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GLOBAL ENVIRONMENT FACILITY
INVESTING IN OUR PLANET

GLOBAL HEALTHCARE WASTE PROJECT

MODULE 3:

International and National HCWM Laws – Legislative, Regulatory and policy Aspects

Module Overview

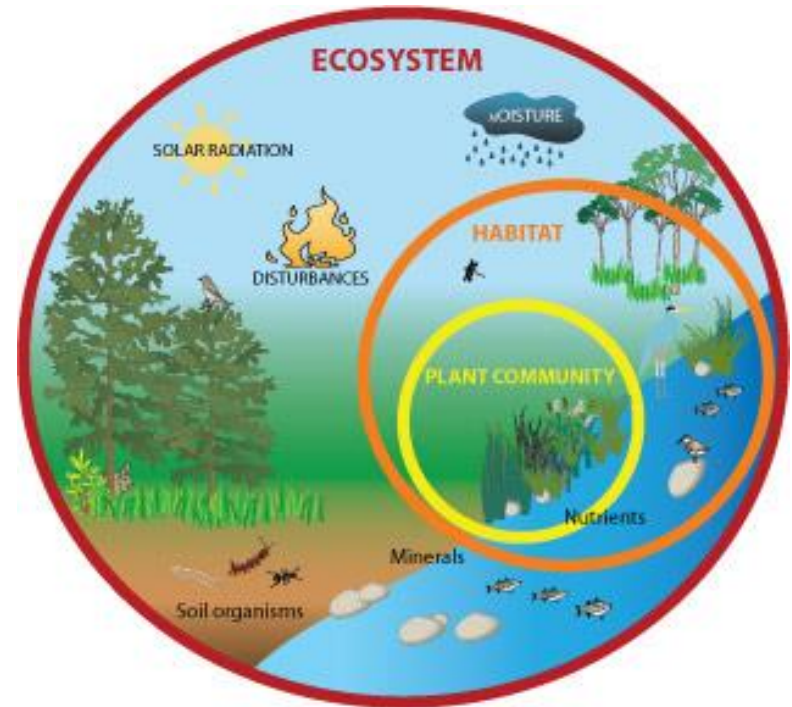
- Introduce basic environmental concepts
- Define the guiding principles of waste management
- Describe the World Health Organization's policy and the core principles for achieving safe and sustainable management of healthcare waste
- Describe the country's obligations under the Basel and Stockholm Conventions as they relate to healthcare waste management (HCWM)
- Describe national and local HCWM laws and regulations

Learning Objectives

- Know basic environmental concepts
- Understand five guiding principles of waste management
- Understand the purpose of the Stockholm and Basel Conventions
- Know the WHO policy and core principles on HCWM
- Understand the structure and provisions of national and local laws and regulations specific to HCWM
- Identify country/state specific HCWM laws and how they apply to your facility

Basic Environmental Concepts

- What is Environment?
- Features of Our Environment
- Ecosystems
- Environmental Pollution and Pollutants
- Interrelationship of Environment and Health

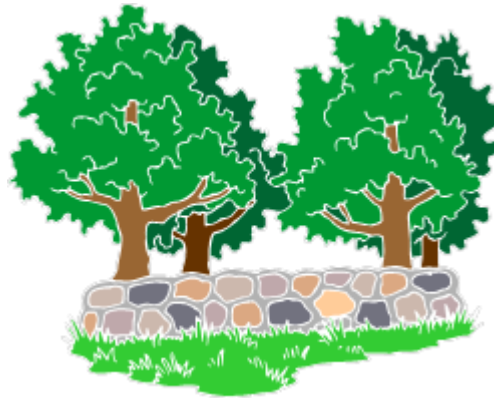


Basic Environmental Concepts

- What is Environment?
 - Everything that surrounds you



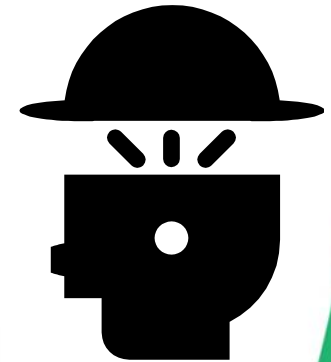
The Family



The Environment



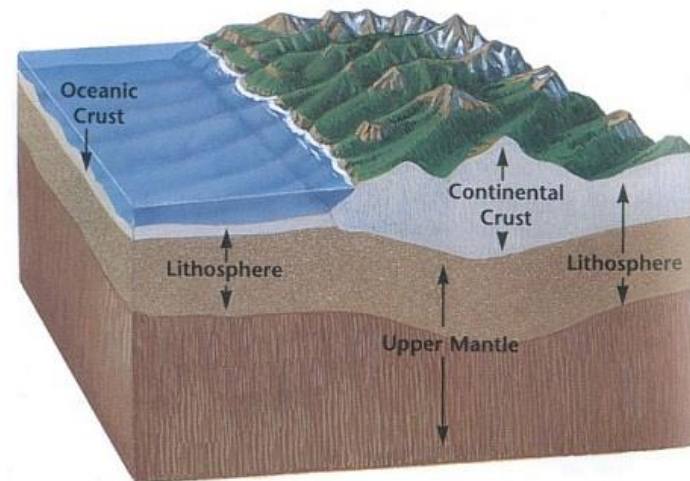
The Sun and Sky



Ideas and Culture

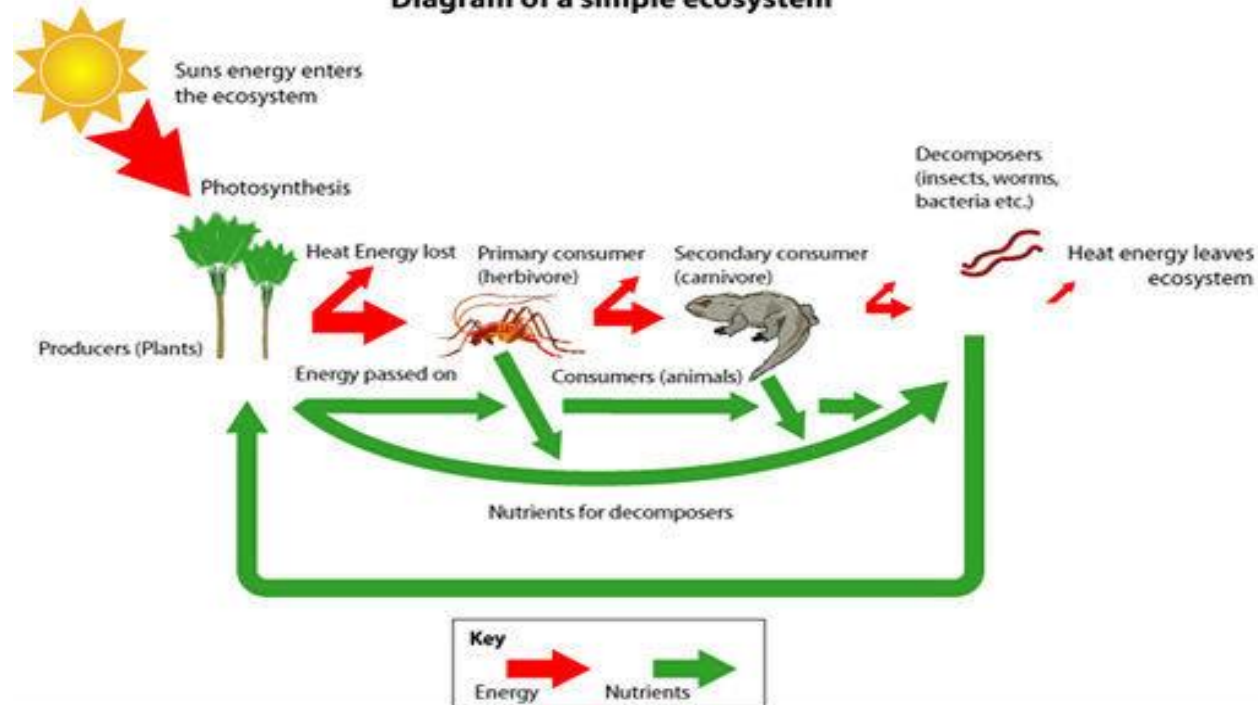
Basic Environmental Concepts

- **Features of our Environment**
 - Biosphere = the sum of all of our ecosystems
 - Atmosphere = the layer of gases surrounding earth
 - Hydrosphere = the water system of the earth
 - Lithosphere = the outermost rocky shell of our earth



Basic Environmental Concepts

Diagram of a simple ecosystem



What is an ecosystem?

A system that includes all living organisms (biotic factors) as well as its physical environment (abiotic factors) functioning together as a unit

Basic Environmental Concepts

- Environmental Pollution
 - Human well-being and health is closely linked with the health of the surrounding environment.
 - Any degradation in any of the environmental components (air, water, soil, biosphere) will have adverse effects on the health of individuals.



Basic Environmental Concepts

Interrelationship of Environment and Health

- Human health is dependent on the health of the environment.



International Principles of Waste Management

- The following international principles are widely recognized as underlying the effective management of wastes
 - “Polluter pays” principle
 - “Precautionary” principle
 - “Duty of care” principle
 - “Proximity” principle
 - “Prior informed consent” principle

Polluter Pays Principle

- All waste producers are legally and financially responsible for:
 - safe handling of waste
 - environmentally sound disposal of waste
 - creating an incentive to produce less waste



Precautionary Principle

In order to protect the environment, the precautionary principle approach shall be widely applied by States according to their capabilities.

Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation.

(Rio Declaration 1992, UNCED)



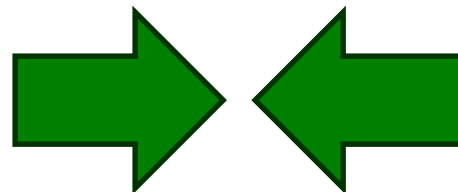
Duty of Care for Wastes

Stipulates that any person handling or managing hazardous substances or related equipment is ethically responsible for applying the utmost care.



Proximity Principle

Recommends that treatment and disposal of hazardous waste take place as near as possible to the point of production as is technically and environmentally possible to minimize risks involved in transport



Prior Informed Consent

Requires that affected communities and other stakeholders be apprised of the hazards and risks involved in the transport of wastes and the siting and operation of waste treatment and disposal facilities



World Health Organization Definition of Health



World Health Organization

The World Health Organization (WHO) defines **health** as a state of complete physical, mental and social well-being.

World Health Organization Guiding Principles on HCWM

1. Prevent health risks to health workers and public
2. Support efforts to reduce disease from noxious emissions
3. Support the Stockholm and Basel Conventions
4. Promote practices to reduce exposures to toxic pollutants from incineration

WHO Core Principles on HCWM

- Safe and sustainable management of healthcare waste is a public health imperative and a responsibility of all.
- Improper management of healthcare waste poses a significant risk to patients, healthcare workers, the community and the environment.
- Right investment of resources and commitment will result in a substantive reduction of the disease burden and corresponding savings in health expenditures

WHO Recommendations

- **Governments** should:
 - allocate a budget to cover the costs of establishment and maintenance of sound healthcare waste management systems
 - request donors, partners and other sources of external financing to include an adequate contribution towards the management of waste associated with their interventions
 - implement and monitor sound healthcare waste management systems, support capacity building, and ensure worker and community health.

WHO Recommendations

- **Donors and partners** should:
 - include a provision in their health program assistance to cover the costs of sound healthcare waste management systems.
- **Non-governmental organizations** should:
 - include the promotion of sound healthcare waste management in their advocacy
 - undertake programs and activities that contribute to sound healthcare waste management.

WHO Recommendations

- The **private sector** should:
 - take responsibility for the sound management of healthcare waste associated with the products and services they provide, including the design of products and packaging.

WHO Recommendations

- All concerned institutions and organizations should:
 - promote sound health care waste management
 - develop innovative solutions to reduce the volume and toxicity of the waste they produce and associated with their products
 - ensure that global health strategies and programs take into account healthcare waste management.

WHO Strategies on HCWM

- **Short Term**

- Develop recycling options where possible
- Use PVC-free materials
- Promote small-scale non-incineration alternatives

- **Medium-Term**

- Reduce the number of unnecessary injections to reduce sharps waste
- Assess the health risks associated with incineration and exposure to healthcare waste.

WHO Long-Term Strategy on HCWM

1. Scale up the promotion of non-incineration technologies for the disposal of healthcare waste
2. Support the development of national guidance manuals for sound management of healthcare waste
3. Support the development and implementation of national plans, policies and legislation on healthcare waste
4. Promotion of the principles of environmentally sound management of healthcare waste as set out in the Basel Convention
5. Allocate human and financial resources to safely manage healthcare waste in countries.

International Laws

Stockholm Convention

- A global treaty to protect human health and the environment from persistent organic pollutants (POPs)
- POPs are chemicals that:
 - remain intact in the environment for long periods
 - become widely distributed geographically
 - accumulate in the fatty tissue of living organisms
 - are toxic to humans and wildlife



International Laws

- As of October 2012, there were 178 parties to the Stockholm Convention
- Parties are required to take measures to eliminate or minimize the production, unintentional production, use, and release of POPs, including **dioxins and furans**



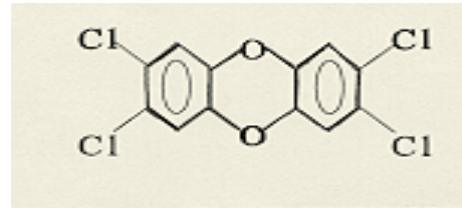
Dioxins and Furans

- Family of 210 compounds
- Extremely toxic at very low concentrations
 - WHO tolerable daily intake (TDI):
0.0000000000001 g TEQ/kg/day
- Classified as a human carcinogen in 1997
- Linked to male and female reproductive disorders
- Linked to developmental and immune system health impacts



Dioxins and Furans

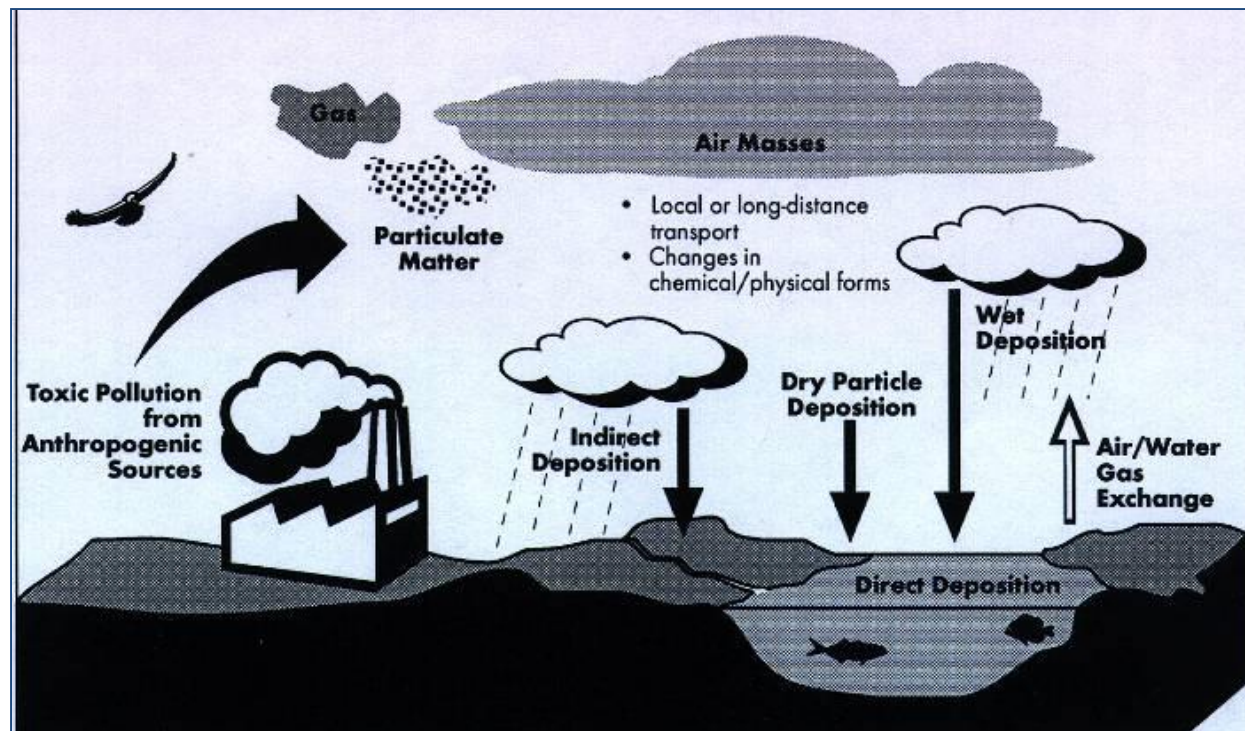
- Travel hundreds of kilometers in the atmosphere across national boundaries
- Persist in the environment many decades (e.g., half-life is 25-100 years in subsurface soil)
- Bioconcentrate up the food chain
- Average half-life in the human body for the most toxic dioxins (2,3,7,8-TCDD): 7-12 years



- Common pathways for human exposure: ingestion of fish, dairy products, meat

Dioxins and Furans

- Medical waste incinerators
 - are major sources of global dioxins and furans



Stockholm Convention on POPs

- Article 5:
Countries have to take measures to further reduce releases of POPs from unintended production “with the goal of their continuing minimization and, where feasible, ultimate elimination.”
- Annex C:
 - **Medical Waste Incinerators** have “the potential for comparatively high formation and release” of dioxins & furans
 - “**Priority consideration**” should be given to alternative technologies that avoid formation of dioxins & furans

Stockholm Convention on POPs

- Resources on Healthcare Waste
 - **Section V.A.ii (“Medical Waste”)** in *Guidelines on Best Available Techniques and Provisional Guidance on Best Environmental Practices Relevant to Article 5 and Annex C of the Stockholm Convention on Persistent Organic Pollutants*, Geneva, December 2006
<http://chm.pops.int/Implementation/BATBEP/Guidelines/tabid/187/Default.aspx>
 - **UNDP GEF Project on Healthcare Waste**: a global project in seven developing countries to demonstrate compliance with the Stockholm Convention
www.gefmedwaste.org

International Laws

Basel Convention, 1989

- Coordinated by the United Nations Environment Programme (UNEP)
- Controls transboundary movements of hazardous waste including medical and pharmaceutical waste
- Hazardous waste exports from most developed countries to the developing world are banned by the convention

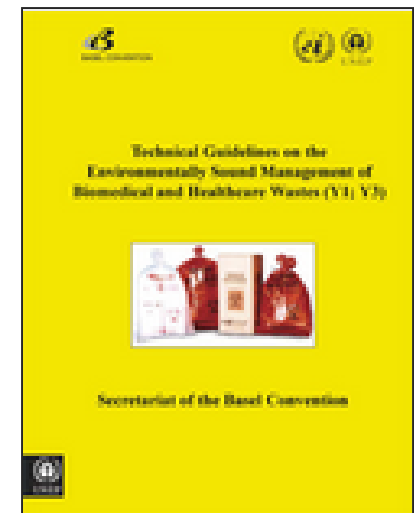


BASEL CONVENTION

Basel Convention

- Resources on Healthcare Waste
 - Technical Guidelines on the Environmentally Sound Management of Biomedical and Healthcare Wastes (Y1; Y3), Secretariat of the Basel Convention, Châtelaine, Switzerland, September 2003

<http://www.basel.int/TheConvention/Publications/TechnicalGuidelines/tabid/2362/Default.aspx>



Global Level

International Healthcare Waste Guidelines

General

National Level

Healthcare Waste Guidelines and Regulations

Country specific

Local Level

Facility Healthcare Waste Management Plan

Unique to each facility
Best Available Practices

National Laws

Local Laws

Medical Waste and Human Rights

- Conclusion of the United Nations Special Rapporteur, July 2011
 - Improper management and disposal of medical waste is a threat to the enjoyment of human rights, including the rights to: life, the highest attainable standard of physical and mental health, safe and healthy working conditions, and adequate standard of living
 - Those affected include medical staff, patients, support service workers, waste workers, recyclers, scavengers and the general public
 - More attention to this issue is needed

Discussion

- Think about the five guiding principles of waste management. Do you know if your country or region abides by one or another? Which of the principles do you think is the most appropriate?
- Does your facility incorporate some of the WHO core principles' short-, medium-, and long-term strategies?
- What are some laws/policies on HCWM in your own country/region? What are some of the elements that they include or provisions that they stipulate? How do these compare with other countries or regions? If there is no legislation that you are aware, what actions have been taken, if any, to establish national HCWM programs and legislation?
- How does your facility compare to the international/national requirements for a HCWM program?