

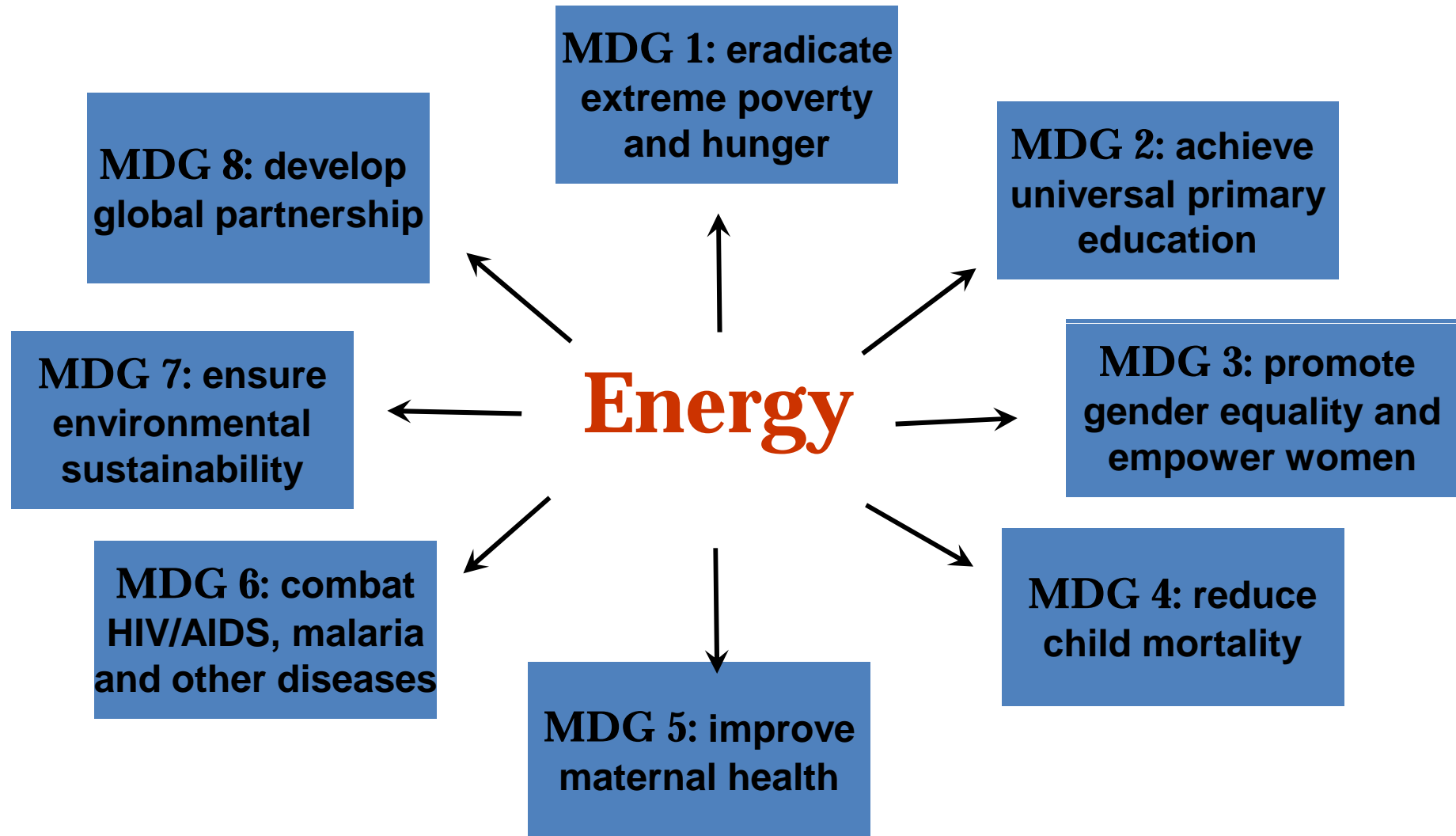
Energy Access needs for the Poor: Feasible and attainable but.....?

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Energy is central to all the Millennium Development Goals (MDGs)



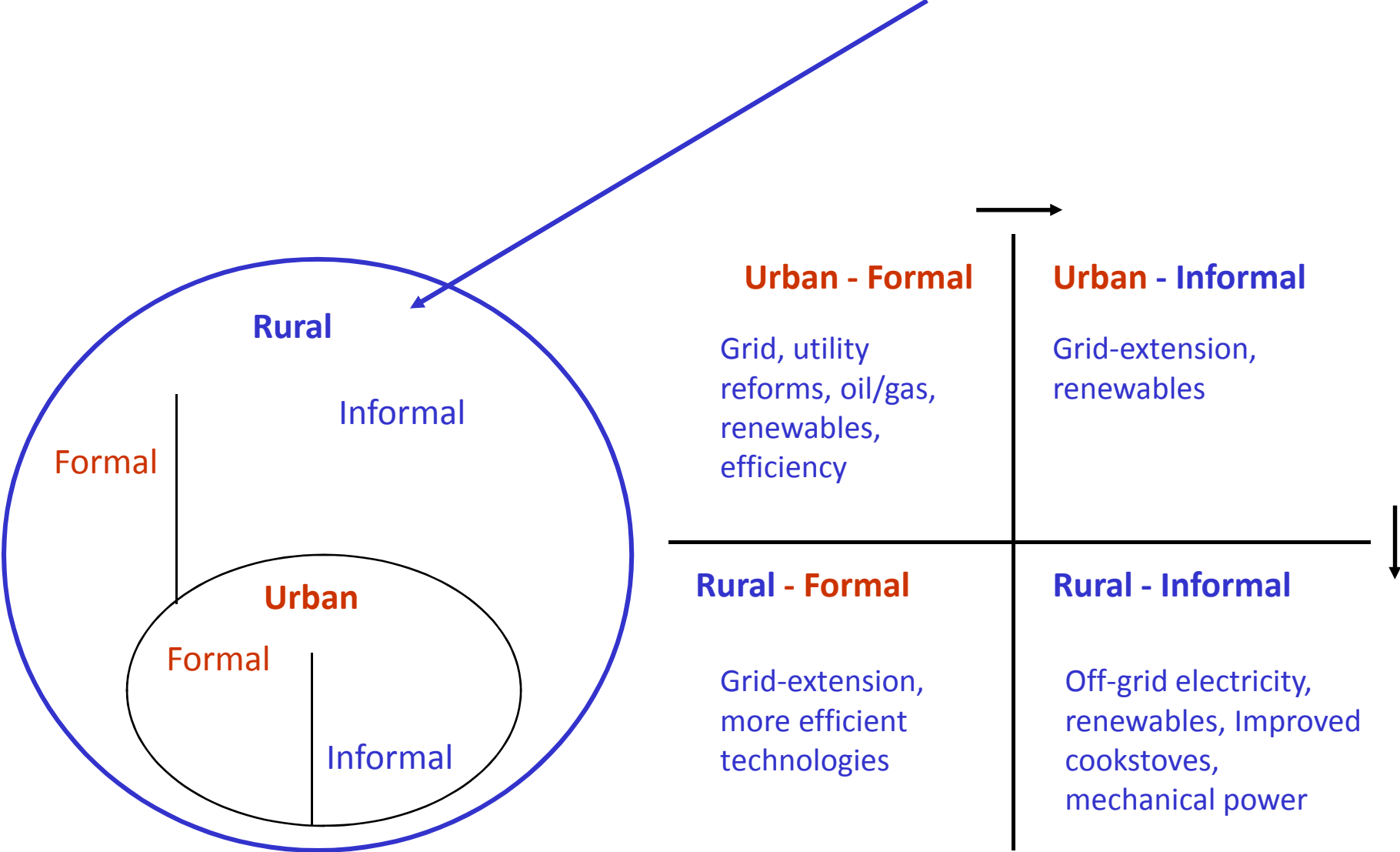
AFRICA - POWER NETWORKS



Existing Network
 Missing Network
 Capital
 Other Cities



Who are the Energy Poor and where are they?



MDG Africa Steering Group Scale of finance and funding gaps

US\$ billion pa	Expenditure needs	Public expenditure	o/w external flows	Financing gap US\$ billion pa
Power sector	47.7	21.3	3.5	26.4
<i>Off-grid</i>	<i>ICS, LPG</i>			1.5
	<i>Electricity, Motive Power</i>			0.8

At the local level: Cost per beneficiary

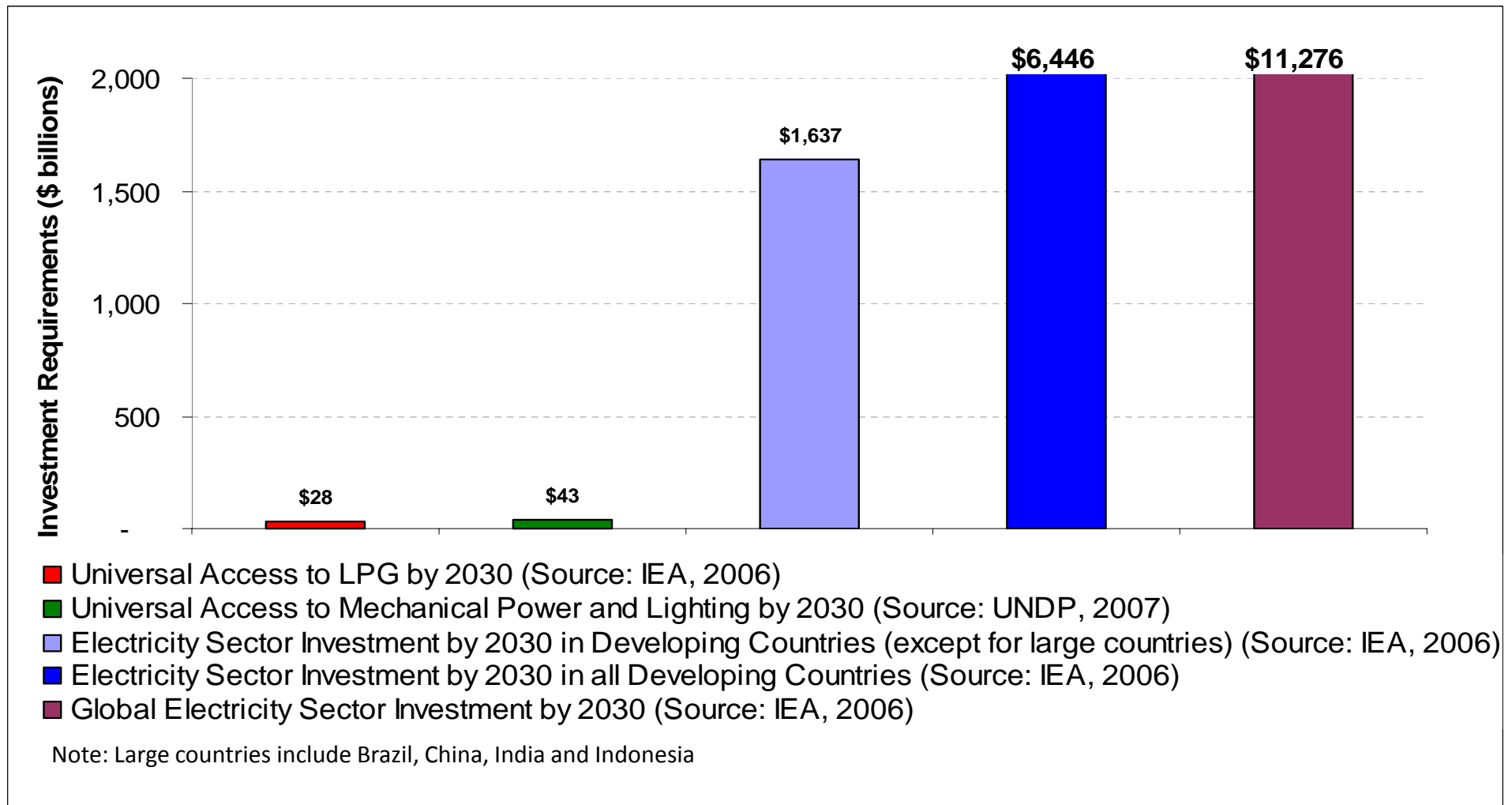
<u>Region</u> (GEF Small Grants Projects)	<u>Number of projects</u>	<u>Total Cost (ODA+Co-financing)</u> (US\$ million)	<u>Number of beneficiaries</u> (million)	<u>Average Cost per beneficiary</u> (US\$)
Global	1163	72	2.6	28
<u>RBA</u>	276	16	<u>0.6</u>	<u>27</u>
<u>RBAP</u>	291	15	<u>0.7</u>	<u>21</u>
<u>RBEC</u>	181	16	<u>0.4</u>	<u>40</u>
<u>RBAS</u>	189	10	<u>0.4</u>	<u>25</u>
<u>RBLAC</u>	226	15	<u>0.5</u>	<u>30</u>

<u>Type of technology</u>	<u>Total Cost (ODA +co financing)</u> US\$ millions	<u>Number of beneficiaries</u> (million)	<u>Average cost per person</u> (US\$)
Solar PV	8	0.05	114
Biofuels	1	0.02	50
biogas	2	0.09	22
Improved stoves	3	0.40	7
Micro hydro	2	0.05	40
<u>Africa total</u>	16	0.61	27

To expand access to modern energy services, modern cooking fuels, electricity and mechanical power, an estimated US\$ 100 per person is need at the local level (**\$100 per beneficiary x 2 billion people = US\$ 200 billion**)

Is it too expensive to expand access to energy services to those not currently reached?

Estimates show that less than 1% of global electricity investment required by 2030 will be needed to provide modern energy services for the poor people who are not currently served.



Top ten 2005 African oil producers, and rough estimate of revenue per person per day

Country	2005 Production	Revenue at US\$ 110 per barrel (US\$ Million) **	2005 Population million	Revenue per person per day (US\$)
	Barrels per day			
Gabon	226,000	25	1.4	17.9
Congo Brazzaville	227,000	25	4	6.3
Chad	249,000	27	9.7	2.8
Equatorial Guinea	356,000	39	0.5	78.0
Sudan	363,000	40	40.2	1.0
Egypt	579,000	64	74	0.9
Angola	1,250,000	138	15.9	8.7
Libya	1,600,000	176	5.8	30.3
Algeria	2,080,000	229	32.8	7.0
Nigeria	2,600,000	286	132	2.2
Total	9,530,000	1048	316.3	3.3

**US\$110 not 2005 figures.

Source: statistics on oil from the 2005 US Energy Agency as at <http://www.clickafrique.com/Magazine/ST014/CP0000002232.aspx>

Is it financially feasible at the current level of revenue generation?

IEA total energy capital investment till 2030: ~ \$ 20 trillion

Total top 2005 10 Africa oil producers oil revenue/ person/day estimate (at US\$110 per barrel) is US\$ 3.3

Total programmatic financing needed to provide basic modern energy services for 2 billion (those who are excluded): ~ \$ 200 billion (1% of the above figure)

Total programmatic financing for 2 billion needed per person per year if accomplished by 2015 from 2008: approx. US\$ 14 per person per year

Expanded access to energy services

What is needed.

Ensuring access to modern energy to meet basic development needs

- **Modern fuels** such as LPG and devices for domestic cooking and heating, this includes improved cookstoves with vented hoods plus sustainable biomass production systems
- **Electricity** at the local level for health clinics, schools, and public lighting systems/communications
- **Mechanical power** at the local level for basic agricultural food processing and water pumping

Key messages:

Scaling up energy services is feasible....

1. Replicable, proven decentralized models and lessons do exist
2. **Prioritizing** energy access for the poor in national development strategies
3. **Investments** in off-grid decentralized energy provide cost-effective access
4. **Capacity development** is fundamental to accelerate service delivery for the poor

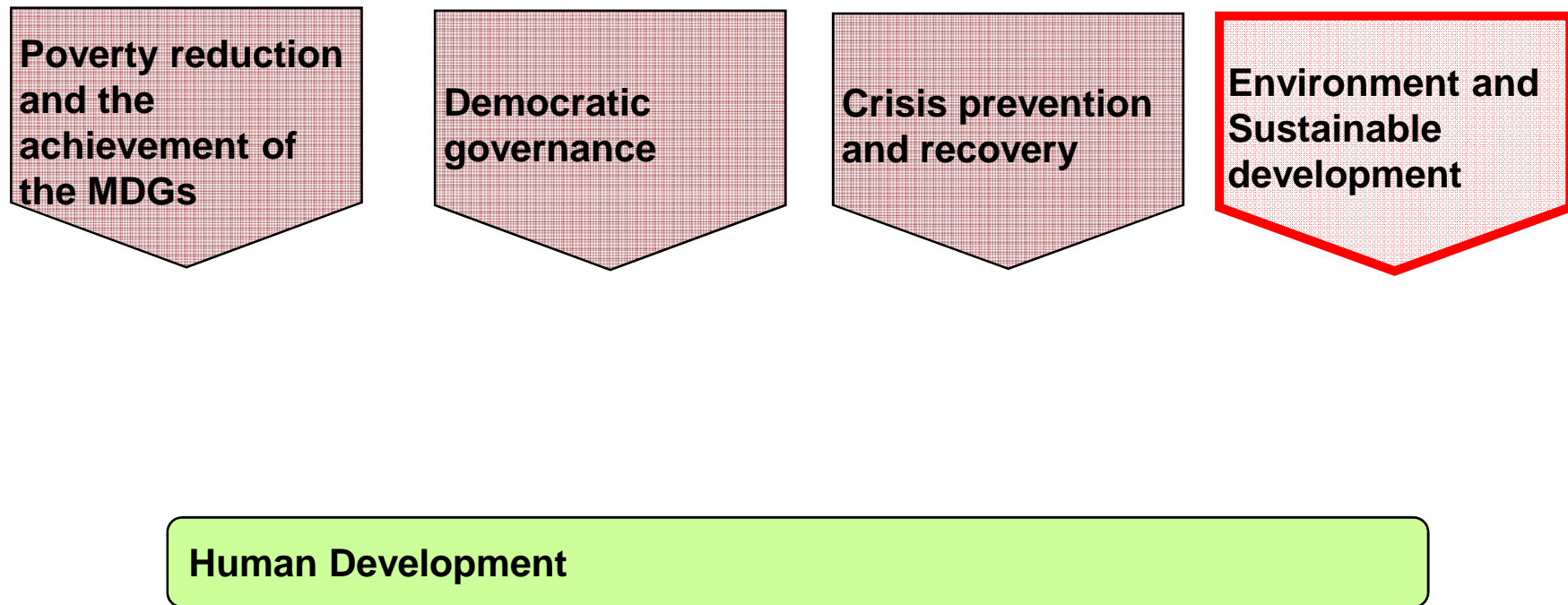
Key points

- **Access to modern energy services** is fundamental to poverty reduction and growth.
- **Achieving universal energy access** is not at all costly on a macro term, and technological and institutional “know-how” already exist to make things happen.
- In theory, **existing financial resources are more than sufficient** to achieve this goal, particularly in resource-rich SSAs (e.g. the cost for energy access is tiny compared with oil revenues).

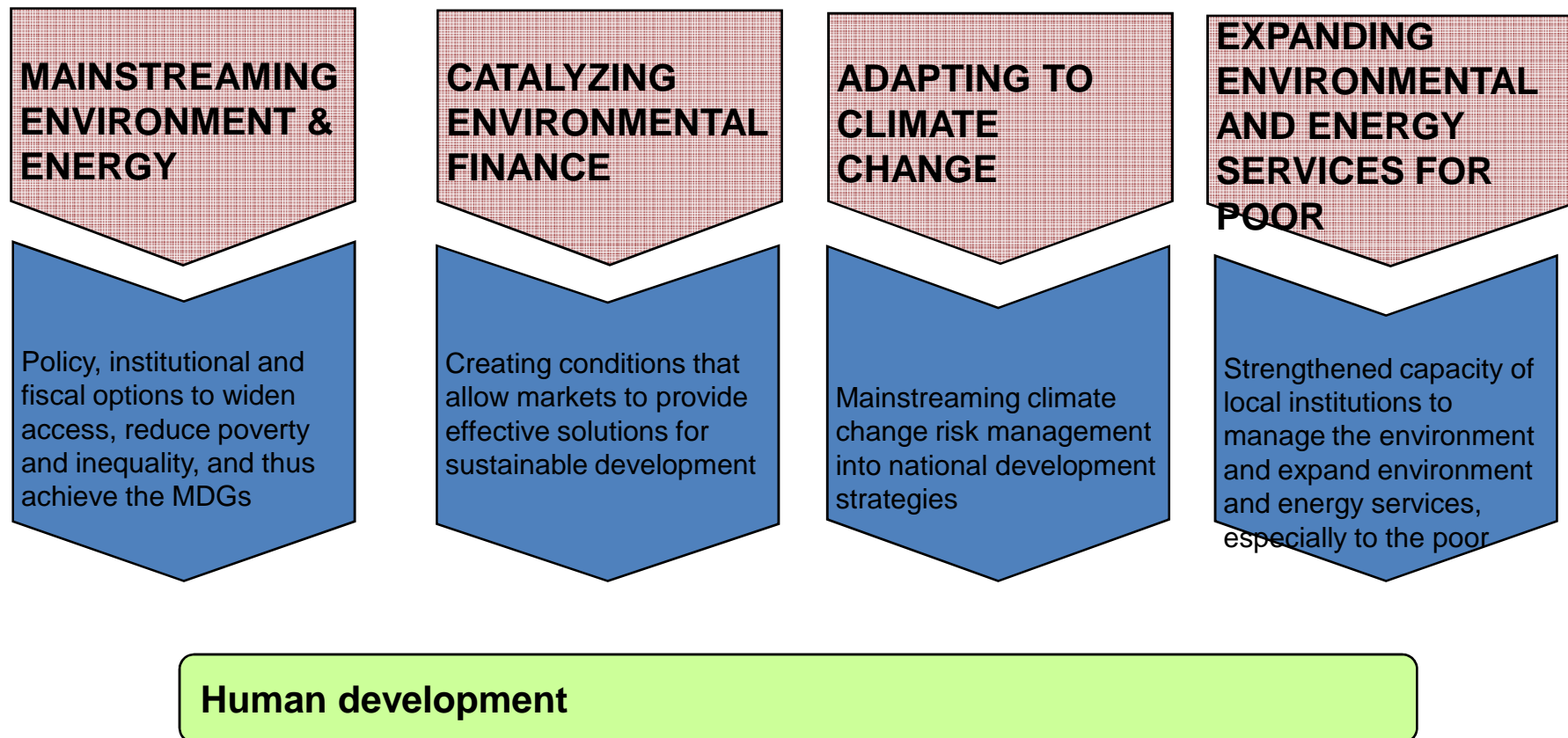
BUT, it's not happening...

- Why is it not happening?
- how can we make it happen?
- Do we have political commitment?
- Is it about strengthening the institutional capacity?
- reform the markets?
- is it a matter of capacity?

UNDP's Strategic Plan 2008 - 2011: Development priorities



SP 2008-11: Environment & Sustainable Development



Thank you