GEF Innovative Approaches to Financing Energy Efficiency in Buildings and GEF-7 Programming Directions

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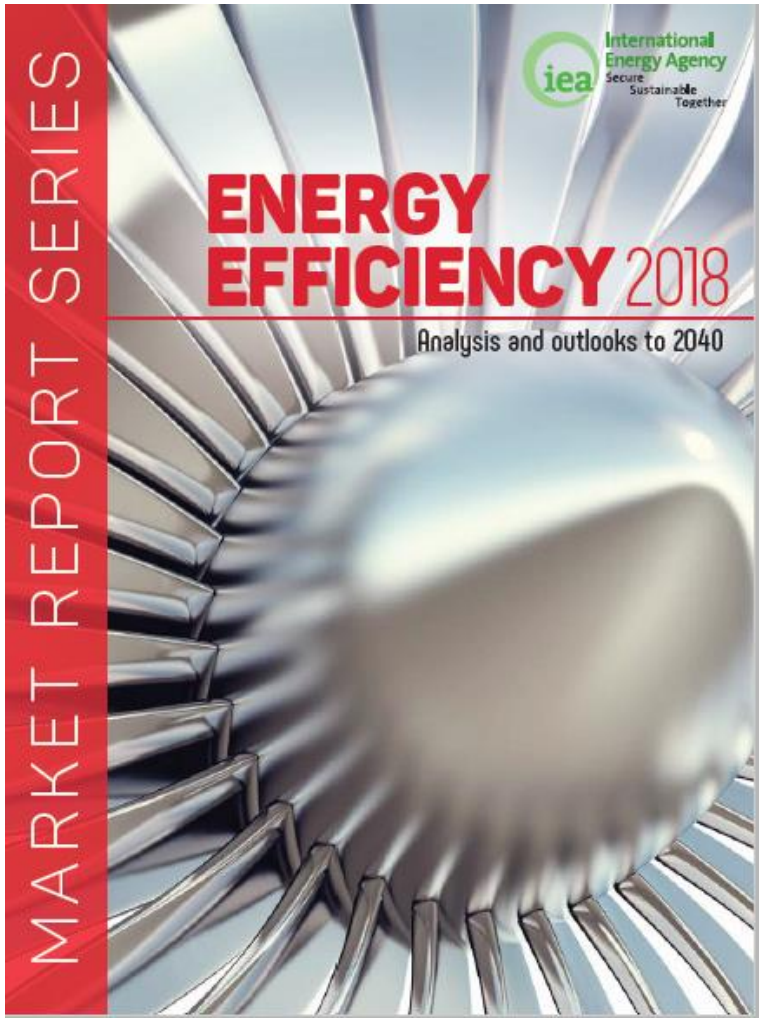
Challenges and Opportunities in Global Building Energy Efficiency

- 66% of buildings were not covered with mandatory energy efficiency policies by 2017
- Space cooling is driving building energy demand
- By 2040,
  - Total building floor area will grow by 60%
  - Space heating offers 25% of potential energy savings
  - Water heating efficiency could be improved by 43%



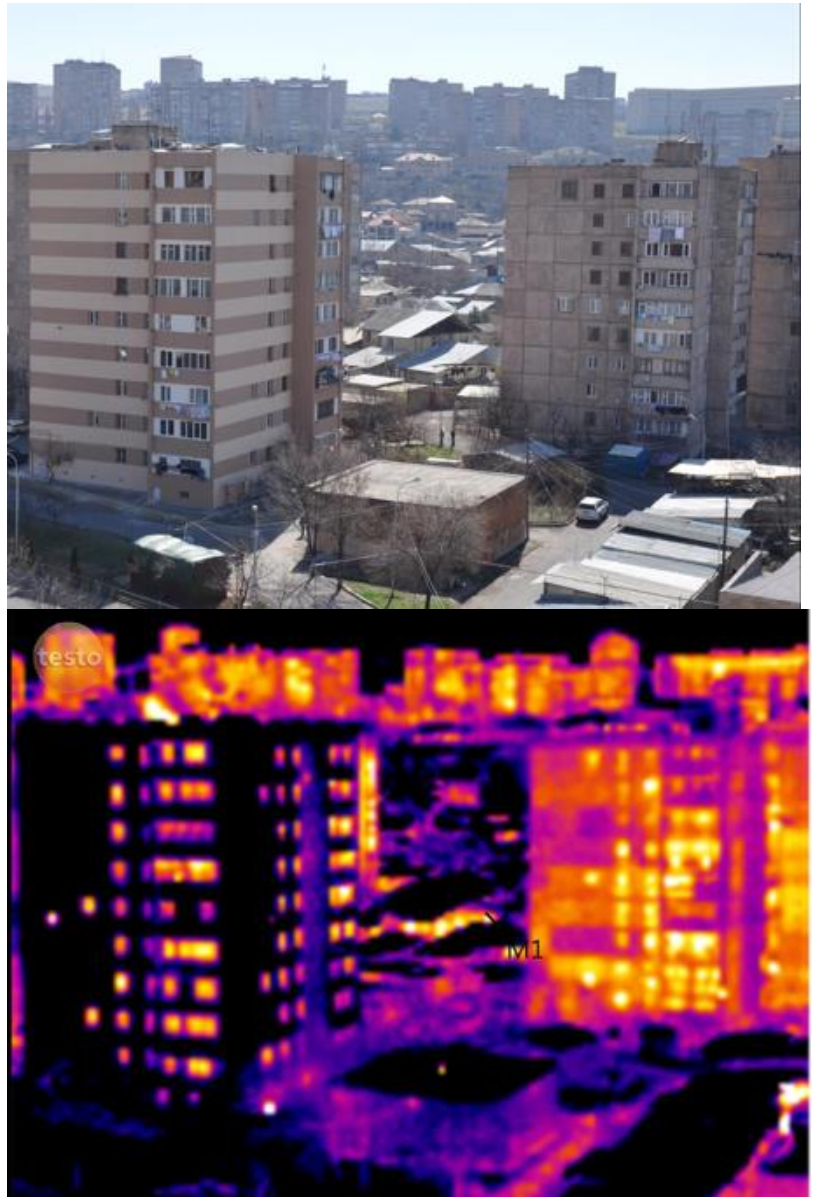
GEF's Portfolio of Energy Efficiency Finance for Buildings

	Number of Projects	GEF CCM investment ($ million)	Co-finance ($ million)	CO2 Reduction (million tonnes)
Pilot Phase (1991-1994)	3	9.13	10.96	1
GEF - 1 (1994-1998)	4	17.48	33.43	81
GEF - 2 (1998-2002)	6	15.93	20.88	41
GEF - 3 (2002-2006)	8	44.23	141.00	73
GEF - 4 (2006-2010)	49	210.61	1,514.06	393
GEF - 5 (2010-2014)	3	35.86	1,307.80	179
GEF - 6 (2014-2018)	1	10.00	70.10	25
Total	**74**	**343.23**	**3,098.21**	**793**
Total in Clean Energy Financing	*1,362*	*4,776*	*49,853*	*15,491*

e.g.: GEF/UNDP Improving Energy Efficiency in Buildings in Armenia (2010-2014)

1) GEF Grant $1,045,000
2) Government of Armenia: $2,000,000 (cash), and
   $200,000 in-kind
3) UNDP: $150,000

- The project changed mindset of Armenians in energy consumption and associated greenhouse gas emissions in buildings
- The pilot buildings saved over 30% energy



GEF7 Programming Framework

	Biodiversity Focal Area	Climate Change Focal Area	Land Degradation Focal Area	International Waters Focal Area	Chemicals and Waste Focal Area
	Programming Areas to be addressed through Focal Area Investments				
	• Biodiversity mainstreaming • Wildlife for sustainable development • Natural capital • Agrobiodiversity • Inclusive conservation • Invasive species • Protected areas • Preventing species extinction • Biosafety • ABS • Ena	• EBA • Enabling Activities • Technology Transfer • NDC preparation and implementation • Sustainable energy	• Creating Enabling Environments for LDN • Enabling Activities • LDN Target setting	• Strengthening Blue Economy Opportunities • Improve Governance in ABNJs • Enhancing Water Security in Freshwater Ecosystems	• Industrial Chemicals • Agricultural Chemicals • SDC/SIDS support • Enabling Activities
Impact Programs					
Food, Land Use, and Restoration Impact Program	• Ma pro • Har sus				acement of POPS and vant HHP's used in the al food supply chain, uding agricultural plastics aminated by these nicals with alternatives, erably non-chemical ternatives. • Disposal of obsolete agricultural chemicals that are POPs.
Sustainable Cities Impact Program	• Integrating biodiversity and ecosystem values in urban planning	• Urban-related GHG emissions avoidance	• Sustainable manag of production syste urban and per-urba	ecreased pollution of rivers, deltas and coastal areas • Advance efficient water use and re-use	• Reduction of POPS, ODS, and Mercury in built infrastructure, industry and products and materials used in cities.
Sustainable Forest Management Impact Program	• Protection of HCV forests • Manage biodiversity in forest landscapes	• Protection of carbon-rich stocks • Forest related GHG emissions avoidance	• Sustainable management of dryland landscapes	• Integrated land and water management	• In forests where ASGM that uses mercury occurs, reduction or elimination of mercury in these areas.

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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

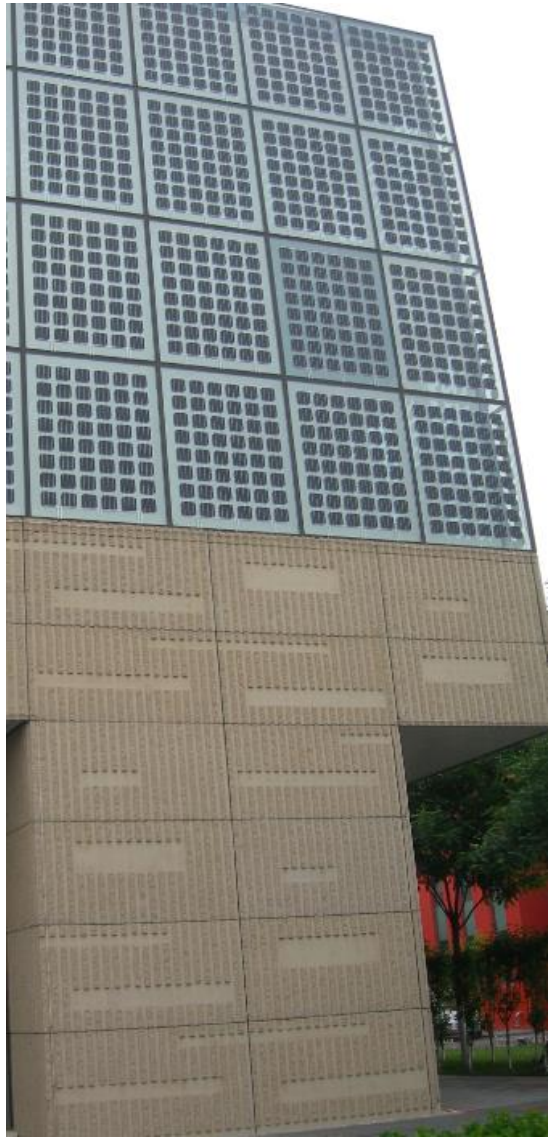
II. Deliver impact and results across Focal Areas

III. Open access but proactive engagement with key countries

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

e.g. Integrating RE, EE, Waste Management, Water, Transport, Biodiversity, Land Use in China Tianjin Eco-city



Use 20% RE, 100% Clean Energy, No private car parking, 100% waste water treatment and reuse, all buildings with rain water collection, 100% household garbage treatment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