

# BIOENERGY FOR SUSTAINABLE DEVELOPMENT

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**Global Lead** 

Sustainable Bioenergy High-Impact Opportunity Sustainable Energy For All

#### **Overview**

- Energy poverty is widespread and prevents economic development
- The international development community is beginning to act
- Momentum is building to grow the bioeconomy across the globe

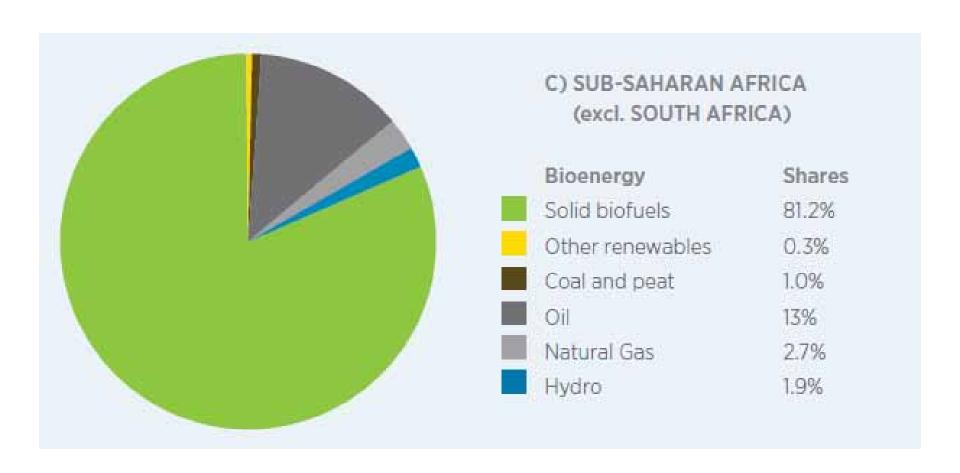
#### **Energy Poverty: Statistics**

- 1.2 Billion people lack access to modern energy services
  - -0.5 Billion in sub-Saharan Africa
- 2.7 Billion people lack sufficient energy to cook with anything but charcoal or biomass





### **Energy Poverty: Sub-Saharan Africa**



IRENA-DBFZ: BIOMASS POTENTIALS IN AFRICA, 2013

## International Efforts to end Energy Poverty

Energy is the golden thread that connects economic growth, increased social equity and an environment that allows the world to thrive.

-- UN Secretary-General Ban Ki-moon

Ending poverty and ensuring sustainability are the defining challenges of our time. Energy is central to both.

-- Jim Yong Kim - World Bank Group President









#### Defined by three goals:

Achieving the three objectives of Sustainable Energy for All...

... makes many development goals possible



Ensuring universal **Energy Access** 



Doubling the share of Doubling the rate of Renewable Energy



improvement in

**Energy Efficiency** 

- Improved health Improved agricultural productivity
- Empowerment of women
- Business and employment creation
- Economic development
- Achievement of the Millennium Development Goals

- Affordable energy even where grid does not reach
- New opportunities for small entrepreneurs
- Decreased variability in energy costs
- Energy security and reduced import bills
- Reduced environmental impacts

- Lighting / appliances that require less power
- Fossil fuel resources used more effectively
- Reduced energy costs for consumers
- Redistribution of electricity that now is wasted or lost
- More reliable electricity systems







SE4All GFT Locations

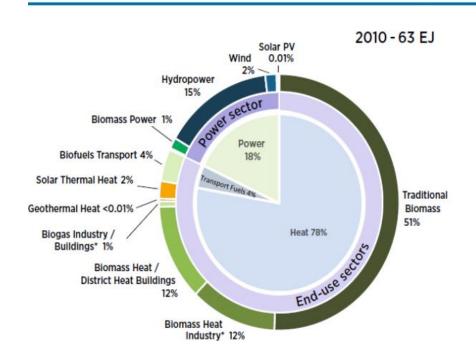
Proposed Regional and Thematic Hub Locations

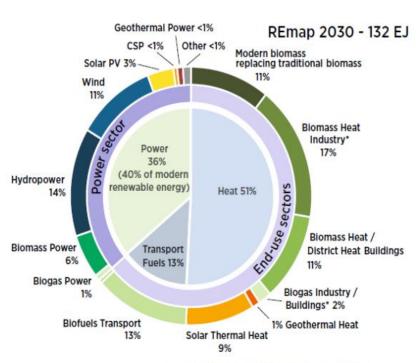
Legend

## IRENA expects biomass to contribute 60% to doubling the use of renewables

Global renewable energy use by technology and sector, 2010 and in REmap 2030







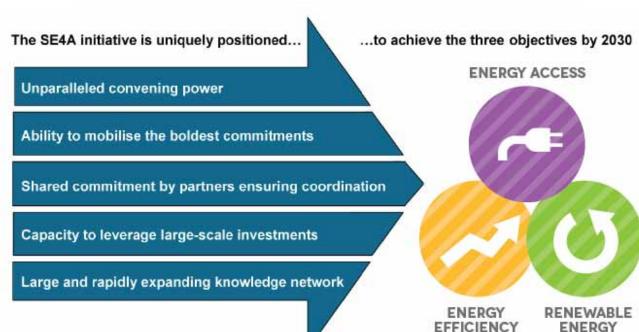
\*including combined heat and power (CHP) and district heat

REmap 2030 estimates a total renewable energy use share of 36% for power and 64% for the end-use sectors, including traditional use of biomass. When traditional use of biomass is excluded, the shares of power and the end-use sectors are 40% and 60%, respectively









#### **PUBLIC SECTOR**

Governments Donors
Multilateral Organizations
Development Banks

#### **PRIVATE SECTOR**

Multinationals
Local Entrerpreneurs
Private Capital

### **SE4ALL High Impact Opportunities**





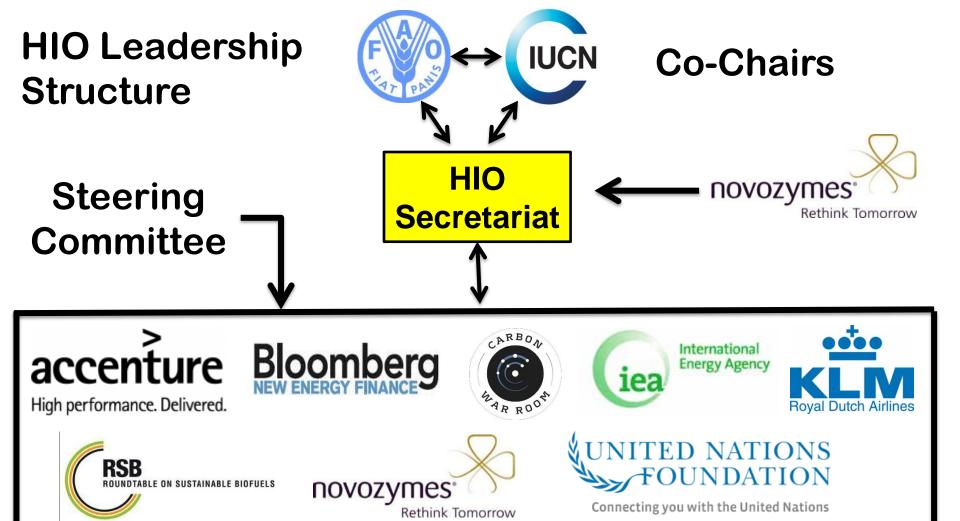




## Sustainable Bioenergy HIO

- Clean Cooking Solutions
- Increased Agricultural Productivity
- Energy from Municipal Solid Waste
- Sustainable Aviation Biofuels
- Cellulosic Ethanol



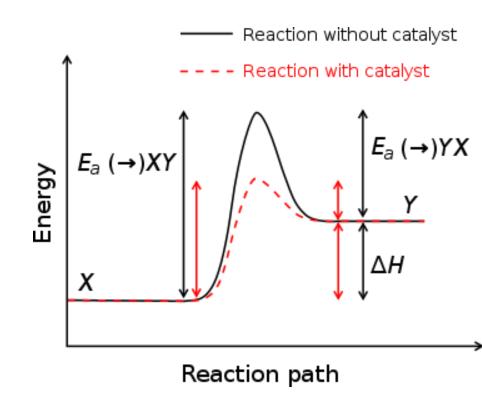


# High Impact Initiatives PROJECTS

#### Reducing transaction costs

Barriers to deployment in developing countries

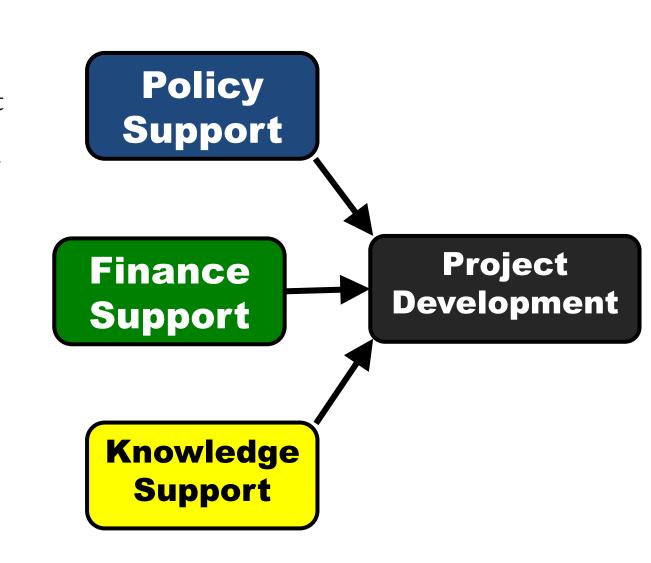
- National, local policy
- Culture
- Finance
- Technology capacity



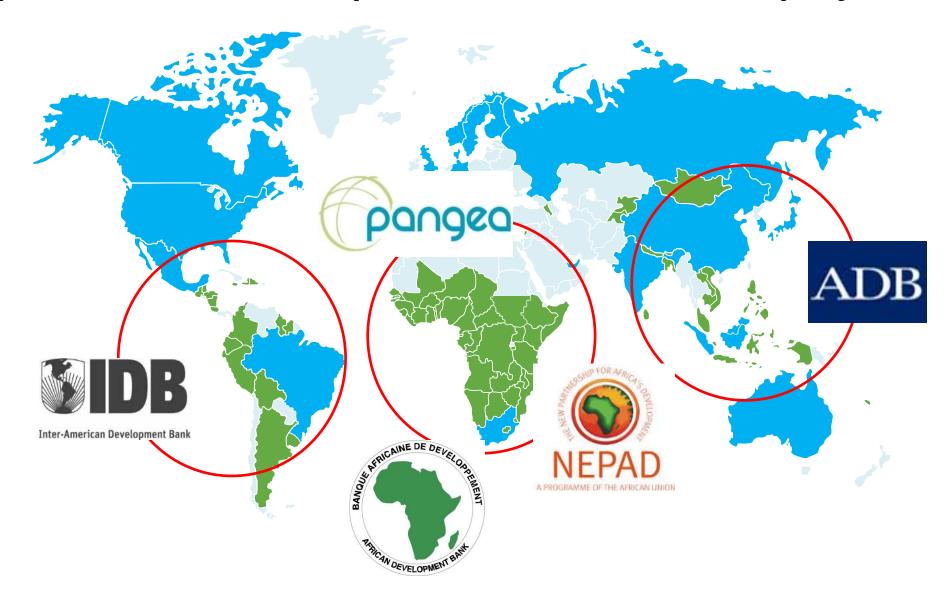
The Sustainable Bioenergy HIO will facilitate deployment by reducing transaction costs

#### We seek to reduce the transaction costs to Sustainable Bioenergy development & deployment

- UN FAO
- IUCN
- UN Foundation
- Accenture Development Partnerships
- Bloomberg New Energy Finance
- Carbon War Room
- Roundtable Sustainable Biomaterials
- IDB
- Addax Bioenergy
- Boeing
- KLM/SKYNRG Novozymes
- PANGEA
- Shell



## Sustainable Bioenergy High-Impact Initiatives will partner with Development Banks to finance projects



#### **Global Opportunities to Source Renewable Carbon**



### **Platform for Bioenergy Deployment**













Inter-American Development Bank











Connecting you with the United Nations



















## SE4ALL Sustainable Bioenergy HIO

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