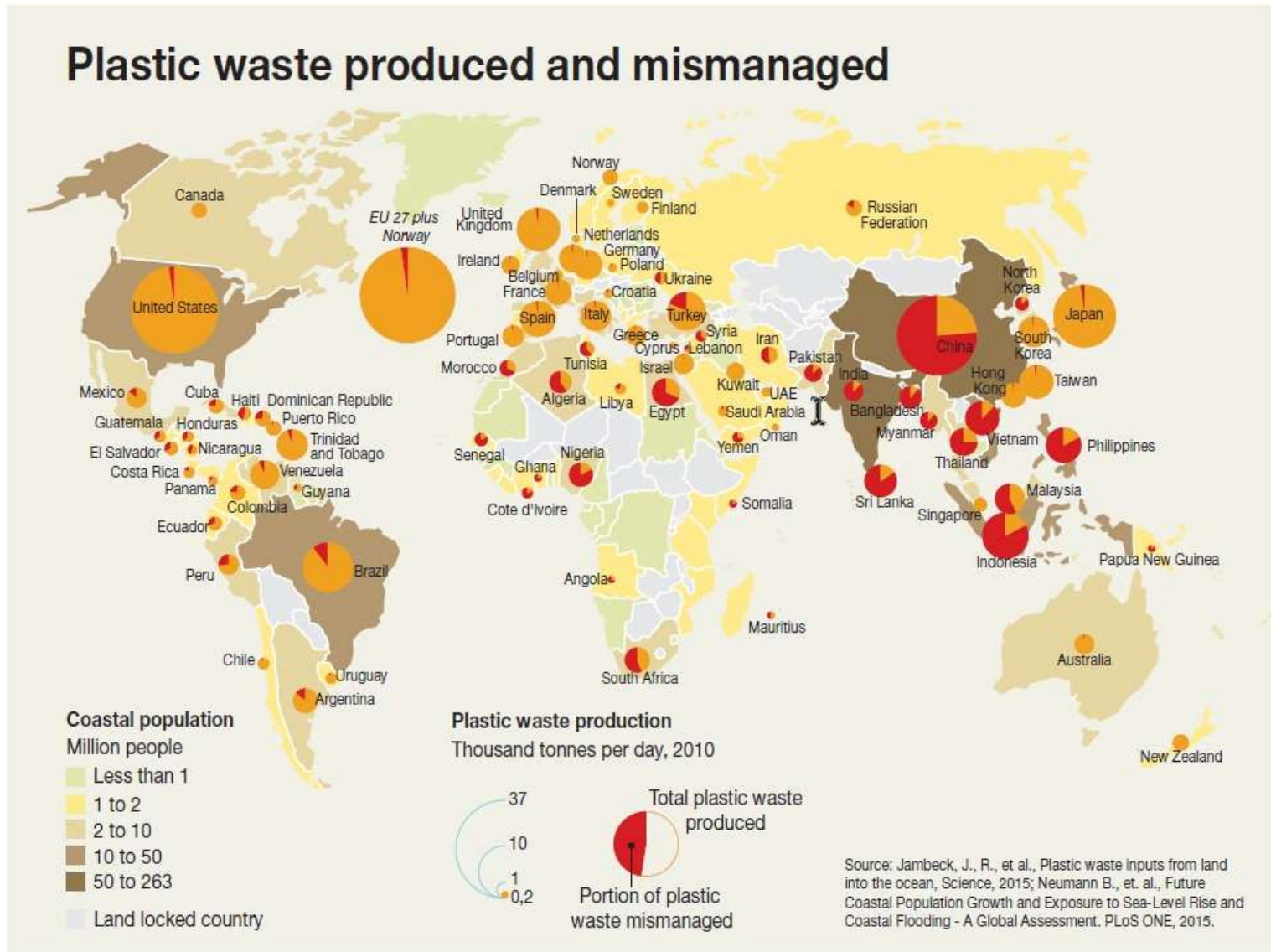
[EUのSingle Use Plastics に関する決定\(3月29日\)\(Phase out の目標年は、2026年\)](#)

<http://www.europarl.europa.eu/sides/getDoc.do?pubRef=-//EP//NONSGML+TA+P8-TA-2019-0305+0+DOC+PDF+V0//EN>

G-20 (Osaka in June 2019) “G20 Implementation Framework for Actions on Marine Plastic Litter“

https://g20.org/pdf/documents/en/annex_14.pdf

Figure 5: Estimated plastic waste produced and mismanaged globally



Source: GRID-Arendal and Maphoto/Riccardo Pravettoni (available at www.grida.no/resources/6931)

Source: **UNEP/AHEG/2018/1/INF/3**

THノート: 適切な処理処分がされていないものが問題。

UNEA4's Major Agenda Item (2) - GEO 6

- Though lightly delayed from the target time decided by UNEA3, GEO6's Summary for Policy Makers was adopted by an intergovernment meeting on 21st–24th January 2019, and, together with the full GEO6 report, it was submitted to UNEA4. UNEA 4 welcomed them with appreciation. [EA4_Res_23_Keeping the World Environment under Review - Enhancing UNEP Science-Policy Interface and Endorsement of the Global Environment Outlook]

- **[GEO6 Full Report \(>350MB\)](#)**

https://wedocs.unep.org/bitstream/handle/20.500.11822/27539/GEO6_2019.pdf?sequence=1&isAllowed=y

- **[GEO6 Summary for Policy Makers \(EA 4/18\)](#)**

https://wedocs.unep.org/bitstream/handle/20.500.11822/27652/GEO6SPM_EN.pdf?sequence=1&isAllowed=y

- GEO6 Video

<https://www.unenvironment.org/news-and-stories/video/planet-focus-global-environment-outlook>

<https://youtu.be/3dyhAcGyd20>

UNEA's Major Agenda Item (3) - International Environmental Law

- Since 1982, UNEP has been implementing Programme for the Development and Periodic Review of Environmental Law, “**Montevideo Programme**”, which contains, inter alia, capacity building of law experts in developing countries. UNEP reviewed its fourth phase (MP-IV) and submitted a proposal of Montevideo-V (2020-2029) [[UNEP/EA.4/19](#)]. *UNEA4 agreed its implementation and agreed to carry out its review by 2025. [[EA4 Res 20](#) Fifth Programme for the Development and Periodic Review of Environmental Law (Montevideo V) – Delivering for People and the Planet].*
- Under the UN General Assembly auspices, UNSG prepared in 2018, a report, “Gaps in international environmental law and environment related instruments: towards a global pact for the environment” (A/73/419). As a follow up, the first substantive expert meeting (first session) was convened in January 2019, second session in March 2019, and the third session was held in May 2019, all in Nairobi.
<http://enb.iisd.org/download/pdf/enb3503e.pdf>

Some recent UNEP reports

<https://www.unenvironment.org/resources?f%5B0%5D=category%3A452&keywords=&page=0>

- **GEO6、GEO6 SPM**

https://wedocs.unep.org/bitstream/handle/20.500.11822/27539/GEO6_2019.pdf?sequence=1&isAllowed=y

- **Global Resources Outlook 2019: Natural Resources for the Future We Want: summary for policymakers**

https://papersmart.unon.org/resolution/uploads/k1804016-1_0.pdf#overlay-context=pre-session-unea4

- **A review of 20 Years' Air Pollution Control in Beijing**

<https://www.unenvironment.org/resources/report/review-20-years-air-pollution-control-beijing>

- **Global Chemicals Outlook II: From Legacies to Innovative Solutions**

<https://www.unenvironment.org/resources/report/global-chemicals-outlook-ii-legacies-innovative-solutions>

- **UN Environment 2018 Annual Report**

<https://www.unenvironment.org/resources/un-environment-2018-annual-report>

- **Global Mercury Assessment 2018**

<https://wedocs.unep.org/bitstream/handle/20.500.11822/27579/GMA2018.pdf?sequence=1&isAllowed=y>

- **ENVIRONMENTAL RULE OF LAW**

https://wedocs.unep.org/bitstream/handle/20.500.11822/27279/Environmental_rule_of_law.pdf?sequence=1&isAllowed=y

Addendum – UN Basics



UN Staff Rules

- Appointment and Promotion
- Salary rules
- Staff performance review, fair treatment rules and procedures.
- ..
- ..
- Staff Association – personal experiences as President

Basics of UN Staffing System

- Staff Ranks
 - United Nations Secretary-General (UN SG)
 - United Nations Deputy-Secretary-General (UN DSG)
 - United Nations Under-Secretary-General (UN USG)
 - United Nations Assistant-Secretary-General (UN ASG)
 - Director (D-2)
 - Director (D-1)
 - Professional Officers (P-5, P-4 . . . P-1)
 - Administrative Officers (G-5, G-1)
- Short-term officers, consultants, project contributors.
- Interns, UN volunteers, Junior Professional Officers.

Japan Association for UNEP



2015年4月一般社団法人として活動を開始。
代表理事：鈴木基之 東大名誉教授

協会ウェブサイト: <http://www.j-unep.jp/>

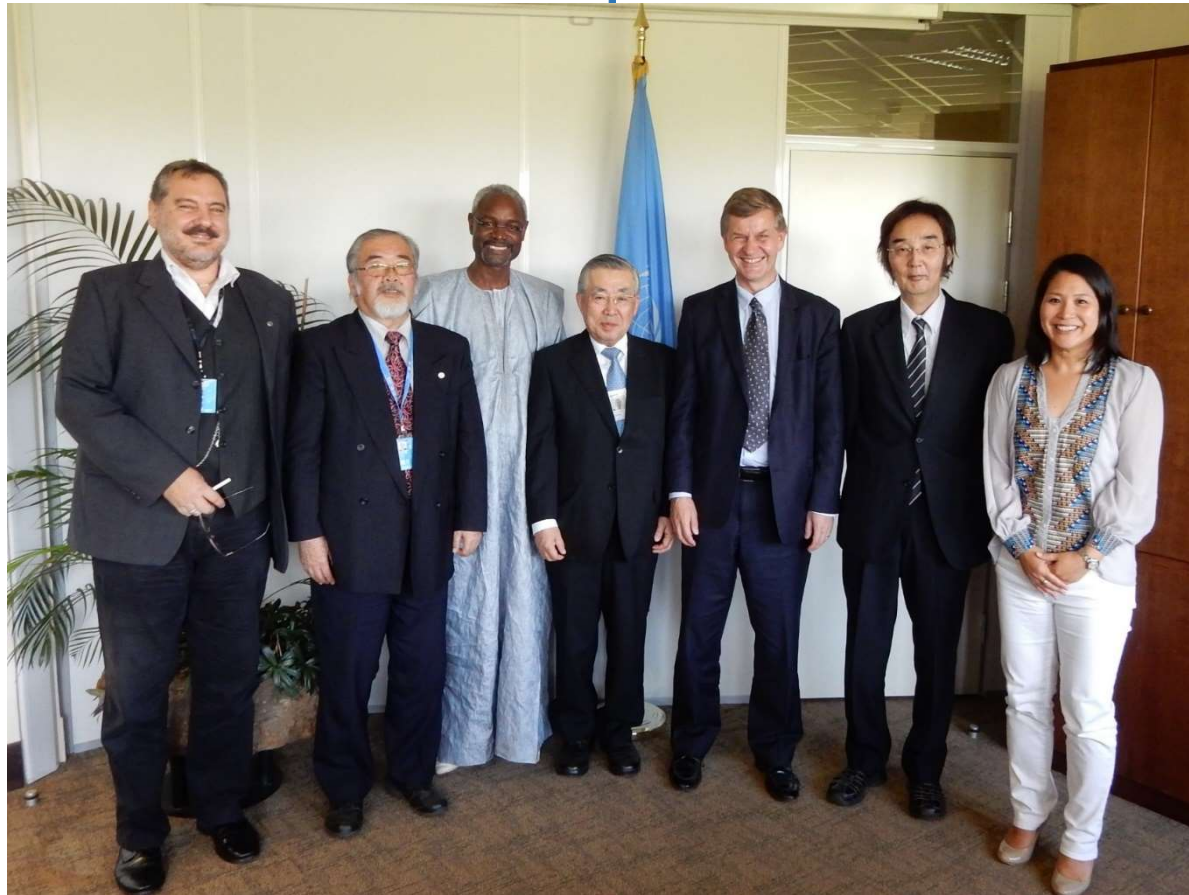
UNEP出版物サマリーページ:

<http://www.j-unep.jp/publications>

日本UNEP協会 - Google Play の Android アプリ

<https://play.google.com/store/apps/details?id=jp.co.tegaraashi.Appcooking322>

In December 2016, a team of JAU visited UNEP Headquarters



2016年12月、於 ナイロビ。
(UNEP側) Erik Solheim 事務局長、Ibrahim Thiaw 事務局次長、
Jorge Laguna-Celis 理事会等書記など

(協会側) 鈴木代表理事、宮内理事、平石理事

Taka Hiraishi

- Born in Tokyo on 3rd December 1944.
- B.Sc. (1966) and M.Sc.(1968) for Industrial Chemistry from Tokyo University.
- Joined Ministry of Labour (Occupational Health and Safety Department) in April 1968.
- Moved to the newly-established **Environment Agency** in 1971 and, till 1996, worked in the fields of offensive odour, acid rain, ozone layer, hazardous wastes, hazardous chemicals and water pollution, except the overseas posting shown below.
- 1987-1989: Director, Water Pollution Control Division, Environment Agency (current Ministry of the Environment) (1987-89)

Overseas posting:

•**1975-1978: Environment Attache (liaison with UNEP) and Second Secretary for bilateral technical co-operation (for Kenya, Uganda and Malawi) at the Embassy of Japan in Kenya.**

•1980-1982: Principal Administrator (A-4, information exchange on chemicals control policies, including chemicals management policies in developing countries), Chemicals Division, Environment Directorate, **OECD Secretariat.**

•**1989-1998: Worked for UNEP as (consecutively);**

- Co-ordinator of Support Measures, Programme Bureau (D-1),**
- Officer-in-Charge, Environmental Law and Institutions Centre,**
- Deputy Director of Policy Division,**
- Deputy Director of Environment Programme Division,**
- Assistant Executive Director for Environmental Information and Assessment (D-2).**
- (President, UNEP Staff Association (in 1996))**

More recently,

- 1999-2006: Visiting Principal Researcher, National Institute for Environmental Studies, Japan.
- 1999-2015: Member, IPCC Bureau and Co-chair, IPCC Inventories Task Force Bureau**
- 1999-2015: Senior Consultant, and Member, Board of Directors, Institute for Global Environmental Strategies (**IGES**), Japan (Part-time),
- February-April 2001: Special Advisor to the Minister of the Environment, Japan (Chair of Communique Drafting Group for G-7 Environment Ministers).
- 2002-2010: Special Advisor to the Minister of the Environment, Japan. (on OECD sustainable development activities, Part-time)
- 2005-2009: Specially assigned Professor (Risk Management and Global Environmental Issues), Osaka University, Japan (Part-time)
- Vising Lecturer for Tokyo Institute of Technologies, Sophia University, Gakushuin University, Osaka University, Atomi University.*
- 2001- : Contributed to the work of the Ministry of the Environment in Japan for CDM, J-VER, JCM, adaptation and “co-benefits”
- 2002-2011: UNFCCC, member of CGE (Consultative Group on non-Annex-I national communications).**
- 2004-2008: UNFCCC, member of EGTT (Expert Group on Technology Transfer)**

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- Counsellor, Institute for Global Environmental Strategies (IGES), Japan (Volunteer),**
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