ARBA MINCH UNIVERSITY

AWTI

WATER SUPPLY AND ENVIRONMENTAL ENGINEERING FACULTY

Environmental Law (WSEE-5236)

Target group: G5 Hydraulic and Water Resources Engineering

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Course Objectives

To make students familiar with

- Aspect of responsibility and obligation for environmental protection.
- The legal aspects of all waste disposal, pollution prevention and construction of large to small dams for different purposes should consider the environment.
- The overall course objective is thus to provide to the students the knowledge on all relevant Ethiopian, regional and international Legal considerations for efficient environmental protection.

Course Contents

- The need for law
- Introduction to Water law
- Water governance
  - Global perspective of water
  - Water rights
  - Ethiopian policy framework of water management
- International water course governance
- Environmental law

Assessment

- 50% continuous assessment [projects, quiz, assignm.]
- 50% final exam

THE NEED FOR A WATER AND ENVIRONMENTAL LAW

- Natural resources are the foundation of the economy
- Renewable natural resources, i.e. land, water, forests and trees as well as other forms of Biodiversity, which meet the basic needs for food, water, clothing and shelter have now deteriorated to a low level of productivity
- Estimates of deforestation, which is mainly for expansion of rainfed agriculture, vary from 80,000 to 200,000 hectares per annum.
- The burning of dung as fuel instead of using it as a soil conditioner is considered to cause a reduction in grain production by some 550,000 tonnes annually

THE NEED FOR A WATER AND ENVIRONMENTAL LAW

- The genetic diversity of Ethiopia's domesticated plants and its unique flora and fauna is increasingly being eroded because:
  - the long history of disruptive interventions by the state and the weakening of local management
  - the increasing needs of agriculture.
- The permanent loss in value of the country's [Ethiopia] soil resources caused by soil erosion in 1990 was estimated to be Birr 59 million.
- Only one percent of the potential of Ethiopia's vast water resources for irrigated agriculture and hydropower generation have been developed.
- Water quality deterioration….

THE NEED FOR A WATER AND ENVIRONMENTAL LAW

- **So law and policy is important to manage deteriorating resources!**

Water Law

Introduction

Conceptual Matters about Water

- Water is nature's precious gift.
- It is a fundamental environmental resource which sustains life.
- Water, as the source of life, is a permanent companion to all living things.
- Relative to population growth and increasing human needs and intervention, water gets scarcer.
- The major concern about water is the question of ensuring sustainable supply and adequate quality.

Introduction

- **Water is one of those natural resources that often cut across local, national and interstate boundaries.**
- **Thus it is a unique resource that links local communities as well as nation states.**
- **Water is a shared resource than anything else whether at local, national or at inter-state level.**

Introduction

law: brief introduction

- Various names for the term Law in different languages
- According to Blacks law dictionary law consists of rules of action or conduct issued by an authority.
- Law is a ruling of human conduct, imposed upon and enforced among, the members of a given state (Gupta 2003).
- The law creates:
  - ✓ legally enforceable expectations (rights);
  - ✓ duties to respect those rights;
  - ✓ means of redressing violations of rights (remedies

Introduction

Water law

- defined as the creation, allocation and distribution of water rights and further consists of those aspects of the law that are of primary concern in the management of water resources (cf. Goldfarb 1988).

- is made up of all the provisions which in one way or another govern the various aspects of water management, i.e. water conservation, use and administration, the control of the harmful effects of water, water pollution and so on (Caponera 1992).

Introduction

International Water Law:

- Covers a combination of laws and policies in the various fields of law related with water.
- Refers to the creation, allocation and distribution of water rights and consists of those aspects of the law that deals primarily with the management of water resources (Goldfarb, 1988)
- Int'l Water law is the field of law dealing with the ownership, control, and use of water as a resource.

Introduction

Sources of Water Law:

- **Water Laws are Derived from:**
  - ✓ **The constitutional, administrative, civil, criminal, agricultural, mining, natural resources, public health legislation of a country,**
  - ✓ **Customs, usages or vested norms**
  - ✓ **Jurisprudence or Court orders from the Judiciary**
  - ✓ **Soft law, guidelines, conventions etc and**
  - ✓ **Scholarly opinions.**
- **Water law tended to cover the consumptive or non-consumptive use and the sharing of water resources.**

Introduction

Important terms:

- ***Riparian states*** **:-** an individual, institution or nation that has ownership or sovereignty over territory along, or across, a river.
- At the international level, the countries that lie next to a river or countries that have an international river passing through it are riparian states(Gupta, 2008).
- ***International Water Course:-***

"Watercourse" means a system of surface waters and groundwater constituting, by virtue of their physical relationship, a unitary whole and normally flowing into a common terminus

"International watercourse" means a watercourse, parts of which are situated in different states (Part I, Article 2).

Hydro-politics

- Hydro-politics is a complex arena of interaction between riparian actors in the shared water basins.
- There are uncertainties about the demand and supply of the scarce fresh water resources.
- The issues of water demand and supply are inherent in the changing, societal, developmental, technological and ecological circumstances.

Hydro-politics

- **Upstream-downstream linkages often create delicate relationships needing Institutional framework and governance system (existence of principles, rules and procedural mechanisms)**
  - **Riparian actors at local level (local and national frameworks)**
  - **Riparian at national level (national level frameworks)**
  - **Riparian at interstate level (international frameworks-principles, rules and procedural mechanisms)**

Major Nile Water-Related Treaties and Agreements were made during colonization. Most of these treatises were done on the basis of colonial and economic territories

- **The Anglo-Italian Protocol of April 15, 1891**
- **The Treaty between Great Britain and Ethiopia , May 15,1902**
- **The Tripartite (Britain-France-Italy) Treaty of December 13, 1906**
- **The Agreement between Egypt and Anglo-Egyptian Sudan of 7th May 1929**

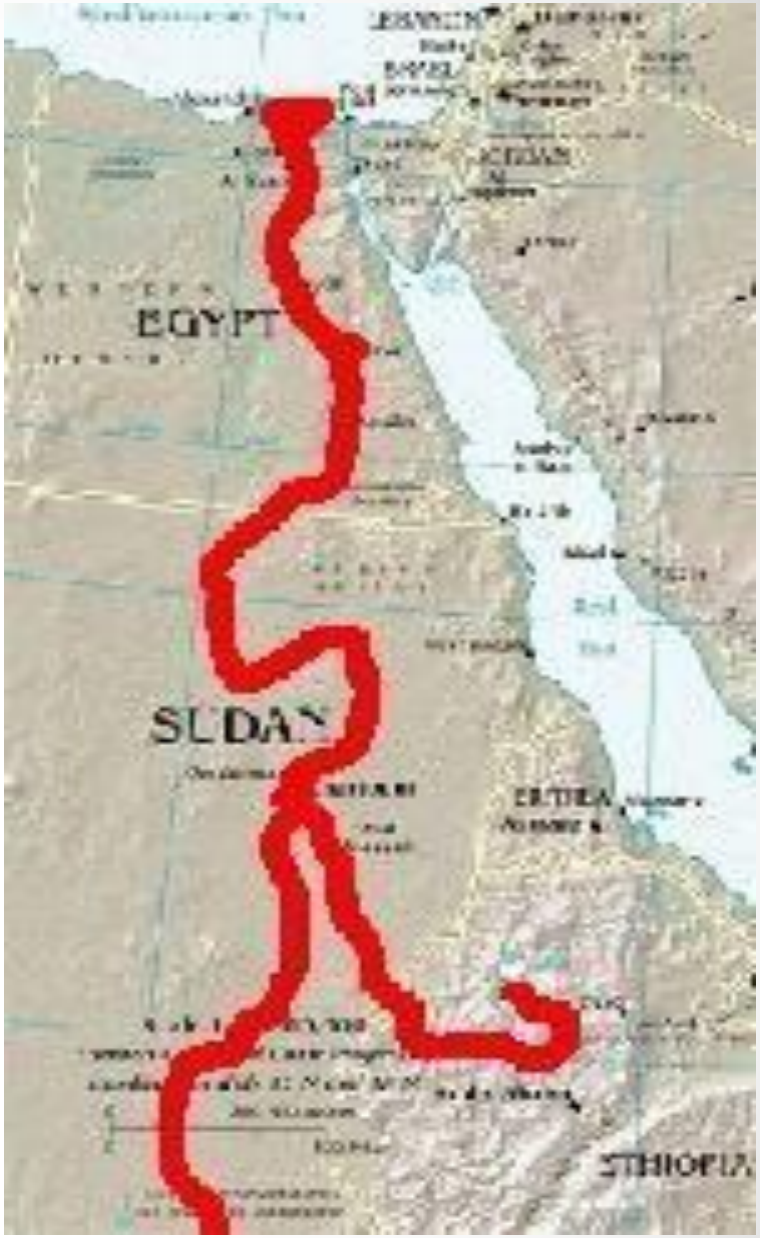

Fig. of Nile river (trans-boundary)

Hydro-politics

- The interstate relationships are driven by national interests, and often confront the riparian states with complex issues and dilemmas of hydro-politics.
- Competition for water may catalyze conflict or cooperation among riparian actors (communities, regions or nations).
- A competition for the control of shared water resources becomes a high national and regional security concern, for instance, in Northeastern Africa and the Middle East.
- Hydro-political complexities are more accentuated between and among states that share rivers /lake basins.

WATER GOVERNANCE

Introduction

- **Water governance is employed :**
  - ✓ **To address the environmental, economic, security and legal/institutional issues of water resources.**
  - ✓ **To provide policy and regulatory mechanisms for optimal utilization, management and protection of water resources**
  - ✓ **To promote cooperative utilization, management and protection among upstream and downstream actors at local, national as well as interstate levels**
  - ✓ **To provide careful interpretation of traditional, customary and conventional principles, practices and institutions to facilitate optimal utilization, management and protection of water resource**

Introduction

Project 1: group study

Title of project: Water & Us: domitory level water use, management and protection assessment

- **The project aims to study the utilization, management and protection of water resources at household level. The main sources of data are: (1) interviews of HH members (2) personal observation of the researcher**

Introduction

The main issues of investigation include:

- **HH water supply pattern**
- **HH water utilization pattern**
- **Existing water protection mechanisms**
- **Economic analysis of HH water use and management**
- **Planned water protection mechanisms**
- **Problems observed**
- **towards best practice of HH water utilization, management and protection**

Duration of assignment: one week

Date of Submission: _____

Papers are submitted in soft copies (entire document and presentation document)

Global Perspective of Water

- All living things including plants, animals and humans depend on water for survival, regeneration, development and socio-economic transformation
- The process of evolution wouldn‟t have taken place in the absence of water
- The great world transformations emerged in the course of effective utilization of water resources.

Global Perspective of Water

- The ancient civilizations were agriculture based in the river basins.
- They were products of the Agricultural Revolution.
  - Irrigation was the main activity.
  - Surplus production, division of labor, social class formation, emergence of intellectual development (philosophy, religion, law, art, cultural objects and symbols, etc.) were the results of the agricultural revolution which created the conditions where a part of the society enjoyed leisure time to think and articulate their thoughts associated to the level of the material development.

Global Perspective Of Water

The following ancient hydraulic civilizations can be mentioned:

- **Indus Civilization in Indus Valley of India**
- **The Chinese Civilization in Howang Ho Valley**
- **The Egyptian Civilization in the Nile Valley**
- **The Sumerian Civilization in the twin river valleys of Euphrates and Tigris**

Global Perspective Of Water

An example of water utilization rule of ancient Sumeria is shown in the following quote:

- **"If anyone be too lazy to keep his dam in proper conditions, and does not keep it so; if then the dam breaks and all the fields are flooded, then shall he in whose dam the break occurred be sold for money and the money shall replace the corn which he has caused to be ruined"**
- **"If anyone open his ditches to water his crop, but careless, and the water flood the field of his neighbor, then he shall repay his neighbor, then he shall pay his neighbor with corn for his loss"**
- **"If a man let out the water, and water overflow the land of his neighbor, he shall pay 10 gur of corn for every gur of gan of land flooded".**

Water and Society

- Water is spiritually revered object:

In Christianity:

- Water is a symbol of purity; e.g., without water there is no baptism.
- Thebal (holy water) is used for spiritual purification as well as for healing from illness.

In Islam:

- Water is the gift of the Almighty.
- The holy laws prescribe to protect water as key object and symbol of cleanliness.
- Muslims go for pray washing with water & be clean.

Water and Society

In Buddhism:

- Water is a symbol of harmony with nature.
- A special attention for the protection of the holy sites includes rivers and water sites.

In Hinduism:

- As much as Gods are in nature, rivers are sacred objects where the faithful immerse themselves to get rid of all sins and evils in and around them.
- Annual rituals of immersing into Ganges River are well known among the Hindu in India.

Water Supply and Roles

A. The state of world"s water supply

- 1360 million km3 on earth: 97 % in oceans (1348 million cubic km), 3% (37 million cubic km) fresh water
- Run off: 40,000 cubic km
- Ground water: 8,000 000 cubic km
- Lakes and rivers: 200 000 cubic km
- Snow/ice cape: 29 000 000 cubic km
- Water vapor in the air: 13,000 cubic km
- Evaporation from land; 70,000 cubic km
- Precipitation over the land: 110,000 cubic km
- Precipitation over the seas: 390,000 cubic km

- Water quality is a function of ecologically/environmentally reasonable use.

Water Supply And Roles

B. Some Roles of Water

- Water as necessity

- No life on earth can be imagined without water. Human, animal, plant, etc. life is dependent water

- Water as luxury

- Swimming, bathing, steam-bathing, canoeing, rafting, fishing, etc. are luxuries people get enjoyment from water.

- Water as healing power

- Water is used as healing power in cultural and spiritual practices
  - The sacred spring at Gish Abbay
  - Thebel springs in numerous places in Ethiopia

Water Supply and Roles

- **Water as development resource**

- Growing food crops, producing organic row materials, processing industrial products of all types-from flour to steel can only be done with the use of water.
- Water is used irrigation activities, hydro-power projects, on the river navigation, fresh water fishing, etc.

- **Water as connector**

- Water connects communities, regions and countries across and along which it flows.

- **Water as means of cooperation**

- The shared water provides the opportunity to cooperate in the utilization, management and protection processes.

Water Supply and Roles

- **Water as divider**

- Communities, regions and countries may be divided as upstream and downstream riparian communities or countries.
- Rivers and lakes may divide communities, regions and countries along two shores of the water resources, thus causing competition and dispute over the control of the resources.

- **Water as object of competition**

- The riparian communities and countries strive to maximize their share of the benefit from the shared water resources.
- This often gives rise for competition among riparian communities, regions or countries.

Water Supply and Roles

- **Water as object of dispute**

- **In the absence of legal and institutional framework disputes over the shared waters may arise.**

- **Water as political weapon**

- **The actors who hold vantage positions may use water as political influence and diplomatic pressure.**

- **Water as destructive power**

- **Floods, avalanches, run-offs can be destructives unless managed.**

Water Supply and Roles

WATER REQUIREMENTS

- Water requirement for human consumption on yearly basis:
  - 1m3 for drinking per person
  - 100m3 for domestic purposes (laundry, washing, cleaning, etc.)
  - 20m3 for industrial and services related activities
  - 1000m3 for food production:
    - The production of one tone of grain is roughly equivalent to annual food requirement for a person.
    - The production of 1tone of food grain requires 1000m3 of water.
    - Food producing is based on optimal soil moisture (for at least 100 days during the year).

Water Supply and Roles

WATER SCARCITY

- The coming of an additional person to this world, not compensated by a death of another person, requires additional 1000m3 of water to sustain the new person.
- If food is not produced in sufficient amount in a country due to lack of water, the deficit food has to be imported.
  - Importing food can be taken as importing water (in the form of virtual water).
- 1000Km2 land requires 1Km3 of water for optimal farming.
- The political economy of global trade in food staples is subordinate to the global hydrological systems.

Water Supply and Roles

WATER SCARCITY

- **Annually available water can increased with appropriate water utilization, management and protection.**
- **Poor countries have less flexible options to mitigate the deficit in annually available water.**
- **The industrialized countries have more flexible options to make up for the water deficit (one of the ways can be through food import)**

Water Supply and Roles

WATER USE INTENSITY IN SELECTED INDUSTRIAL PRODUCTS

Quantity and product type	Quantity of water required
1 liter of petroleum	10 liter of water
1 can of vegetables	40 liters of water
1 kg of paper	100 liters of water
1 ton of wooden cloth	600 liters of water
1 ton of cement	4,500 liters of water
1 ton of steel	20,000 cubic m. of water
1 ton of Dacron	4,200 cubic m. of water

Shared Waters

Water is shared resource at different levels:

- **Local level:**
  - **Communities, villages, organizations may share springs, streams, deep wells, lakes, harvested water bodies, wetlands, etc.**
- **National level**
  - **Cross regional rivers, lakes, wetlands other water bodies**
- **Inter-state level**
  - **Trans-boundary Rivers, trans-boundary lakes, trans-boundary wetlands, cross-boundary dams, cross-boundary wetlands**

Shared Waters

Shared Water Basins of Ethiopia

Name of basin	Basin area in km²	Average annual flowing bcm	Drainage towards
Wabeshibelle	202 697	3.16	Somalia
Abbay	201 340	52.62	Sudan-Egypt
Ganale/ Dawa	171 042	5.8	Somalia
Awash	112 695	4.6	Internal
Tekeze	82 350	8.2	Sudan-Egypt
Omo/Gibe	78 213	17.9	L. Turkana/Kenya
Ogaden	77 121	----	Internal
Baro/Akobo	74 102	23.24	Sudan-Egypt
Dankel	74 002	0.86	Internal
Rift Valley	52 730	5.64	Internal
Mereb	23 932	0.65	Eritrea-Sudan

Source: Ethiopia, Federal Democratic Republic of, 1990, *Country Paper*, the Nile 2002 Conference, March 15-19, 1999, Cairo, p 2.

Water rights

What is water right?

- **Water right establishes a legally enforceable expectation of an individual or a group of individuals to use or own water and, if necessary, to exclude other individuals or groups from this ownership or use.**
- **It involves duties to respect and means to redress violations**

Water rights

What is the purpose of a water right system for society?

- To deal with scarcity
  - Priorities
  - Demand management
- To create equity and social acceptance
- To create predictability and to secure investments
  - Administrative clarity (registration)
  - Flexibility and transfer arrangement
- Environmental management
  - Conservation
- Social and economic planning and development
- Cost recovery principle for development and management

Water rights

Factors of influence for the many different water right systems?

- Scarcity (sub-tractibility)
- Physical characteristics
- Culture and religion
- Political history and political environment
- Legal tradition
  - Customary law (everywhere)
  - Roman (civil) law, Common law
  - Islamic law
  - Hindu and Buddhist law

Water rights

How can a (contemporary) water right be acquired? Systems of acquisition?

- Law
- Custom
- Beneficial use (through time)
- Court order
- Trade or via the market
- Government allocation
- River basin plan
- Combinations

Water rights

Legitimate water uses (subject to righting)

- Consumptive:
  - Drinking
  - Other Domestic
  - Livestock
  - Irrigation
  - Industry
    - Cooling
  - Aquaculture
- Non-consumptive:
  - Power Generation
  - Transport
  - Recreation
  - Environment & Nature
  - Fishery

Water rights

Types of water rights

- Absolute ownership right
  - Only restricted by law
- Absolute right of use
  - Restricted by law, but no ownership
- Relative right of use
  - Conditions: restricted transfer, effective use, specification of use, attachment to land etc.
- Permit, concession, license
  - Through administrative allocation

Water rights

Possible conditions to relative rights or permits

- Drought regimes
  - Restrictions of proportionality or priority of use
  - Water reservations and water shortage areas
  - Minimum flow requirements
- Emergency legislation
  - Suspension in times of war/civil strife
- Effective or beneficial use
  - „use it or loose it"
- Attachment to land or abstraction point
- Time restrictions

Ethiopian Policy Framework of water governance

Project 2

Title of project: Local water governance study

- **The project aims to study water management of Arba Minch & /or other cities or large settlements in Ethiopia; and write a paper in up to 10 pages.**

- **The expected tasks include:**

a. **Identify a water stream or a segment of it in Arba Minch or in other cities of Ethiopia.**
b. **Describe the hydrological pattern.**
c. **Explain the state of water quality.**
d. **Explain the state of water governance**

Policy Framework

e) Discuss riparian issues.
f) Discuss institutional issues.
g) Conclusion
h) Annexes (photos, sketches, maps, etc., if any)

- Duration of the assignment: 2 weeks
- Date of submission:_____

Final papers are submitted in 2 copies [document and presentation]

Policy Framework …contd'

- Water has drawn a longstanding attention of society and governments in the Ethiopian history.

1. Fetha Negast & Water

- The *Fetha Negast* embodied the following principles in relation to the use and management of water resources:
  - It recognizes shared rights among the riparians with regard to water use as well as the protection of the environment of the river course.
  - For instance, it goes to the extent of prescribing that in the case of shared riverbanks, if soil is eroded from one holding to another, compensation is due.

Policy Framework

- **The *Fetha Negast also* prescribes principles of management and dispute handling over shared water resources.**
  - **Downstream riparian right to receive the water flow (1179)**
  - **Upstream riparian right to receive compensation for the loss of soil (1180-1181)**
  - **Right of corridor to access watering point (1182)**
  - **Issue of silt accumulation (1184)**
  - **Water as common property; no selling, no buying unless human labor is invested.**

Ethiopian Policy Framework

2. The Ethiopian Constitutions & Water

- Since 1931 Ethiopia has had three constitutions, representing 3 political regimes with distinct political systems.

The 1955 Revised Constitution of Imperial Ethiopian Government

Article 130 provided that "the natural resources of the waters, forests, land, air, lakes, rivers and ports of the empire were held in sacred trust for the benefit of present and succeeding generations of the Ethiopian people. The conservation of resources was stated as essential for the preservation of the Empire"

Policy Framework

The 1987 Constitution of Peoples Democratic Republic of Ethiopia

Article 13 stipulated that **"Natural resources, especially land, mineral resources, waters and forests are the property of the state".**

Policy Framework

The 1995 Constitution of the Federal Democratic Republic of Ethiopia

Article 40 (3) provides that "**the right to ownership of all natural resources is exclusively vested in the state and peoples of Ethiopia**".

Policy Framework

- All three constitutions are consistent in upholding the principle of public ownership of water.

- The constitutional provisions assume that use, management and protection of water resources should be in line with the general public interest.

Policy Framework

3. The Ethiopian Civil Code of 1960 & Water

- The 1960 Civil Code of Ethiopia deals with water resources ownership.
- Unlike the constitutions, the Civil Code remained unchanged with the successive changes of the political regimes.
- Chapter 2, Section 3, articles 1228-1256 of the Code articulate the rights and obligations with regard to ownership of and access to water.
- Issues including priority of use (irrigation, domestic use, etc.) and compensation are given special attention.
- Article 1228 recognizes the community"s priority rights to all running and still water, and provides for water"s control and protection by competent authorities.

Policy Framework

- Article 1236 guarantees a landowner‟s right to use water that crosses or borders his land, but not to the detriment of those in downstream.
- Article 1237 establishes priority for domestic use over irrigation or other consumptive uses.
- Article 1239 provides compensation for a landowner whose ability to exploit his rights to water is compromised.

Policy Framework

- The provisions of the Civil Code represent an effort to consolidate rights enjoyed under the *Fetha Negast* and other customary water rules.
- The scope of the provisions seems to aim at regulating upstream-downstream water use rights and obligations on small-scale level.
- The code however does not assume large-scale water management problems

Policy Framework

4) Water Administration Policy of Ethiopia (1999)

- The Policy addressed all encompassing issues of water resources development:
  - Water supply for drinking and sanitation
  - Water for agriculture
  - Water for mining and industry
  - Water for marine resources
  - Watershed management
  - Flood management
  - Water quality
  - Balanced water distribution
  - Water transport
  - Water for hydroelectric power

Policy Framework

5. National Water Sector Strategy of Ethiopia

- This is a 15 year water sector development strategy of Ethiopia.

- The water sector strategy focuses on general resources development strategy which includes Stakeholder participation and Gender Mainstreaming.

Policy Framework

6. **Water Proclamations**
   - **Water Resources Utilization Proclamation (proclamation no. 92/1994)**

Article 14 provides that "utilization of trans-boundary rivers shall be administered in accordance with the provisions of this proclamation and international treaties to which Ethiopia is party".

   - **Ethiopian Water Resources Management Proclamation (Proclamation No. 197/2000)**

Ensure that the water resources of the country are protected and utilized for the highest social and economic benefits of the people of Ethiopia,

Domestic use shall have priority over and above any other water uses.

Policy Framework

- **Ethiopian National Security Council Establishment Proclamation** (proclamation No. 257/2001)
- **Environmental Protection Organs Establishment Proclamation** (Proclamation no.295/2002)
- **Environmental Impact assessment Proclamation** (Proclamation no. 299/2002)
- **Environmental Pollution Control Proclamation** (Proclamation no. 300/2002)
- **River Basin Councils and Authorities Proclamation** (Proclamation No. 534/2007)

Policy Framework

7. **Water Regulations**
   - Ethiopian Water Resources Regulation (Regulation No. 115/2005)
- The Regulation contains 39 articles and
- mainly deals with permits, conditions and procedures of water resources use and management including license acquisition.
   - Awash Basin High Council and Authority (Council of Ministers Regulation No. 156/2008)
- The main objective: to promote and monitor the implementation of integrated water resources management process in an equitable and participatory manner in the Awash Basin.
   - Abbay Basin High Council and Authority (Council of Ministers Regulation No. 151/2008)
- Main objective: to promote and monitor the implementation of integrated water resources management process in an equitable and participatory manner in the Abbay Basin.

Institutions

Water Sector Institutions of Ethiopia

1. **Water Resources Department – WRD (1959)**

- established as a support outfit for the Abbay Basin Study Program,
- The main tasks accomplished by WRD included:
  - Provide aerial maps for the entire basin of the Abbay river within Ethiopia
  - provide hydro-meteorological services to the study program
  - establish the basis for the future development and expansion of hydro-metrological services throughout Ethiopia.
  - survey water resources
  - inventory community water supply
  - gather soil data

Institutions

- The strategic function of the WRD was to prepare and analyze data with regard to the entire Abbay basin
  - This is to enable the Ethiopian Gov"tto negotiate with the downstream states with regard to the utilization and management of the Nile waters.

- The main mission of WRD terminated with the termination of the Abbay Basin Study Program in 1964.
- The modest but pioneering achievement of the WRD gave impetus to the subsequent institutional development of Ethiopia"s water sector.

Institutions

2. Awash Valley Authority – AVA (1962-1977)

- was the first water management institution in Ethiopia and included the following tasks:
  - Administer water use and water rights in the Awash valley
  - Coordinate the activities of all gov't organs in the valley
  - Construct and administer dams and canals in the valley
  - Allocate water for irrigation and other purposes
  - Fix and collect fees for the use of water and other facilities.
- was the first water institution in Ethiopia that had a charter and a ministerial board of governors that included the ministers of Agriculture, Commerce & Industry, Interior and Public Works.

Institutions

3. Awash Valley Development Agency –AVDA(1977-1981)

- AVA was replaced by AVDA.
- The AVDA was meant to facilitate the transformation of agricultural and agro-industrial activities in the Awash valley into state enterprises.
- Most importantly, however, AVDA was responsible for reorganizing and administering large agri-businesses of the Awash Valley in line with the development and expansion of state farms throughout the country.

Institutions

4. National Water Resources Commission – NWRC (1971-1993)
5. Water Resources Development Authority (1981-1995)
6. The Valleys Agricultural Development Authority – VADA (1977-1981)
7. Ethiopian Water Works Construction Authority – EWWCA (1980-1992)

Institutions

8. Water Resources Development Authority – WRDA (1981-1995)
9. Water Supply and Sewerage Authority – WSSA (1981-1995)
10. Ethiopian Valleys Development Studies Authority – EVDSA (1987-1995)
11. Ministry of Natural Resources Development & Environmental Protection – MONRDEP (1993-1995)
12. Ministry of Water Resources – MWR (1995)
13. Ministry of Water and Energy (2010)
14. customary water institutions

Trans-boundary water/international water course management

Introduction

- Watercourse means a system of surface waters and groundwater constituting, by virtue of their physical relationship, a unitary whole and normally flowing into a common terminus
- International watercourse means a watercourse, parts of which are situated in different states.
- The major issues of trans-boundary water Courses
  - they draw international boundaries. They provide natural means for separating the human communities and their territories
  - They may serve as inter-state highway for water transportation. They may have a great economic significance for the riparian countries.
  - They may provide non-navigational uses, such as fishing, irrigation and the production of hydroelectric power.
  - The issue of priority of uses international watercourse (irrigation, fishing, navigation, hydroelectricity, etc.

Introduction

- International watercourse issues require agreement between riparian nations.
- Such agreement will address (1) principles (2) rules and (3) procedures.
- Examples of international conventions/codes and agreements/treaties

International Water Codes and Treaties

1. **The UN Convention on the Law of the Non-Navigational Uses of International watercourses (1997)**
   - **Prepared by ILA as per the request made by UN General Assembly and adopted in 1997.**
   - **More than 100 countries have affixed their signature on the convention**
   - **A threshold for ratification of the convention has not been attained**
   - **The Convention serves as a basis for international norm for trans-boundary water management.**
   - **Provides an international framework of cooperation on the use, management and protection of shared water resources.**

International Water Codes and Treaties

1. **The UN Convention on the Law of the Non-Navigational Uses of International watercourses (1997)**

- Empowers watercourse countries to enter into watercourse agreements (Article 3)

- Most fundamental principles of the convention includes "Equitable and Reasonable Utilization" (Article 5, 6) and "No Significant Harm" (Article 7)

International Water Codes and Treaties

1. **The UN Convention on the Law of the Non-Navigational Uses of International watercourses (1997)**

- Equitable and reasonable use within the meaning of Article 5 requires taking into :
  - ✓ Geographic, hydrographic, climatic, ecological and other factors;
  - ✓ The social and economic needs of the watercourse states;
  - ✓ The population dependent on the watercourse;
  - ✓ The effects of the use of the watercourse by one state on other watercourse states;
  - ✓ Existing and potential uses of the watercourse; and
  - ✓ Conservation, protection, development and the economy of use of the water resources of the watercourse..
  - ✓ The availability of alternatives (Article 6.1).

International Water Codes and Treaties

2. Agreement between the republic of Sudan and the United Arab republic on the Full Utilization of the Waters of the Nile (8 Nov. 1959)
    - Only the two downstream countries signing
    - A bilateral agreement excluding all upstream riparian countries
    - Rejected by upstream nations
        - Is an example of non-cooperation

International Water Codes and Treaties

3. Cooperative framework Agreement (May 13, 2011)

- Nine countries negotiated (1999-2010)
- 7 countries adopted, 6 countries signed & ratification is awaited to establish a Nile Basin Commission.
- Protracted negotiation to establish principles, rules and procedures for the utilization, management and protection of the Nile waters for all riparian countries and communities.

Environmental law

Introduction to Environmental Law

What is International environmental law?

- *the application of international law to environmental problems.*

What is National Environmental Law?

- In the context of the Ethiopian legal system, it includes the provisions concerning the environment in the 1995 FDRE constitution; different environmental treaties ratified by the House of Representatives according to Art. 9 (4) of our constitution and all laws (federal and regional) concerned with the environment

Historical Development of International Environment Law

- Throughout history national governments have passed occasional laws to protect human health from environmental contamination.
- For example, in about 80 AD the Senate of Rome passed legislation to protect the city's supply of clean water for drinking and bathing.
- In the 14th century England prohibited both the burning of coal in London and the disposal of waste into waterways.

Historical Development of International Environment Law

- In 1681 the Quaker leader of the English colony of Pennsylvania, William Penn, ordered that one acre of forest be preserved for every five acres cleared for settlement,
- and, in the following century, Benjamin Franklin led various campaigns to curtail the dumping of waste.
- In the 19th century, in the midst of the Industrial Revolution, the British government passed regulations to reduce the deleterious effects of coal burning and chemical manufacture on public health and the environment.

Historical Development of International Environment Law

- In the early 20th century, conventions to protect commercially valuable species were reached, including the Convention for the Protection of Birds Useful to Agriculture (1902),
    - signed by 12 European governments; the Convention for the Preservation and Protection of Fur Seals (1911), concluded by the United States, Japan, Russia, and the United Kingdom; and the Convention for the Protection of Migratory Birds (1916), adopted by the United States and the United Kingdom (on behalf of Canada) and later extended to Mexico in 1936.

Historical Development of International Environment Law

- Beginning in the 1960s environmentalism became an important political and intellectual movement in the West.
- In Japan rapid post-World War II reindustrialization was accompanied by the indiscriminate release of industrial chemicals into the human food chain in certain areas.
  - In the city of Mina Mata, for example, large numbers of people suffered mercury poisoning after eating fish that had been contaminated with industrial wastes.
- By the early 1960s the Japanese government had begun to consider a comprehensive pollution-control policy,

Historical Development of International Environment Law

- In 1967 Japan enacted the world's first such overarching law, the Basic Law for Environmental Pollution Control. Not until the end of the 20th century was Mina Mata declared mercury-free.
- Following the United Nations Conference on the Human Environment, held in Stockholm in 1972, the UN established the United Nations Environment Programme (UNEP) as the world's principal international environmental organization.

Historical Development of International Environment Law

- Nevertheless, a series of important conventions arose directly from the conference, including the London Convention on the Prevention of Pollution by Dumping of Wastes or Other Matter (1972) and the Convention on International Trade in Endangered Species (1973).
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Historical Development of International Environment Law

- During the 1980s the trans-boundary effects of environmental pollution in individual countries spurred negotiations on several international environmental conventions.
- Similarly, the Framework Convention on Climate Change, or Global Warming Convention, adopted by 178 countries meeting in Rio de Janeiro at the 1992 United Nations Conference on Environment and Development (popularly known as the —Earth Summitll), did not set binding targets for reducing the emission of the —greenhousell gasses thought to cause global warming.

Basic principle of Environment Law

1. **Prevention**

- Experience and scientific expertise demonstrate that prevention must be the Golden Rule for the environment, for both *ecological* and *economic* reasons.
- In some instances, it can be impossible to remedy environmental injury once it has occurred:
- the extinction of a species of fauna or flora, erosion, and the dumping of persistent pollutants into the sea create intractable, even irreversible situations. Even when harm is remediable,
- the cost of rehabilitation is often very high.

Basic principle of Environment Law

2. Precaution

- Precaution has variously been associated with the ideas that:
  1. scientific uncertainty should not be used as a reason not to take action with respect to a particular environmental concern;
  2. action should affirmatively be taken with respect to a particular environmental concern;
  3. those engaging in a potentially damaging activity should have the burden of establishing the absence of environmental harm; and
  4. a State may restrict imports based on a standard involving less than full scientific certainty of environmental harm.

Basic principle of Environment Law

- The so-called —precautionary approach is relatively recent, dating from the late 1980s.
- The Rio Declaration stipulates that:
  - *In order to protect the environment, the precautionary 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.*

Basic principle of Environment Law

3. Polluter Pays

- The polluter pays principle was originally enunciated by the Organization for Economic Cooperation and Development (OECD).
- There are at least 3 possible ways for the community to assume the economic costs of the pollution:
  1. The river can remain polluted and rendered unsuitable for certain downstream activities, causing the downstream community to suffer an economic loss;
  2. The downstream community can build an adequate water treatment plant at its own cost;
  3. The polluter may receive public subsidies for controlling the pollution.

Basic principle of Environment Law

- In each case, the affected community bears the cost of the pollution and of the measures designed to eliminate it or to mitigate its effects.

- Generally, polluters should pay for the **cost of pollution control measures, such as the construction and operation of anti-pollution installations, investment in anti-pollution equipment and new processes**, so that a necessary environmental quality objective is achieved.

thank you!!