

# GEF EE financing and GEF-7 Programming Directions

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# GEF's Portfolio of Clean Energy Finance

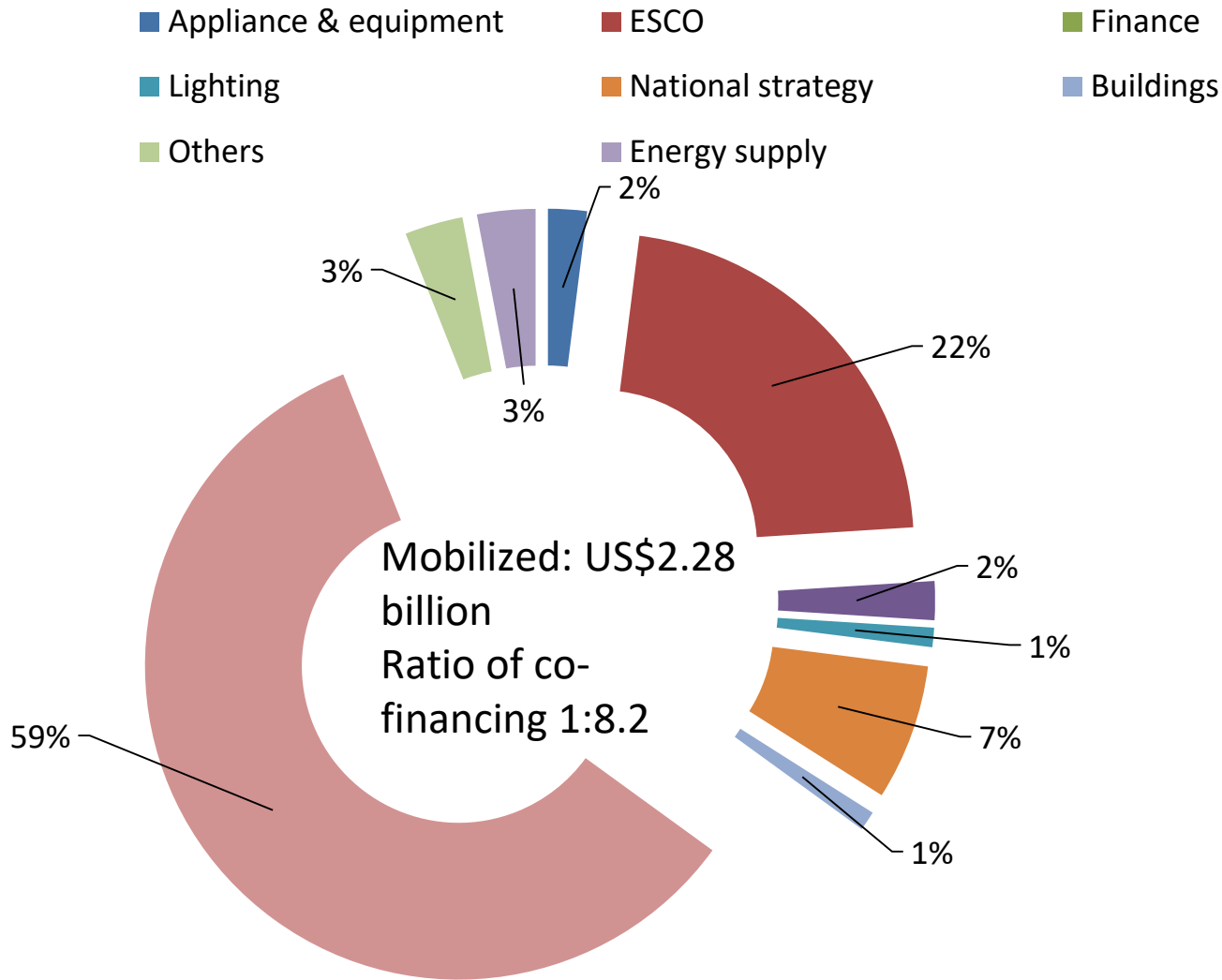
Source: GEF PMIS (April 2018)

	Number of Projects	GEF CCM investment (\$ million)	Co-finance (\$ million)	CO2 Reduction (million tonnes)
Pilot Phase (1991-1994)	36	232	2347	88
GEF - 1 (1994-1998)	136	366	1369	439
GEF - 2 (1998-2002)	200	620	4181	578
GEF - 3 (2002-2006)	149	790	4326	1447
GEF - 4 (2006-2010)	211	841	8339	1945
GEF - 5 (2010-2014)	313	1153	14444	9520
GEF - 6 (2014-2018)	317	775	14829	1473
<b>Grand Total</b>	<b>1,362</b>	<b>4,776</b>	<b>49,835</b>	<b>15,491</b>

*Key message: The largest sub-area is energy efficiency. It contributed to total CO2 mitigation with largest share.*



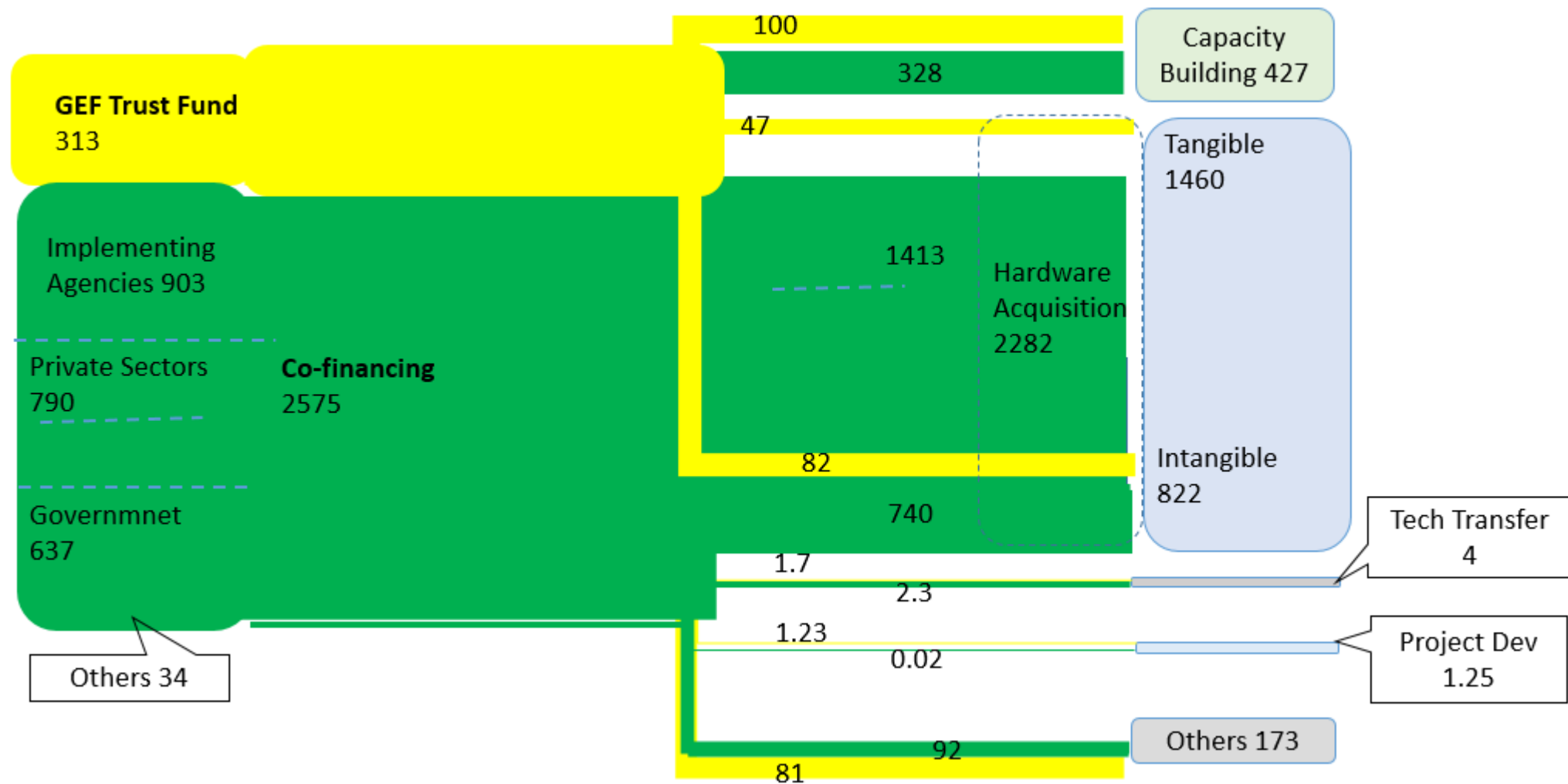
# Impacts of GEF \$129 million investment in 49 completed energy efficiency projects



- Will directly mitigate 244 million tonnes of CO<sub>2</sub>, at \$0.53/tonne
- Trained 1.3 million professionals
- Transferred 49 clean energy production technologies
- Created 17 policies and standards and codes, 21 innovative financial instruments, and 29 market-based mechanisms



# GEF and co-financing funds flow by source and project activities in closed 47 EE projects (unit: US\$ million)



*Key messages: GEF Co-financing funds were mostly used to cover hardware investments in EE projects*



# GEF7 Programming Framework

	Biodiversity Focal Area	Climate Change Focal Area	Land Degradation Focal Area	International Waters Focal Area	Chemicals and Waste Focal Area
<b>Programming Areas to be addressed through Focal Area Investments</b>					
	<ul style="list-style-type: none"> <li>Biodiversity mainstreaming</li> <li>Wildlife for sustainable development</li> <li>Natural capital</li> <li>Agrobiodiversity</li> <li>Inclusive conservation</li> <li>Invasive species</li> <li>Protected areas</li> <li>Preventing species extinction</li> <li>Biosafety</li> <li>ABS</li> <li>Enabling Activities</li> </ul>	<ul style="list-style-type: none"> <li>CBM</li> <li>Enabling Activities</li> <li>Technology Transfer</li> <li>NDC preparation and implementation</li> <li>Sustainable energy</li> </ul>	<ul style="list-style-type: none"> <li>Creating Enabling Environments for LDN</li> <li>Enabling Activities</li> <li>LDN Target setting</li> </ul>	<ul style="list-style-type: none"> <li>Strengthening Blue Economy Opportunities</li> <li>Improve Governance for ABNJs</li> <li>Enhancing Water Security in Freshwater Ecosystems</li> </ul>	<ul style="list-style-type: none"> <li>Industrial Chemicals</li> <li>Agricultural Chemicals</li> <li>LDC/SIDS support</li> <li>Enabling Activities</li> </ul>
<b>Impact Programs</b>					
<b>Food, Land Use, and Restoration Impact Program</b>	<ul style="list-style-type: none"> <li>Marine protected areas</li> <li>Harvesting</li> </ul>				<ul style="list-style-type: none"> <li>Replacement of POPs and Persistent HHP's used in the local food supply chain, including agricultural plastics contaminated by these chemicals with alternatives, preferably non-chemical alternatives.</li> <li>Disposal of obsolete agricultural chemicals that are POPs.</li> </ul>
<b>Sustainable Cities Impact Program</b>	<ul style="list-style-type: none"> <li>Integrating biodiversity and ecosystem values in urban planning</li> </ul>	<ul style="list-style-type: none"> <li>Urban-related GHG emissions avoidance</li> </ul>	<ul style="list-style-type: none"> <li>Sustainable management of production systems in urban and peri-urban areas</li> </ul>	<ul style="list-style-type: none"> <li>Decreased pollution of rivers, deltas and coastal areas</li> <li>Advance efficient water use and re-use</li> </ul>	<ul style="list-style-type: none"> <li>Reduction of POPs, ODS, and Mercury in built infrastructure, industry and products and materials used in cities.</li> </ul>
<b>Sustainable Forest Management Impact Program</b>	<ul style="list-style-type: none"> <li>Protection of HCV forests</li> <li>Manage biodiversity in forest landscapes</li> </ul>	<ul style="list-style-type: none"> <li>Protection of carbon-rich stocks</li> <li>Forest related GHG emissions avoidance</li> </ul>	<ul style="list-style-type: none"> <li>Sustainable management of dryland landscapes</li> </ul>	<ul style="list-style-type: none"> <li>Integrated land and water management</li> </ul>	<ul style="list-style-type: none"> <li>In forests where ASCM that uses mercury occurs, reduction or elimination of mercury in these areas.</li> </ul>





# Climate Change Mitigation Focal Area

I. Promote innovation, technology transfer for sustainable energy breakthroughs

- de-centralized renewables with storage (for Energy Access);
- electric mobility;
- accelerating energy efficiency; and
- cleantech innovation

II. Demonstrate mitigation options with systemic impacts  
(through impact programs)

III. Foster enabling conditions for mainstreaming mitigation concerns into sustainable development strategies, including CBIT, NDCs, Enabling Activities





# Impact Programs

- I. Address drivers and promote systemic change
- II. Deliver impact and results across Focal Areas
- III. Open access but proactive engagement with key countries





**Energy efficient technologies will save water, fertilizer, energy, and labor in the whole chain for food production, transport, process, refrigeration, and heating...**

**Food Systems, Land Use and Restoration**  
*Achieving Transformational Shift – “Sustainability”*

- **Efficient and effective food value chains for multiple benefits**
- **Removing deforestation from supply chains**
- **Expand restoration of degraded lands**



# GEF-7 Sustainable Cities Impact Program (IP)

- Integrated approach to invest in cities to generate global environmental benefits.
- Multi-scale partnerships– *Global Platform, National level frameworks, Cities / Municipalities* for scaled up results
- Cross-sector engagement to ensure results at all levels and for all stakeholders
- Energy efficiency is one of the core pillars to support sustainable cities

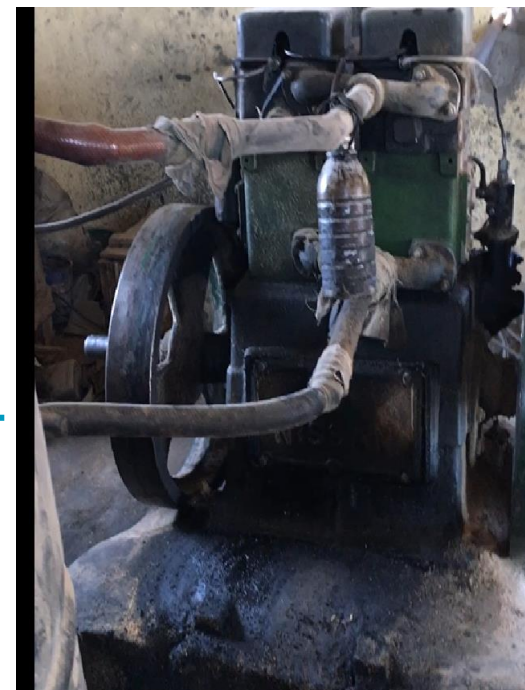


# GEF Sustainable Cities IP

- GEF aims to deliver transformational change through Impact Programs in key global systems for achieving Global Environmental Benefits.
- Sustainable Cities is one of the key global systems which are major drivers of environmental degradation.
- GEF's Sustainable Cities Impact program (SC IP) will directly contribute to GEF's climate change mitigation goals as cities consumes 75% of energy demand and contributes to 70% of global GHG emissions.
- **The SC IP aims to take an integrated approach to support decarbonization of cities.**
- SC IP will **support evidence-based spatial planning and innovative sustainability solutions** for key urban systems with **focus on energy and resource efficiency** across key urban infrastructure such as buildings, transport, housing and others.
- The program also aims to scale up climate change mitigation goals by emphasizing on strengthening urban governance and **engaging with wider set of stakeholders such as the private sector** and multilateral banks.



# E.g. Integrating EE, RE, Energy Access, & Food System



## Background

A rural village in Nigeria:

1. 200 residents
2. No power access
3. Two diesel engines for food processing
4. Using charcoal in bakery house

## The Project

Installed 45 kW off-grid solar PV;  
 Electrified 200 residents;  
 Replaced diesel engines with e-motors;  
 Powered shops  
 Enabled water pumps  
 Mitigated CO2

## Results

Integrated RE, RE and Food production and processing  
 A pilot in Nigeria for a program to cover 10,000 villages in energy access

## Remaining Challenges

Tariffs: \$0.4/kWh  
 Government charges GST  
 ESCOs pay import duties for spare parts

*Key message: Policy is needed to remove barriers to private investments*



# Policy Recommendations for EE Financing in Developing Countries

- Capacity building and institutional development for EE (ESCOs, Commercial banks, etc.)
- Development of long term national EE plans, mandatory targets, and strategies
- Stopping subsidies for fossil fuel production, transportation and consumption
- Engaging private investment through blended financing, tax incentives, de-risk, etc.
- Mandatory EE codes for building systems
- Enforcing minimum energy performance standards for appliances and lighting
- Progressive minimum fuel efficiency standards for transportation systems
- Dynamic minimum energy performance standards for per unit industrial output
- Developing MRV systems and market for energy savings trading
  
- **Integrating EE in**
  - **Energy Access (SDGs) and Paris Agreement (NDCs)**
  - **Food, land use and land restoration for national economic and social development**
  - **Supply chains of energy, water, food, and other commodities in urban planning**
  - **E-mobilities and urban transportation systems**







GEF-7

