

Module IV

Environment and Development



Lecture 4 (14 July 2024)
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Topic covers:

1. Concept of development
2. MDGs and SDGs
3. HDI

Development

Development is a **a multi-dimensional process** which involves transformation in **structures, attitudes and institutions** as well as the **acceleration of economic growth, reduction of inequality** and the **eradication of absolute poverty**.

- Development is about expanding the choices people have to lead lives that they value.
 - UNDP, Human Development Report, 2014

The term “development” includes not only economic growth, but also human development—providing for health, nutrition, education, and a clean environment.

Human Development

The term ‘human development’ may be defined as an expansion of human capabilities, a widening of choices, ‘an enhancement of freedom, and a fulfilment of human rights.

At the beginning, the notion of human development incorporates the need for income expansion. However, income growth should consider expansion of human capabilities. Hence development cannot be equated solely to income expansion.

Income is not the sum-total of human life. As income growth is essential, so are health, education, physical environment, and freedom. Human development should embrace human rights, socio-eco-politico freedoms. Based on the notion of human development.

Human Development

Human Development Index (HDI) is constructed. It serves as a more humane measure of development than a strictly income-based benchmark of per capita GNP.

The first UNDP Human Development Report published in 1990 stated that: “The basic objective of development is to create an enabling environment for people to enjoy long, healthy and creative lives.”

It also defined human development as “a process of enlarging people’s choices”, “and strengthen human capabilities” in a way which enables them to lead longer, healthier and fuller lives.

Components of Human Development

The noted Pakistani economist Mahbub ul Haq considered four essential pillars of human development.

These are:

- i. Equality
- ii. Sustainability
- iii. Productivity
- iv. Empowerment

Equality

If development is viewed in terms of enhancing people's basic capabilities, people must enjoy equitable access to opportunities. Such may be called equality-related capabilities. To ensure equality-related capabilities or access to opportunities what is essential is that the societal institutional structure needs to be more favourable or progressive.

Sustainability

Another important facet of human development is that development should 'keep going', should 'last long'. The concept of sustainable development focuses on the need to maintain the long term protective capacity of the biosphere.

Productivity

Another component of human development is productivity which requires investment in people. This is commonly called investment in human capital. Investment in human capital—in addition to physical capital—can add more productivity.

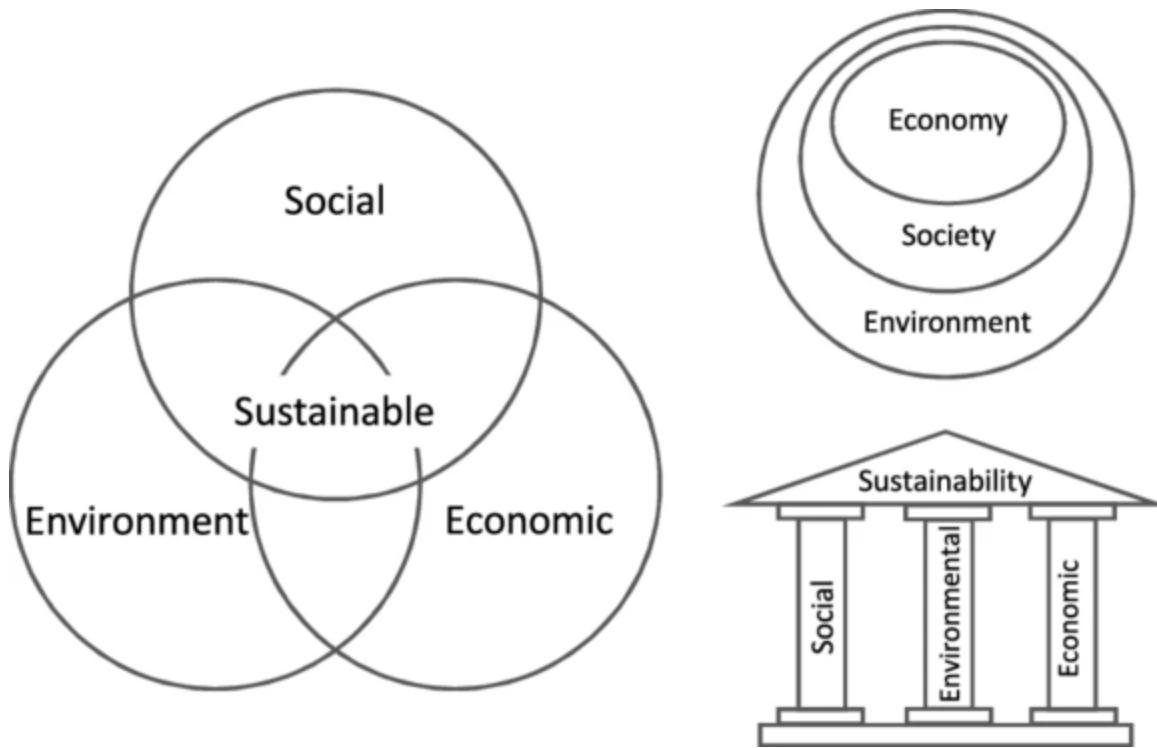
Empowerment

The empowerment of people—particularly women—is another component of human development. In other words, genuine human development requires empowerment in all aspects of life. Empowerment implies a political democracy in which people themselves make the decisions about their lives. Under it, people enjoy greater political and civil liberties and remain free from excessive controls and regulations.

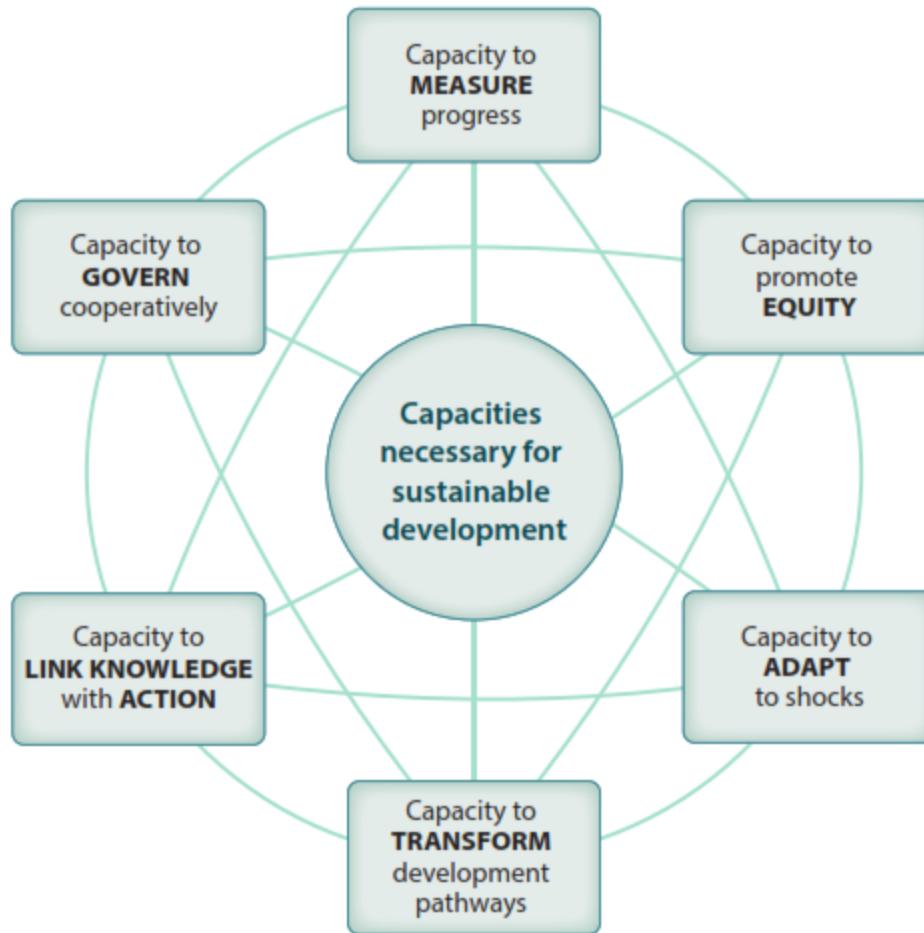
Sustainable Development

In 1987, the United Nations World Commission on Environment and Development released the report *Our Common Future*, commonly called the Brundtland Report. The report included a definition of "sustainable development" which is now widely used:

"Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs."



Several visual representations of sustainability and its three dimensions: the left image shows sustainability as three intersecting circles. In the top right it is a nested approach. In the bottom right it is three pillars.

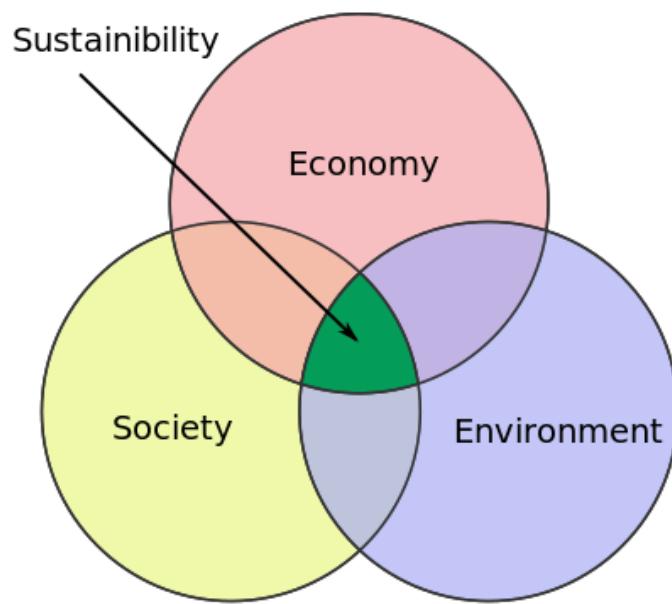


Sustainable development requires six central capacities.

Sustainable development is an organizing principle that aims to meet human development goals while also enabling natural systems to provide necessary natural resources and ecosystem services to humans. The desired result is a society where living conditions and resources meet human needs without undermining the planetary integrity and stability of the natural system.

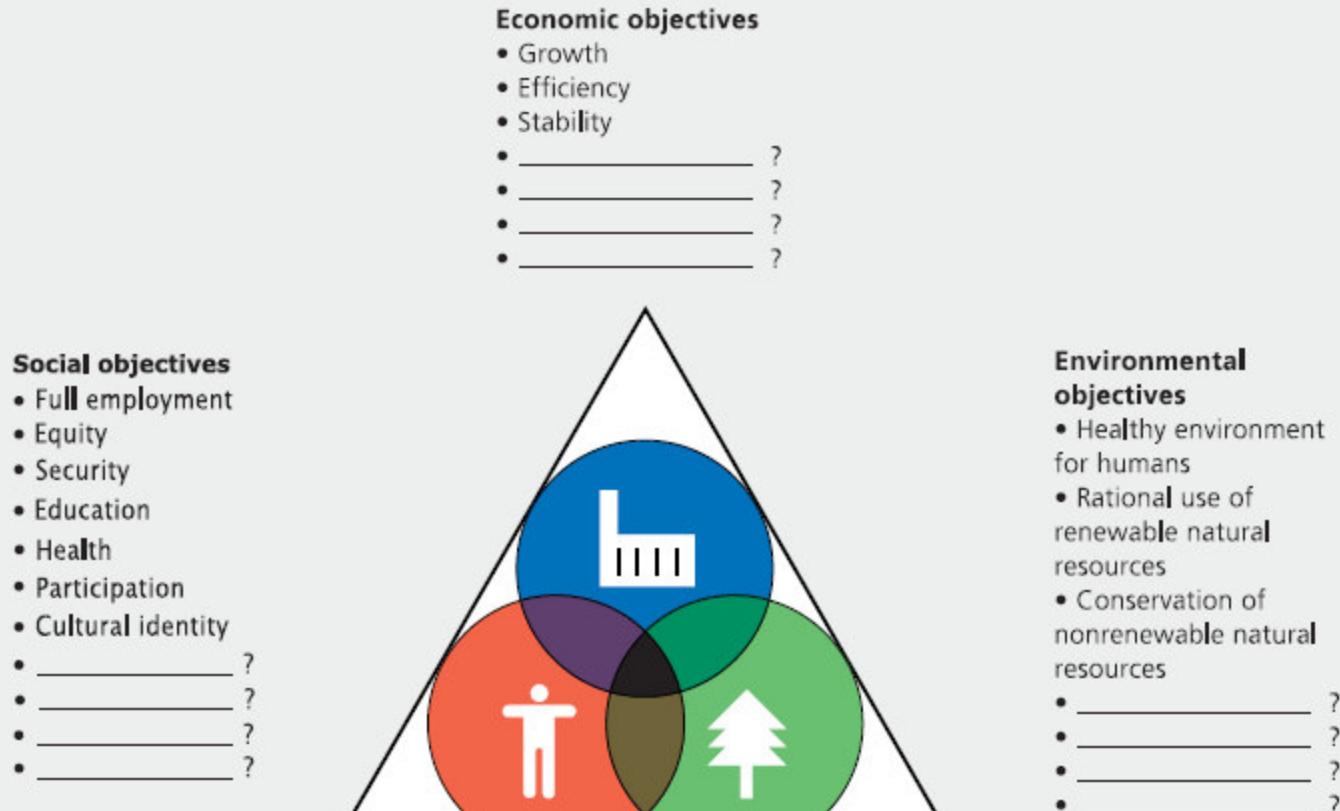
Sustainable development was first institutionalized with the [Rio Process initiated at the 1992 Earth Summit in Rio de Janeiro](#). In 2015 the United Nations General Assembly (UNGA) adopted the Sustainable Development Goals (2015 to 2030) and explained how the goals are integrated and indivisible to achieve sustainable development at the global level.

Sustainable development, like sustainability, is regarded to have three *dimensions*: the environment, economy and society. The idea is that a good balance between the three dimensions should be achieved.



Sustainability Venn diagram, where sustainability is thought of as the area where the three dimensions overlap

Three Main Components (elements) of Sustainable Development



Millennium Development Goals

In September 2000, leaders of 189 countries gathered at the United Nations headquarters and signed the historic Millennium Declaration, in which they committed to achieving a set of eight measurable goals that range from halving extreme poverty and hunger to promoting gender equality and reducing child mortality, by the target date of 2015.

The MDGs were revolutionary in providing a common language to reach global agreement. The 8 goals were realistic and easy to communicate, with a clear measurement/monitoring mechanism.

Goal 1

Eradicate extreme poverty and hunger

Goal 2

Achieve universal primary education

Goal 3

Promote gender equality and empower women

Goal 4

Reduce child mortality

Goal 5

Improve maternal health

Goal 6

Combating HIV/AIDs, malaria, and other diseases

Goal 7

Ensure environmental sustainability

Goal 8

Develop a global partnership for development



(Source: UNDP, 2012)

The Sustainable Development Goals (SDGs)

The Sustainable Development Goals (SDGs), also known as the Global Goals, were adopted by the United Nations in 2015 as a universal call to action to end poverty, protect the planet, and ensure that by 2030 all people enjoy peace and prosperity.

The 17 SDGs (169 targets) are integrated—they recognize that action in one area will affect outcomes in others, and that development must balance social, economic and environmental sustainability.

Countries have committed to prioritize progress for those who're furthest behind. The SDGs are designed to end poverty, hunger, AIDS, and discrimination against women and girls.

(Source: UNDP)

SUSTAINABLE DEVELOPMENT GOALS



The Human Development Index (HDI)

The Human Development Index (HDI) is a statistical composite index of life expectancy, education (mean years of schooling completed and expected years of schooling), and per capita income indicators, which is used to rank countries into four tiers of human development.

A country scores a higher level of HDI when the lifespan is higher, the education level is higher, and the gross national income GNI (PPP) per capita is higher. It was developed by Pakistani economist Mahbub ul-Haq and was further used to measure a country's development by the United Nations Development Programme (UNDP)'s Human Development Report Office.

The Human Development Index (HDI)

The HDI was created to emphasize that people and their capabilities should be the ultimate criteria for assessing the development of a country, not economic growth alone.

The Human Development Index (HDI) measures each country's social and economic development by focusing on the following four factors:

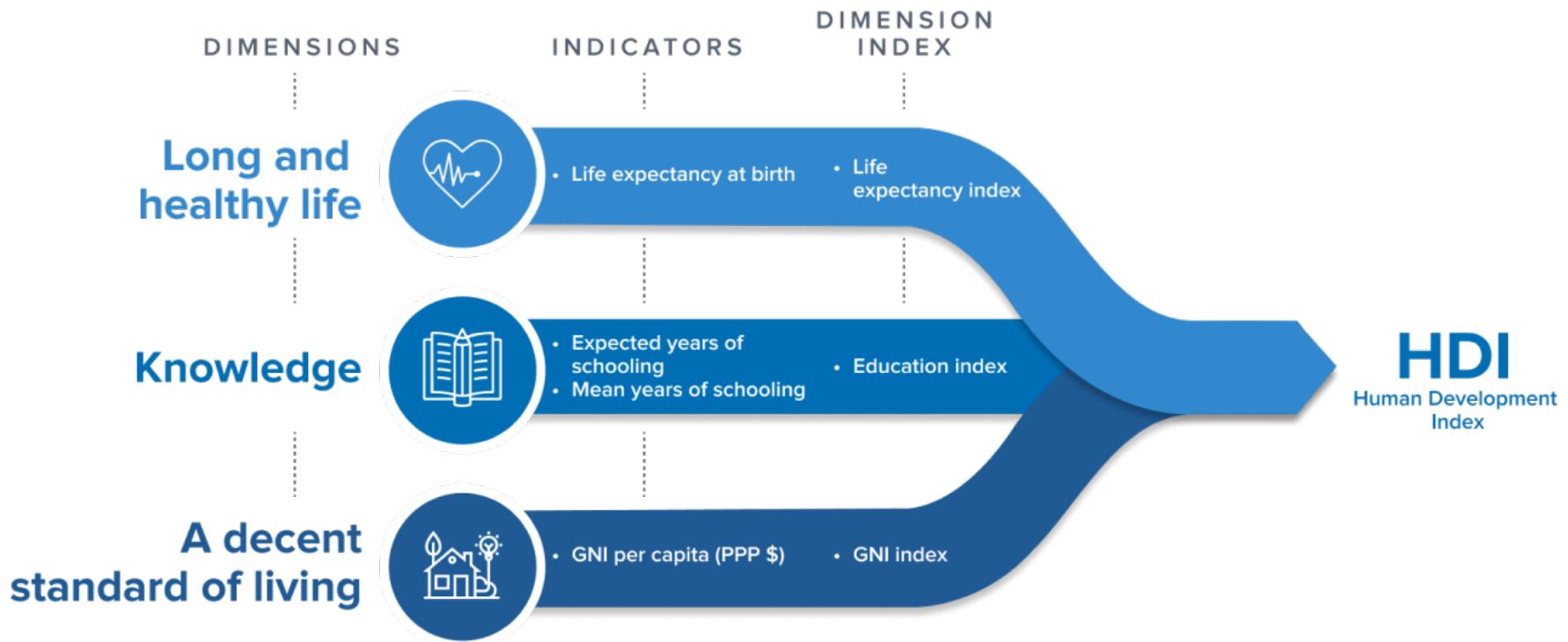
- mean years of schooling
- expected years of schooling
- life expectancy at birth
- gross national income (GNI) per capita

How to calculate HDI?

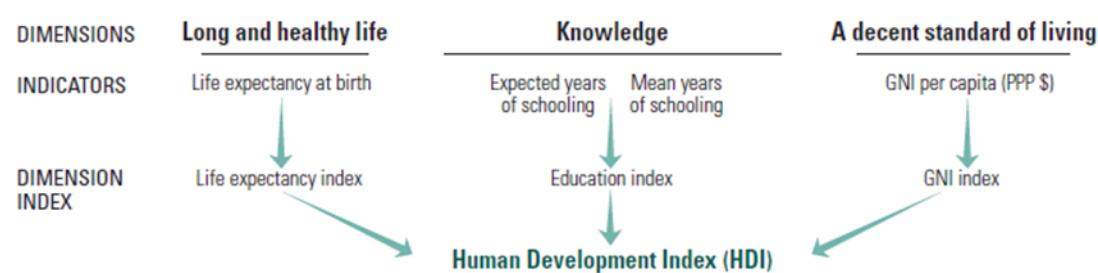
Original HDI = $\frac{1}{3}(\text{Life Expectancy}) + \frac{1}{3}(\text{Education}) + \frac{1}{3}(\text{Per-Capita Income})$

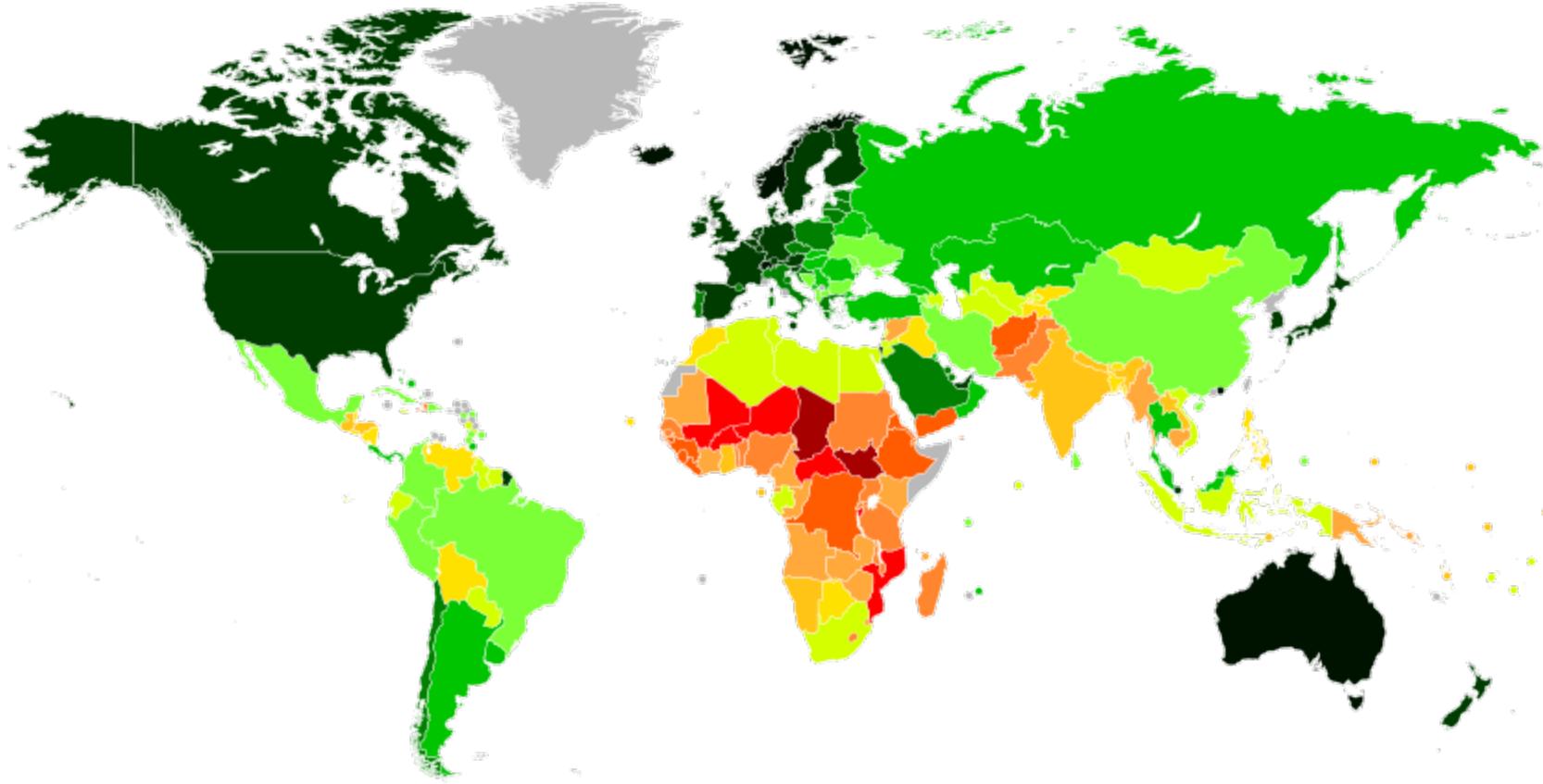
Education included adult literacy rate and school enrollments.
Original HDI used arithmetic mean to calculate HDI.

Hybrid HDI uses geometric mean rather than arithmetic mean in calculating HDI.

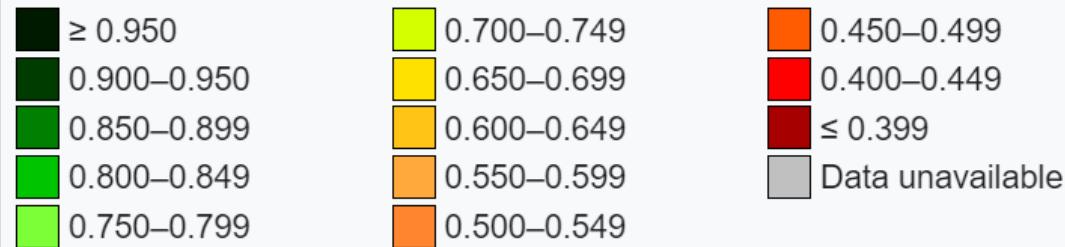


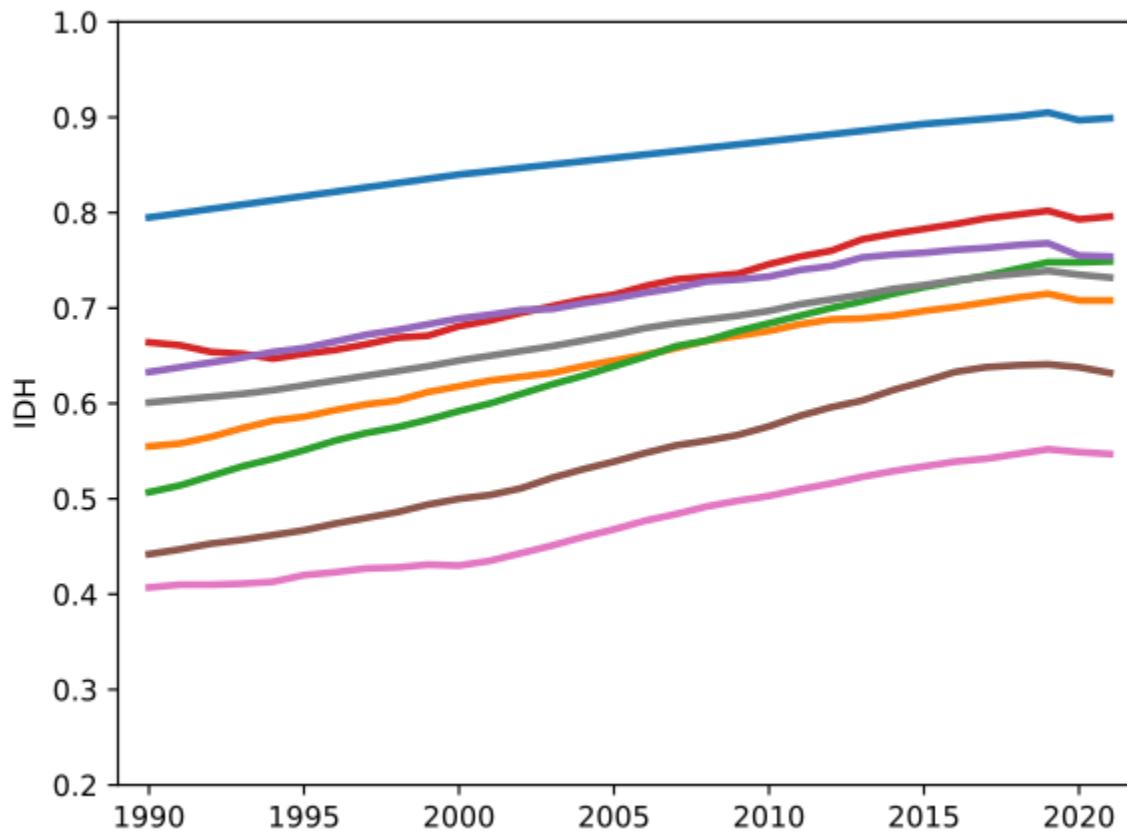
Human Development Index (HDI)





World map of countries or territories by HDI scores in increments of 0.050 (based on 2021 data, published in 2022)

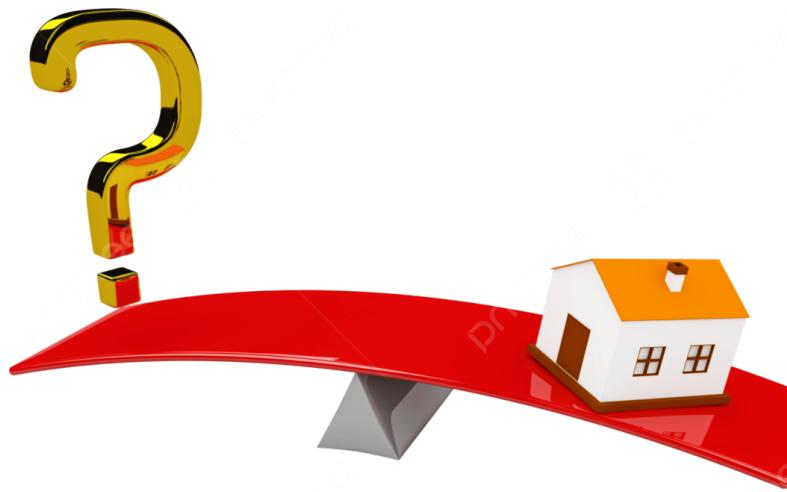




HDI trends between 1990 and 2021

World
OECD countries

Developing countries:
Arab States
East Asia and the Pacific
Europe and Central Asia
Latin America and the Caribbean
South Asia
Sub-Saharan Africa



Module IV

Environment and Development_II



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Topic covers:

1. Tragedy of commons
2. GDP and GNI/GNP

Tragedy of Commons

The tragedy of the commons is a dilemma described in an influential article titled —the tragedy of the commons, written by ecologist Garret Hardin which was published in December in 1968.

The tragedy of the commons states that individuals acting independently and rationally according to each's self-interest behave contrary to the best interests of the whole group by depleting some common resource.

Please watch this video: <https://www.youtube.com/watch?v=CxC161GvMPc>

Tragedy of Commons

Secure | <https://www.ft.com/content/ec74ce54-d3e1-11e7-8c9a-d9c0a5c8d5c9>

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Opinion Social Media

Facebook faces the tragedy of the commons

The openness of social networks enables creativity but invites exploitation

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Tragedy of Commons

Chawkbazar Tragedy (February, 2019)



Tragedy of Commons

Space junk is our new tragedy of the commons

The remnants of China's largest rocket have plummeted back to Earth, plunging into the Indian ocean near the Maldives, ending days of speculation over where the debris would hit. The latest incident once again highlights the growing risk posed by space debris that threatens our future in space



<https://www.tbsnews.net/feature/panorama/space-junk-our-new-tragedy-commons-244111>

Tragedy of Commons

Overfishing: Fish populations in the ocean are a common resource, but overfishing by individual fishermen and companies can deplete fish stocks, leading to economic losses for the fishing industry and environmental damage.

Deforestation: Trees in a forest are a common resource, but individual loggers may cut down trees for their own profit without regard for the long-term health of the forest, leading to soil erosion, loss of biodiversity, and reduced water quality.

Water scarcity: Water is a common resource, but overuse by individuals, agriculture, and industry can lead to depletion of aquifers, reduced water availability, and increased conflict over water resources.

Air pollution: The atmosphere is a common resource, but emissions of greenhouse gases by individuals, companies, and countries can lead to climate change and negative impacts on human health and the environment.

Traffic congestion: Roads are a common resource, but individual drivers may choose to drive during peak hours, leading to traffic congestion, increased travel time, and reduced economic productivity.

Does “Tragedy of Commons” happen all the time?

Does “Tragedy of Commons” happen all the time?

Elinor Ostrom was an American political economist who won the Nobel Prize in Economics in 2009 for her work on the management of common pool resources. Her ideas challenged the traditional view of the "Tragedy of the Commons"



Does “Tragedy of Commons” happen all the time?

Ostrom's research showed that communities are often able to manage their common pool resources effectively through self-organizing systems, without external intervention.

Ostrom's research showed that when communities have the autonomy to self-govern and manage their own resources, they are often successful in sustaining those resources over the long term. Therefore, she challenged the idea that the tragedy of the commons was an inevitable outcome of collective resource use, and instead showed that successful management of common-pool resources is possible through effective governance structures.

Examples of Successful Management of Common Resources

Water management in the Haor wetlands: The Haor wetlands in Bangladesh are a common pool resource that provides water for irrigation, fishing, and domestic use. In the past, there were conflicts between different user groups over the use of the water. However, in recent years, community-based water management systems have been developed that involve all user groups in decision-making processes. These systems have been successful in reducing conflicts and ensuring sustainable use of the water.

Community-based forest management: In Bangladesh, community-based forest management systems have been developed in which local communities are given the responsibility of managing forests. These systems have been successful in reducing deforestation and promoting sustainable use of forest resources. The communities have developed their own rules and norms for forest management, which are enforced through a system of graduated sanctions.

Community-based fisheries management: In Bangladesh, community-based fisheries management systems have been developed in which local communities are given the responsibility of managing fisheries. These systems have been successful in reducing overfishing and ensuring sustainable use of fish resources. The communities have developed their own rules and norms for fisheries management, which are enforced through a system of graduated sanctions.

Examples of Successful Management of Common Resources



word economy. Gross distribution agriculture supply property Babylonians
sector process services, related society GDP turtle range
period expressed services management started main
defined (economic called management manufacturing,
tertiary science sectors contrasted nation-states term various
natural stage/degree Precedence
free use times referred market labour fields
aspects applied economy: country public facilities,
needed industrial distribution, goods goods.
Great subsistence Rate business
Involves trade, certificates
contended... sector. national activity
Econometrics accounting
economy capital
state. so-called interest. ratios
real region developed division
included unit
economic
resource
informal
administrative education

associated CONSUMER businesses,
international expatriates
revolution trade
research construction
social history
state measures conventional
value financial growth
consumption
demand private world.
concerned general categories
compensation compensation