CERTIFIED EXECUTIVE TRAINING ON GREEN ECONOMY

WGEO EXECUTIVE TRAINING COURSE ON SCALING UP TRANSITION TO A GREEN ECONOMY ON A PATH TOWARDS IMPLEMENTING THE UNITED NATIONS 2030 SUSTAINABLE DEVELOPMENT AGENDA

MODULE DELIVERED BY

WGEO
WORLD GREEN ECONOMY ORGANIZATION

GREEN INVESTMENT PROMOTION

MODULE "GI"

Dr. Hussein Abaza
Green Investment Advisor
World Green Economy Organization
Email:hussein.m.abaza@gmail.com

WGEO WORLD GREEN ECONOMY ORGANIZATION
UNDP Empowered lives. Resilient nations.
ESCAP
GGGI
ISA INTERNATIONAL SOLAR ALLIANCE

COHORT ONE
11-12 June 2019
Bangkok, Thailand

Agenda

REGIONAL MINISTERIAL CONFERENCES ON GREEN ECONOMY

1 Green Economy in a Nutshell
2 Global Green Investment Trends
3 Renewable Energy
4 Sustainable Water Use
5 Sustainable Agriculture
6 Sustainable Forest Management
7 Sustainable Fisheries
8 Green Industry
9 Agroindustry
10 Ecotourism
11 Sustainable Cities
12 Green Buildings
13 Green Transport systems
14 Integrated Waste Management
15 Sustainable Finance

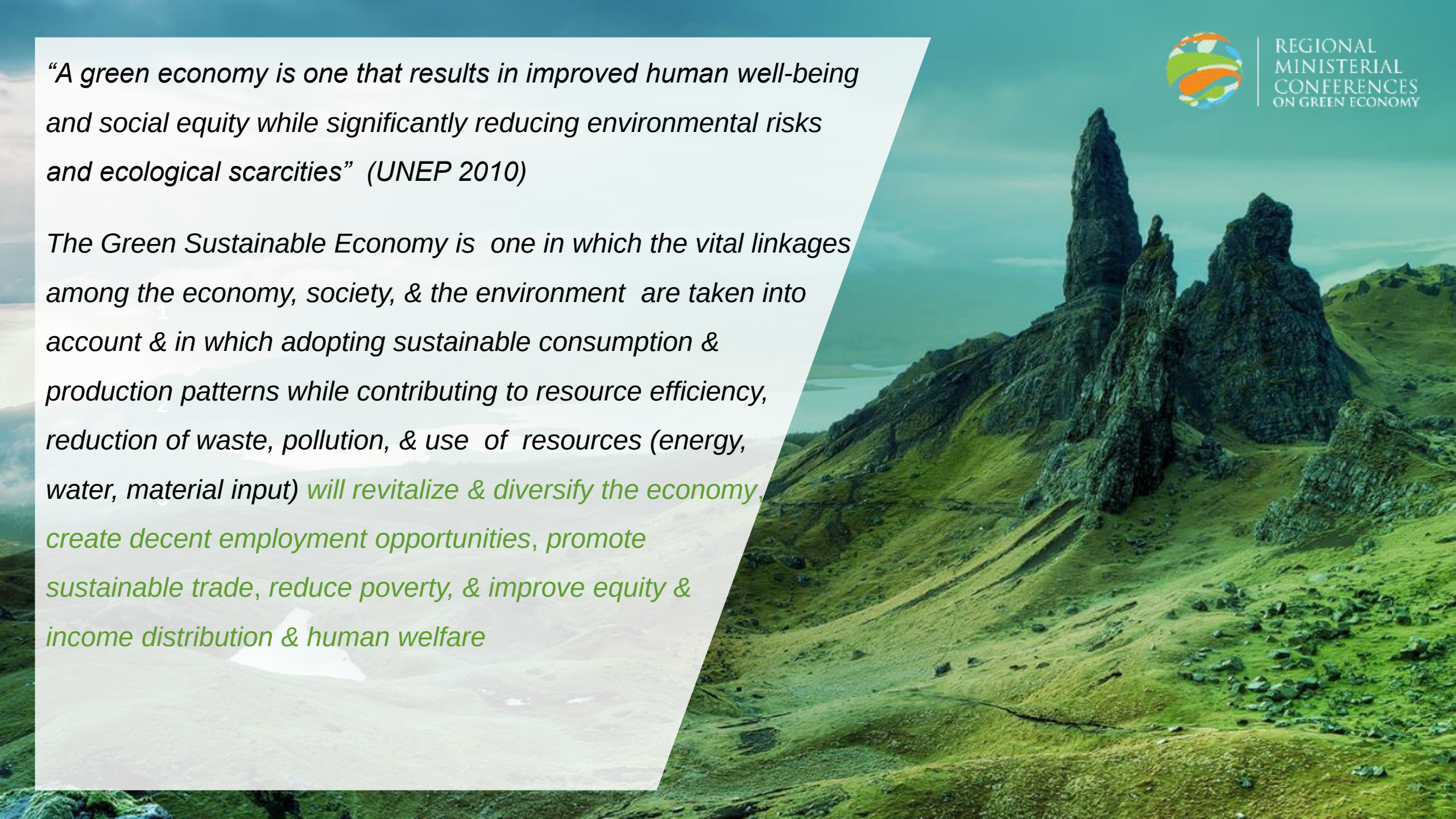
REGIONAL MINISTERIAL CONFERENCES ON GREEN ECONOMY

Green Economy in a Nutshell

REGIONAL MINISTERIAL CONFERENCES ON GREEN ECONOMY

"A green economy is one that results in improved human well-being and social equity while significantly reducing environmental risks and ecological scarcities" (UNEP 2010)

The Green Sustainable Economy is one in which the vital linkages among the economy, society, & the environment are taken into account & in which adopting sustainable consumption & production patterns while contributing to resource efficiency, reduction of waste, pollution, & use of resources (energy, water, material input) will revitalize & diversify the economy, create decent employment opportunities, promote sustainable trade, reduce poverty, & improve equity & income distribution & human welfare



What does Green Economy help achieve

REGIONAL MINISTERIAL CONFERENCES ON GREEN ECONOMY

Economic Resilience

- Revitalize & diversify the economy
- Enhance competitiveness & create new market niches
- Generate new investment opportunities
- Contribute to Gross National Product

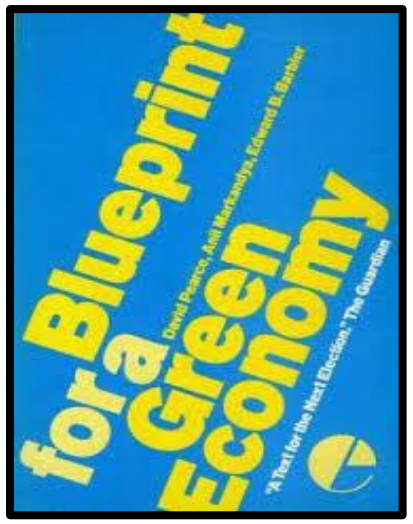
Promote Equity, Social Integrity & inclusiveness

- Human capital development
- Poverty reduction
- Intergenerational equity
- Intragenerational equity
- Gender equality
- Create genuine prosperity & wellbeing (education, health…
- Right to development for all

Ecological Sustainability

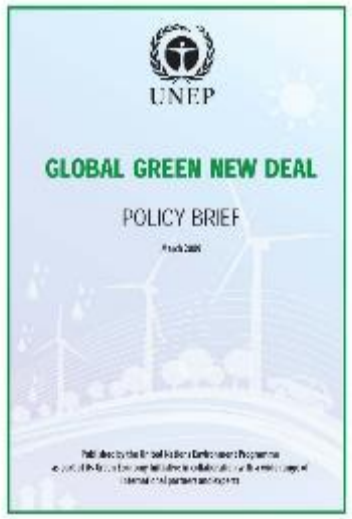
- Maintenance of eosystem services & natural capital
- Biodiversity conservation
- Sustainable consumption & production
- Resource efficiency
- Waste avoidance, reduction, recycle, recovery, reuse
- Address climate change concerns

REGIONAL MINISTERIAL CONFERENCES ON GREEN ECONOMY



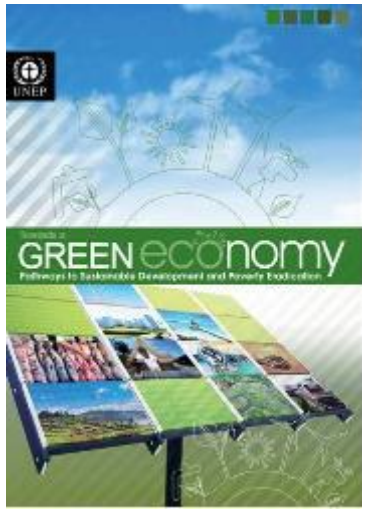
1989

The term “green economy” appeared in a publication entitled “Blueprint for a Green Economy” (Pearce et al. 1989)



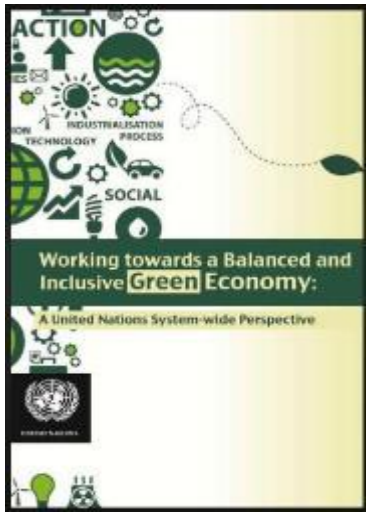
2009

A Global Green New Deal: Rethinking the Economic Recovery”, commissioned by UNEP (Barbier 2010)



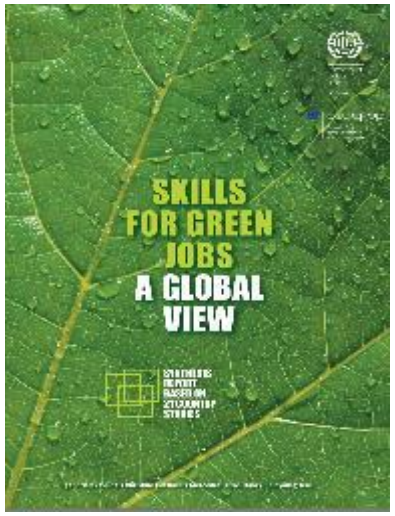
2011

Towards a Green Economy: Pathways to Sustainable Development & Poverty Eradication UNEP 2011



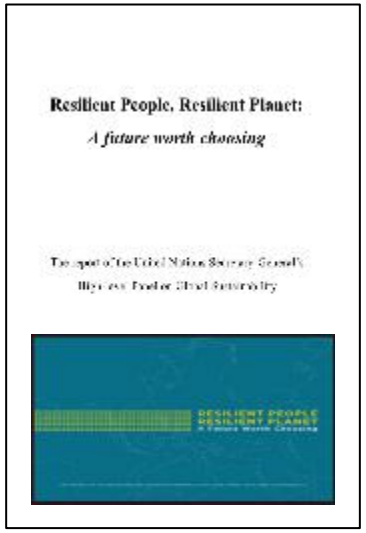
2011

Working Towards a Balanced and Inclusive Green Economy - A United Nations System-wide Perspective”, developed under the United Nations Environment Management Group (EMG 2011)



2011

“Skills for Green Jobs – A Global View”, a study by ILO (ILO 2011)



2012

“Resilient People, Resilient Planet: A Future Worth Choosing”, a report by the Secretary-General’s High Level Panel on Global Sustainability (2012)

REGIONAL MINISTERIAL CONFERENCES ON GREEN ECONOMY

Global Investment Trends

REGIONAL MINISTERIAL CONFERENCES ON GREEN ECONOMY

Global new investment in renewable power & fuels reached $ 279.8 billion in 2017

Global sales of electric cars increased by 58% in 2016

Since 1990s ecotourism has been growing between 20%-30%/year

The global market for organic food reached $ 97 billion in 2017

The renewable energy sector now employs over 8.1 million people

The transformation to a greener and low-carbon economy could generate up to 60 million additional jobs across economic sectors

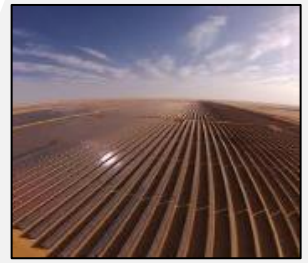
REGIONAL MINISTERIAL CONFERENCES ON GREEN ECONOMY

Investment Opportunitiesarial

REGIONAL MINISTERIAL CONFERENCES ON GREEN ECONOMY

Renewable Energy

- Renewable sources of energy include, solar, hydro, wind, bio-energy, & thermal
- Investments include extending existing grids to non-served areas, based on energy efficient & renewable sources of energy
- In remote locations, off-grid & mini-grid options tend to be more cost effective than expanding existing electricity grids
- Solar household systems have the potential to alleviate rural energy poverty & displace costly diesel-based power generation
- Energy efficiency & renewable energy use in industry, tourism agriculture,, buildings, cities, transportation, municipalities & services




REGIONAL MINISTERIAL CONFERENCES ON GREEN ECONOMY

- Investing in water efficiency saves costs & supports local economic growth & enhances resilience to climate change
- Investing in biodiversity & ecosystem services promotes water supply
- Providing local water-supply systems reduces degradation of water ecosystems & is likely to yield greater returns
- Adequate sanitation & drinking water supply & contributes to improved health, poverty reduction, & human wellbeing
- Investing in wastewater treatment & seawater desalination contributes to addressing water security

Sustainable Water Use

REGIONAL MINISTERIAL CONFERENCES ON GREEN ECONOMY

- Investing in organic & sustainable farming
- Applications of precision agriculture & innovative technologies
- Investing in draught resistant & water saving cash crops
- Soil & water management systems, & diversify crops & livestock
- Strengthening the supply chains for green products & farm inputs
- Farm mechanization & post-harvest storage
- Storage & cooling facilities to enhance efficiency & reduce waste
- Manufacturing of water & energy saving equipment
- Recycling of agricultural waste into compost and biogas




Sustainable Agriculture

- Green investment to reverse loss of forests by conserving existing areas & promoting expansion through regeneration & reforestation
- Improving management in existing forests & agroforestry systems to ensure continued provision of ecosystem services
- Investment in agroforestry provides win-win solution: conserves forests & promotes sustainable agriculture
- Investment in conservation & restoration of forests in accordance with principles of sustainable forest management
- Investment in the production of forest plantations using treated wastewater




Sustainable Forests

- Investment options include maintenance & decommissioning of vessels & improved fish stock management practices
- Investing in aquaculture, while ensuring minimum negative environmental impacts
- Fish fodder & fish processing plants & recycling of fish waste in order to create job opportunities & increase incomes
- Public awareness, re-training and education programs for fishermen in order to improve fishing practices, including waste reduction
- Effective management practices, such as individual transferable quotas (ITQs), could lead to improvement & rebuilding of fish stocks
- Creating alternative employment opportunities in order to reduce pressure on fisheries, especially in artisanal fishing locations

REGIONAL MINISTERIAL CONFERENCES ON GREEN ECONOMY

Sustainable Fisheries

REGIONAL MINISTERIAL CONFERENCES ON GREEN ECONOMY

- Investing in innovative & efficient technologies & processes that result in reduced energy & material use, waste reduction & promotes recycling of final used products
- Redesign products & business models so that the same functionality can be delivered with fundamentally less energy & material use recyclable products
- Introduce cleaner technologies & improve the efficiency of existing processes to establish new modes of production marked by higher material & energy efficiency
- Substitute green inputs for brown inputs wherever possible, recycle generated wastes, including wastewater

Green Industry

REGIONAL MINISTERIAL CONFERENCES ON GREEN ECONOMY

- Investing in drying & canning agriculture produce such as tom paste, production of jam (apricot, strawberries, …, dried dates & fruits
- Investing in meat, poultry & fish products
- Investing in medicinal plants
- Textile industry (cotton, silk, jute, woolen etc…,)
- Production of oil & biofuel from plants (Jejova, Jatrova,..
- Production of sugarcane & sugarbeet
- Production of paper, wood & manufacturing of furniture
- Production of tea & coffee

Agroindustry

REGIONAL MINISTERIAL CONFERENCES ON GREEN ECONOMY

- Investing in sustainable tourism offers a wide range of opportunities including generating significant returns while reducing environmental impacts
- Investment opportunities include Infrastructure (roads, airports, national parks, hotels, national & private reserves, recreational areas,…)
- Environmental conservation (natural attractions, beaches, mountains, rivers, biodiversity, natural parks (adopting sustainable management & cleaner production systems)
- Education & capacity building (labor force skills, including the greening of the skills base), & technology development & applications




Eco tourism

REGIONAL MINISTERIAL CONFERENCES ON GREEN ECONOMY

- Green investment options in cities include investment in green infrastructure: transport, buildings, energy, water, sanitation, waste & technology, as well as investing in urban form, size, density & configuration

- Application of AI and innovative technologies for efficient design & layout of urban structures, efficiency in the use of energy & water & other factor inputs & the use of renewable sources of energy & water & recycled material

- Green cities benefit from synergies between their constituent parts including energy systems & city fabric, & between different economic sectors & resource flows, where outputs of one sector becomes the input of another

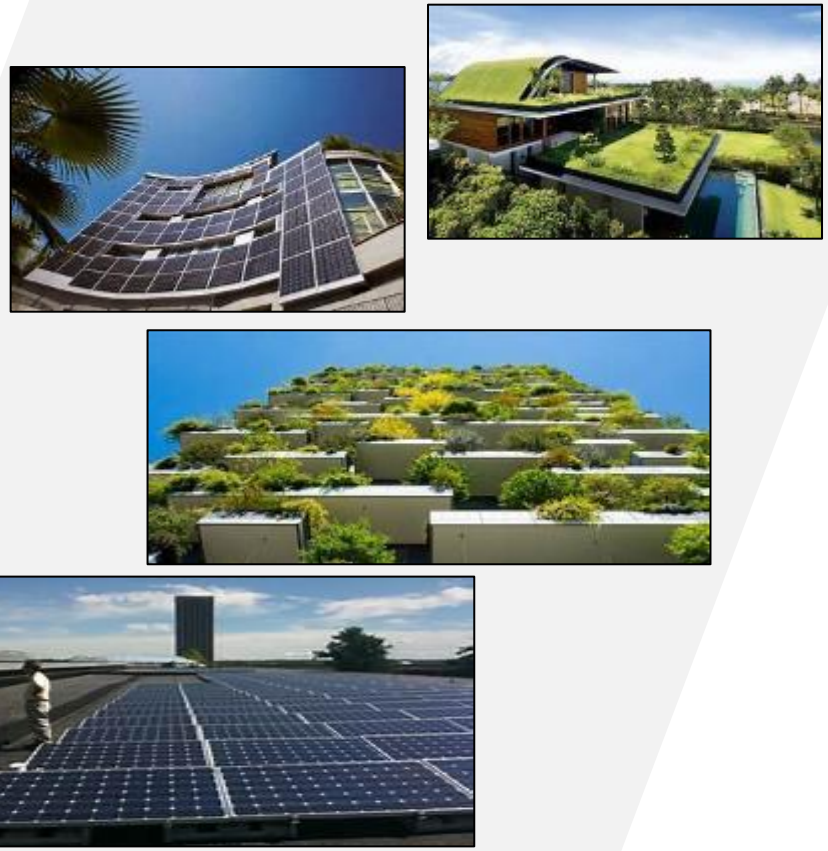
- Electricity generation for city districts from biogas generated in landfills

Sustainable Cities

REGIONAL MINISTERIAL CONFERENCES ON GREEN ECONOMY

Green Buildings

- Opportunities for greening the building sector in developed countries, are found mainly in retrofitting existing buildings
- Most developing countries experience housing deficit, the greatest potential to reduce energy demand will come from a new generation of green buildings with more efficient design & higher performance standards
- Two paradigms for greening the sector that can be applied to new buildings as well as retrofitting existing building stock
- The 1st is based on the concept of “passive” design where buildings respond to their local site context by using natural elements (such as air-flow & sunlight) to limit the effect of external conditions
- The 2nd paradigm based on a more “active” approach that uses newer technology & state-of-the-art building management systems that reduces resource & material consumption & generates energy



REGIONAL MINISTERIAL CONFERENCES ON GREEN ECONOMY

- *Avoiding* or reducing the number of journeys taken; *Shifting* to more environmentally efficient forms of transport; & *Improving* vehicle & fuel technology to reduce adverse environmental effects such as pollution & resource depletion

- Enacting the *Avoid, Shift & Improve* strategy requires: Adequate investment in R&D, production & operation & management of infrastructure (such as tracks for buses & rail, pedestrian & cycle routes & park-&-ride facilities)

- Greener vehicles & transport modes (including green public transport & low emission transport systems), cleaner fuels, telecommunication technology to substitute conventional transport (e.g. GPS, smart transport systems, green logistics, etc.)

Green Transport Systems

- Three central components in the *waste* minimization hierarchy are Reduce, Reuse and Recycle. Investment opportunities exist for these three areas of interventions

- Green investments in waste avoidance & minimization through innovative technologies & sustainable practices, waste recovery & recycling & treatment in an environmentally friendly processes

- Investments need to be allocated to formalizing the currently highly informal waste sector with the objective of improving the working, living conditions, environmental & health conditions of workers

- Investing in source separation, municipal solid waste management & production of compost, biogas, bio diesel from agriculture & municipal organic waste

REGIONAL MINISTERIAL CONFERENCES ON GREEN ECONOMY

Integrated Solid Waste Management

REGIONAL MINISTERIAL CONFERENCES ON GREEN ECONOMY

Funding Green Sustainable Development

REGIONAL MINISTERIAL CONFERENCES ON GREEN ECONOMY

The Addis Ababa Action Agenda clearly reaffirms the need to mobilize all available funding – public and private – to achieve the ambitious 2030 Agenda for Sustainable Development.

According to UNCTAD, achieving the SDGs requires between $5 to $7 trillion annually, with an investment gap in developing countries of about $2.5 trillion out of the global GDP of $ 115 trillion.

Moreover, according to the OECD, around $6.3 trillion annually is needed on a global scale for investing in clean & resilient infrastructure between 2016 & 2030, without taking into account climate concerns.

Green & Sustainable Finance

REGIONAL MINISTERIAL CONFERENCES ON GREEN ECONOMY

- ✓ Integrate sustainability risk factors into credit analysis
- ✓ Create green investment funds & banks
- ✓ Introduce requirements for reporting on sustainability performance annually
- ✓ Enhance sustainability capabilities of policymakers & financial regulators
- ✓ Introduce requirements to disclose policies on sustainability
- ✓ Develop financial literacy programs to include sustainability considerations
- ✓ Incorporate sustainability considerations into financial markets & asset purchase programs
- ✓ Integrate environmental & social considerations in lending operations

- ✓ Restrict financial transactions that result in social & environmental costs
- ✓ Facilitate lending for priority sectors, green investment
- ✓ Facilitate lending for private sector, including SMEs
- ✓ Align fiscal incentives for savings, lending, investment, & insurance with sustainability
- ✓ Introduce standards & regulations to facilitate capital raising such as green bonds
- ✓ Promote diversity of financial institutions in terms of geographical coverage, size & business model
- ✓ Promote knowledge & training on sustainability to undertake fiduciary responsibility

Source: UNEP Inquiry Report 2015

Tools for Mainstreaming Environmental Risks in Business

REGIONAL MINISTERIAL CONFERENCES ON GREEN ECONOMY

IFC's ESP

IFC's Environmental & Social Performance Standards define IFC clients' responsibilities for managing their environmental & social risks

The Equator Principles

The Equator Principles provide a risk management framework that can be adopted by financial institutions for determining, assessing & managing environmental & social risk in projects

UNEP FI's Principles

UNEP FI's Principles for Sustainable Insurance were developed to support sustainable finance in the context of insurance industry

Sustainable Stock Exchanges

The Sustainable Stock Exchanges Initiative explores how to improve investment transparency & performance on ESG through dialogue with investors, companies & regulators & corporate disclosure

PRI

The UN Principles for Responsible Investment (PRI) aim to incorporate sustainability concerns into the investment planning of investors

REGIONAL MINISTERIAL CONFERENCES ON GREEN ECONOMY

Principles for Responsible Investment

- Incorporate ESG issues into investment analysis & decision-making processes
- Promote acceptance & implementation of the Principles across the investment industry
- Actively incorporate ESG issues into our ownership policies & practices
- Work together to improve our effectiveness in implementing the Principles
- Seek appropriate disclosure on ESG issues by the entities in which we invest
- Each report on our activities & progress towards implementing the Principles

Sources of Green & Sustainable Finance

REGIONAL MINISTERIAL CONFERENCES ON GREEN ECONOMY

ODA

ODA amounted to $149.3 billion in 2018 down by 2.7% in real terms from 2017, but still continues to be a main source of funding

Private Sector

Remove obstacles facing private investors thru good governance, predictable & stable policies, incentives & other incentive measures

Blended Finance

The use of ODA for the mobilization of additional private finance towards sustainable development
OECD DAC members endorsed Blended Finance Principles for Unlocking Commercial Finance for SDGs

Fiscal Measures

Taxes & subsidies can play an important role in directing finance to support the implementation of the SDGs
Remittances of nationals working abroad

Innovative Finance

Unlocking the supply of finance thru innovative domestic institutions (e.g. green banks) & financing instruments (green bonds)
Revolving Fund
Energy Performance Contracting
Result-based financing
Ethical finance

Sources of Green & Sustainable Finance

REGIONAL MINISTERIAL CONFERENCES ON GREEN ECONOMY

Financial Institutions

Mobilizing financial resources for SDGs requires introducing sustainability measures in the financial system regulatory frameworks along with risk mitigation mechanisms to encourage & govern lending for sustainable development projects

Public Finance &Trade

Government revenue thru taxes & subsidy reform provide a main source of funding, trade policies, properly designed can be provide a source for foreign exchange earnings needed to support sustainable development & create jobs

UN & International Conventions & Funding Mechanisms

Meeting commitments with respect to international conventions offer funding opportunities (GEF, global Strategic Plan for Biodiversity for 2011-2020, GCF, Environmental Conventions

Remittances of Nationals working abroad

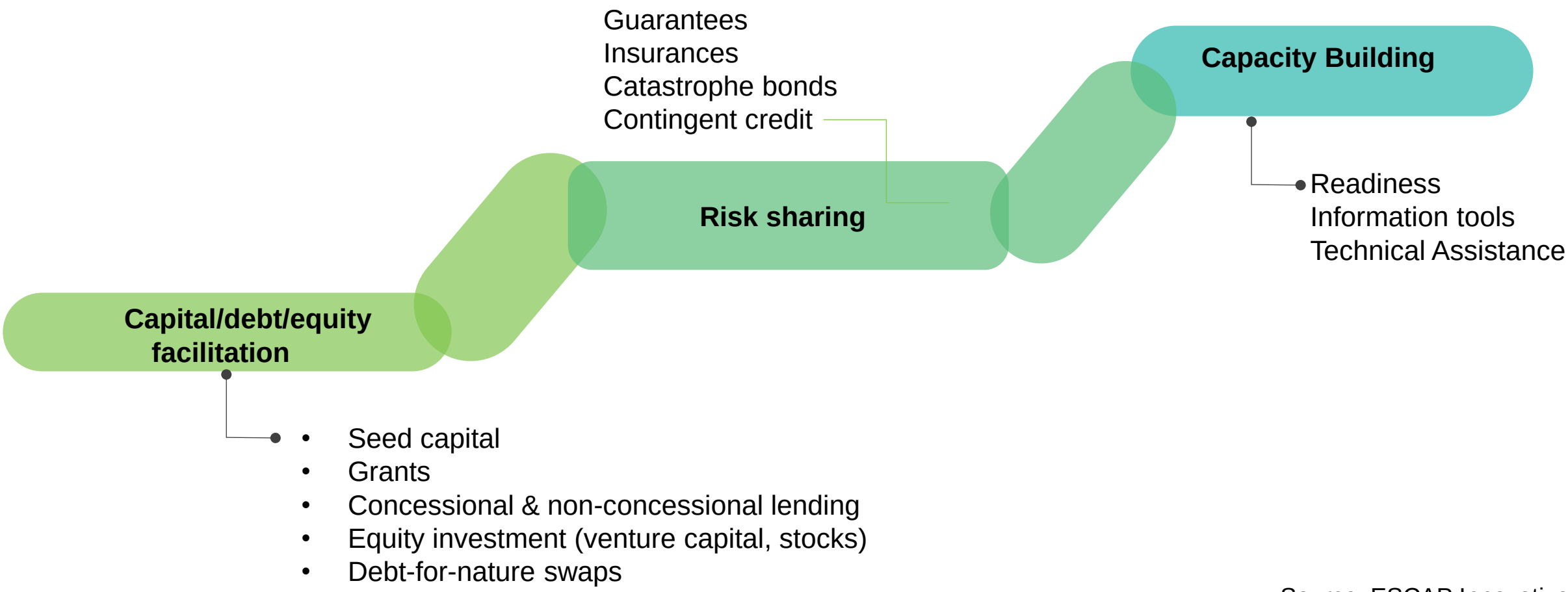
Facilitate & provide financial services to nationals living & working abroad & their families the transfer of funds to their respective countries can represent a major source of green funding

Civil Society & Philanthropic Organizations

Civil society & philanthropic organizations to provide financial & technical contributions towards sustainable development & aligning their activities with government policies, plans & programs

Green Finance Delivery Instruments

REGIONAL MINISTERIAL CONFERENCES ON GREEN ECONOMY



Source: ESCAP Innovative instruments for Green Finance

Principles for Responsible Investment

REGIONAL MINISTERIAL CONFERENCES ON GREEN ECONOMY

- Disclosure Requirements
- Accepting Carbon Certificates as part of Commercial Banks Legal Reserves
- Directed Green Credit Policy Instruments
- Green Differentiated Reserve Requirements
- Differentiated Capital Requirements
- Green Macroprudential Regulation & Climate-related Stress Testing
- Green Quantitative Easing & Reserve
- Green Finance Guidelines & Frameworks

Source: ESCAP Innovative instruments for Green Finance

Countries reducing GHG Emissions while Growing their Economies

REGIONAL MINISTERIAL CONFERENCES ON GREEN ECONOMY

COUNTRY	CHANGE IN CO_2 (2000–2014)	CHANGE IN GDP (2000–2014)
Austria	-3%	21%
Belgium	-12%	21%
Bulgaria	-5%	62%
Czech Republic	-14%	40%
Denmark	-30%	8%
Finland	-18%	18%
France	-19%	16%
Germany	-12%	16%
Hungary	-24%	29%
Ireland	-16%	47%
Netherlands	-8%	15%
Portugal	-23%	1%
Romania	-22%	65%
Slovakia	-22%	75%
Spain	-14%	20%
Sweden	-8%	31%
Switzerland	-10%	28%
Ukraine	-29%	49%
United Kingdom	-20%	27%
United States	-6%	28%
Uzbekistan	-2%	28%

Sources: BP Statistical Review of World Energy 2015; World Bank World Development Indicators

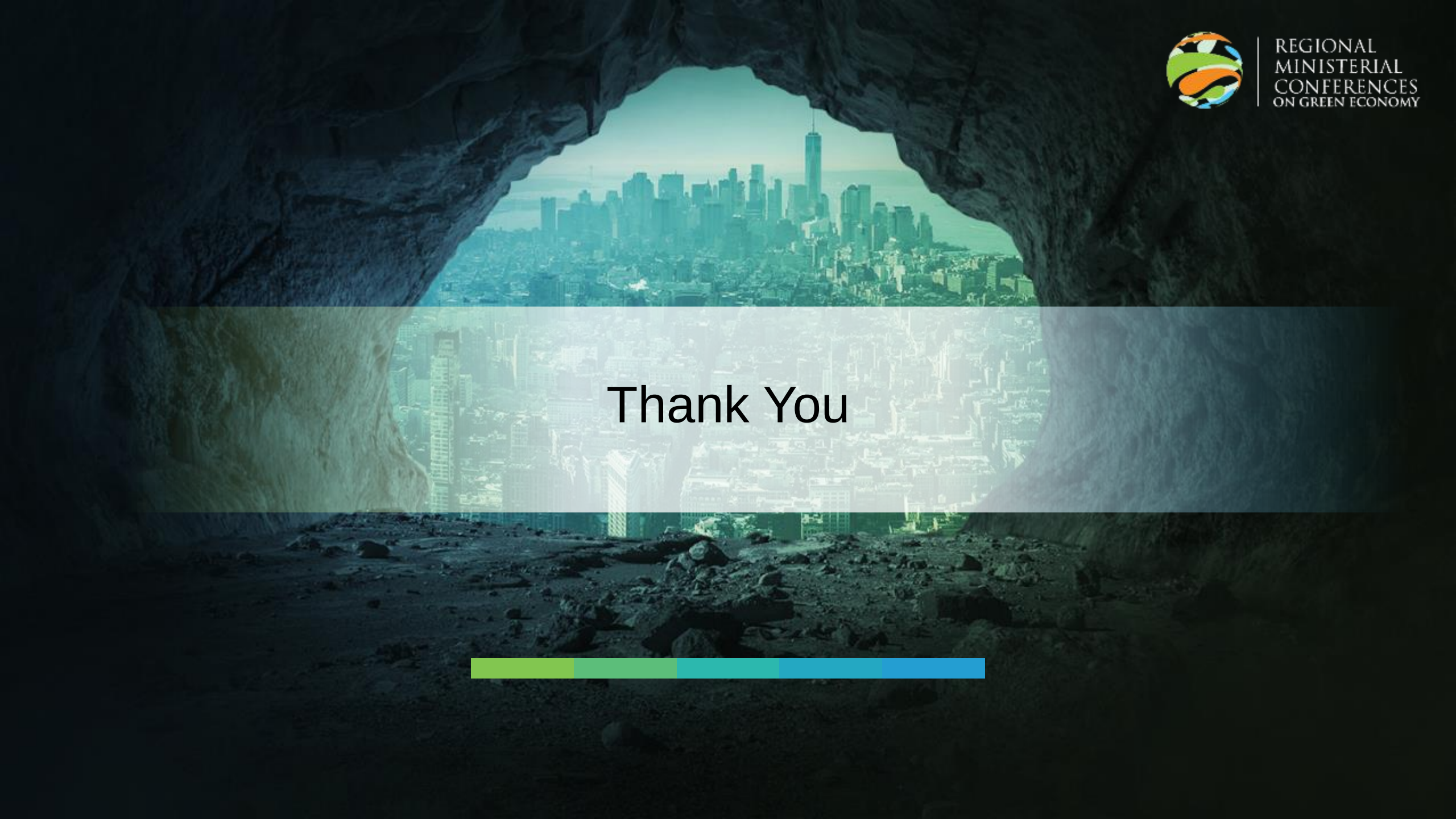
Best Performing Green Economy Countries

REGIONAL MINISTERIAL CONFERENCES ON GREEN ECONOMY

Expressed as percentiles representing an aggregate result from 4 main dimensions of GGEI: Leadership & climate change, efficiency sectors, market & investment, and environment

	2018 result	*time series available*
Sweden	0.7608	2010-2018
Switzerland	0.7594	2014-2018
Iceland	0.7129	2010-2018
Norway	0.7031	2010-2018
Finland	0.6997	2010-2018
Germany	0.6890	2010-2018
Denmark	0.6800	2010-2018
Taiwan	0.6669	2014-2018
Austria	0.6479	2014-2018
France	0.6405	2010-2018
United Kingdom	0.6230	2010-2018
Colombia	0.6188	2014-2018
Singapore	0.6154	2018
Costa Rica	0.6142	2014-2018
Ireland	0.5993	2014-2018
Canada	0.5966	2010-2018
Netherlands	0.5937	2010-2018
New Zealand	0.5928	2010-2018
Japan	0.5927	2010-2018
Monaco	0.5909	2018
Kenya	0.5809	2014-2018
Uruguay	0.5784	2014-2018
Zambia	0.5740	2014-2018
Belgium	0.5737	2014-2018
Italy	0.5606	2010-2018
South Korea	0.5591	2010-2018
Thailand	0.5551	2014-2018
China	0.5531	2010-2018
Peru	0.5526	2014-2018
Greece	0.5485	2016-2018
United States	0.5471	2010-2018

Source: The GGEI is published by Dual Citizen LLC, a private U.S.-based consultancy


REGIONAL
MINISTERIAL
CONFERENCES
ON GREEN ECONOMY
Thank You