

# Fossil-Fuel Subsidy Reform

## Mitigating emissions through getting the price right

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**GSI** Global  
Subsidies  
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# Figure 1: The Nesting Doll of Subsidy Definitions

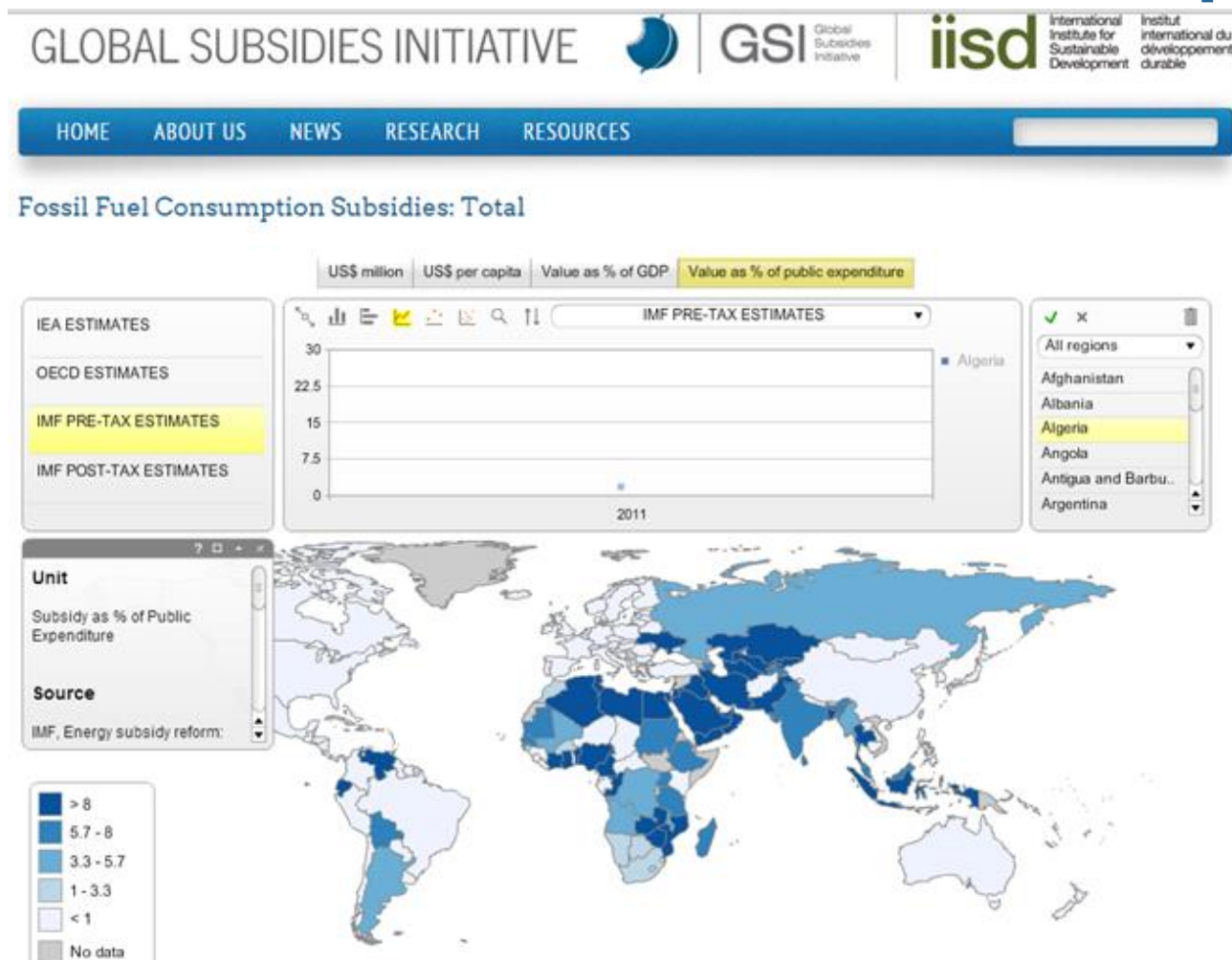


Consumer Fossil-fuel Subsidies	Producer Fossil-fuel Subsidies
Fossil fuels exempt from social cost of externalities (non-internalized externalities).	
Fossil fuels sold below regional or international tax levels.	Government tax and regulation levels below regional or international levels.
Fossil fuels exempt from VAT, GST and carbon taxes	Government revenue forgone (reduced and exempt tax rates).
	Government provided or purchased goods and services (above or below market rates).
Fossil fuels sold below the cost of production, imports and international benchmark price to consumers	Direct transfers or potential direct transfers of funds to producers.
	Income or price support (above market rate prices for producers).

**Explanation:** ‘... ‘the term “subsidy” can be visualized as a matryoshka nesting doll—at the centre of the definition are ideas that everyone agrees on, but as the definition expands to include other layers, it becomes more complicated and more controversial (see Figure 1).’ (Gerasimchuk et al, 2012). For more information on definitions of subsidies and support to fossil fuels see IEA, WB, OECD, IMF and GSI, 2014 ‘Comparison of Fossil-fuel Subsidy Support Estimates’. **Source:** GSI-IISD, October 2014, based on: Gerasimchuk, I.; Bridle, R.; Beaton, C.; and Charles, C. (2012) ‘State of Play on Biofuel Subsidies: Are Policies ready to shift?’ IISD-GSI, and GSI (2010) ‘A How-to Guide: Measuring Subsidies to Fossil-fuel Producers’.



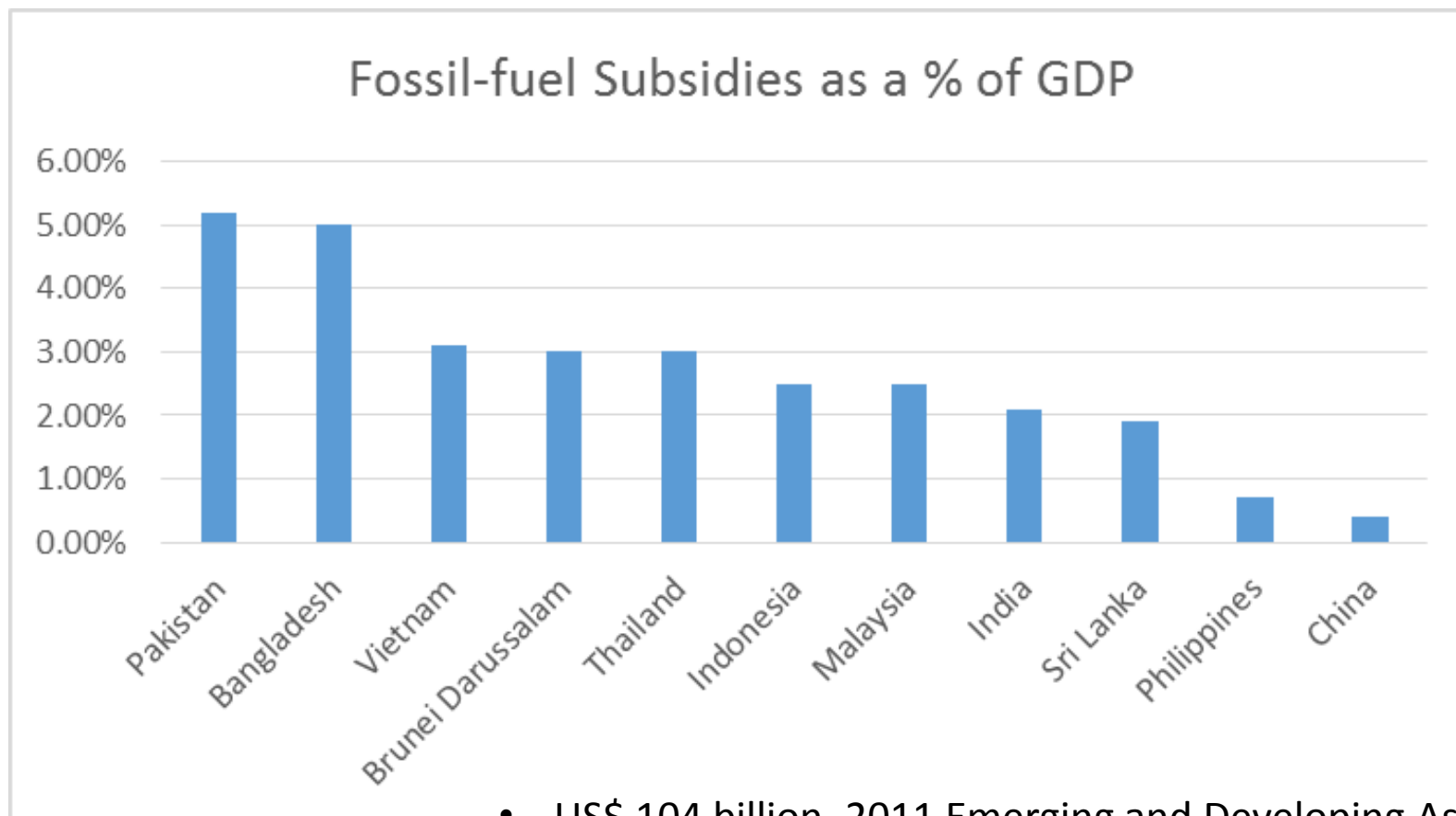
# Distribution: GSI Interactive Map



Source: <http://www.iisd.org/gsi/fossil-fuel-consumption-subsidies-total>



# Emerging and Developing Asia



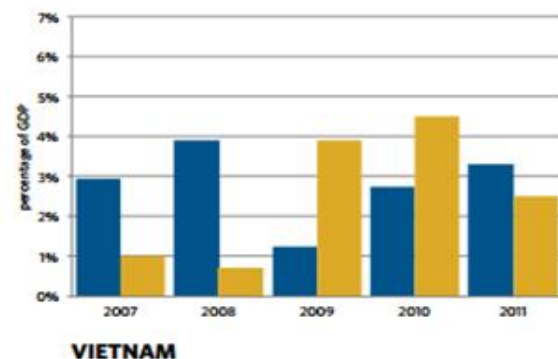
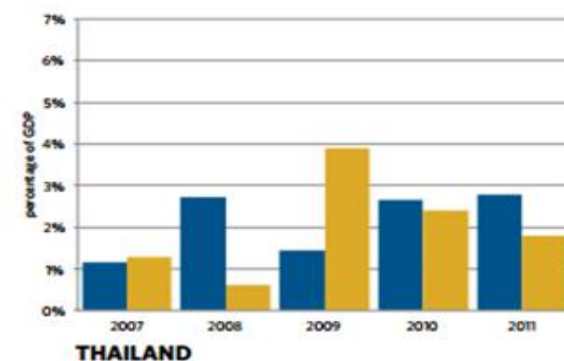
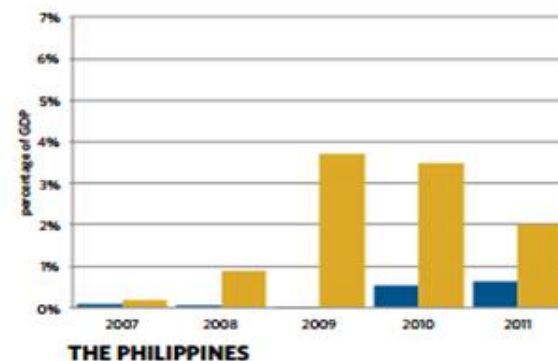
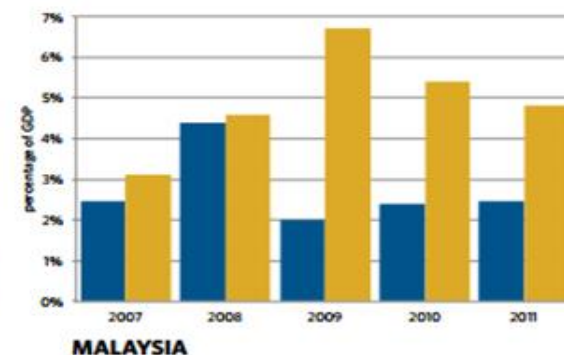
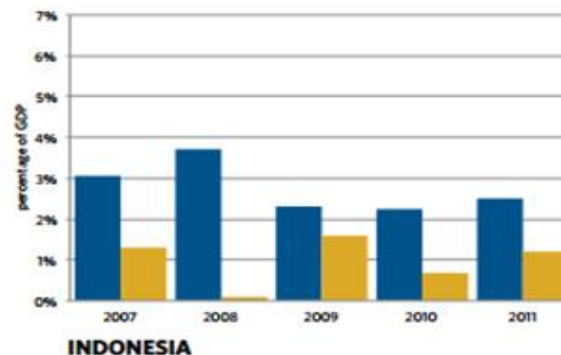
Source: IMF, 2013 Pre-tax figures for selected Asian countries from Merrill (2014).

- US\$ 104 billion, 2011 Emerging and Developing Asia
- 4% of government revenues
- 1% of regional GDP
- 20% of global total of fossil-fuel subsidies



# Consumer subsidies: Economic Impacts

Source: GSI-IISD,  
Beaton et al. 2013, A  
Guidebook to Fossil-  
fuel Subsidy Reform  
for Policy Makers in  
Southeast Asia



■ Fossil-fuel subsidies  
■ Budgetary deficit  
■ Budgetary surplus

Source: IISD-GSI calculations based on IEA (2012) subsidy estimates, derived using the price-gap method, and ADB (2012) data on GDP and budgetary deficits and surpluses.

<http://www.iisd.org/gsi/fossil-fuel-subsidies/guidebook>



**GSI** Global Subsidies Initiative

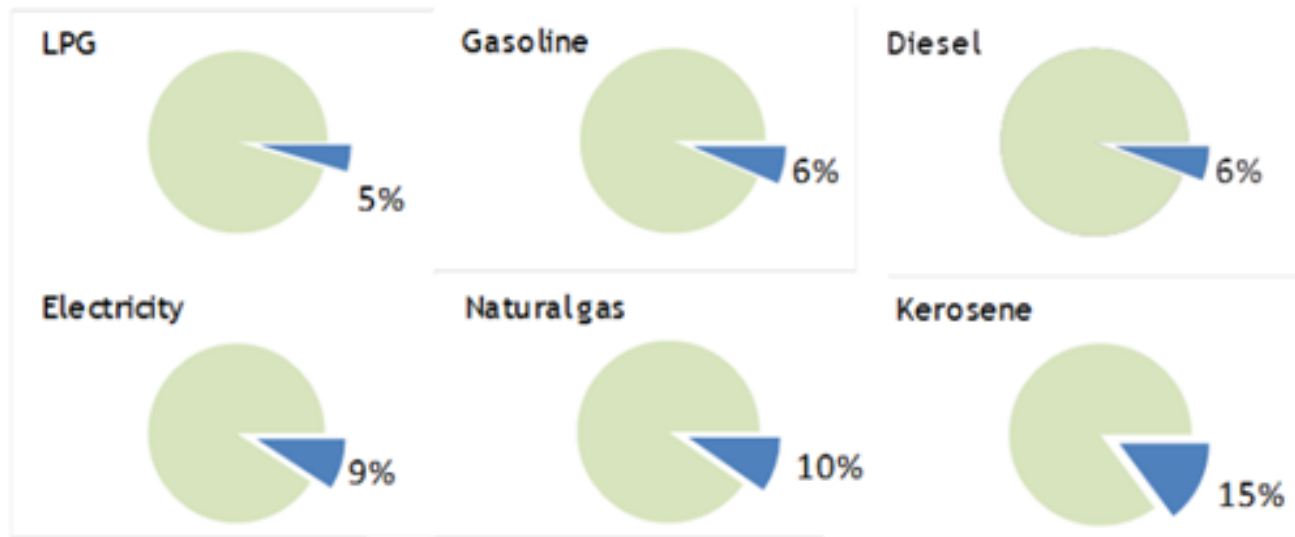
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# Fossil fuel subsidies: Social impacts

## Goal 1: End poverty, Goal 10: Reduce Inequality

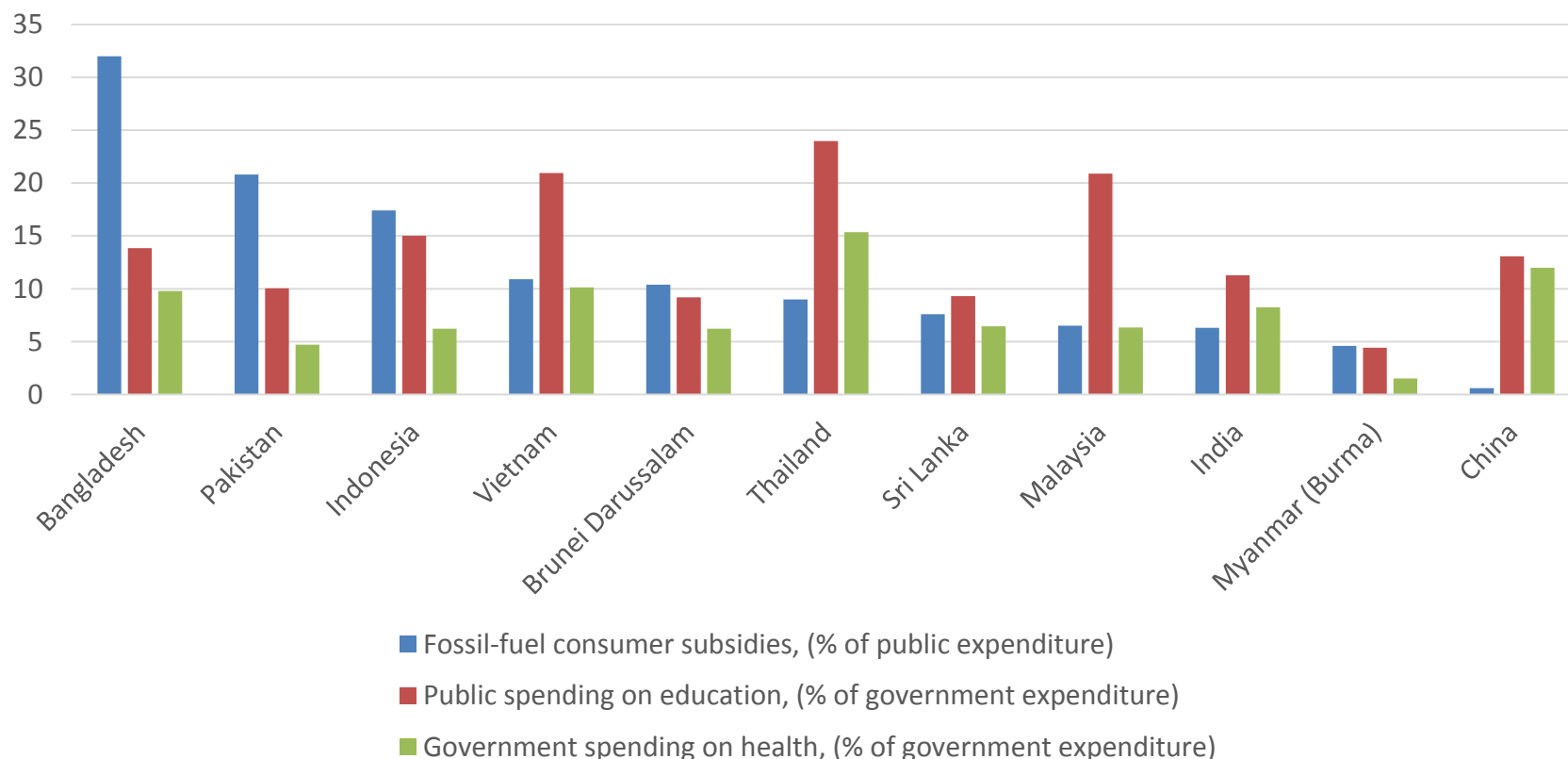
Share of fossil-fuel subsidies received by the lowest 20% income group, 2010



***Subsidies are an extremely inefficient means of assisting the poor: only 8% of the \$409 billion spent on fossil-fuel subsidies in 2010 went to the poorest 20% of the population***



# Consumer subsidies: Social Impacts, health and education



Source: GSI-IISD, Financing the Sustainable Development Goals through Fossil-fuel Subsidy Reform, Opportunities in Southeast Asia India and China (Merrill, 2014)

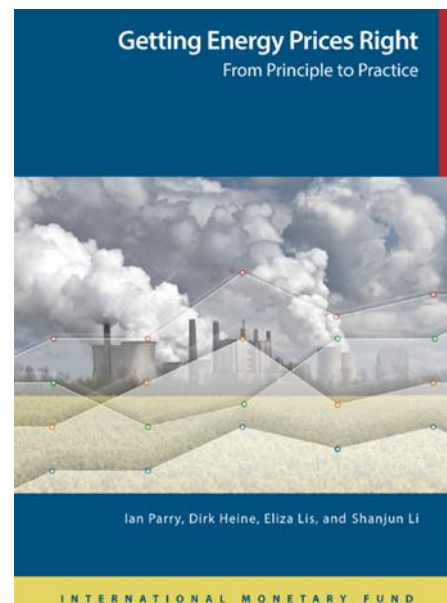
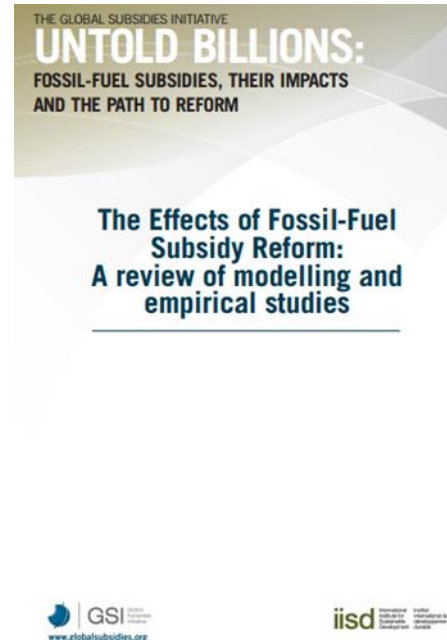




# Understanding and maximising the environmental benefits of subsidy reform

- 2010 GSI reviewed 6 major multi-country fuel studies on environmental impacts of reform including Burniaux et al. (2009) **CO<sub>2</sub> down 13%** and **GHG emissions down 10%** by 2050.
- Dwarfing climate finance **US\$35 billion** for climate change (2010-2012) (Nakhooda et al 2013), **\$480 billion** for pre-tax fossil-fuels (2011) (IMF,2013)
- **\$544 billion** fossil fuels, 5 times more than renewable energy, **\$101 billion**.
- 15% of global CO<sub>2</sub> emissions receive an incentive of \$110 per tonne in the form of fossil fuel subsidies, with only 8% subject to carbon pricing.
- A recent report from the IMF suggests that by removing fossil fuel subsidies and then taxing fossil fuels correctly (based on the cost borne to society through air pollution, carbon emissions and accidents) could lead to a decline in CO<sub>2</sub> emissions by **23 percent globally (IMF, 2014)**. IMF Getting Energy Prices Right

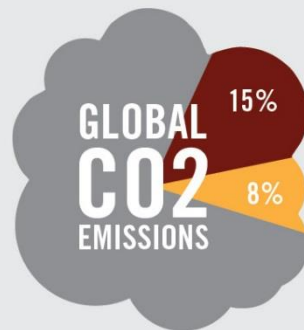
2014.



# PAYING THE POLLUTER

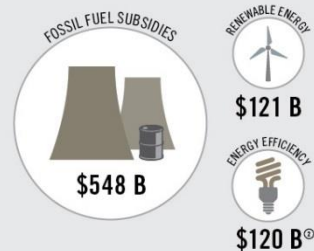
How fossil fuel subsidies hold us back from a low-carbon future

## HARMFUL INCENTIVES



15% of global CO<sub>2</sub> emissions receive an incentive of \$110 per tonne in the form of fossil fuel subsidies, while only 8% are subject to a carbon price.①

## WRONG PRIORITIES



Fossil fuel subsidies stood at \$548 billion dollars in 2013. This is four times the value of subsidies to renewable energy. It is also more than four times the amount invested globally in improving energy efficiency.③

## OPPORTUNITY FOR CHANGE

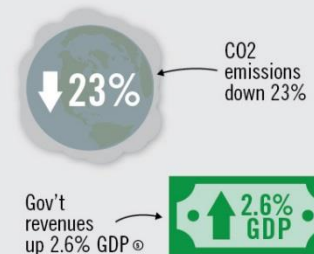
Renewable energy targets until 2020 in the Middle East and North Africa could cost up to:



This is less than one year's worth of fossil fuel subsidies in the region, which total:



## LONG-TERM BENEFITS

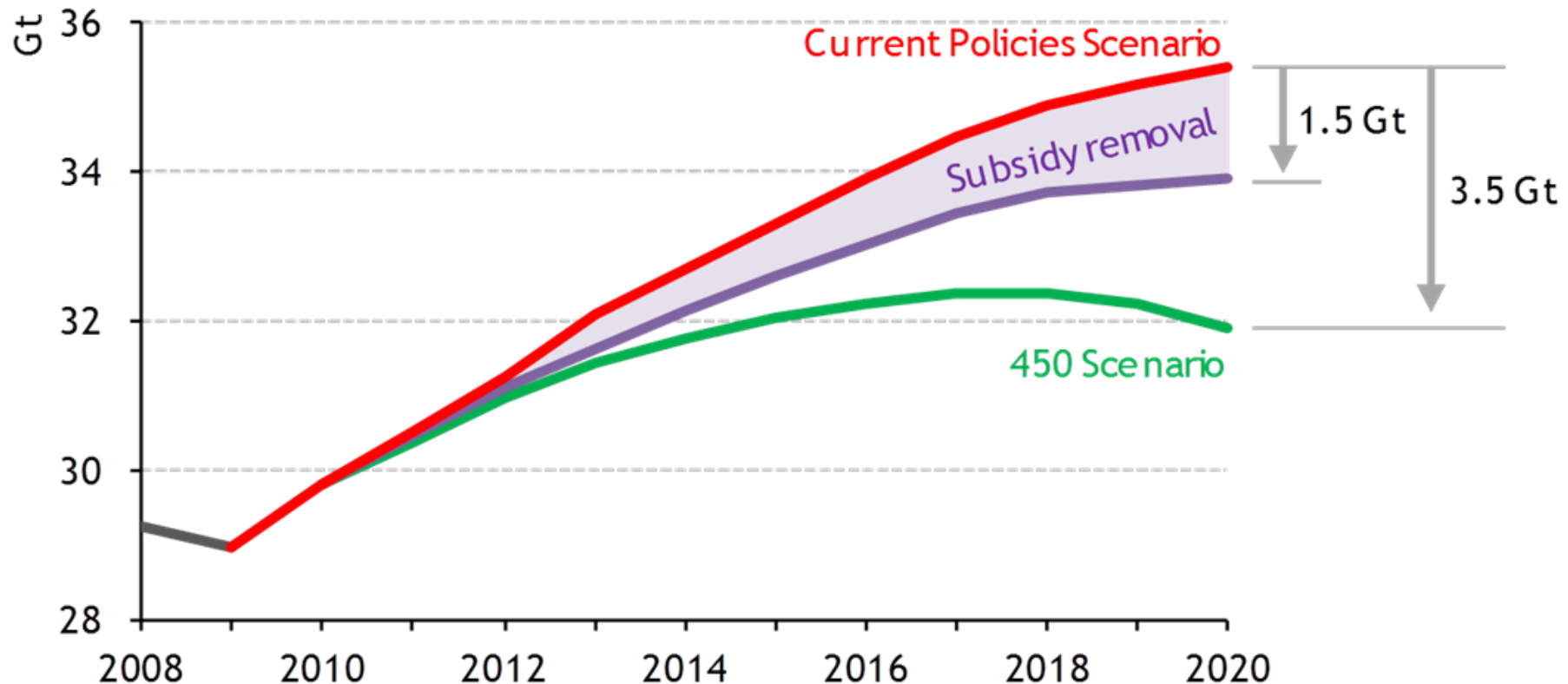


By removing subsidies and taxing carbon correctly, we could reduce global CO<sub>2</sub> emissions by 23% and raise government revenue through savings and taxation, equivalent to 2.6% of global GDP.

### SOURCES:

- ① International Energy Agency (IEA) 2013, 'Redrawing the Energy-Climate Map.'
- ② IEA (2014), 'Energy Efficiency Market Report 2014'
- ③ IEA (2014), 'World Energy Outlook'
- ④ Bridle, R. 2014 'The Annual Cost of Energy Subsidies is Greater than the Total Cost of Meeting 2020 Renewable Energy Targets in the Middle East and North Africa', The Global Subsidies Initiative
- ⑤ IMF (2014), 'Getting Energy Prices Right'

# Consumer subsidies: Environmental impacts



IEA (2013)

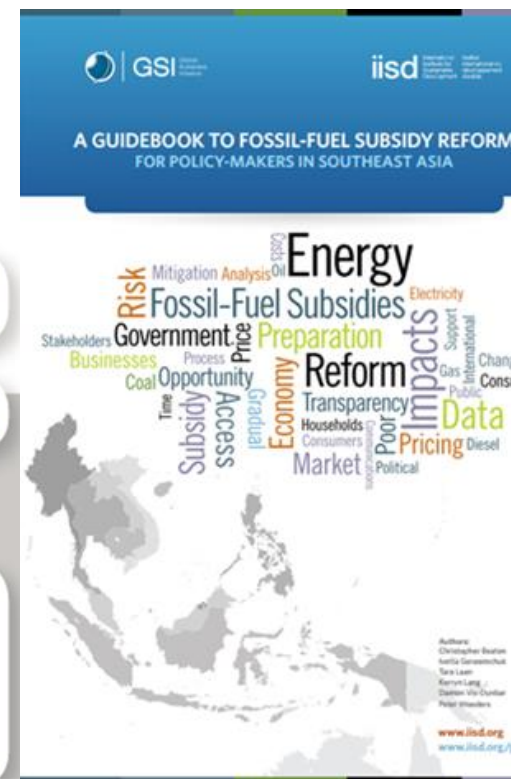
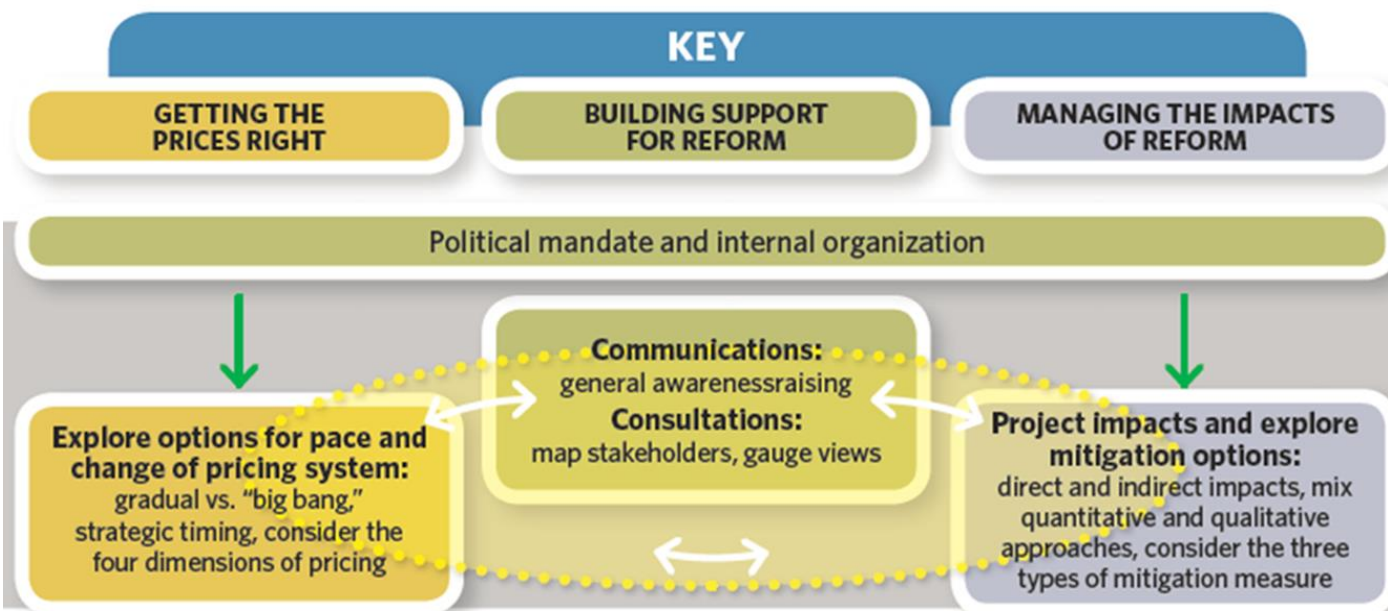


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# Consumer subsidies: National action

- Increasingly sophisticated reform packages
- Political dimension remains a key challenge



Source: GSI-IISD, Beaton et al. 2013, A Guidebook to Fossil-fuel Subsidy Reform for Policy Makers in Southeast Asia,  
<http://www.iisd.org/gsi/fossil-fuel-subsidies/guidebook>



# Indonesia

- Package of measures to mitigate the impacts of reform (2005, 2008, 2013) and being considered again ...
  - One off cash transfer schemes (2005, 19 million families)
    - unconditional cash transfer scheme introduced in 2013 (the *Bantuan Langsung Sementara Masyarakat* (BSLM), or “temporary direct cash assistance”)
  - Building an ongoing social welfare system (2013, US\$ 2.9 billion)
    - *Jamkesmas* – a public health insurance
    - *Raskin* – A subsidized rice program
    - Bantuan Siswa Misking, or BSM “assistance for poor students”
    - PKH – the conditional cash transfer launched in 2007, Program Keluarga Harapan (PKH, or The Family of Hope Program)
  - Infrastructure and works programme
    - Acceleration and Expansion of Development Program or P4 (*Program Percepatan dan Perluasan Pembangunan*). Housing infrastructure, water (drinking and irrigation), transport, sanitation etc.

Sources: Perdana, A. (2014). The future of social welfare programs in Indonesia: From fossil-fuel subsidies to better social protection. Geneva: GSI. [http://www.iisd.org/gsi/sites/default/files/ffs\\_indonesia\\_briefing\\_welfare.pdf](http://www.iisd.org/gsi/sites/default/files/ffs_indonesia_briefing_welfare.pdf)

And GSI (2014). Indonesia Energy Subsidy Briefing August 2014 IISD-GSI

[http://www.iisd.org/gsi/sites/default/files/ffs\\_newsbriefing\\_indonesia\\_july2013\\_eng.pdf](http://www.iisd.org/gsi/sites/default/files/ffs_newsbriefing_indonesia_july2013_eng.pdf)



# Consumer subsidies: National action

- Highly dynamic, since 2009 at least partial reforms attempted in many countries, including:
  - Argentina, Bolivia, Egypt, Ghana, Morocco, Mozambique, India, Indonesia, Malaysia, Nigeria, Pakistan, Sudan, Thailand, Vietnam, Yemen, Zambia
  - 30 countries in 2014 alone
- Not a question of if but how
- Now a question of ensuring quality of reforms, moving savings towards:
  - Re-investment into energy infrastructure, low carbon energy and mass transit systems
  - Re-investment into health and education
  - Development of comprehensive health care systems
  - Taxation of fossil-fuels to provide on going revenues to fund





# GSI Activity – IISD stand

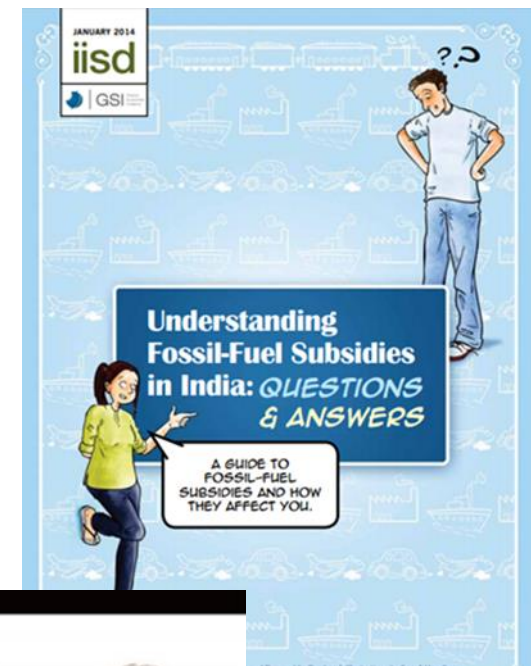
## FOSSIL FUEL PRODUCTION SUBSIDIES



## FOSSIL FUEL CONSUMER SUBSIDIES



## SUSTAINABLE ELECTRICITY SYSTEMS



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- Side event Wednesday 10<sup>th</sup> December 15.00-16.30 on fossil-fuel subsidies
- New report GSI around the impact of fossil-fuel subsidies and renewables
- [lmerrill@iisd.org](mailto:lmerrill@iisd.org)

# Maximizing Contributions to Emissions Mitigation from Fossil-Fuel Subsidy Reform



**Wednesday 10 December 15:00 – 16:30**  
**CoP 20, Machu Picchu Room,**  
**Cuartel General del Ejercito del Peru, Lima, Peru**

According to the International Energy Agency, subsidies to fossil fuels totalled around \$548 billion in 2012, which is more than four times the value of global subsidies to renewable energy—it is also more than four times the amount invested globally in improving energy efficiency. However, in the last year alone almost 30 countries across the globe have made serious efforts to dismantle government support and subsidies to fossil fuels. This panel discussion will address the link between fossil-fuel subsidies, their reform and a low-carbon future. The event will outline the support available to countries undergoing reform, the opportunities to strengthen the process and direct savings towards investment in sustainable energy systems, and how countries can utilize emissions mitigation from subsidy reform within the UNFCCC process, e.g., through post-2020 national contributions.

The event is organized by the Friends of Fossil Fuel Subsidy Reform (Costa Rica, Denmark, Ethiopia, Finland, New Zealand, Norway, Sweden and Switzerland) in conjunction with the Global Subsidies Initiative of IISD. The panel includes Ministers, officials, representatives from business, development banks and intergovernmental organizations. The Friends group advocates for a reform of fossil-fuel subsidies. Intergovernmental organizations and development banks support countries in measuring and removing such subsidies. Businesses recognize how fossil-fuel subsidies impact on the renewables industry. The GSI will also be releasing a new report regarding the impact of fossil-fuel subsidies on renewables on the same day.

## PANELISTS

	<b>DORIS LEUTHARD</b> Federal Councilor, Head of the Federal Department of the Environment, Transport, Energy and Communications, Switzerland		<b>JEREMY LEGGETT</b> Social entrepreneur, author and chairman of Interventions, Editorial and Carbon Tracker		<b>LEONARDO MARTINEZ-DIAZ</b> Deputy Assistant Secretary for Environment and Energy U.S. Treasury Department		<b>RACHEL KYTE</b> World Bank Group Vice President and Special Envoy, Climate Change Group
	<b>EDGAR E. GUTIERREZ-ESPELETA</b> Minister of Environment, Energy, Ocean, Costa and Waters, Republic of Costa Rica		<b>HAKIMA EL HAITE</b> Minister in Charge of Environment, Morocco		<b>SIMON BUCKLE</b> Head of the Climate, Biodiversity and Water Division, OECD Environment Directorate		<b>Moderator: JO TYNDALL</b> Climate Change Ambassador, New Zealand

**FOR MORE INFORMATION CONTACT:**

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 Translation into Spanish and French available



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