THE NEW CLIMATE ECONOMY: OPPORTUNITIES FOR INDIA

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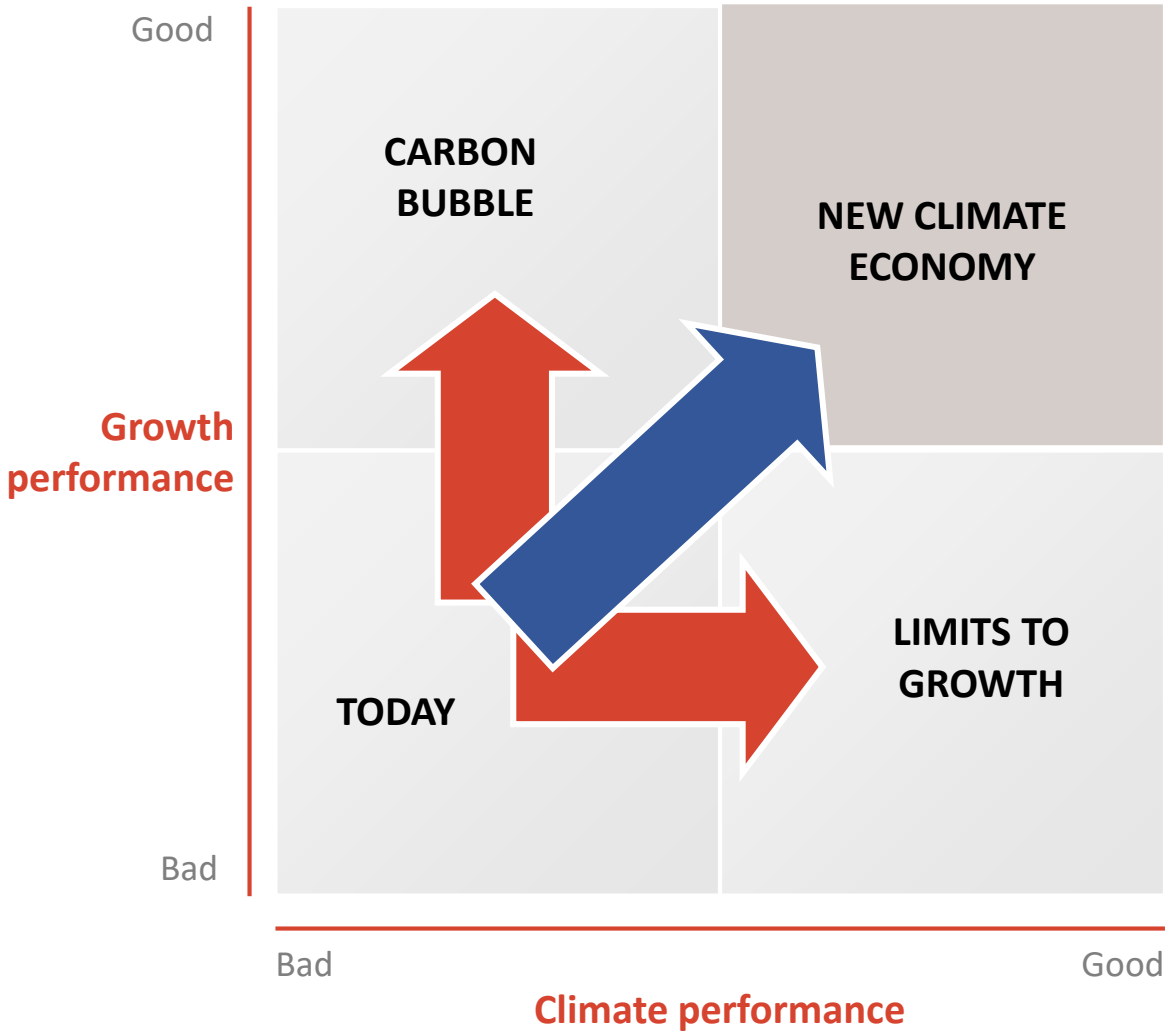
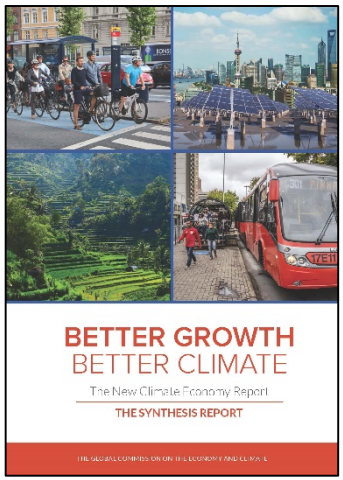
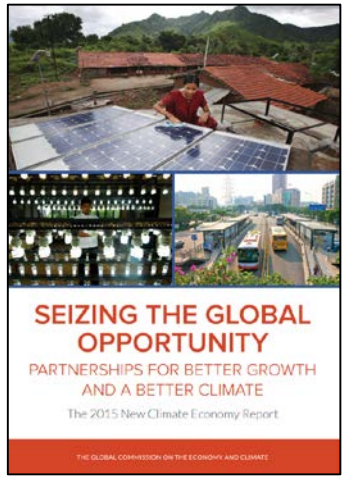
A different growth pathway



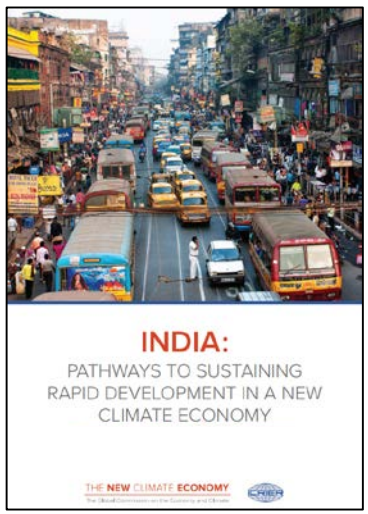
The New Climate Economy Project

Global Reports





Country Case Studies, including India



Commissioned by 7 countries:
Colombia, Ethiopia, Indonesia, Norway, Sweden, South Korea, United Kingdom

Led by a Global Commission: 28 former heads of state, CEOs and heads of international institutions. Chaired by Felipe Calderon, former President of Mexico

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Delivered by 8 research institutes:

CLIMATE POLICY INITIATIVE
EDRI
Global Green Growth Institute
ICRIER
ODI
SEI
Tsinghua University
WORLD RESOURCES INSTITUTE

(Managing Partner)

Contributions from 120+ organisations

2

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Main findings of *Better Growth, Better Climate: The New Climate Economy Report*

- Economic growth and climate mitigation can be achieved together. We do not need to choose.
- A growing number of businesses, cities and countries are demonstrating this. Recent technological and policy developments mean that even more opportunities are available today.
- About US$90 trillion will be invested in infrastructure to 2030 – need to choose if it is low-carbon and climate resilient. Low-carbon would not cost much more, and fuel savings could fully offset additional investment costs.
- But if we lock-in the wrong path, we risk significant economic and social impacts of climate change. Need to act urgently.
- There are multiple economic benefits of action, e.g. reduced health costs from air pollution, less congestion & road deaths, enhanced energy, water and food security. In many cases these will outweigh the costs of action.

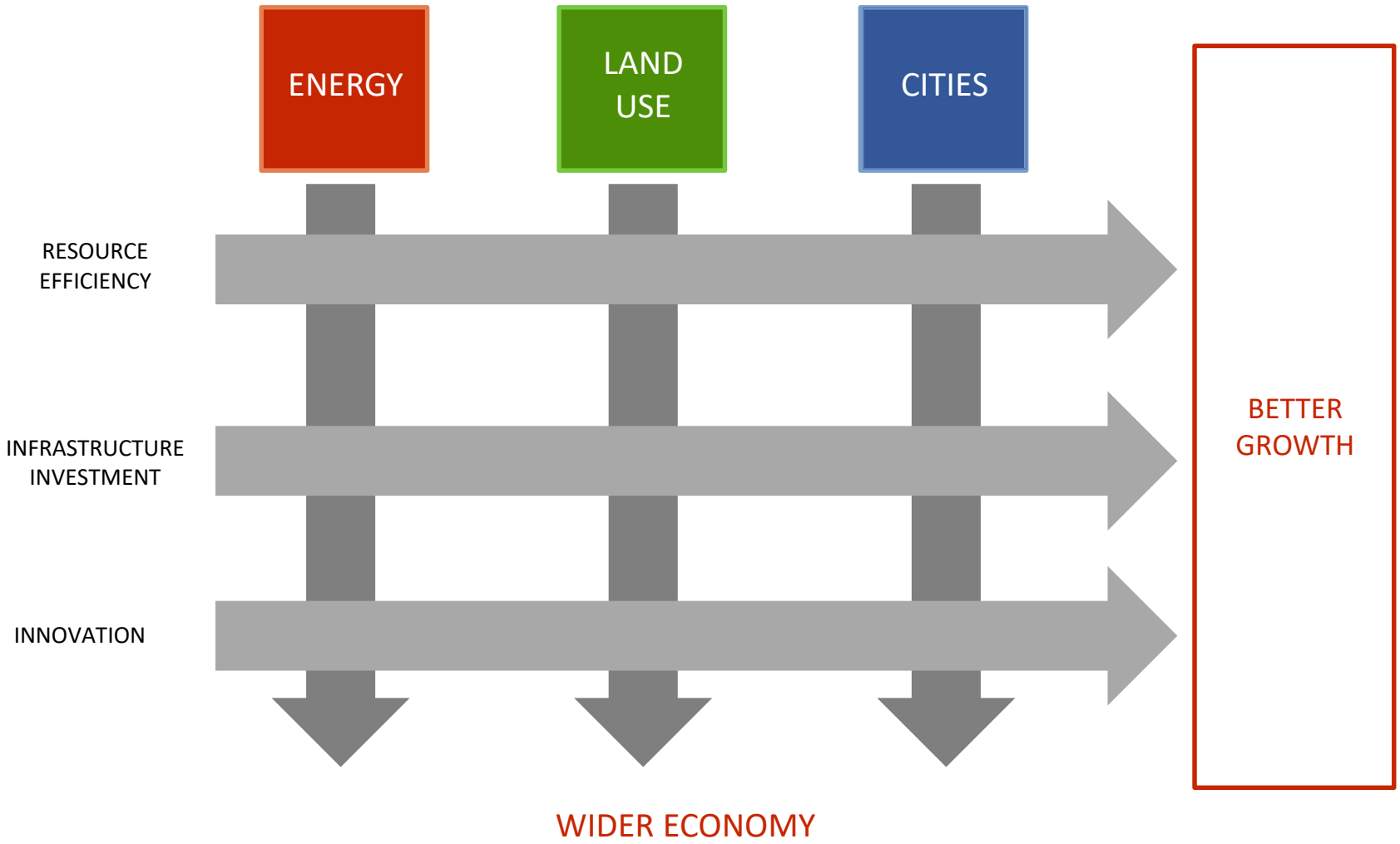
INDIA:

PATHWAYS TO SUSTAINING RAPID DEVELOPMENT IN A NEW CLIMATE ECONOMY

THE NEW CLIMATE ECONOMY
The Global Commission on the Economy and Climate

CRIER

Critical economic systems and key drivers of growth



SOURCE: New Climate Economy, 2014. Global Commission on the Economy and Climate. Available at: http://newclimateeconomy.report.

CITIES

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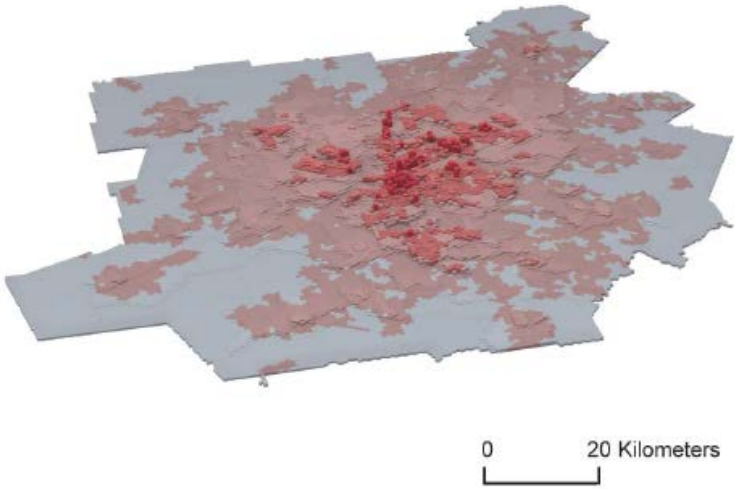
Atlanta and Barcelona have similar populations & wealth, but different carbon productivities

ATLANTA

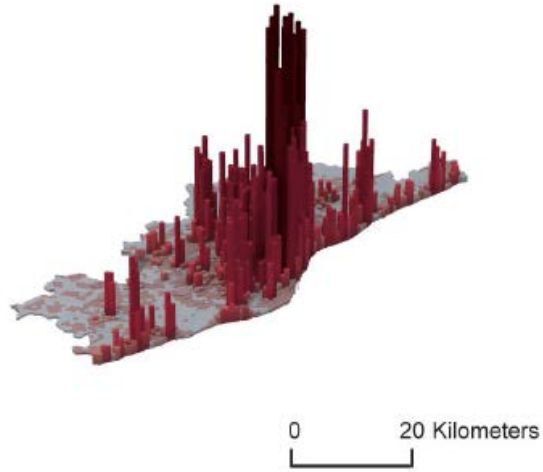
Atlanta's built-up area



Population: 5.26 million
Total area: 16,605 km^2
Urban area: 7692 km^2
Transport carbon emissions: 6.9 t/CO_2 p.c.

BARCELONA

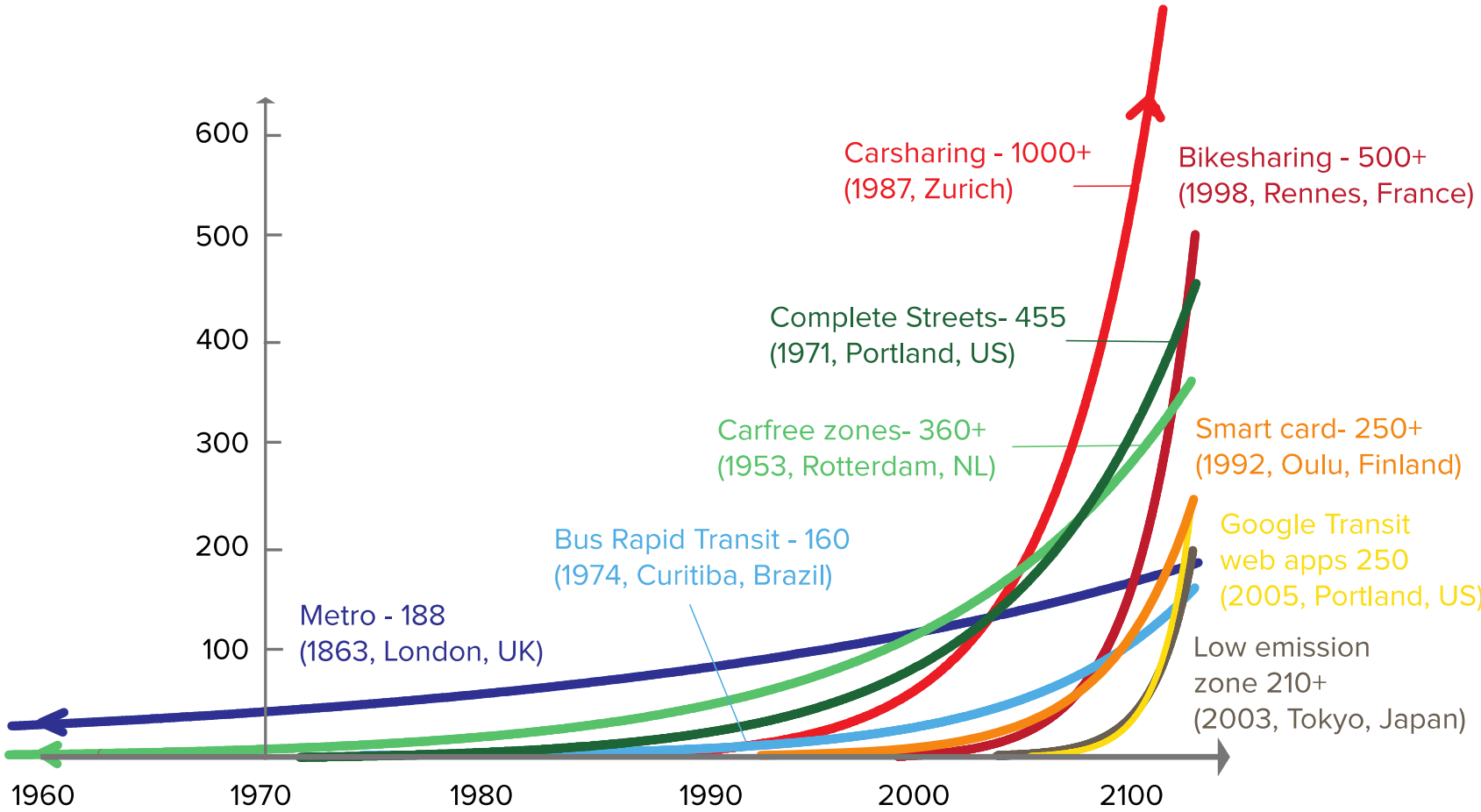
Barcelona's built-up area



Population: 5 million
Total area: 3263 km^2
Urban area: 648 km^2
Transport carbon emissions: 1.2 t/CO_2 p.c.

Source: LSE research, drawing on data from Atlanta Regional Commission (2014), Autoritat del Transport Metropolita (Area de Barcelona) (2013), GenCat (2013), UCSB (2014), D'Onofrio (2014), based on latest data.

A range of smart transport systems have taken off in numerous cities worldwide since 2000



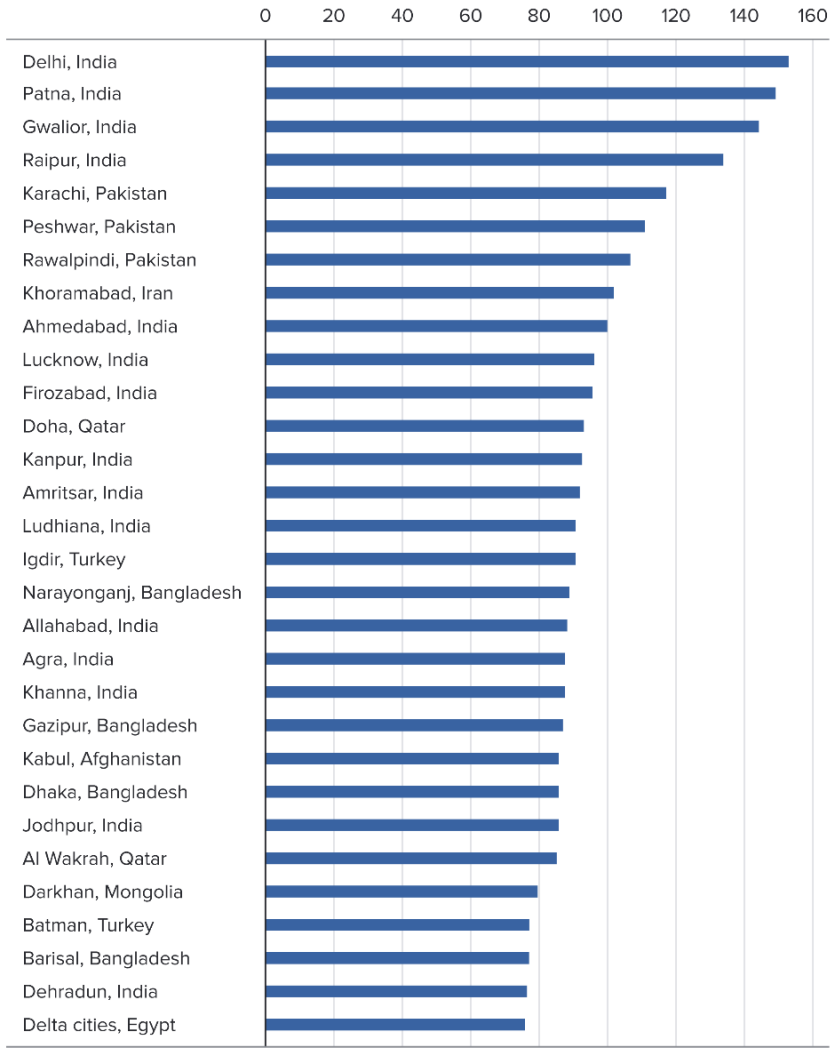
Source: Sustainable Transport Adoption Curves, World Resources Institute, Embarq 2013

Raahgiri Day has spread from one to 40 cities in 3 years with half a million people participating every Sunday

Half of the world's most polluted cities are in India

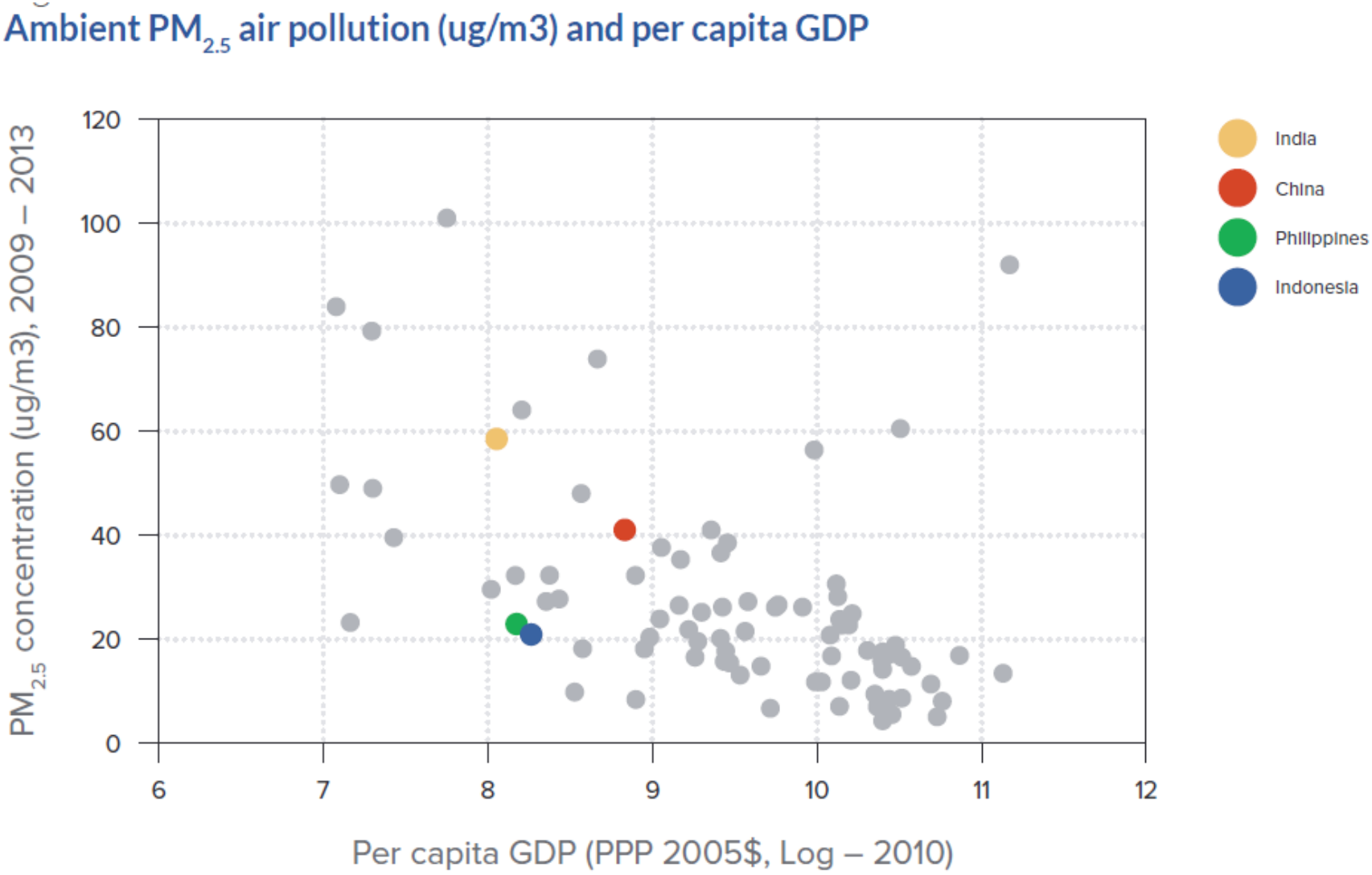
Figure 2.3. Cities with highest ambient PM 2.5 air pollution

Top 30 cities, 2009 – 2013 (ug/m3)



SOURCE: WHO (2014)

India's PM2.5 pollution is exceptionally high even for countries at or near its per capita income level



Source: WHO, 2014; World Bank, 2014a [25]

Cities Recommendations

- Reform land regulations
- Expand and renew urban infrastructure
- Reform and strengthen urban local government

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ENERGY

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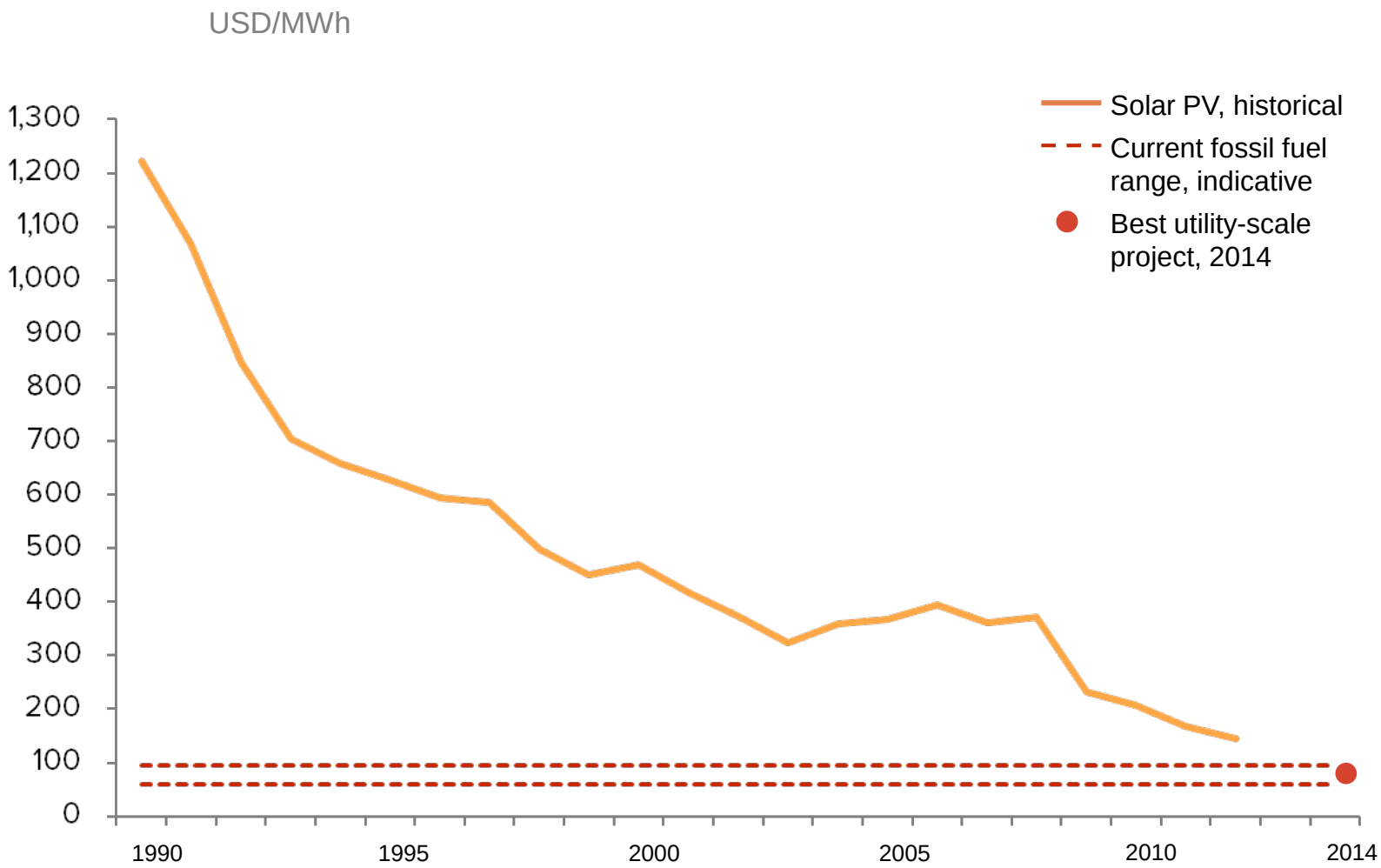
The cost of solar PV is dropping fast

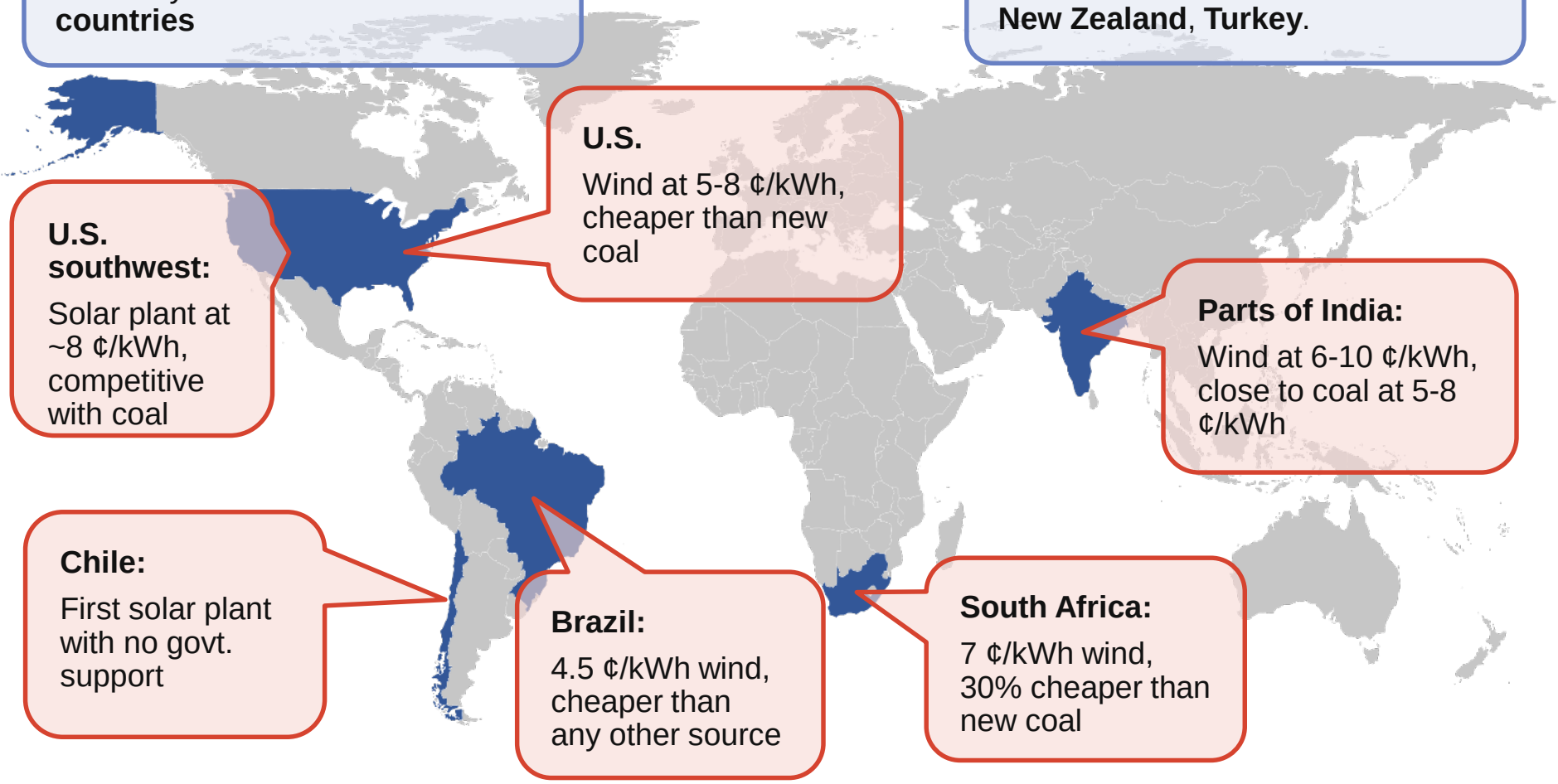


Sources: Citi Research 2012; G. F Nemet, “Beyond the learning curve”, Energy Policy 34, 3218-3232 (2006)

Wind and solar power have become cost-competitive in several markets, even without subsidies

Rooftop solar cheaper than electricity retail rates in **at least 11 countries**

Wind also reported competitive with coal in **Australia**, **Chile**, **Mexico**, **New Zealand**, **Turkey**.



U.S.

Wind at 5-8 ¢/kWh, cheaper than new coal

U.S. southwest:

Solar plant at ~8 ¢/kWh, competitive with coal

Parts of India:

Wind at 6-10 ¢/kWh, close to coal at 5-8 ¢/kWh

Chile:

First solar plant with no govt. support

Brazil:

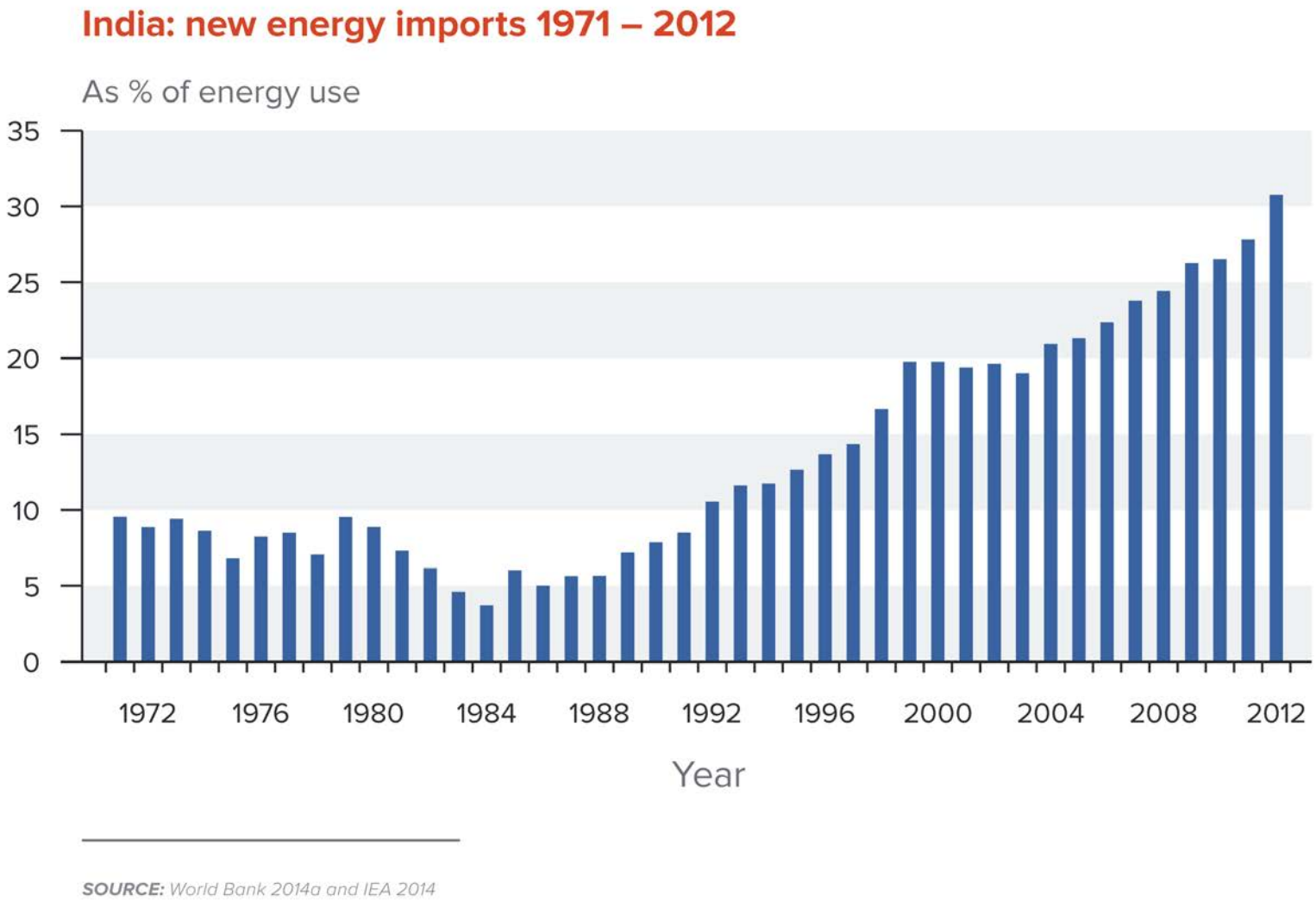
4.5 ¢/kWh wind, cheaper than any other source

South Africa:

7 ¢/kWh wind, 30% cheaper than new coal

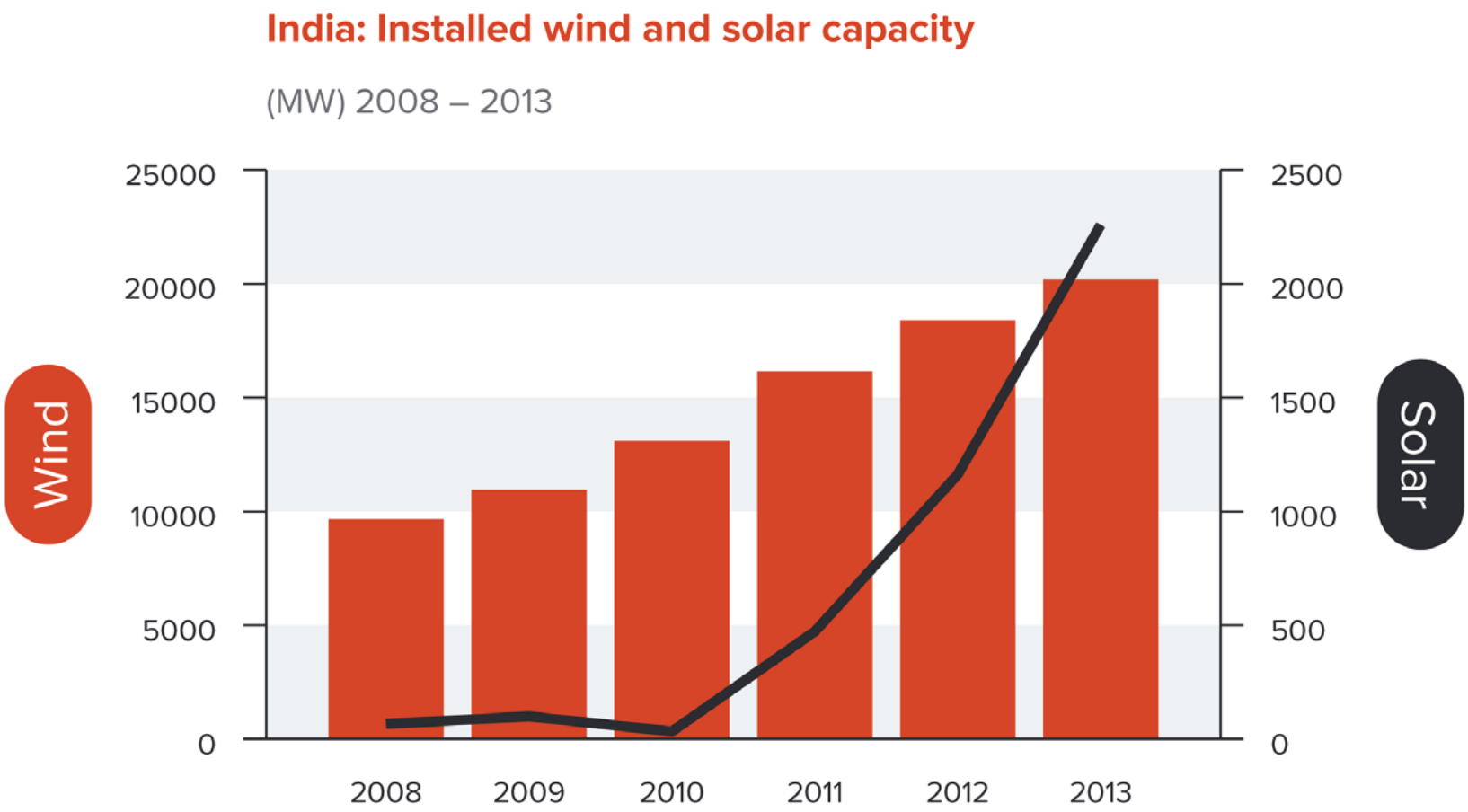
Source: REN21 Renewables 2014 Global Status Report; Deutsche Bank Markets Research; IEA 2013 Wind Roadmap.

India’s fast-rising demand for energy



SOURCE: *World Bank 2014a and IEA 2014*

India has begun to capitalize on its renewable energy potential

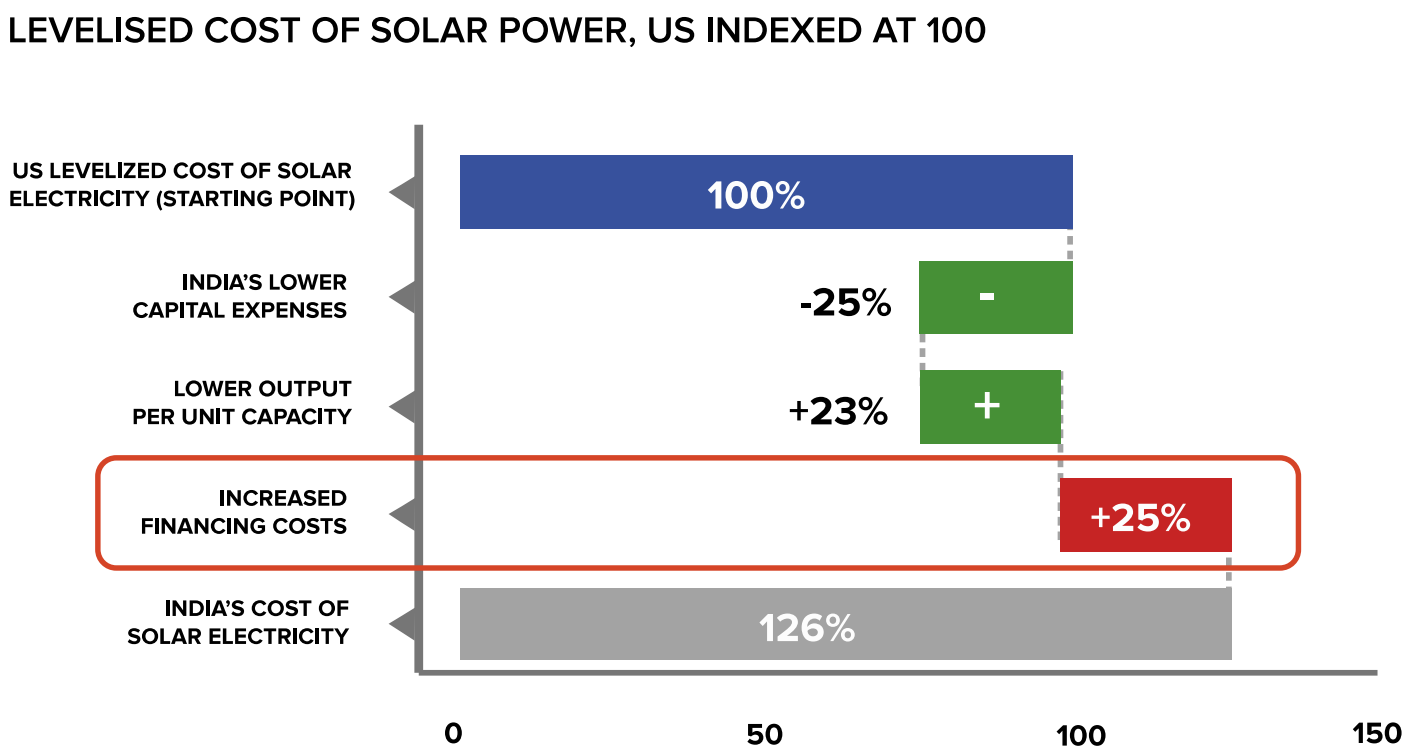


Installed capacity in 2013 remains less than 1% of physical potential

Source: BP 2014; India Ministry of New and Renewable Energy 2014; Lawrence Berkeley National Laboratory

Off-grid Energy

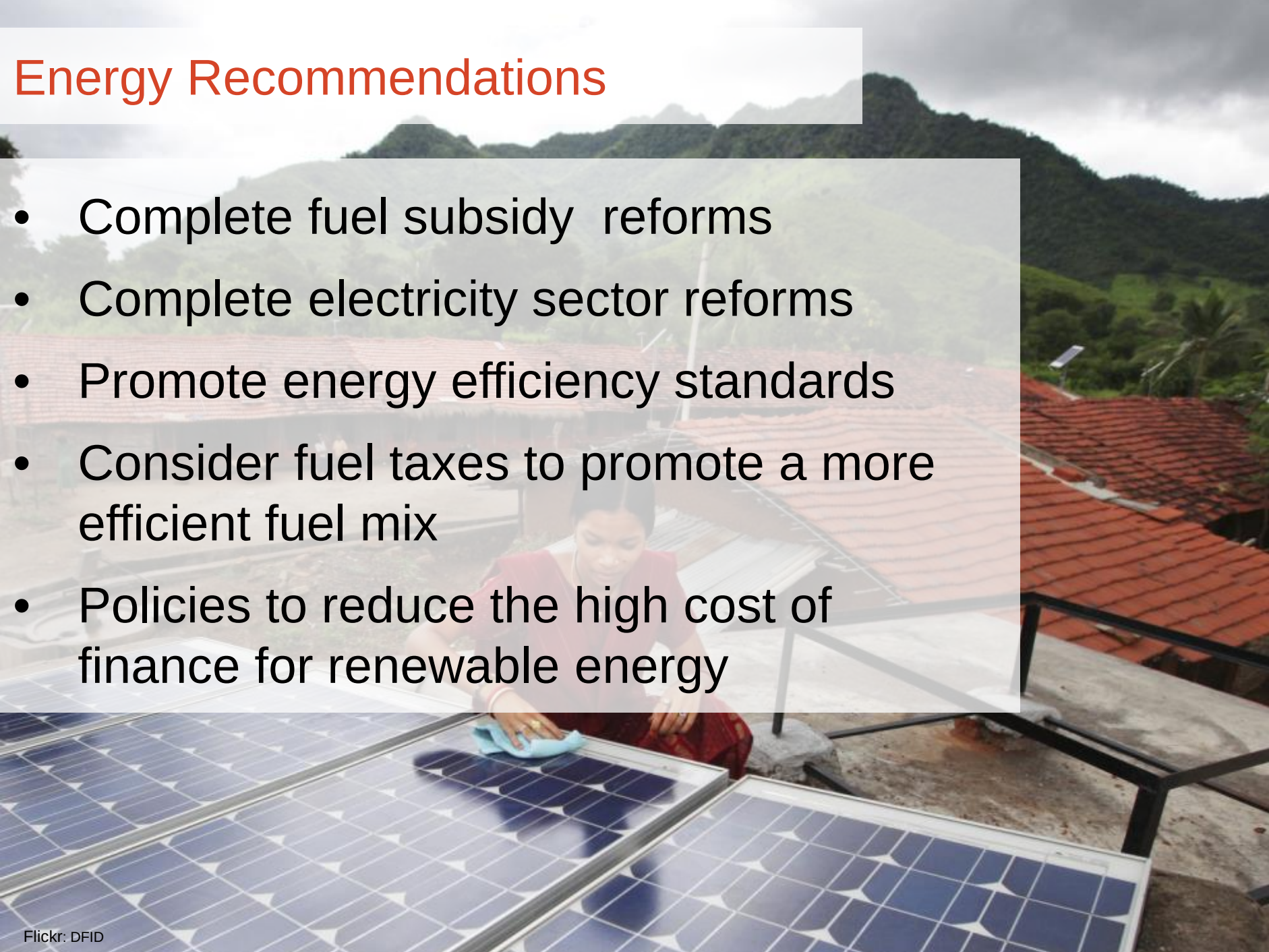
Financing costs for solar power eliminate natural cost advantages in India. But innovative new financing models can unlock the potential of renewables



Source: Climate Policy Initiative, 2012. *Meeting India's Renewable Energy Targets: The Financing Challenge*. Available from: http://climatepolicyinitiative.org/publication/meeting-indias-renewable-energy-targets-the-financing-challenge/

Energy Recommendations

- Complete fuel subsidy reforms
- Complete electricity sector reforms
- Promote energy efficiency standards
- Consider fuel taxes to promote a more efficient fuel mix
- Policies to reduce the high cost of finance for renewable energy



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LAND USE

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China’s Loess Plateau shows how an agricultural landscape approach can deliver economic and climate benefits

1990

2012

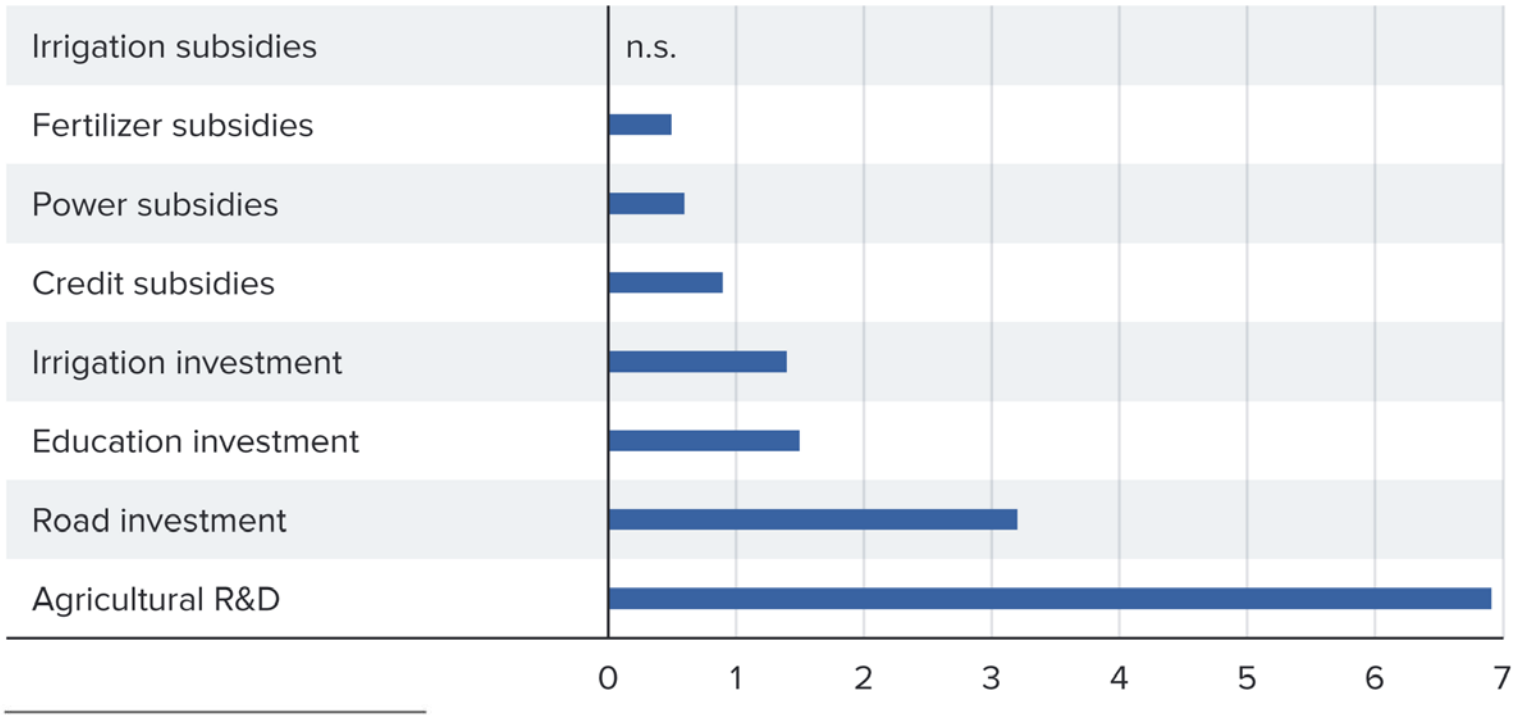
- In an area of 640,000 sq. km, lifted more than 2.5 million people out of poverty, boosting farm incomes from $70 to $200 pp pa
- Average grain yields increased by 60% over 10 years
- Stopped Yellow River silting, reduced air borne dust to Beijing, and increased soil carbon storage

Source: World Bank project completion evaluations of the Loess Plateau Watershed Habilitation Projects I and II, 1999 and 2005.

Agricultural R&D has a much higher return on investment than agricultural subsidies

India: Agricultural public expenditures, 1990s

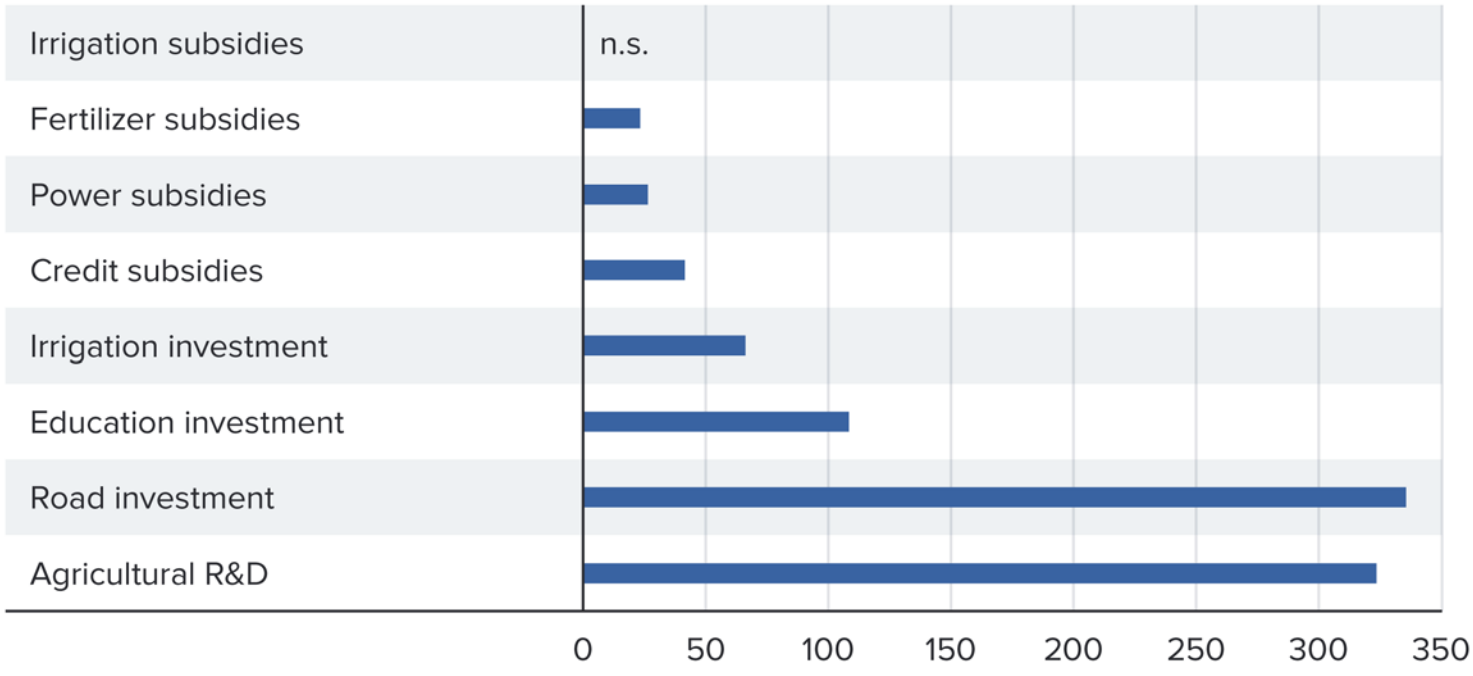
Figure 4.3a. Returns in agricultural GDP (Rs per Rs spent)



SOURCE: *Fan, Gulati and Thorat (2008)*

Agricultural R&D is better for poverty reduction too

Figure 4.3b. Returns in poverty reduction (decline in number poor per million Rs spent)



SOURCE: *Fan, Gulati and Thorat (2008)*

Land Use Recommendations

- Restructure public spending in agriculture
- Scale up forestry initiatives

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Main finding of *India: Pathways to Sustaining Rapid Development in a New Climate Economy*

Key reforms in energy, cities, and agriculture/forestry policies and institutions can unlock more rapid economic growth and improved welfare while tackling many of the unwanted national side-effects of the existing model of growth, such as severe air pollution, stress on water resources, rising energy insecurity and growth urban sprawl. Such reforms also provide important climate-co benefits by mitigating greenhouse gas emissions and climate risks.

The Paris Agreement

Thank you

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