GREEN ECONOMY

IN THE ARAB REGION

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What is a Green Economy?

Decoupling of unsustainable resource use and environmental impacts from economic growth

- Increase in **green investment**
- Increase in quantity & quality of **jobs** in green sectors
- Increase in global and local **environmental benefits**

- Decrease in energy/resource use per unit of production
- Decrease in greenhouse gas emissions
- Decrease in waste and pollution

UNEP's <u>Working Definition</u> of a Green Economy

*A **system of economic activities** related to the production, distribution and consumption of goods and services that result in **improved human well-being** over the long term, while not exposing **future generations** to significant **environmental risks** and **ecological scarcities***

SOME DEFINITIONS OF GREEN ECONOMY CONCEPTS

- **A low carbon economy**: part of a GE measured by the carbon level of economic activities

- **Green growth**: GDP growth subject to green conditions as well as focusing on green sectors as new growth engines - growth in a GE is green growth

- **Green jobs**: jobs in green sectors, also known as green collar jobs

Some definitions of Green Economy Concepts (cont'd)

- **Circular economy**: an economy in which the waste from one production/consumption process is circulated as a new input into the same or a difference process – one of the approaches to a GE

- **Ecological economy**: an economy subject to ecological principles (eg biodiversity & carry capacity) as well as utilizing ecological functions to contribute to both the economy and ecosystems (eg organic farming) – one of the approaches to a GE

Why a Green Economy

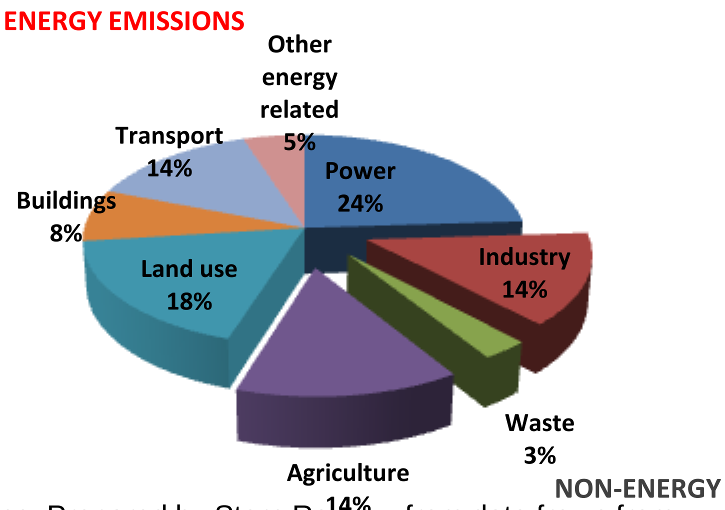
CRISES EFFECTS AS OF 2009:

- **18 to 51 million unemployed over 2007 levels (ILO) and expected negative global growth**
- **-1 %in growth in developing countries = + 20 million people consigned to poverty (WB)**
- **Rising fuel prices have cost consumers in developing economies $400 billion in higher energy expenditure and $240 billion in dearer food (IEA and WB)**
- **The number of extremely poor has increased by at least 100 million people worldwide (WB)**

ON A BUSINESS AS USUAL PATH

By 2030

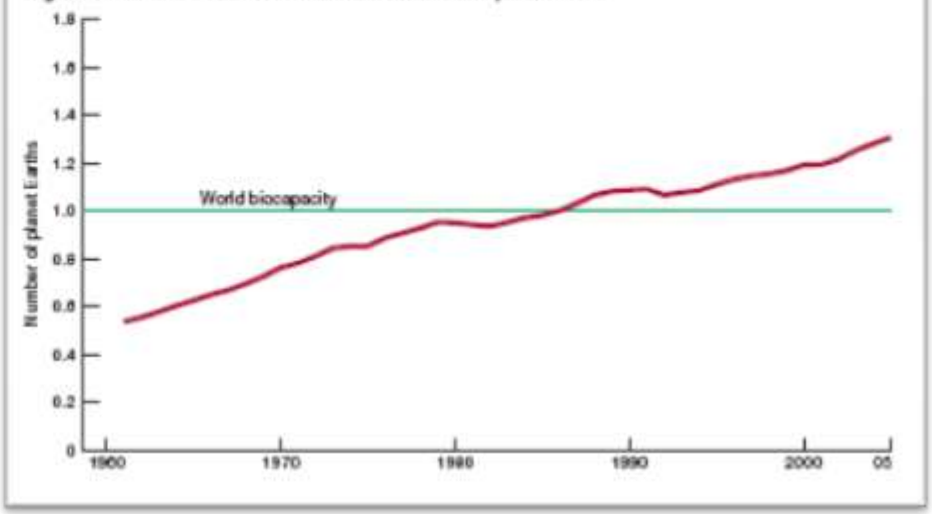
- Global energy demand up by 45%
- Oil price up to US$180 per barrel (IEA)
- GHG emissions up 45%
- Global average temperature up 6°C
- Sustained losses equivalent to 5-10% of global GDP
- Poor countries will suffer costs in excess of 10% of their GDP (Stern)



Source: Prepared by Stern Review, from data drawn from World Resources Institute Climate Analysis Indicators Tool (CAIT) on-line database version 3,0

ON A BUSINESS AS USUAL PATH (CONT'D)

Fig. 2: HUMANITY'S ECOLOGICAL FOOTPRINT, 1961-2005



- **Ecological degradation and water scarcity will increase Over US$70 Billion worth of biodiversity is lost every year (UNEP)**

- **1 billion people living on less than US$1 a day and US$3 billion living on less than US$2 a day by 2015 (ILO)**

- **Current global GHG Emissions at 42 GtCO2e per annum are 5 times higher than the Earth can absorb (WWF)**

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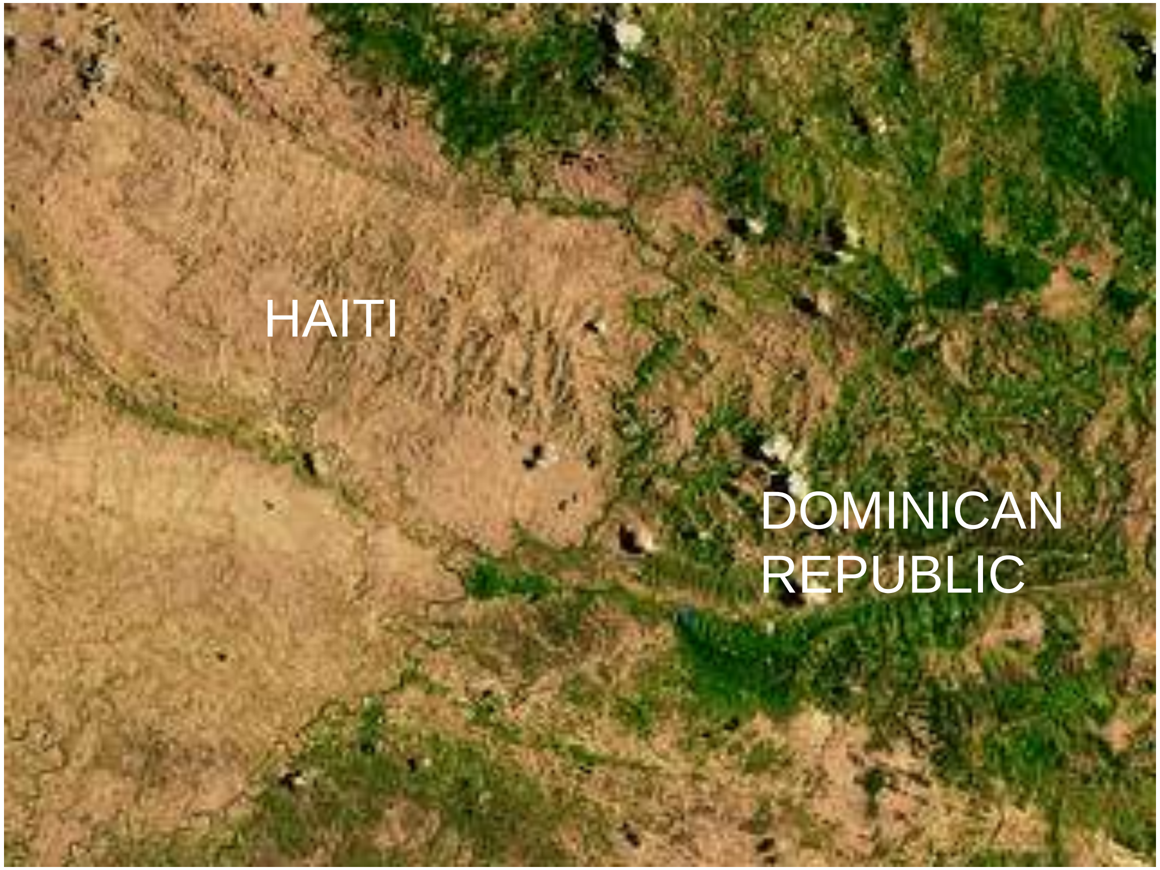
Global Green New Deal
Objectives relating to poverty

- **Revive the world economy, create new and decent jobs, and protect the vulnerable**
- **Reduce carbon dependency, ecosystem degradation, and water scarcity**
- **Eliminate persistent poverty by 2015…. achieve the MDG's**

Ecosystem Losses & Links to MDG's Example : MDG # 1, 4, 5, 8…



- MDG1: Eradicate extreme poverty & hunger
- MDG4: Reduce child mortality
- MDG5: Improve maternal health
- MDG8: Develop a Global Partnership

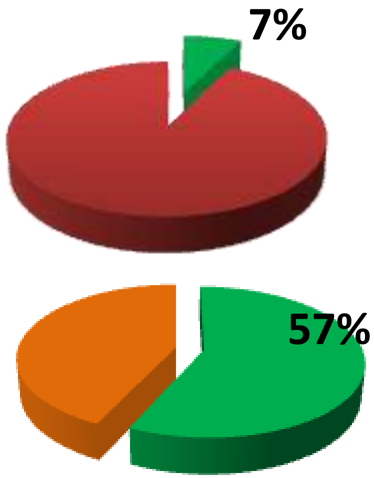
Ecosystem Losses & Poverty

"GDP of the Poor" is most seriously impacted by ecosystem losses…

- **India Example: 480 Million people earn their livelihood mainly in small farming, animal husbandry, informal forestry, fisheries …**

Ecosystem services / classical GDP

Ecosystem services/ "GDP of the Poor"



TEEB : GLOBAL LOSS OF FISHERIES… HUMAN WELFARE IMPACT

• Open Access & Perverse Subsidies are key drivers of the loss of fisheries

• Half of wild marine fisheries are fully exploited, with a further quarter already over-exploited

• ***at risk : $ 80-100 billion income from the sector***

• ***at risk : est. 27 million jobs***

• ***but most important of all…..***

at risk : Health … over a billion rely on fish as their main or sole source of animal protein, especially in developing countries.

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How does a Green Economy Protect and Preserve Biodiversity?

- The loss of biodiversity has caused some people to experience declining well-being, and exacerbating poverty in some social groups.
- Furthermore, the ecosystem is the prime provider of a number of raw materials that serve as an engine for economic development.
- The preservation and protection of ecosystems is at the heart of the green economy agenda and green investments also aim at reducing the negative externalities caused by the exploitation of natural capital.
- Investments in the preservation of forests which sustain a wide range of sectors and livelihoods and at the same time preserve 80% of terrestrial species.
- By boosting investment in green forestry, a green economy agenda would preserve the economic livelihoods of over 1 billion people who live from timber, paper and fiber products which in their turn currently yield 51% of global GDP (this is far outweighed by the non-market public goods derived from forest ecosystem services)

GREEN ECONOMIC RECOVERY

- Stabilizing CO2 emissions to 500-550ppm and limiting temparature increase to 2°C
  - 1% of global GDP by 2050 in green investments (Stern)
  - 515 billion in clean energy per year between now and 2030 (IEA)
- Stimulating economies through green public and private investment
  - Green stimulus plans (opportunities from green stimulus packages 16% of US$3.1Trillion are green stimulus= US$512)
  - New policies and reforms
  - Sustained job creation in green sectors

SOME GREEN ECONOMY EVIDENCE

- **2.3 M jobs in renewable energy to grow to 20 M by 2030**
- **USD253bn market for water supply, sanitation,& water efficiency is expected to grow to $ 658 b by 2020**
- **EU & US: green buildings to create 2-3.5 mi jobs**
- **Organic agriculture provides more than 30% more jobs/hectar**
- **China: 10 mi jobs in recycling; RE output at US$17 bn/year & employs 1 m**

Emerging Opportunities

- **Collective global “rethink”** of development and business models
- Governments looking for ways to **stimulate economic activity and create jobs**
- Significant **international momentum** for transition to a green economy

Shifting to a Green Economy

Why Now?

- Global economic, food, fuel and climate crises provide an **opportunity to reconsider** traditional development and business models
- Significant international momentum for **transition to a green economy**
  - United Nations Conference on Sustainable Development in 2012 (Rio+20) will include theme on "green economy in the context of sustainable development and poverty eradication"
  - G20 reaffirmed their commitment to "move toward greener, more sustainable growth" (Sept 2009)
  - CSD 18th and 19th sessions will examine priorities and needs for shifting to sustainable consumption and production

What does a Green Economy Offer for Developing Countries?

- Green economy policies can help developing countries attain economic and social gains on several fronts, e.g. deployment of cleaner energy technologies and improved access to energy services; improved resource efficiency through investments in cleaner production approaches; increased food security through the use of more sustainable agricultural methods; and access to emerging new markets for their green goods and services.

- Improvements in resource efficiency and diversifying the energy matrix can reduce import bills and protect a country from price volatility in energy markets, while reducing the environmental footprint and associated health costs of economic activity.

- There are a number of ongoing developing country initiatives that are demonstrating a positive benefit stream from specific green investments and policies, and if scaled up and integrated into a comprehensive strategy, could offer an alternative sustainable development pathway, one that is pro-growth, pro-jobs and pro-poor.

Does a Green Economy Lead to Protectionism?

- Concerns have been raised that the implementation of a green economy could lead to trade protectionism and conditionalities on development aid.

- Trade measures encouraging environmentally sustainable practices, e.g. standards, subsidies, public procurement, and market access related measures, are often mentioned as potentially leading to green protectionism.

- It is essential to find the right balance between safeguarding market access and protecting health and the environment.

- At the international level, one important means of mitigating this risk is to ensure substantive participation of developing countries in relevant standard setting negotiations and processes to ensure the concerns are addressed.

- At the national level, the formulation of green economy policies needs to consider the potential effects on the trading positions of other countries, especially low income countries.

What Can Governments do to Enable a Green Economy?

- A number of policies could stimulate green investment and enable a green economic transition, ranging from regulatory and economic instruments to public-private partnerships and voluntary initiatives. The relevance and efficacy of a particular policy is often highly dependent on the unique endowments and capacities of the country considering the policy.

- One of the most direct ways for governments to promote a green economy is through public finance and fiscal measures. For instance, public expenditure on research and development can be an effective means of stimulating the innovation necessary to transition to a green economy.

- In many developing countries where access to capital is limited, public investments in a green economy are particularly important. Governments can also lead by example through the use sustainable public procurement efforts that stimulate demand for green products and services.

- A legal framework that facilitates green economic activity and regulates harmful forms of production and consumption is also necessary.

- Building the capacity of governments and other stakeholders, as well as promoting actions that increase public support for change.

Action Indicators of a Green Economy

- Number of policies and officially approved plans to promote green economy
- Green private investment as a % of total private investment
- Green government expenditure as a % of total expenditure
- Green stimulus as a % of total stimulus and GDP
- Amount of credit available and utilized for green sectors as a % of total available and utilized credit.
- Etc.

Green Economy Opportunities in Water

- **Efficiency**: Irrigation accounts for over 90% of water used in many developing countries; globally, about 15-35% of irrigation withdrawals should be made sustainable
- **Economic gains**: $28.4 billion a year, or around 5% of GDP is the estimated overall economic gain in Africa alone by providing access to safe water and basic sanitation through investment in small scale projects
- **Health**: Improvements in drinking-water quality; through household water treatment, such as chlorination at point of use and adequate domestic storage, leads to a reduction of diarrhoea episodes by 39%;
- For each $1 invested in safe drinking **water and sanitation**, the World Health Organization estimates returns of $3-$34, depending on the region and technology.

Areas of Water Green Investment

- Investing in "green" irrigation models (drip)
- 90% of energy and 70% of water saving can be achieved by investing in recovery and reuse of water - recycling industrial and municipal wastewater for industrial or cooling water;
- 70% of industrial wastes are dumped untreated into waters; huge opportunities for investing in wastewater treatment;
- Investing in flood prevention and control;
- Investment in integrated water resources management.

Green Economy Opportunities in Energy

- **Investment potential**: Investment in the sustainable energy market has defied the global recession growing by around five per cent—from $148 billion in 2007 to around $155 billion in 2008
- **Employment**: Photovoltaics create 50% more jobs than highway construction; wind programs create 60% more jobs than tax cuts.
- **Health**: A shift from burning crop residues to LPG, kerosene, ethanol gel or biogas could decrease indoor air pollution by approximately 95%.
- **Policy stabilising**: Over 50 countries have set renewable energy targets including Mexico; Brazil, China, India, Iran, Morocco, Syria, Tunisia, Senegal, South Africa and Uganda.

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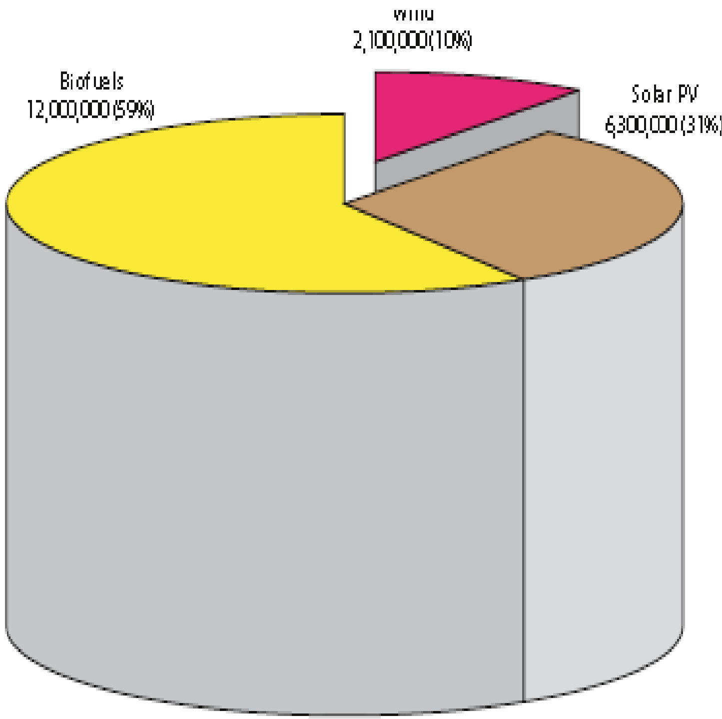
Energy Green Job Opportunities

- Globally, investing US$630 bn in the renewable energy sector by 2030 would create 20 million additional jobs:
  - 2.1 million in wind energy
  - 6.3 million in solar PV
  - 12 million in bioenergy



Green Jobs in Renewable energy, 2030

Areas of Energy Green Investment

- Renewable resource assessment and mapping
- Infrastructure for transmission and distribution
- Invest in financing schemes to lower the high upfront fixed costs of renewable technologies
- Funding research and development
- Finance and support development of renewable energy service companies
- Energy markets: Invest in grants, prizes, subsidies, tax support, insurance, feed-in prices

Green Economy Opportunities in Agriculture

- **Productivity**: 114 cases of conversion to organic/near organic in Africa showed 116% increase in productivity.
- **Market**: Global trade of organic reached US$50 billion.
- **Economic gains**: 97% of revenues generated in Europe/North America; more than 80% of producers are in Africa, Asia and Latin America.
- **Employment**: 30% more jobs per ha than non-organic in East Africa; 178,000 new jobs in Mexico.
- **Environment**: CO2 emissions per ha 48% to 68% lower.

Areas of Agricultural Green Investment

- Storage and transport infrastructure, to reduce post-harvest losses;
- Value addition by processing of harvested produce;
- Infrastructure for production, marketing and trade in organic fertilizers and biological and integrated pest control methods;
- Improving irrigation infrastructure and its efficiency,
- Green Banks and/or micro-credit for farmers and SMEs.

Greening the economy links to

engine of development

creation of employment

poverty eradication

UNEP Green Economy Initiative (GEI)

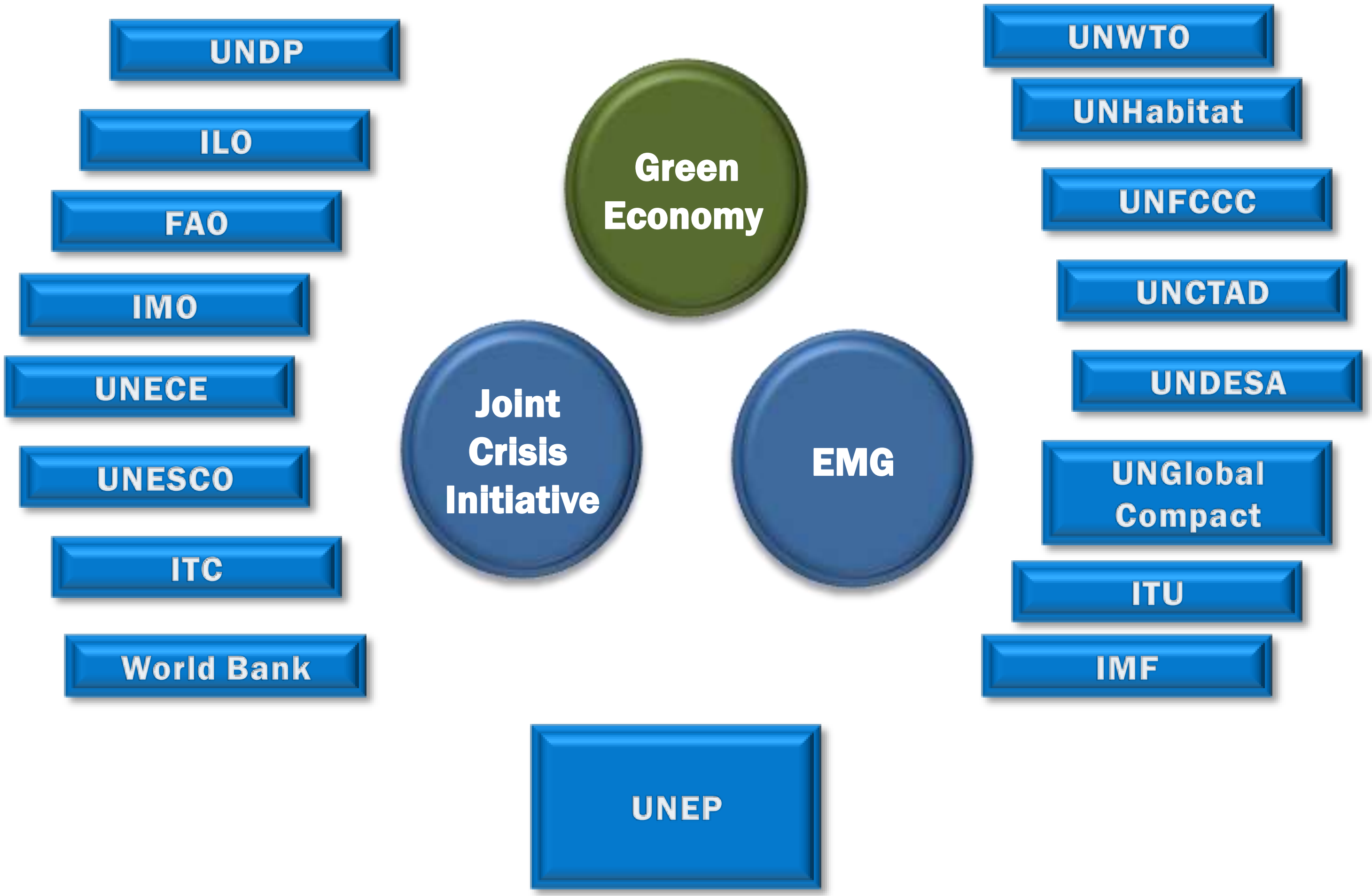
GEI Objective

Advise countries in greening their economies by working with a wide range of partners to provide cutting edge economic analysis and research products

The programme

- One of the nine proposed inter-agency United Nations Joint Crisis Initiatives (UN-JCI)
- Launched in October 2008
- Implemented by UNEP in partnership with over 20 UN, the IMF, World Bank, OECD, Private and Civil Society partners
- Funded by the Governments of Norway, Switzerland, United Kingdom and the United Nations Foundation
- Seeks to mobilize the international community and countries individually, towards green investments in key sectors and in 'natural' infrastructure

Green Economy Partners



Green Economy Report

Agriculture
Building
Cities
Energy
Finance
Forest
Manufacturing
Tourism
Transport
Waste
Water
Modeling
Enabling Conditions

The Economics of Ecosystems and Biodiversity (TEEB)

Five Deliverables

1. Economic assessment
2. National Policymakers
3. Local Administrators
4. Business/Private Sector
5. Consumers

Green Economy Advisory Services

- To date - active in Africa, Asia and the Pacific, Europe and West Asia
- Examples of UNEP GE report s
  - “Low Carbon Green Growth for Developing Countries in East Asia”
  - “National Strategy for Green Growth” of the Republic of Korea
  - “Scoping Study on Opportunities and Challenges of a Green Economy” for Indonesia
- Europe – launched study on promoting organic agriculture in Eastern Europe, Caucasus, and Central Asia
  - Azerbaijan – launched scoping study on priority areas for green economy programmes (linked to UNDAF priority of economic diversification)
- Contribution to awareness raising workshops on the green economy in the Arab region
  - Jordan Launched Scoping Study on priority areas for green economy
  - Egypt assessment mission carried out

Green Economy Advisory Products

Green Economy Scoping Study	**Rapid macro-economic overview and assessment of green economy opportunities and challenges, prioritisation of sectors, review of existing country programmes, gaps that warrant intervention**
Green Sector Study	**Sector-specific study focusing on green investment opportunities, economic returns at economy-wide level, potential for green jobs, poverty reduction, and environmental gains**
Green Economy Report	**Economy-wide assessment of priority sectors (asssement of green investment opportunities and returns, green jobs potential, poverty reduction, environmental gains); analysis of key enabling conditions and policy reforms; identification of programmes and projects and capacity-building**
Green Economy Special Report	**Reports and studies responding to specific country requests beyong GESS, GSS and GER (e.g. ongoing review of Rep of Korea National Strategy for Green Growth)**

SOME PARTNERSHIPS RESULTS

- ***UNEP/ILO Green Jobs Report*: making a social economic case for green investments**

- ***UNEP/WTO report on Trade and Climate Change*: better understanding of the linkages between trade policies and practices and climate change**

… Through a Family of Initiatives

Green Jobs[1]

Sizing and incentivizing growth in green & decent jobs

- Evaluating Biodiversity Business
- Evaluating Ecological Infrastructure

GGND investment, education & training, metrics for green employment growth

TEEB[3]

Demonstrating the value of ecosystems & biodiversity, capturing these values, and reversing the vicious cycle of environmental losses and persistent poverty

Policy Insight[2]
UNEP proposals to policy makers on how to "green" fiscal stimulus packages

Country and Regional[5] Green Economy Roadmaps

Green Economy Report[4]

Demonstrating that Greening is a new engine for growth, sizing sectoral opportunities, addressing hurdles & enabling conditions

Decent jobs from Community-based Conservation, PES/ IPES implementation

1. Green Jobs Report, September 2008
2. Global Green New Deal, December 2008 & UNEP Policy Brief, March 2009
3. The Economics of Ecosystems and Biodiversity, 2008
4. Green Economy Report, September 2010
5. Review of the South Koreas's Green New Deal, August 2009

The Economics of Ecosystems and Biodiversity (TEEB)

- **Integrate ecological and economic knowledge**
- **Recommend appropriate valuation methodologies**
- **Examine the economic costs of biodiversity decline and the costs and benefits of actions to reduce these losses.**
- **Develop "toolkits" for policy makers at international, regional and local**
- **Enable easy access to leading information and tools for improved biodiversity practice for the business community**
- **Raise public awareness of the individual's impact on biodiversity and ecosystems**

Green Jobs report

- ✓ Renewable energy generates more jobs than employment in fossil fuels: 20 million jobs by 2030
- ✓ Climate change will continue to impact workers and their families, especially those dependent upon agriculture and tourism
- ✓ A continuation of the Green Jobs Initiative integrated into the Green Economy Report.

United Nations Environment Programme

International Labour Organization

International Organisation of Employers

International Trade Union Confederation

THE UNEP GREEN ECONOMY REPORT

OPEN ARCHITECTURE, END-USER TARGETED, DIALOGUE-BASED, INCLUSIVE, MODULAR, TIME-BOUND…

***OBJECTIVE:* MAKING A MACRO-ECONOMIC CASE FOR INVESTMENTS IN GREEN SECTORS AND PROVIDING THE POLICY TOOLS FOR THE ENABLING OF A GREEN ECONOMY**

Green Sectors/Areas

1. **Cities**
2. **Buildings**
3. **Tourism**
4. **Finance**
5. **Industry**
6. **Transport**
7. **Renewable energy**
8. **Waste management**
9. **Agriculture**
10. **Water**
11. **Forests**
12. **Fisheries**

Enabling Conditions

1. **Legislation/standard setting**
2. **Fiscal policy reform**
3. **Financing and investment**
4. **Development, transfer of technology and capacity building**
5. **Trade policies and markets**
6. **Information, awareness, education, and participation**
7. **Private sector and public-private partnership**
8. **Transparency, monitoring, and accountability**
9. **Sustainable consumption**
10. **Integrated policy-making**
11. **GGND international coordination**

What is good about the GEI

- It focuses on the positive links between being "green" and economic growth/decent job creation/poverty reduction
- It promotes green sectors as new growth engines and enables developing countries to leapfrog into modern economies
- It has the potential to address multiple challenges facing the humankind

WHAT YOU CAN DO?

- **Government official**: Share with UNEP thoughts on how the GEI can help your country in both development and environmental terms. Adopt green procurement policies to encourage the growth of green sectors

- **Business:** Operate and share your experience in practicing green investments and green businesses

- **Researcher**: Contribute your analytical inputs, including data and information on economic, social, and environmental contributions from investing in green economies and from implementing the enabling policy reforms

WHAT YOU CAN DO? (CONT'D)

- **Civil society**: communicate the GEI to your constituencies, get feedbacks, and help UNEP ensure that the GEI adequately captures the particular concerns of your constituencies

- **Media**: Publicise the GEI and encourage debates on the various streams of the GEI

- **Educator or student:**
  - a) promote and take green economy related courses and training;
  - b) advocate green economic practices in your campuses; and
  - c) influence those around you to prepare them mentally for a shift towards a green economy

WHAT YOU CAN DO? (CONT'D)

- **Shareholder**: Demand environmental information disclosure from the companies you invest in and adjust your portfolio towards green assets that are likely to provide a steady stream of income.

- **Consumer/Producer**: adopt green consumption and production behaviours and life styles.

  a) Use environmental as well as health labels for consumer products;

  b) Give preference to products and services provided in an environmentally friendly manner; and

  c) Minimise and recycle waste.

Green Economy Context in Arab countries

- 50 million people still do not have access to safe drinking water in the Arab world
- Severe water scarcity by 2025
- 97 million lacking access to adequate sanitation
- Land degradation destroyed 34 % of irrigated agricultural land
- The region loses US$5 billion of agricultural revenue per year because of desertification

Green Economy Context in Arab countries (cont'd)

By the end of the century:

- Temperature increase of 2–5.5 degrees Celsius
- Decreased precipitation of up to 20 per cent and sea level rise that could wipe out areas of agricultural land and displace millions.

Arab Green Economy Initiative

- Rationalize water use
- assist farmers sustain livelihood security in rural areas
- Market for organic farming grew from $15 billion in 1999 to $46 billion in 2007
- It is estimated that the Arab region will spend $200 billion on water resource management by 2020

What is needed in the Arab Region?

- Long-term environmental management strategies
- Powerful and effective environmental agencies
- Clear political and legislative mandates
- Environmental research, education and media

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Thank You

UNEP Green Economy Website

http://www.unep.org/greeneconomy