

# Fiscal Policy to Mitigate Climate Change

Ian Parry

Fiscal Affairs Department, IMF

Closing the Carbon Price Gap: Public Finance and Climate Policy, Berlin, May 22-23, 2014

Disclaimer: The views expressed herein are those of the author and should not be attributed to the IMF, its Executive Board, or its management.

# Plan of talk



- IMF climate activities
- Energy subsidies
- Ancillary benefits from carbon pricing

# IMF Perspective on Climate Mitigation



- Fiscal instruments must be center stage
  - effective (if right base)
  - cost effective (if revenue used productively)
  - balance benefits/costs (if equal envir. damage)
  
- Engaging MOFs given their potential role in
  - administration
  - re-calibrating tax system towards energy

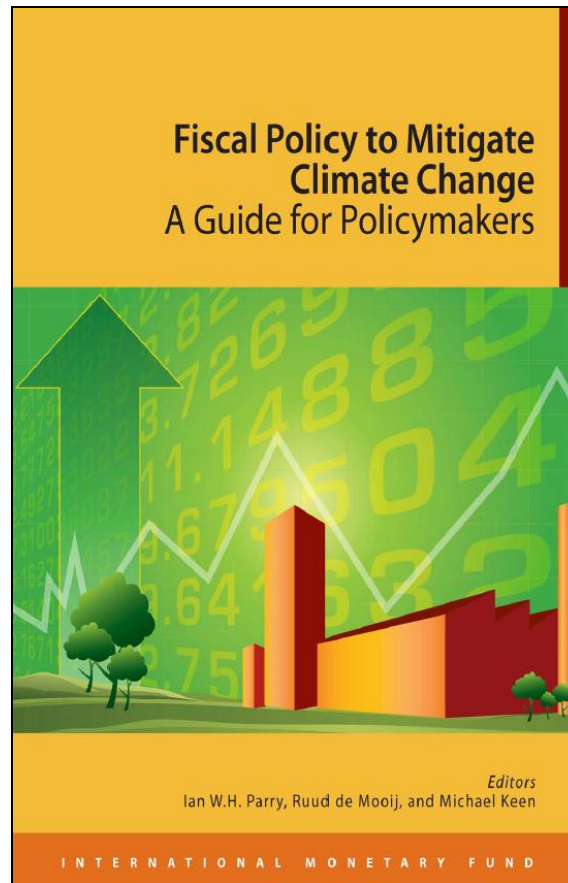
# TA and Outreach on Environmental Taxes



- Upcoming missions
  - China, Costa Rica
  
- Conferences
  - UNEP (Geneva 2012, Nairobi 2014)
  - OECD (Paris 2013, Paris 2015)
  - EC, CESifo, PBL (November 2014)
  - Green Growth Knowledge Platform (Venice 2015)
  - South Africa (Fall 2014)
  - AEI, Brookings, RFF (November 2012)

**Mobilizing  
Climate Finance**  
G20 Report, 2011

World Bank, IMF



**Carbon Taxes  
and Fiscal  
Reform: Key  
Issues Facing  
US Policy  
Makers**  
forthcoming

IMF, Brookings,  
RFF

# Energy Subsidy Reform

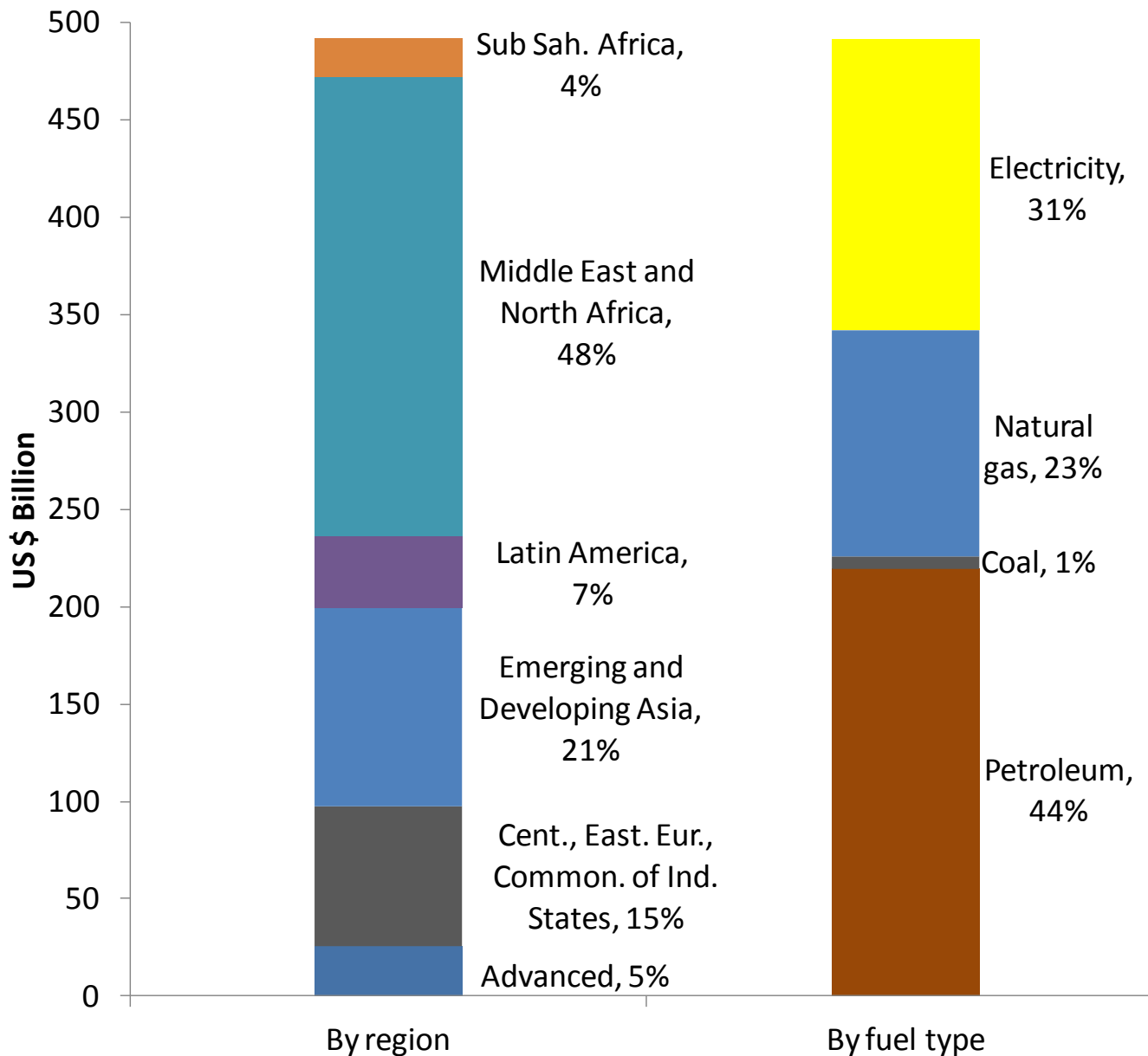
## Lessons and Implications



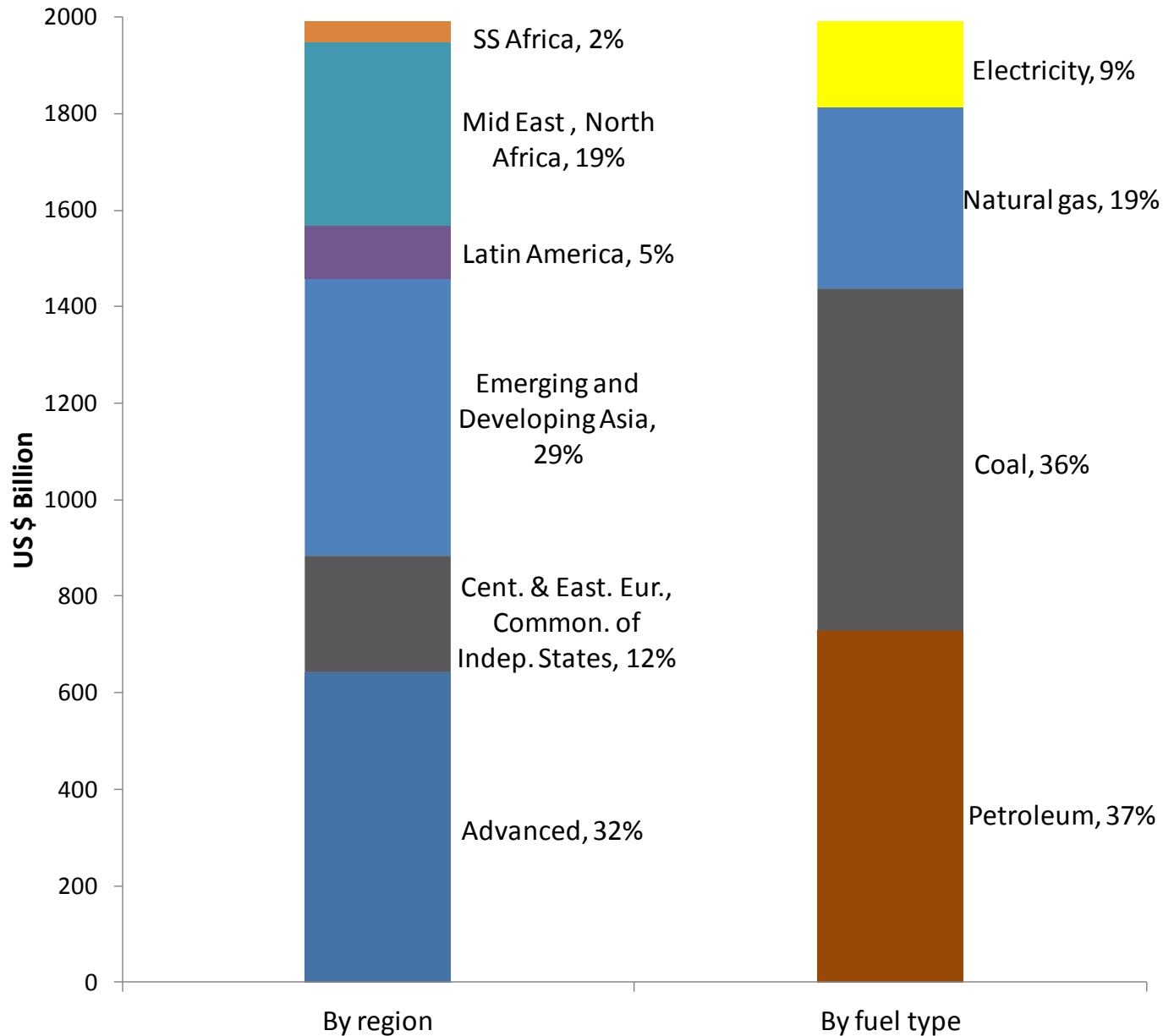
EDITORS

Benedict Clements, David Coady, Stefania Fabrizio,  
Sanjeev Gupta, Trevor Alleyne, and Carlo Sdravovich

# Pre-Tax Energy Subsidies, 2011



# Post-Tax Energy Subsidies, 2011







**Getting Energy  
Prices Right:  
From Principle  
to Practice,  
July 2014**

IMF

# Example: Air Pollution Damages from Coal



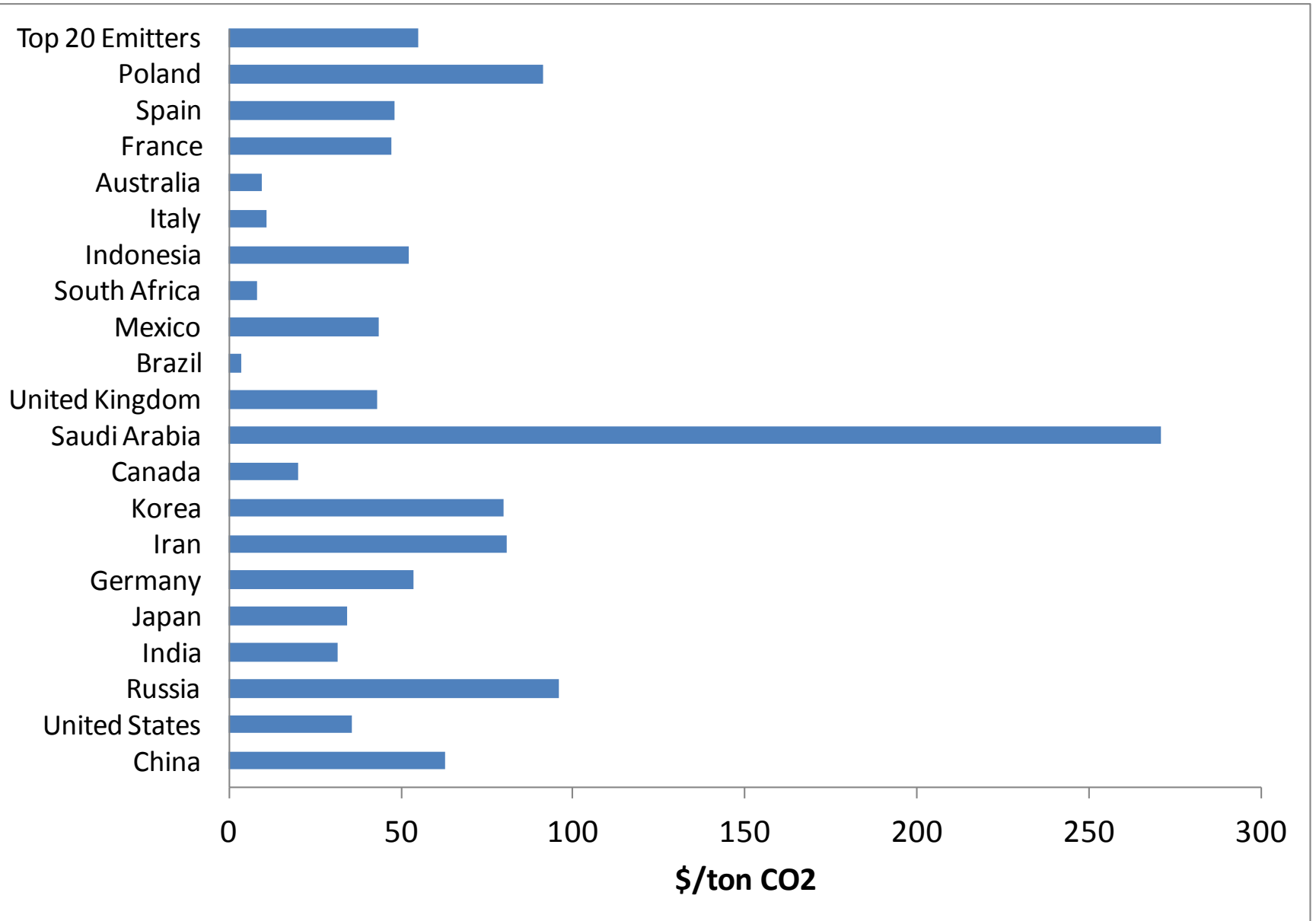
- Pollution exposure (power plant location → number of people in proximity)
- Exposure → mortality risk (WHO)
- Monetize health effects (income elasticity of VSL)
- Damage per unit (country-specific emissions factors)

# Ancillary Benefits of Carbon Pricing

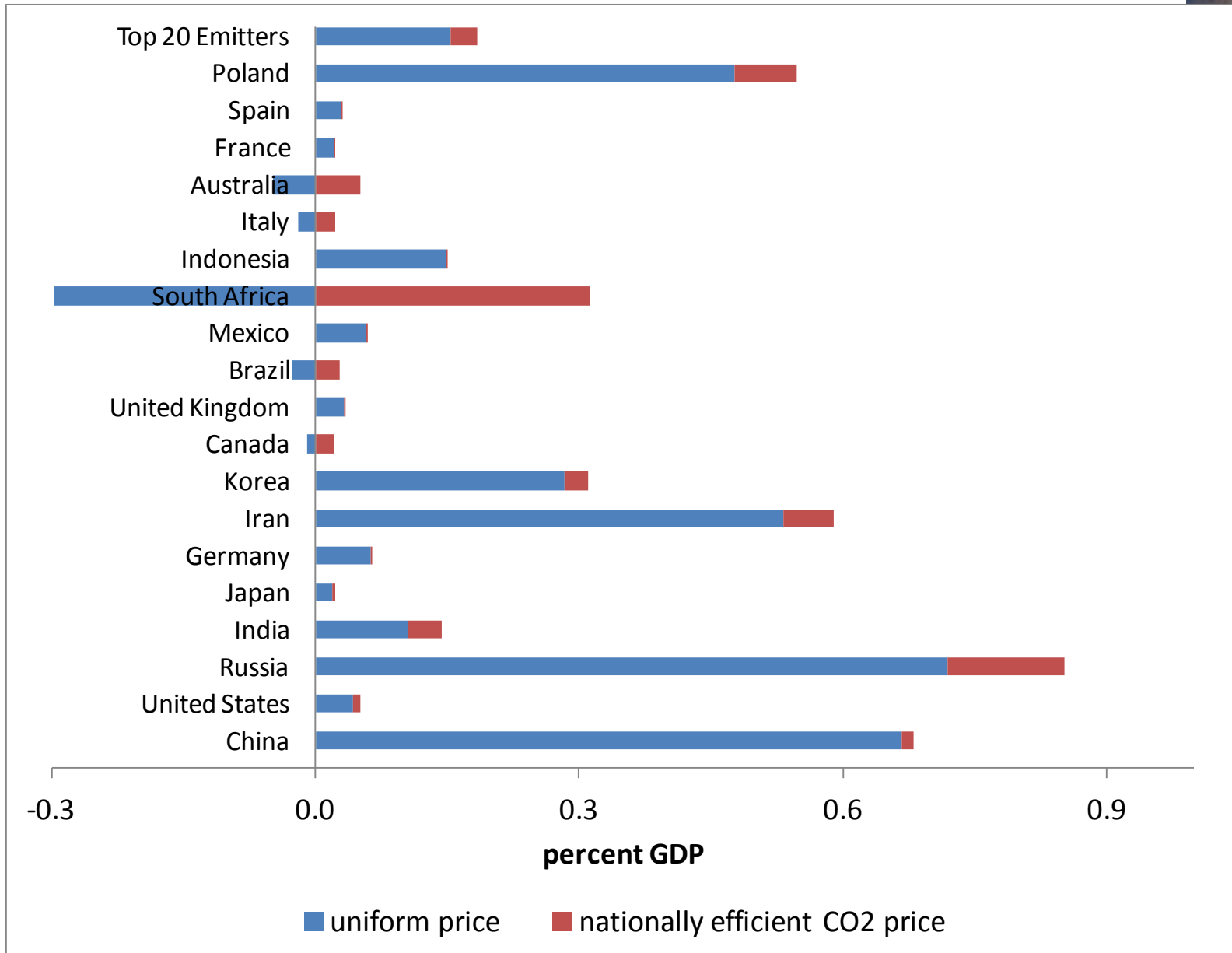


- Estimate nationally efficient CO<sub>2</sub> prices
  - domestic externality benefit/ton of CO<sub>2</sub> reduced (net of fuel taxes/subsidies), *excluding carbon benefits*
  
- Other policies needed (air pollution, congestion charges) but until comprehensively implemented
  - ancillary benefits should be subtracted from welfare costs of carbon pricing

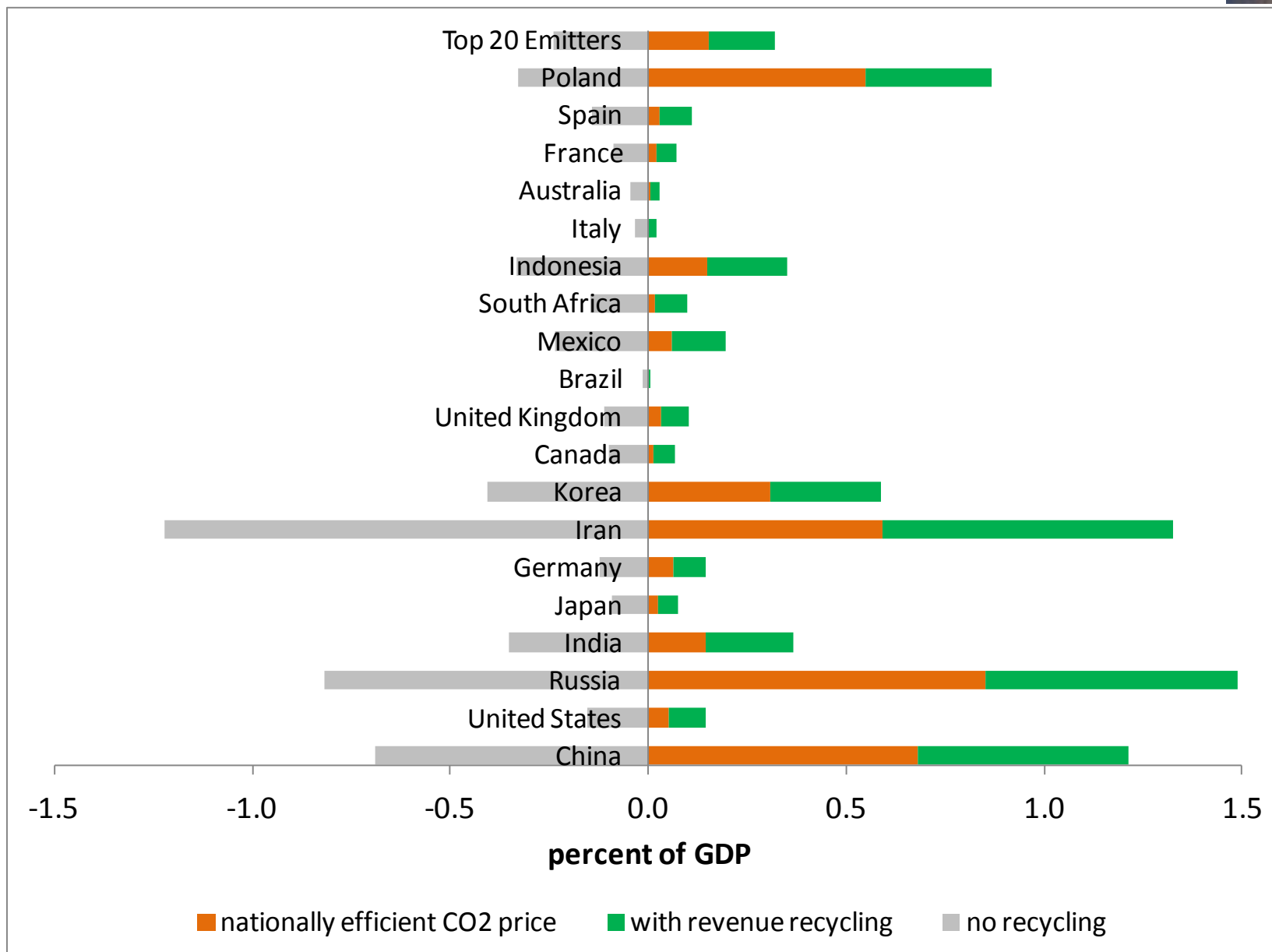
# Pricing CO<sub>2</sub> for Ancillary Benefits, 2010



# Net Benefits: Differentiated vs. Uniform Prices



# Net Benefits with and Without Recycling



# Concluding



- Carbon pricing in countries own interests but
  - fiscal dividend must be exploited
  - differentiated pricing may be better than uniform