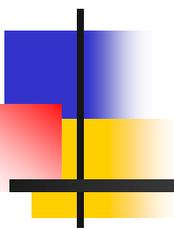


CE 213A

Introduction to Environmental Science



L 23 : Environmental Laws and Regulations

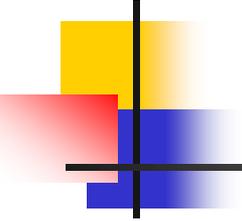
Dr. Anubha Goel

FB 308, anubha@iitk.ac.in, x 7027

Schedule : LEC: W F 10:30-12:00; T112

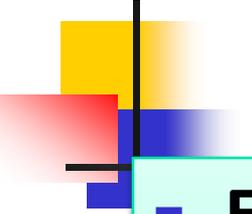
Environmental Law and Regulations





International Environmental Law

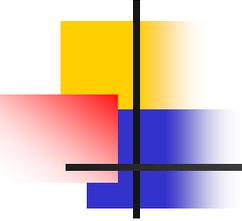
- **Environmental law** - or "**environmental and natural resources law**" - is a collective term describing the network of treaties, statutes, **regulations**, and common and customary laws addressing the effects of human activity on the natural **environment**.



Environmental Laws and Legislation

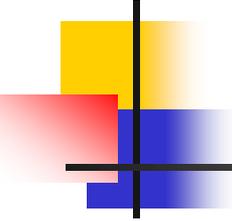
- **Environmental law** - or "**environmental and natural resources law**" - is a collective term describing the network of treaties, statutes, **regulations**, and common and customary laws addressing the effects of human activity on the natural **environment**.

- **Environmental legislation** is a collection of many **laws** and **regulations** aimed at protecting the **environment** from harmful actions.



Objective of Regulations

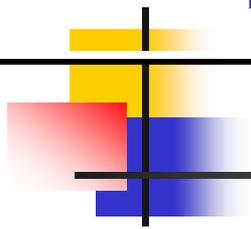
- Protection of the Environment



Content

- Events that led to development of environmental rules and regulations
 - USA, India
- Environmental Concerns
- Concerns about implementation of regulations
- International Environmental Law
 - Need, development process
- Indian Environmental Law
 - General principles, legislative developments

Modern Environmentalism



- A series of major environmental disasters through the early 20th century raised awareness of other environmental issues besides resource conservation.



- A dense smog from a zinc plant in Donora, Pennsylvania in 1948 sickened thousands.
- This was one of the deadliest incidents of **air pollution**, the introduction of particles or gases into the atmosphere that are harmful to living organisms.



- Radioactive fallout from nuclear bomb testing in the Marshall Islands exposed native islanders and Navy sailors to radioactive fallout.
 - This material was **carcinogenic**, meaning it increased the risk of cancer.



- A major oil spill near the city of Santa Barbara in 1969, coupled a fire on the Cuyahoga river that same year left powerful images of the effects of **water pollution**, the contamination of lakes, rivers, oceans, and groundwater.



- Rachel Carson published the book "**Silent Spring**" in 1962, documenting the effects that indiscriminate spraying of pesticides like DDT were having on the environment.
 - Many of these pesticides were **persistent pollutants**, meaning they resist normal environmental degradation.
 - **Biodegradable** pollutants will decompose over time.



- Many species, such as the whooping crane, nearly disappeared completely from the wild due to overhunting and habitat loss.
- This raised awareness of the problem of **extinction**.
 - Elevated rates of extinction reduces the **biodiversity**, or variety of species found in a particular habitat or ecosystem.

Global Extinction Rate of species

- There is no accurate estimation of species extinction rate,
- Reported numbers are from model runs.
- One of the report published on Aug 2015, suggest numbers as high as 8700 species a year or 24 a day.

Reference:

http://e360.yale.edu/feature/global_extinction_rates_why_do_estimates_vary_so_wildly/2904/

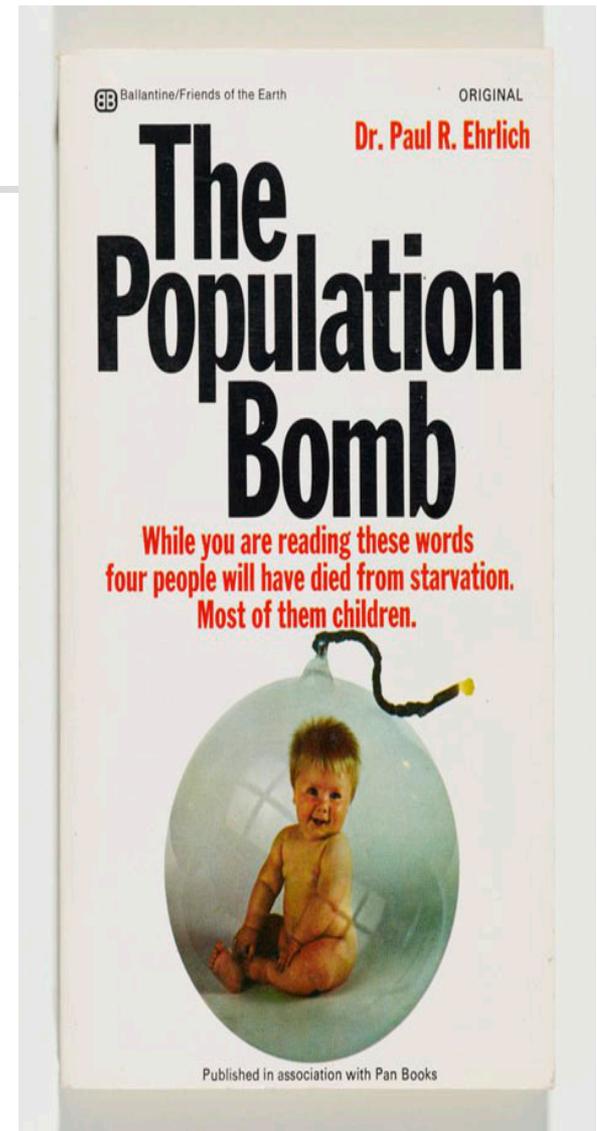
Yale Environment 360 - A publication of the [Yale School of Forestry & Environmental Studies](#).

- Rapid increases in the population size of countries like India and China caused fears of **human overpopulation and famine**, an extreme scarcity of food.

- One prediction from the book, The Population Bomb:

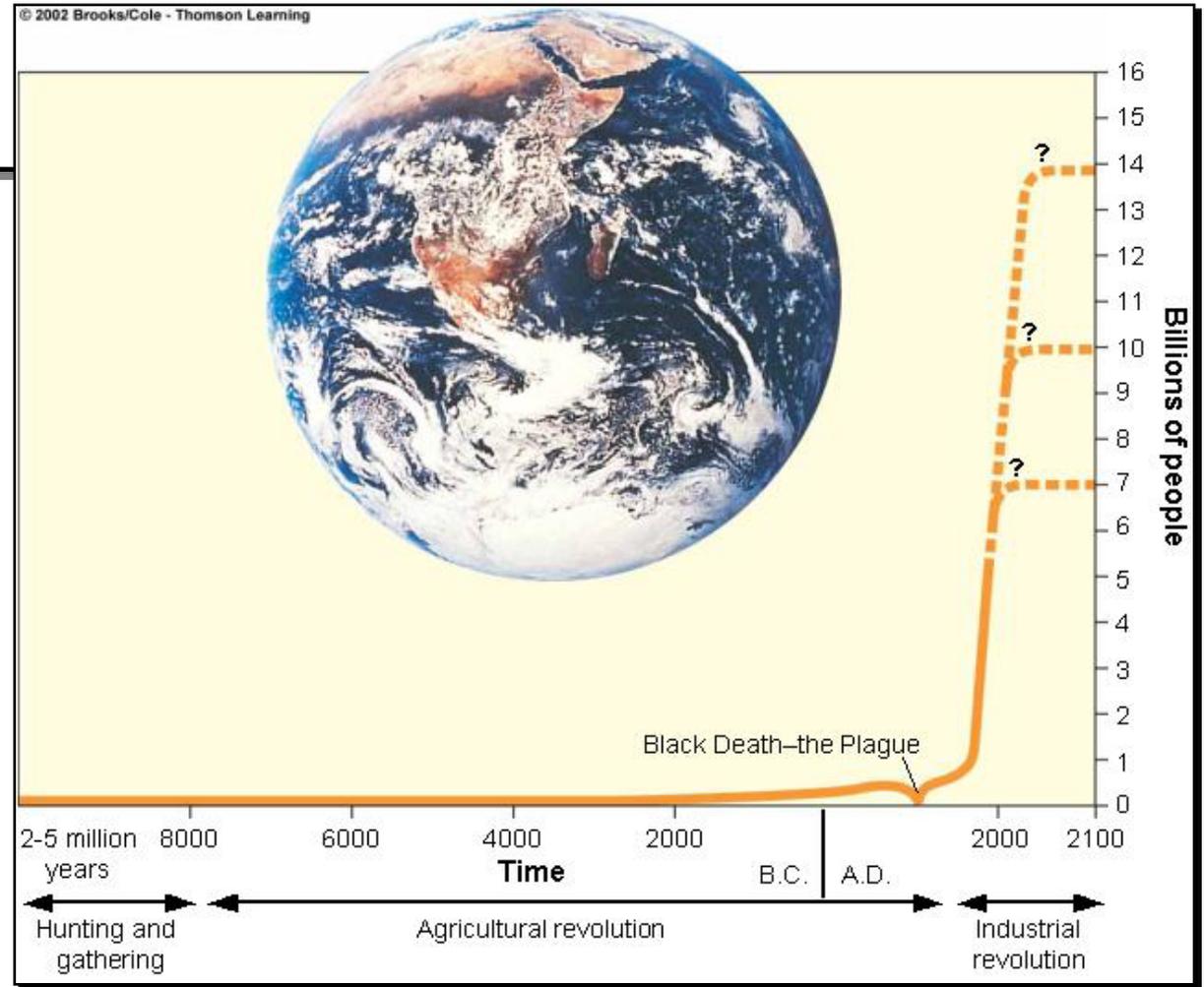
"The battle to feed all of humanity is over. In the 1970s hundreds of millions of people will starve to death in spite of any crash programs embarked upon now.

At this late date nothing can prevent a substantial increase in the world death rate..."



Population Growth

- 7.4 billion and counting (2016)
- Exponential Growth



According to the United Nations, world population reached **7 Billion** on October 31, 2011.



- In 1978, homes in the city of Love Canal, New York, were abandoned due to leakage from a massive chemical waste dump near the elementary school.
 - This was **hazardous waste**; compounds that are especially dangerous to the environment and human health.

Outcome ----- Laws and Regulations

Case Study - USA

- A series of laws were passed in response to the modern environmentalism movement.
 - The **Safe Drinking Water Act**, which regulates the testing and contents of municipal tap water.
 - The **Clean Water Act**, which restricts pollution of surface waters.
 - The **Clean Air Act**, which restricts pollution of the atmosphere.
 - The **Resource Conservation and Recovery Act**, which describes rules for handling toxic and hazardous waste.
 - The **Endangered Species Act**, which lists species at risk for extinction and plans for their recovery.
 - The creation of the **Environmental Protection Agency (EPA)**, which is charged with enforcing these and other laws.

Indian Environmental Law

Trigger Events

- Stockholm Conference, 1972
 - “Are not poverty and need the greatest polluters?...How can we speak to those who live in villages and slums about keeping the oceans, the rivers and the air clean when their own lives are contaminated at the source?”
 - Smt. Indira Gandhi

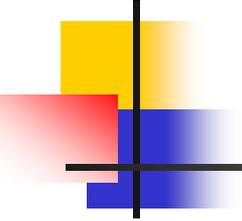


Events of note in India

Bhopal Gas Tragedy 1984

- A good example is the 1984 explosion of a pesticide factory located near the town of Bhopal, India.
 - Environmental regulations, worker protections, and government inspections were minimal.
- Chemicals that leaked into the air resulted in an immediate death toll in the thousands.
 - A total of 558,125 injuries were reported to the Indian government.
- A settlement of \$470 million was reached by Union Carbide and the Indian government, although originally \$3.3 billion was claimed.





- Bhopal gas tragedy

"Social transformation occurs only when thinking humanity remains capable of suffering and the suffering humanity begins to think."



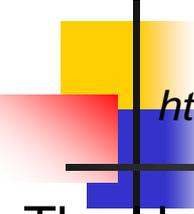
Trigger Events contd.

- Rio Conference, 1992

United Nations *Conference* on Environment and Development (UNCED), *Rio* de Janeiro, 3-14 June 1992. Informal name, The Earth *Summit*.

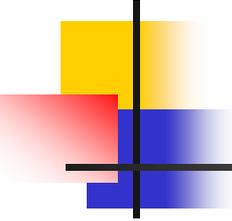


Rio Declaration on Env't. and Development



<http://www.unep.org/Documents.Multilingual/Default.asp?documentid=78&articleid=1163>

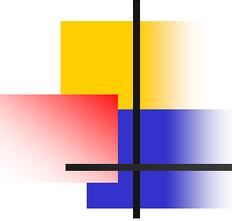
The United Nations Conference on Environment and Development,
Having met at Rio de Janeiro from 3 to 14 June 1992,
Reaffirming the Declaration of the United Nations Conference on the Human Environment, adopted at Stockholm on 16 June 1972, and seeking to build upon it,
With the goal of establishing a new and equitable global partnership through the creation of new levels of cooperation among States, key sectors of societies and people,
Working towards international agreements which respect the interests of all and protect the integrity of the global environmental and developmental system,
Recognizing the integral and interdependent nature of the Earth, our home,



Environmental concerns1

Environmental concerns are categorised under the following:

- Protection of various **environmental media**
 - Atmosphere
 - Land resources
 - Forests
 - Biological diversity
 - Freshwater resources
 - Oceans, seas and marine living resources



Environmental concerns2

- Regulation of particular activities and products
 - Biotechnology
 - Toxic chemicals
 - Agricultural products
 - Hazardous waste
 - Solid waste and sewerage related issues
 - Radioactive waste

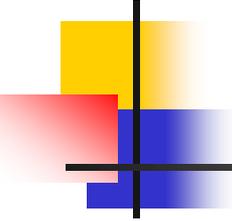
Indian Environmental Law.

Article 253

Role of Judiciary

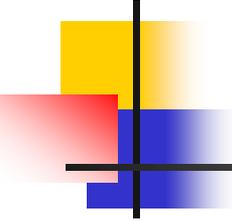
General principles

Recent developments



Who governs environmental laws and policies?

- The governing body for major statutes or laws:
Ministry of Earth Forests and Climate Change (MOEFCC)
<http://envfor.nic.in/about-ministry/about-ministry>
 - It is the nodal agency in the administrative structure of the Central Government for the planning, promotion, co-ordination and overseeing the implementation of India's environmental and forestry policies and programmes.
- establish policies, set goals and facilitate the implementation of such policies:
Central Pollution Control Board (CPCB) :



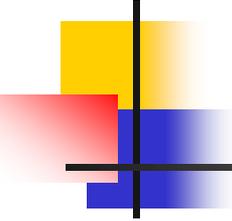
Concerns about Regulations

- Structured so costs excessive compared to benefits.
- Command-and-control
- Uneven application of regulations
- Lack properly structured incentives
- Generate inefficiencies
- Paper work, costs
- Duplicative (Federal, State, etc)

India and International Environmental Law



International Environmental Law

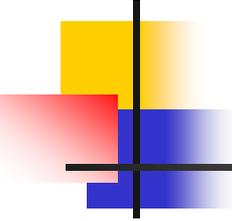


National vs. International Law

- **National law** is law that is adopted by the government of an individual country.
 - Common examples of national law are federal and state legislation and judicial decisions. Agency regulations and executive orders would also fall within this category.
- **International law**, on the other hand, concerns agreements among different nations, or between citizens or corporations of different nations.
 - Because the field of international environmental law focuses on the relations and agreements among nations, it is part of public international law.

Handout 18

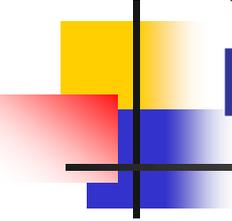
What is International Environmental Law?



International Environmental Law contd.

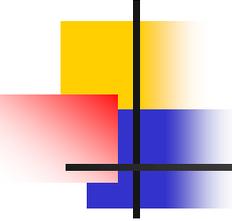
- primary International Agency:
 - UNEP – United Nations Environment Program
<http://www.unep.org/>
 - Involved in Programmes on Sustainable Consumption and Production <http://www.scpclearinghouse.org/>
- Non Profits involved:
 - Center for International Environmental Law
<http://www.ciel.org/>

Conditions which have contributed to the emergence of International Environmental Law



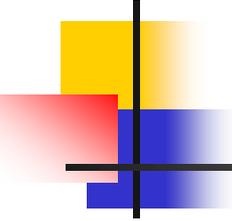
- Realization that **ecological interdependence** does not respect national boundaries
- Issues previously considered to be matters of domestic concern are no longer confined to national boundaries and have international implications

These can only be addressed by international law and regulation.



Process of developing international legal principles

- The process of developing international legal principles have been
 - Piecemeal
 - Gradual
 - Often reactive to particular incidents or availability of new scientific evidence



To note.....

- Development has been gradual
- International law and developments at the international level have influenced Indian law
 - Legislation
 - Judicial decisions
 - Executive decisions

Indian Environmental Law.

Article 253

Role of Judiciary

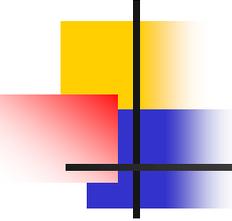
General principles

Recent developments

Indian Environmental Law.

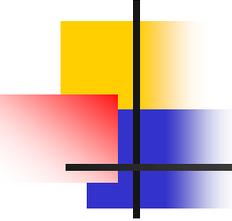
Article 253

- Article 253 has been used to enact most of the legislations in the field of environment
 - Air (Prevention and Control of Pollution) Act, 1981
 - Environment (Protection) Act, 1986
 - Biological Diversity Act, 2002
 - National Green Tribunal Act, 2010



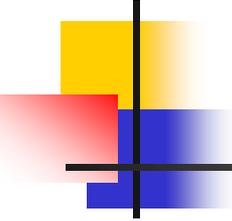
Role of Judiciary

- Judiciary is playing a major role in the development of Indian Environmental law
- Judicial activism



Judicial Decisions

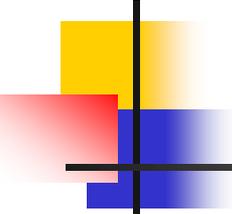
“If the mere enactment of the laws relating to protection of environment was to ensure a clean and pollution free environment, then India would, perhaps, be the least polluted country in the world. But this is not so. There are stated to be over 200 Central and State statutes which have at least some concern with environment protection, either directly or indirectly.



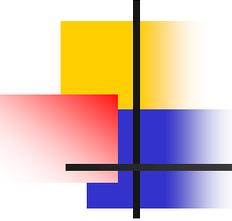
General principles

- Permanent Sovereignty over Natural Resources
- Precautionary Principle
- Sustainable Development

Sovereignty over natural resources

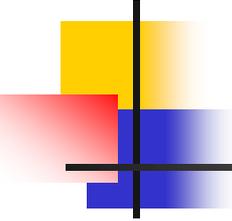


- State's sovereign right to exploit natural resources and the duty not to cause transboundary environmental damage
 - Principle 21 Stockholm Declaration
 - States have, in accordance with the Charter of the United Nations and the principles of international law, ***the sovereign right to exploit their own resources*** pursuant to their own environmental policies, and ***the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States*** or of areas beyond the limits of national jurisdiction.



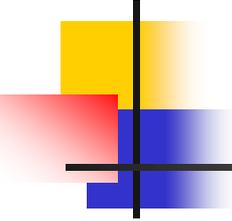
Sovereignty over natural resources

- Principle 2 Rio Declaration
- States have, in accordance with the Charter of the United Nations and the principles of international law, the sovereign right to exploit their own resources pursuant to their own environmental *and developmental* policies, and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction.



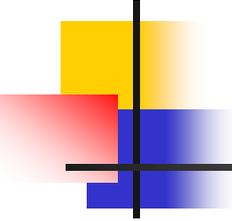
Precautionary Principle

- Principle 15 of Rio
 - 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.



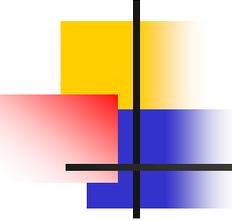
Polluter Pays Principle

- Polluter pays principle
 - Cost of pollution should be born by the person causing pollution
 - Doubtful as to whether reached the status of a customary principle of international law
 - Principle 16 Rio



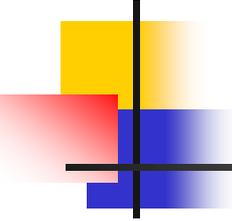
Polluter Pays Principle

- Rio Declaration
 - Principle 16
 - National authorities should endeavor to promote the internalization of environmental costs and the use of economic instruments, taking into account the approach that the polluter should, in principle, bear the cost of pollution, with due regard to the public interest and without distorting international trade and investment.



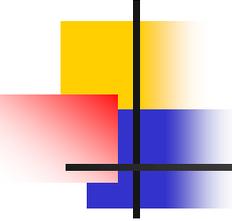
Polluter Pays Principle

- PPP means that the absolute liability for harm to the environment extends not only to compensate the victims of pollution but also the cost of restoring the environmental degradation. Remediation of damaged environment is part of the process of sustainable development and as such polluter is liable to pay the cost to the individual sufferers as well as the cost of reversing the damaged ecology



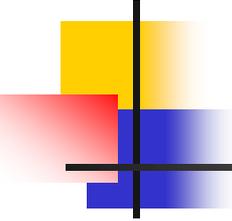
Sustainable Development

- Brundtland Report (1987)
- Four recurring themes (Philippe Sands)
 - The need to preserve natural resources for the benefit of future generations (*the principle of inter-generational equity*)
 - the aim of exploiting natural resources in a manner which is 'sustainable', or 'prudent', or 'rational', or 'wise', or 'appropriate' (*the principle of sustainable use*);



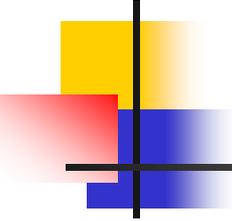
Sustainable Development

- the 'equitable' use of natural resources , which implies that use by one state must take account of the needs of other states (*the principle of equitable use, or intra-generational equity*)
- the need to ensure that environmental considerations are integrated into economic and other development plans, programmes and projects, and that development needs are taken into account in applying environmental objectives (*the principle of integration*)



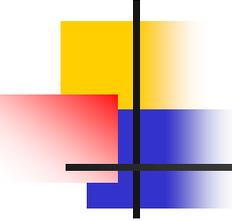
Sustainable Development

- International environmental law, to put it differently, is today subordinated to corporate interests, which dictate the high consumption patterns in rich countries. It cannot, therefore, bring about an accordant relationship between humankind and nature.



Sustainable Development

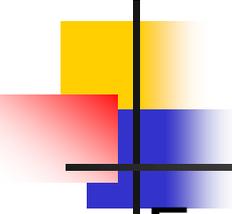
- 12th Five Year Plan (2012 – 2017)
 - Faster, More Inclusive and Sustainable Growth
 - suggests that there are significant 'co-benefits' for climate action with inclusive and sustainable growth



Sustainable Development

- Economic Survey

- For the first time chapter on Sustainable Development and Climate Change (2011 -12)
 - Diesel subsidy: Diesel prices need a large adjustment now (as China, for example, has recently undertaken), given subsidies, pollution and public health costs. Charging high road and vehicle taxes is another option (that Singapore uses).

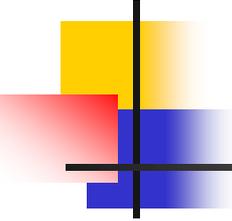


Sustainable Development

- Economic Survey

- 2012-13

- Financing climate change adaptation and mitigation measures
- Estimates that to meet the NAPCC objectives would require Rs. 230,000 crores
- Government budgetary support
- Carbon taxes: National Clean Energy Fund; cess on coal
- Market mechanisms: Perform Achieve and Trade (PAT) and Renewable Purchase Obligation (RPO)



Legislative Developments

- The National Green Tribunal Act, 2010
 - The Tribunal shall, while passing any order or decision or award, apply the principles of sustainable development, the precautionary principle and the polluter pays principle.
 - Section 20