



partner for prosperity



Energy, Climate Change and the Private Sector Activities and cooperation perspectives with UNIDO

ACP Secretariat 2nd GCCA Technical Meeting , Brussels 06 May 2014

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Poverty Reduction through Productive Activities • Trade Capacity Building • Environment and Energy

Agenda

- A few facts about UNIDO
- Global platforms and networks
- Examples of interventions at different levels
- Opportunities and Actions

A FEW FACTS ABOUT UNIDO

A few facts about UNIDO

**Former Vice-Minister
of Finance of China**



**Li Yong
Director-General**

**700 staff members at
Headquarters (Vienna) &
in offices worldwide**

172 Member States

**3000 experts/year
50% from developing
countries**

**€ 500 million available for
future implementation**



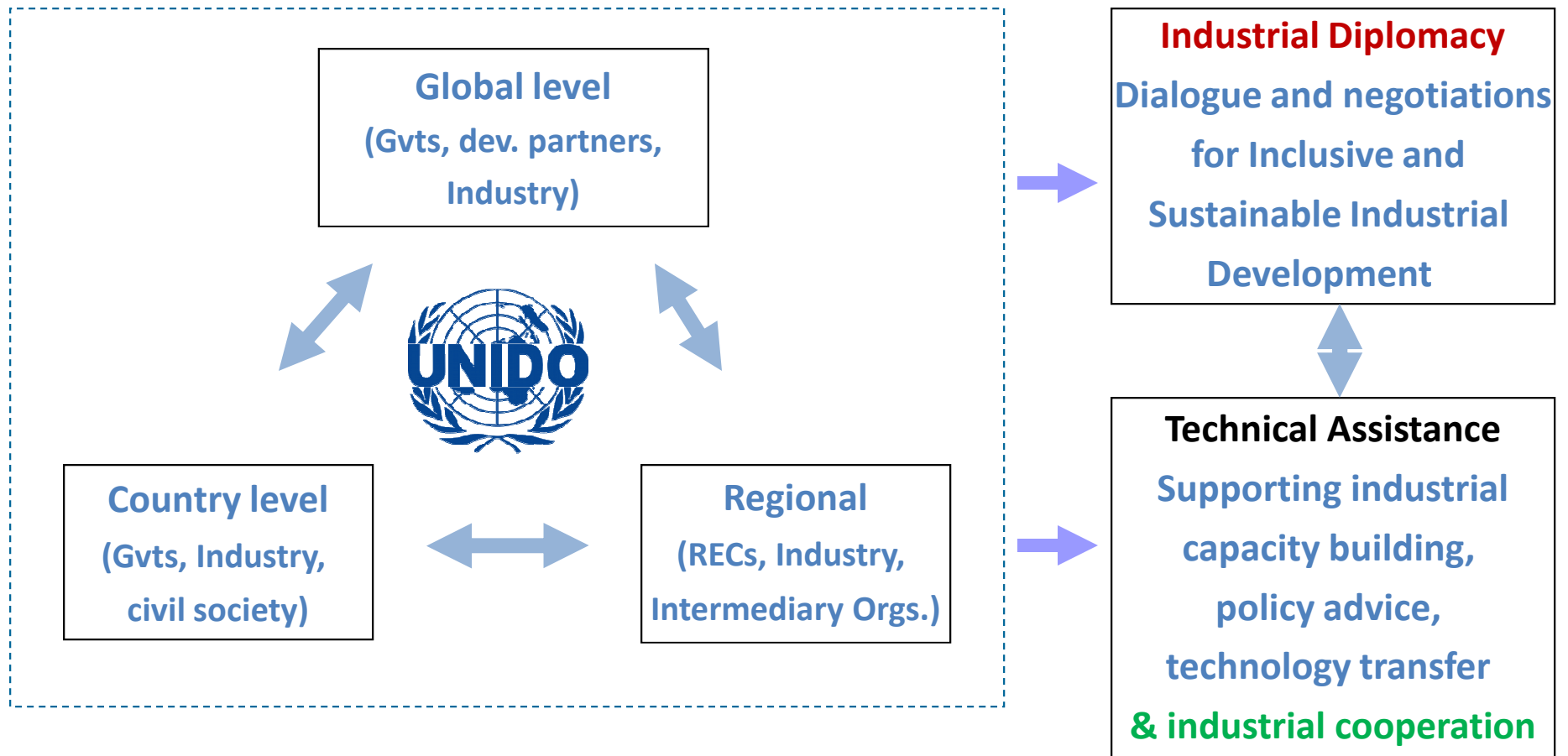
UNIDO mandate



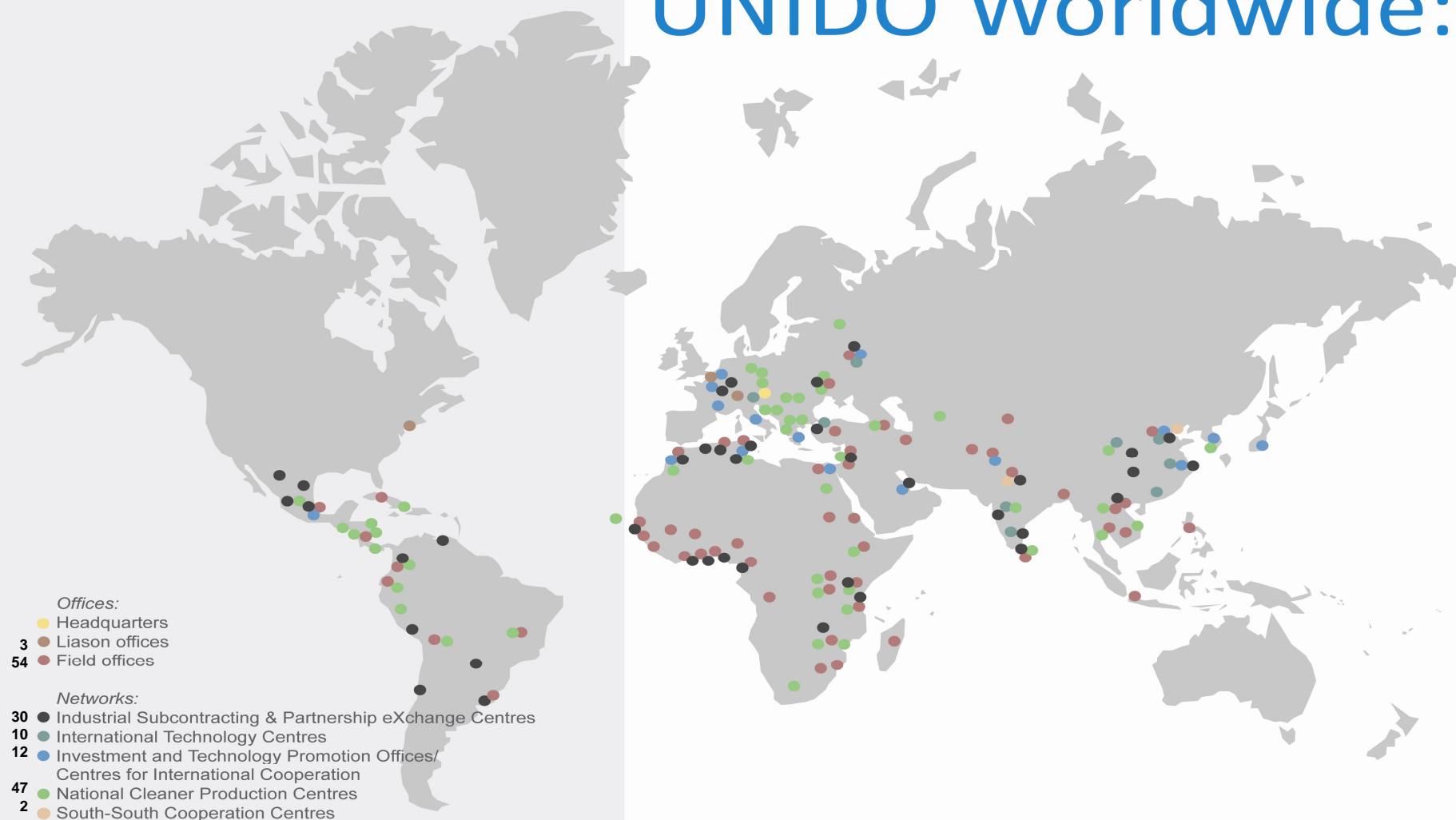
Inclusive and Sustainable Industrial Development



Industrial governance and cooperation for ISID



UNIDO Worldwide:



Partnership with the EU and ACP

European Union



- Relationship Agreement (1993)
 - Technical Assistance
 - Industrial Cooperation
 - Industrial Studies, Analysis
- Facts of cooperation (2006-12)
 - More than €100 million
 - More than 80 countries
- Recent joint activities
 - EU SE4ALL Summit, Rio+20, HLRLMs
 - UNIDO DG: Meetings with six EU Commissioners in 2012 alone

African Caribbean Pacific



- Relationship Agreement (2011)
 - Support of inclusive industries, particularly agro-industries, for job creation & poverty reduction
 - Strengthen competitive industries, the private sector and TCB
 - Develop environmentally friendly industries for sustainable dev.
- Recent Joint Activities
 - 4th EABF in Brussels 2014, Tripoli 2010
 - ACP in UNIDO General Conference 2011
 - UNIDO in ACP Council of Ministers 2012

GLOBAL PLATFORMS AND NETWORKS

Global Platforms for a progressive agenda

- **UNIDO General Conference (2011, 2013)**

- 172 Member States supporting the 3rd Industrial Revolution and ISID
- Key note speakers: Ban Ki Moon, J. Rifkin, J. Potočník, Dr. Chambas



The new
industrial revolution
making it sustainable

GENERAL CONFERENCE Fourteenth Session 28 November-2 December 2011, Vienna, Austria



15
UNIDO
GENERAL
CONFERENCE
Lima - Peru
02 - 06.12.13

- **Green Industry Platform (GIP) and EREP**

- Global platforms to boost resource efficiency and green industry
- GIP Launched in Rio+20: J. Potočník, M. Barbut, A. Steiner



- **Sustainable Energy for All (SE4ALL) & Vienna Energy Forum (VEF)**

- Commitments: 61 governments, businesses: \$50+ billion, 1bn beneficiaries
- VEF key note speakers: A. Schwarzenegger, Dr. Chambas, etc.



**2012 INTERNATIONAL YEAR OF
SUSTAINABLE ENERGY
FOR ALL**

- **Accelerated Agri-business and Agro-industry Initiative (3ADI)**

- Regional high level conferences (incl. Abuja 2010)
- 20+ countries already globally to work under 3ADI

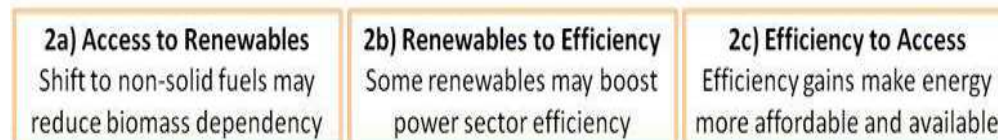
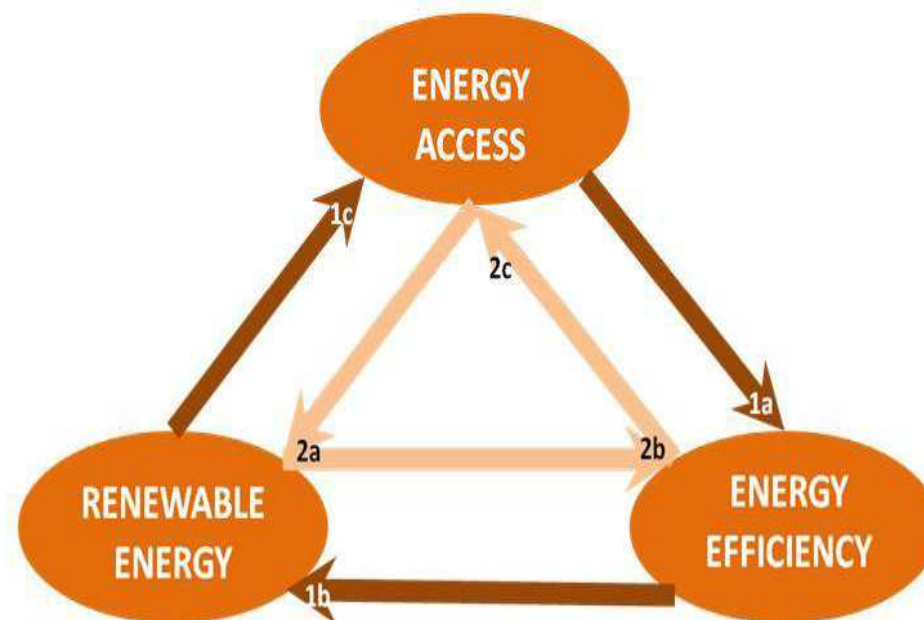
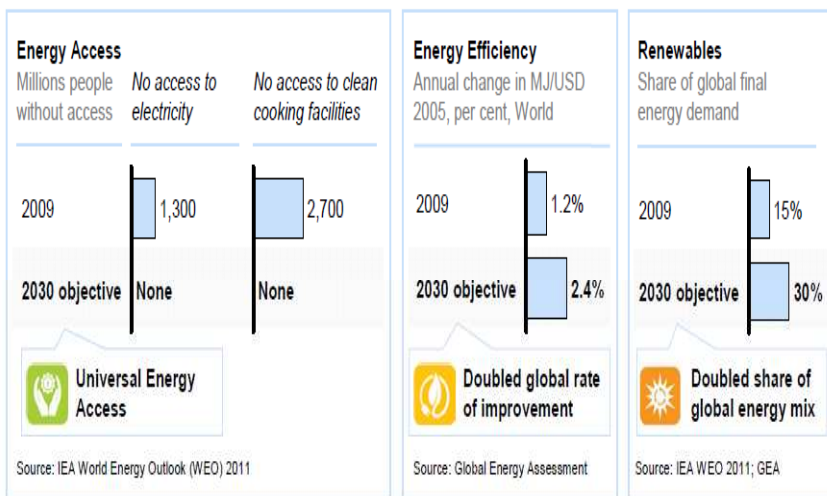


**VIENNA ENERGY
FORUM 2011**
energy for all—time for action
Vienna, Austria, 21-23 June 2011



3ADI
Accelerated Agribusiness
and Agro-industries
Development Initiative

SE4ALL objectives



<http://www.se4all.org/>



SUSTAINABLE
ENERGY FOR ALL

SE4ALL: Significant momentum continues to build

✓ ~1B beneficiaries ✓ > \$50bn mobilized ✓ 65 countries ✓ >100 organizations

Number of Commitments	Funds Mobilized		Number of Beneficiaries	
	Total	Notes	Total	Notes
165*	More than \$50 B*	<ul style="list-style-type: none"> Majority from businesses focused on EE/renewables More announcements on access expected 	~1 B* people	<ul style="list-style-type: none"> Announcements in off-grid lighting, clean cooking, mini-grids Grid extension, energy policy, investments also areas of focus

Category	# of Commitments
Private Sector	78
Government	60
UN System/IGO	14
NGO/CSO	12
Development Bank	1
Total	165

Action Area	# of Commitments
Energy planning and policies	60
Industrial & agricultural processes	36
Distributed electricity solutions	25
Capacity building & knowledge sharing	12
Finance & risk management	9
Buildings & appliances	7
Large scale renewable power	6
Modern cooking appliances & fuels	3
Grid infrastructure & supply efficiency	1
Transportation	1
Total	165



*Note: Numbers are tentative as a number of commitments are still in the process of being submitted

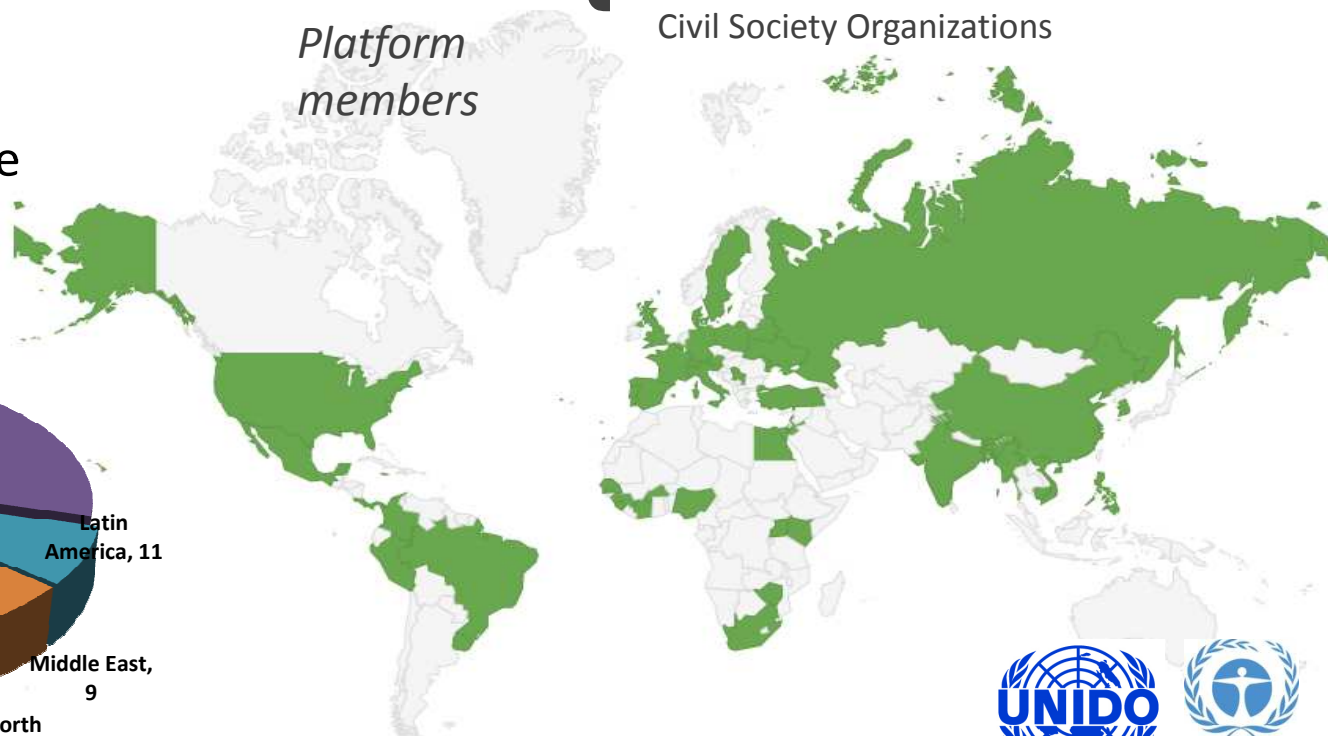
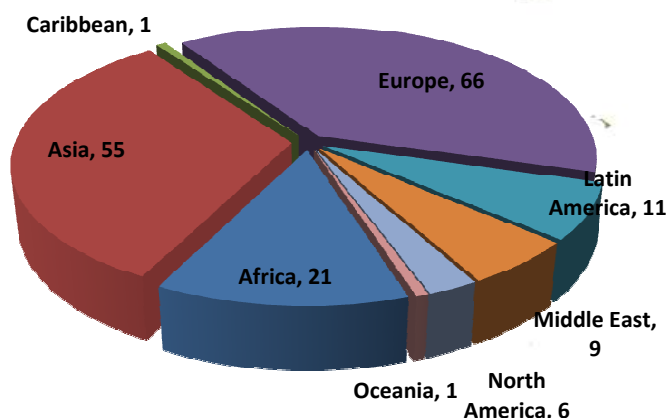
Green Industry Platform (GIP)

A global high-level, multi-stakeholder partnership intended to act as a forum to catalyze, mobilize and mainstream action on Green Industry around the world.

187

Platform members

- 29 Governments
- 93 Businesses
- 65 Int'l, Business, Civil Society Organizations



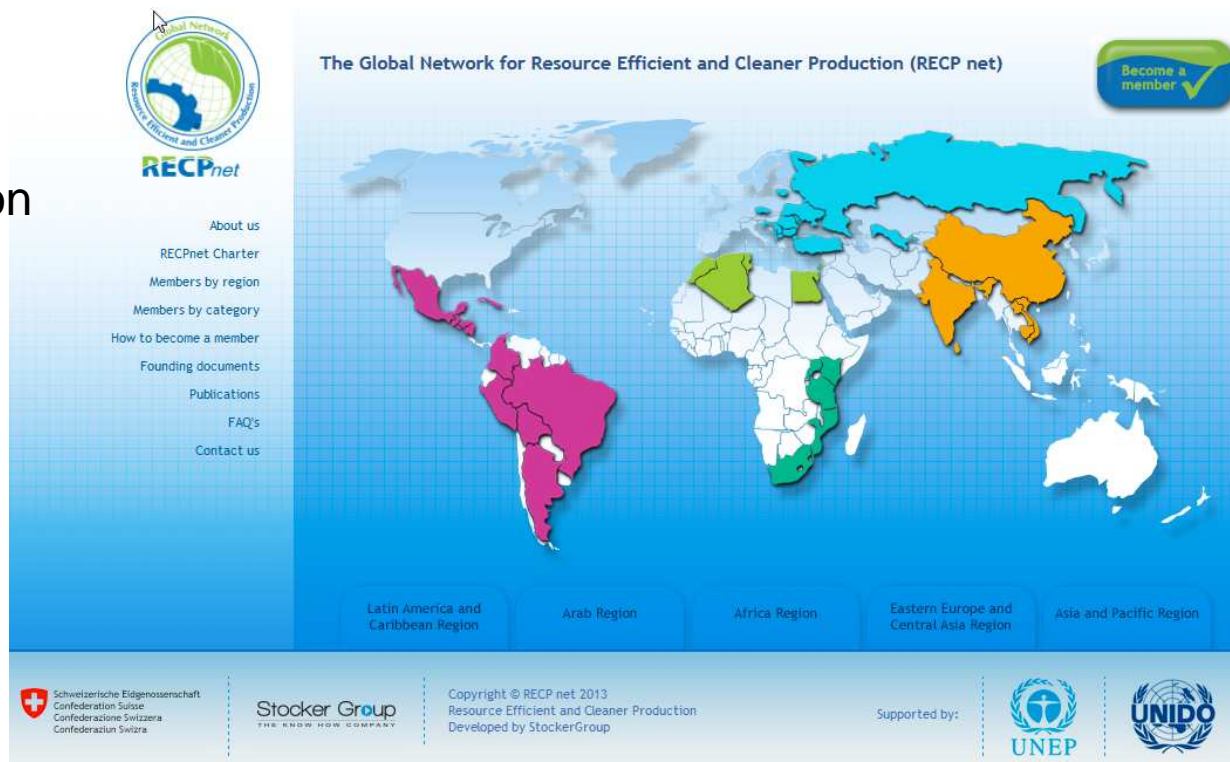
<http://www.greenindustryplatform.org/>

Resource Efficient and Cleaner Production (RECP) Network

RECPnet is comprised of National Cleaner Production Centres and Programmes (NCPCs/NCPPs) and other providers of RECP services in more than 50 countries.

5 service areas:

1. Awareness building and information, dissemination
2. Professional training
3. In plant assessments/ technical assistance
4. Policy advice
5. Transfer of Environmentally Sound Technologies



<http://www.recpnet.org>

Climate Technology Center and Network (CTCN)

Consortium Approach - Advantages are many: wide pool of diverse technical knowledge; broad range of expertise covered; regional knowledge; larger potential for co-funding



<http://www.unep.org/climatechange/ctcn/>



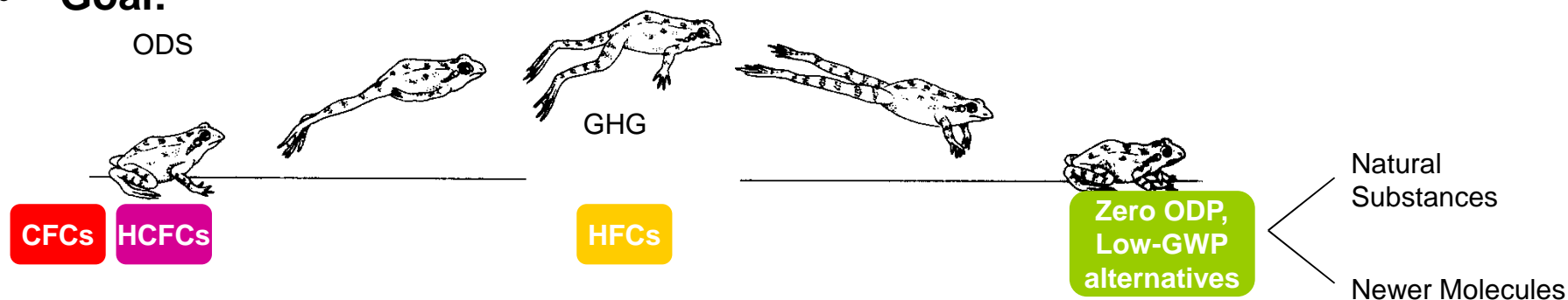
EXAMPLES OF INTERVENTIONS AT DIFFERENT LEVELS

Green Industry: Flagship Programmes

Resource Efficiency	Water	Energy	Chemicals Management
Resource Efficiency & Cleaner Production (RECP)	Transfer of Env. Sound Technologies (TEST)	Industrial Energy Efficiency: EMS & System Optimization	Persistent Organic Pollutants (POPs) Phase-out
Environmental Management Standards	Mercury Programme	Renewable Rural Energy for productive use	Ozone Depleting Substances (ODS) Phase-out
Corporate Social Responsibility – REAP 26000	Large Marine Ecosystems (LME) Rehabilitation	Low Carbon Technologies	Chemical Leasing
<i>Address CC Mitigation and Adaptation</i>			E-waste Management

Protecting climate and ozone layer

- **Impact:** Montreal Protocol has reduced GHG emissions by around 11 Gt CO₂eq (= 5-6 times Kyoto Protocol) annually.
- **Performance:** UNIDO one of only four implementing agencies and implements more than 25%+. In the last 11 years 10 times the best implementing agency
- **Task:** projects phasing out ODS from annual consumption and production in small and medium sized and large enterprises in the industrial, agricultural and refrigeration-servicing sectors.
- **Technology:** that replaces is generally more energy efficient and has a reduced global warming potential (GWP). Hydrofluorocarbons (HFCs) developed as zero Ozone Depletion Potential (ODP) alternatives but, emerged as “transitional substances” no other cost-effective alternatives.
- **Goal:**



UNIDO RE energy projects and impact



UNIDO is currently implementing more than 60 renewable energy projects in around 50 countries, with the following targets to be achieved in a 5-year period (2013-2018):

Number of people gaining access to energy: **>135,000¹**

Renewable energy capacity installed: **~25 MW**

Renewable energy generated: **>125 GWh/year**

Million tons of CO₂e emissions avoided: **>3 million tons direct²**

Number of enterprises benefiting from projects: **>600**

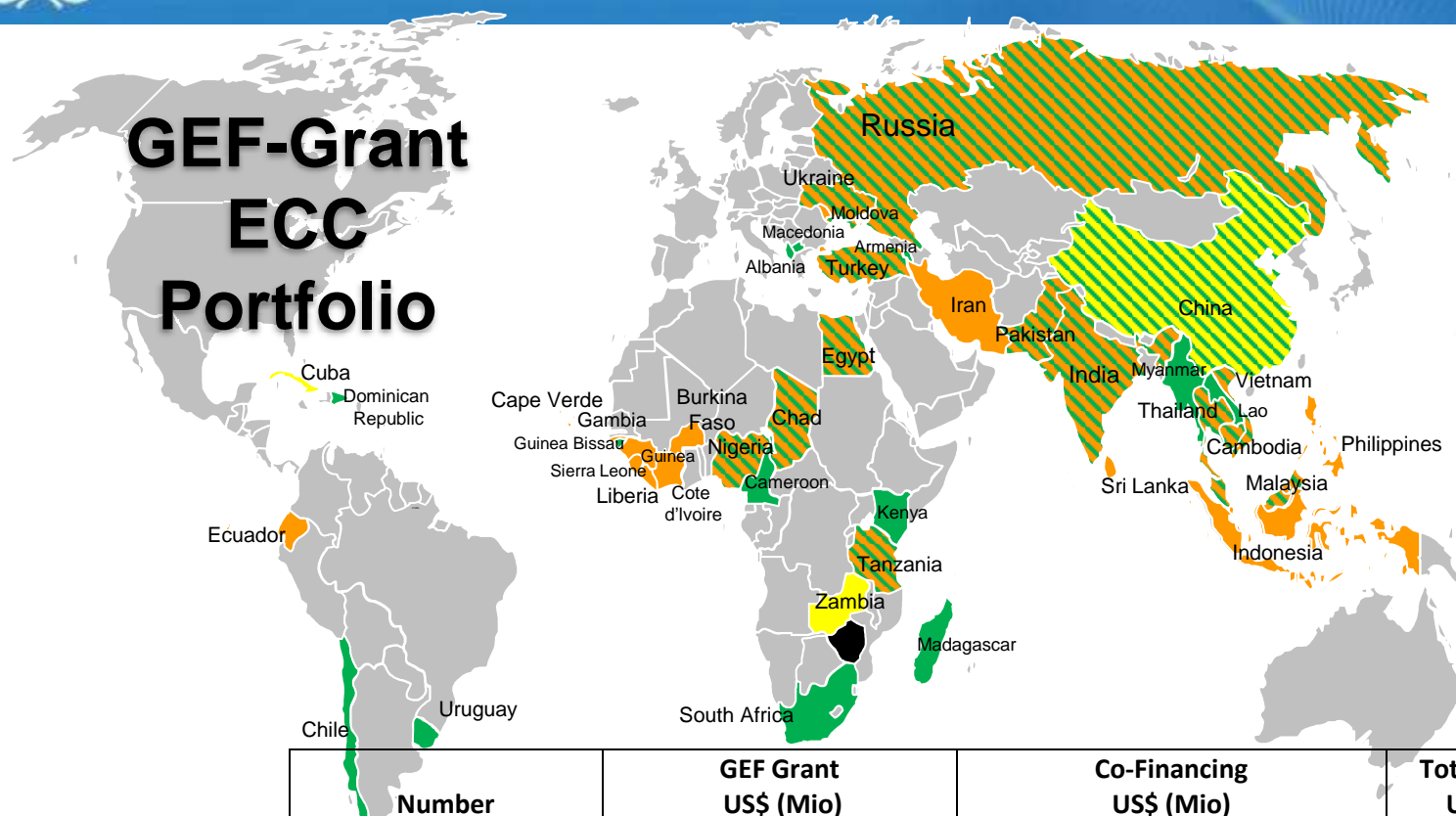
¹ Calculated on the basis of MWh/year generated as a result of projects divided by average electricity consumption per capita in a given country (based on 13 projects), using World Bank Statistics 2009.

² Based on emissions over the lifetime of projects (typically between 10-20 years, depending on the technology used and the size of the project).



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GEF-Grant ECC Portfolio



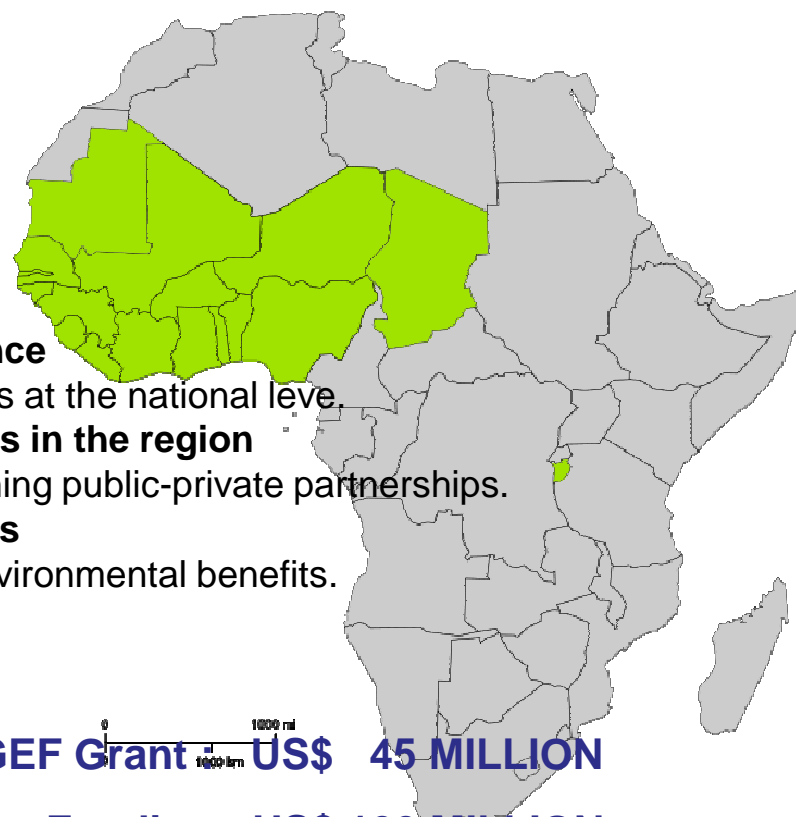
	Number		GEF Grant US\$ (Mio)		Co-Financing US\$ (Mio)		Total Funding US\$ (Mio)
GEF 5	49	EE: 20	141.15	EE: 65.93	689.64	EE: 340.1	830.79
		RE: 29		RE: 75.21		RE: 348.7	
GEF 4	32	EE: 17	89.1	EE: 59.59	548.78	EE: 409.75	637.86
		RE: 15		RE: 29.5		RE: 139.03	
GEF 3	2	EE: -	9.83	EE: -	18.5	EE: -	28.33
		RE: 2		RE: 9.83		RE: 18.5	
GEF 2	1	EE: 1	8.8	EE: 8.8	10.55	EE: 10.55	19.35
		RE: -		RE: -		RE: -	
TOTAL	84		248.86		1267.47		1516.33

Poverty Reduction through Productive Activities • Trade Capacity Building • Environment and Energy

GEF Strategic Programme in West Africa – SPWA

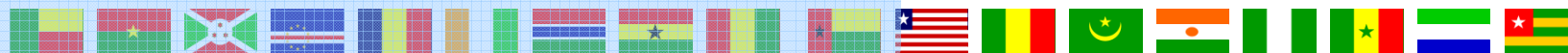
Priority Areas:

- To use a programmatic approach to ensure greater coherence
- in the design of renewable energy and energy efficiency projects at the national level.
- To scale up renewable energy and energy efficiency markets in the region
- through increased private sector investments and by strengthening public-private partnerships.
- Local capacity to use renewable energy for productive uses
- and reap substantial developmental benefits as well as local environmental benefits.
- Regional coordination mechanism
=> greater synergies



GEF Grant US\$ 45 MILLION

Co-Funding: US\$ 100 MILLION



ECOWAS Centre for Renewable Energy & Energy Efficiency

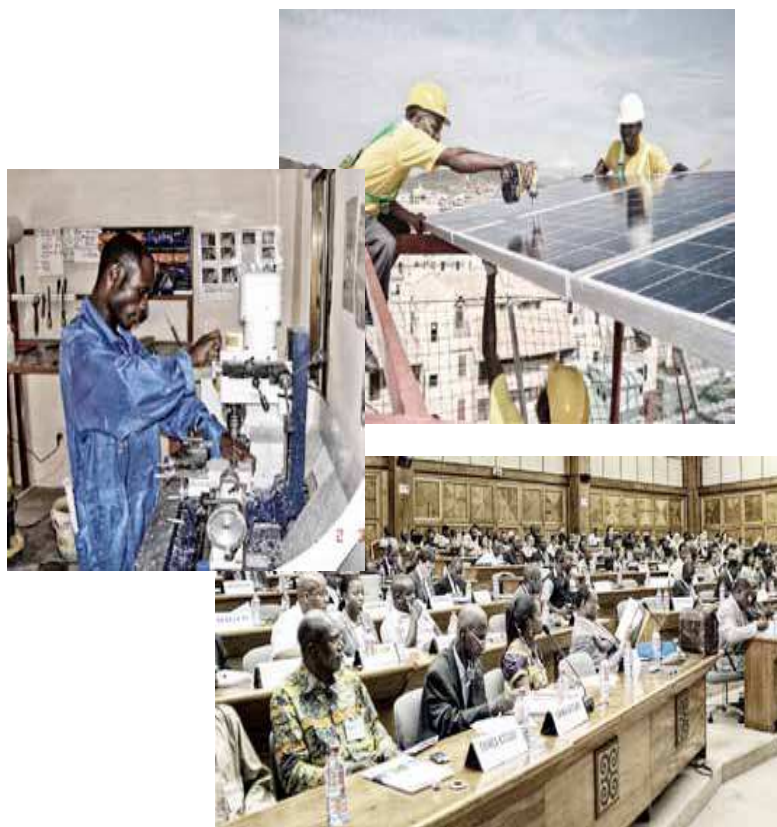
- **Scope & Concept**
 - Covers all ECOWAS countries (+Mauretania)
- **Impact**
 - Implementation of energy access, RE and EE projects and develop markets
 - Implementing demonstration projects with potential for reg. scaling-up
 - Tailored Policy Frameworks and Quality Standards
 - Advocacy, Awareness Raising, KM and Networking
 - Facilitate Capacity building and financing mechanisms
- **Leverage**
 - ECREEE as implementing agency for two
 - UNIDO-GEF projects worth 9,3 million USD
 - Cape Verde attains 25% RE Penetration
 - New centres in other regions foreseen



ECOWAS Center for RE and EE (ECREEE)

Results

- » ECREEE Secretariat and a network of National Focal Institutions in 15 ECOWAS countries was established
- » Policies and Targets were adopted by the ECOWAS Ministers
- » More than 750 key market enablers on various aspects of sustainable energy were trained (e.g. financing, policy, technical)
- » ECOWAS RETScreen Clean Project Analysis Train the Trainers Network was established and 14 national workshops were organized.
- » Technology conferences with more than 2.000 participants from the region were organized.
- » ECOWAS Observatory for Renewable Energy and Energy Efficiency (www.ecowrex.org) created with GIS maps on resources and investment possibilities in 15 ECOWAS countries
- » ECOWAS Renewable Energy Facility (EREF) was established and 41 rural projects of over EUR 3 million are under execution.



+ ECOWAS Observatory for RE and EE (ECOWREX)

East Africa GEF Energy Programme

Priority Areas:

- Enhanced Access to energy based on renewables
- Demonstration, deployment and transfer of innovative low-carbon technologies (beyond TNAs, TT Pilots and Dissemination of best practices)
- Market transformation for energy efficiency in industry, building and transport sectors
- Promoting carbon financing markets in the region
- Adaptation programmes, and linkages to other focal areas



Examples in Renewable Energy

Renewable energy based electricity generation for isolated minigrids in Zambia



- Biomass gasifier power plant for 500 kW of electricity generation
- Small hydropower station to generate 1 MW of electricity
- Solar energy mini-grid with an outputs of 60 kW

Delivery of Renewable Energy Based Modern Services in Cuba - The case of Isla de la Juventud



- A large biomass gasifier plant (3.5 MW) for power generation
- Four gasifier applications (about 6 MW thermal) to be placed at four industrial sites for heat production
- Wind farm to produce 1.5 MW of electricity

Carbon footprint reduction opportunities for the agro-processing industries of Tanzania



- Identifying opportunities for reducing the carbon footprint associated with agro-processing industries
- Help to import understanding and equip the agro-processing industries
- Part of a UN Joint Programme on the Environment in Tanzania

Pacific Islands: Enabling framework for RE



Results

- » A solar-powered community centre at Solomon Island using solar photovoltaic power improved local living conditions for 15 communities, increasing employment and income opportunities by supporting productive activities such as sewing, food processing and food storage.
- » Local entrepreneurs were trained in these areas. The project is reducing about 460 kg of CO₂ emissions per year.
- » A Strategic Plan for the Community of Pacific Power Utilities was approved to guide decision-makers on priority areas of intervention.
- » Technically and economically viable investment opportunities were identified in the tourism and agro-food sectors, such as using waste from coconut processing in Samoa (the largest producer of coconut oil). A full technical feasibility study is to be carried out to demonstrate state-of-the-art technologies and trigger replication.

=> Scale-up phase two started

IEE Market Transformation in Russia

Objective	To reduce emissions in Russian GHG-intensive industries through improved energy efficiency, best-practices dissemination & investments contributing to market transformation
Components:	<ul style="list-style-type: none"> <input type="checkbox"/> Training material and programs on Energy Management Systems (EnMS) and Energy System Optimization (ESO) for enterprises and consultants <input type="checkbox"/> EnMS-ESO web-site with Library and Peer-to-Peer Network <input type="checkbox"/> 120 national trainers trained in EnMS and ESO
Enhancing knowledge assets	
Capacity-building in Large Industry (20)	
Capacity-building in SMEs (60+)	<ul style="list-style-type: none"> <input type="checkbox"/> Training and TA for implementation of EnMS in line with ISO 50001 <input type="checkbox"/> Training and TA for implementation of ESO (steam, pumps, fans, etc.) <input type="checkbox"/> Energy audits <input type="checkbox"/> Energy Efficiency Investment Plans <input type="checkbox"/> Subsidies for energy metering equipment <input type="checkbox"/> Technical assistance support for access to financing EE (€120 M EBRD +RUSEFF cofin)
Policy support	<ul style="list-style-type: none"> <input type="checkbox"/> Training of Government officials on EE policy development <input type="checkbox"/> Strengthening of M&V framework <input type="checkbox"/> Strengthening schemes for EnMS and EE professional competencies certification <input type="checkbox"/> Develop incentives for EnMS implementation <input type="checkbox"/> Assist in developing market-based mechanisms like White Certificate and Carbon Trading

PPP UNIDO-Philips Efficient Stoves

Objective

To reduce GHG emissions in Lesotho by introducing efficient household stoves into the market by successfully demonstrating, deploying, and transferring low-carbon, fuel efficient, and clean-burning industrial technologies and creating an enabling policy environment for this technology transfer.



PHILIPS

Project Components and Expected Outcomes

Policy and standards

Supportive policies and legal framework for efficient stove producers and distributors developed and strengthened.

Capacity of suppliers

Sustainable implementation model developed and applied for local production of efficient stoves.

Demonstration & dissemination

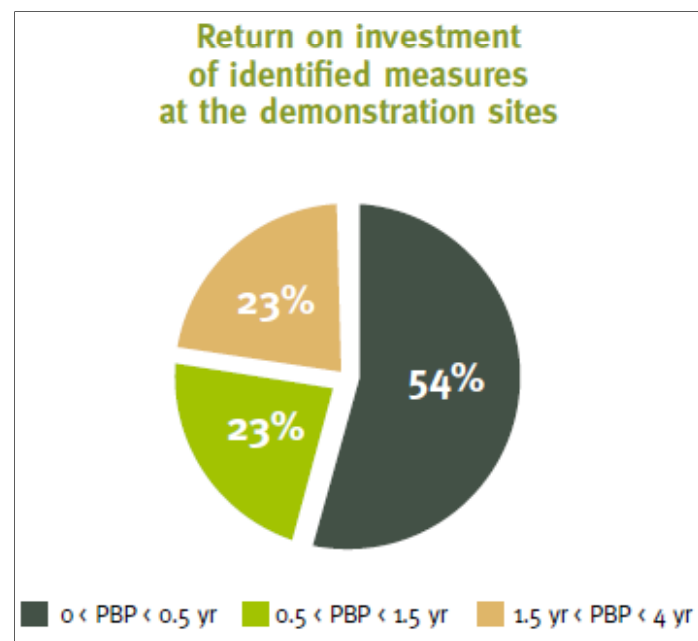
Efficient stove market developed with sustainable level of demand.

Making resource efficiency attractive to companies

- **Scope & Concept**
 - Tunisia, Morocco and Egypt
 - Transfer of Environmentally Sound Technologies
- **Impact**
 - 17 Millions USD/yr economic savings
 - 9.7 Millions m³/yr water savings
 - 263 GWh/yr energy savings
- **Leverage:**
 - \$1.6 m ODA & \$20 Millions private sector investments (1/10 ratio)
 - Replication across the region in SWITCH-MED



Strategic Partnership for the Mediterranean Large Market Economy
MedPartnership



Adaptation: Climate Resilient industries

- Adaptation experience based on:
 - Industrial/ economic diversification policy advice
 - Greening of value chains in the private sector (cooperation with Global Consumer Goods Forum)
 - Water resource management
- Focus on new GEF-6 cycle integrated approaches:
“Commodities” and “Food Security” and 3 climate sensitivities:
 - industrial activities dependent on climate-sensitive resources;
 - industrial activities vulnerable to climate change;
 - climate-sensitive markets

Mozambique: Renewable energy for water supply



Results

- » UNIDO installed renewable energy systems for water supply, irrigation and electricity supply in seven communities, and provided tailored training on various issues including improved charcoal production and general operation and maintenance of the renewable energy systems installed.
- » Four photovoltaic solar water pump systems installed with cumulative capacity of 5280 Wp supplying safer drinking water for 2,000 inhabitants
- » Solar photovoltaic power system installed in Eduardo Mondlane with 4800 Wp capacity for a community radio transmission station with tele-centre, benefitting 14,000 inhabitants
- » Two photovoltaic solar water pump systems installed in Ndombe and Mapai for productive uses with cumulative capacity of 1920 Wp benefitting 1,800 inhabitants
- » A biogas digester system of 10 kW generator capacity for electricity generation installed in Mepuzi.

Gambia, Vietnam, Morocco: climate resilient fishing

- **Rationale:** Fishing industry is major economic activity and employer
Refrigeration technologies key of the overall fishing industry and value chain (cold stores, fish processing, handling and ice-making plants, freezing units of fishing vessels, transportation, etc.), but 50-90% of energy consumption
- **Goal:** To promote a more inclusive and sustainable development of the fishing industry through environmentally sound investments:
- **Elements of Strategy:**
 - Income, job and wealth generation through increased competitiveness of fishing sector and community livelihood
 - Technological upgrade by leapfrogging HFCs and introducing alternative refrigerants with zero ozone-depleting and low global-warming potential
 - Increase of impact through IEE optimization and introduction of RE energy sources
 - Close coordination with the national HCFC Phase-out Management Plan

OPPORTUNITIES AND ACTIONS

Power of Partnerships



Austrian
Development Cooperation

Note: List not comprehensive

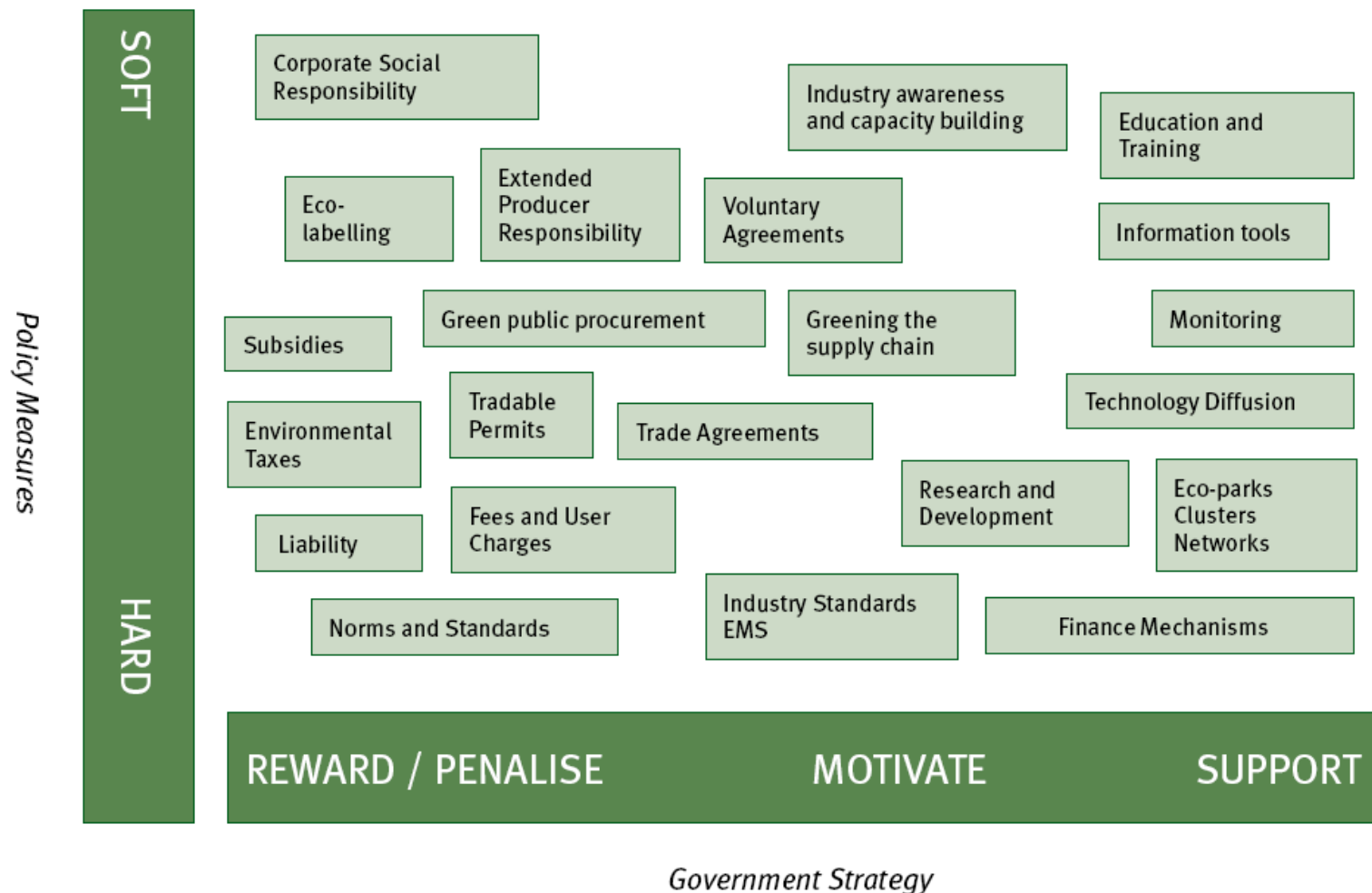
Opportunities for collaboration

- Participation in global platforms, networks and initiatives
- Regional strategic programmes and strategies
- National and sectoral strategies and policy making
- Implementation of actions on the ground:
 - Strategic partner
 - Knowledge partner
 - Implementing partner
 - Procurement and individual experts

Proposed elements of joint actions

- **Joint advocacy and mobilization** for transformative agenda via various platforms and networks
- Strengthen **institutional, legal and policy framework** to create incentives (taxes, VAs, feed in tariffs, etc.) for different players to go green
- Increase **research, knowledge tools and innovation systems** for evidence based policies and actions
- **Leverage the private sector** (local & international) for global public goods and green investments based on business case
- Increase **capacity of local institutions and private sector** to increase local ownership and sustainability
- Seek for **synergies between mitigation and adaptation** (e.g. Greening of agricultural value chains)

Green Industry needs a mix of instruments



UNIDO Green Industry
Policies for supporting Green Industry

*« Be the Change you want to see in the world »
Mahatma Gandhi*

**Let's be part of the third industrial
revolution!**

www.unido.org



SUSTAINABLE
ENERGY FOR ALL

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