Mercator Research Institute on
Global Commons and Climate Change

Policies to integrate climate targets and the Sustainable Development Goals in Sub-Sahara Africa

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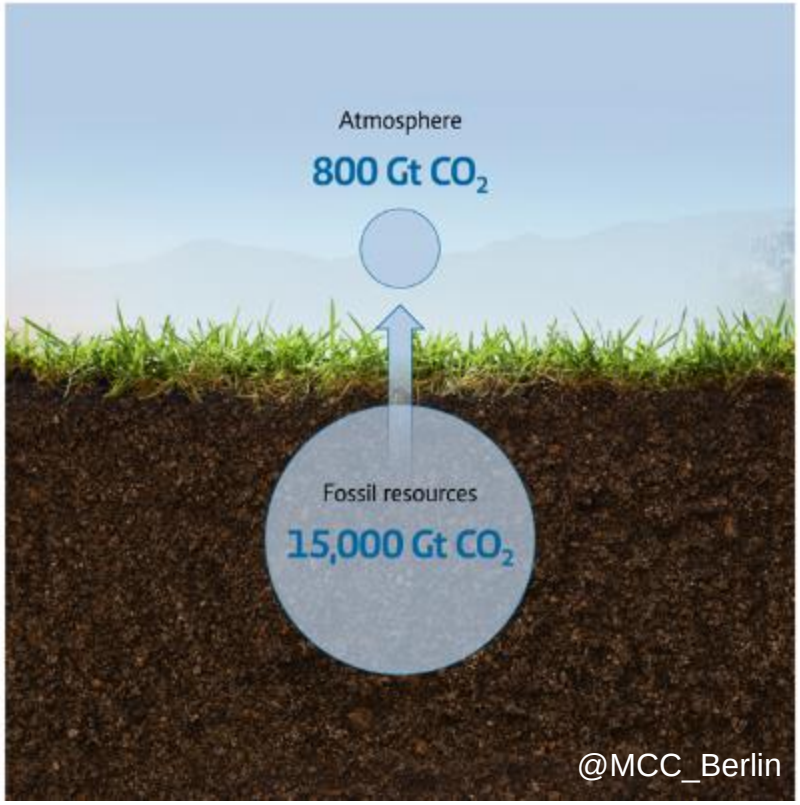
COP23 Side Event AfDB, RWI, MCC

Bonn, 15 November 2017

A twofold global challenge

Overuse of the global commons



Underprovision of public infrastructure

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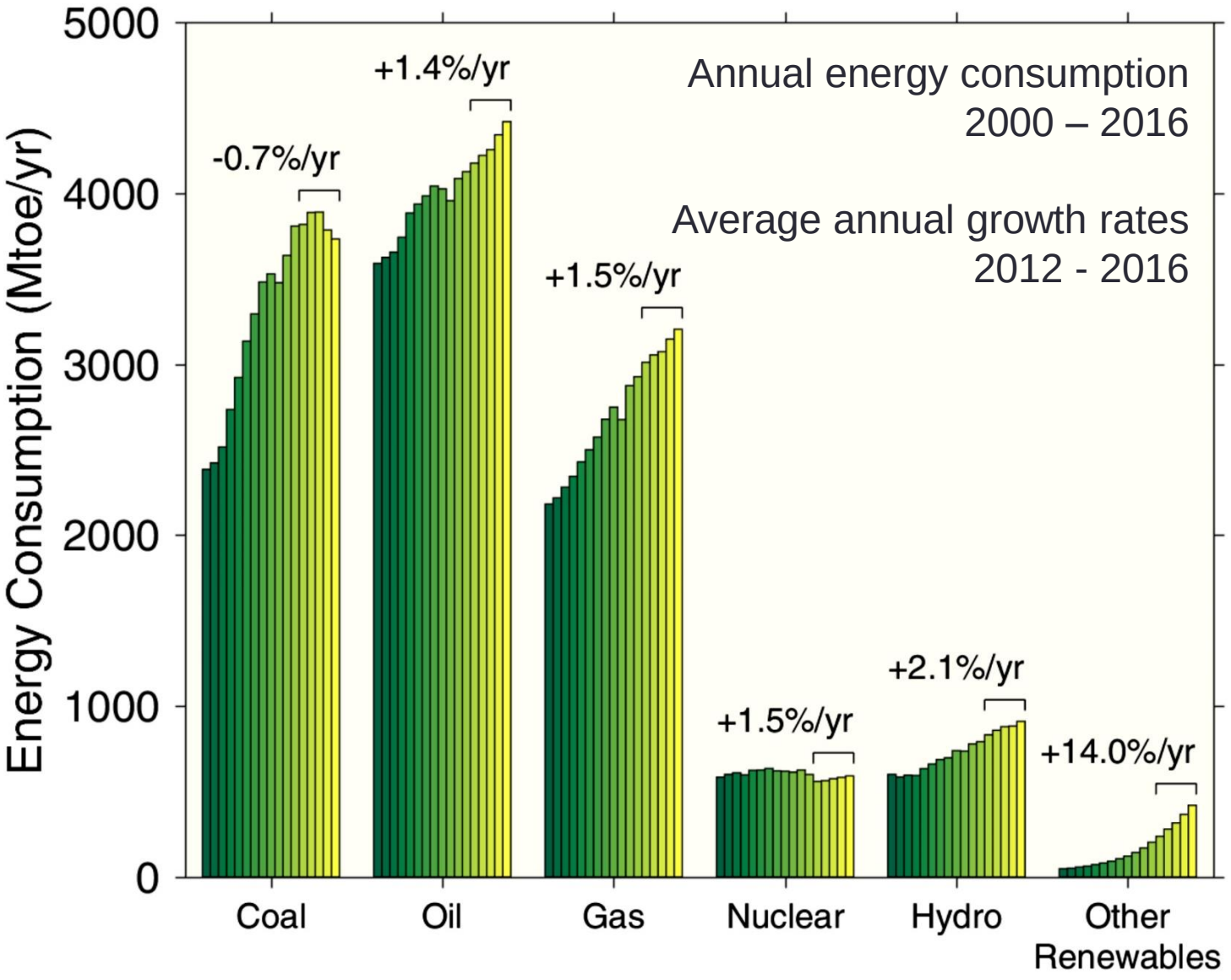
The global perspective: Investment dynamics on the energy market



Jackson et al. 2017

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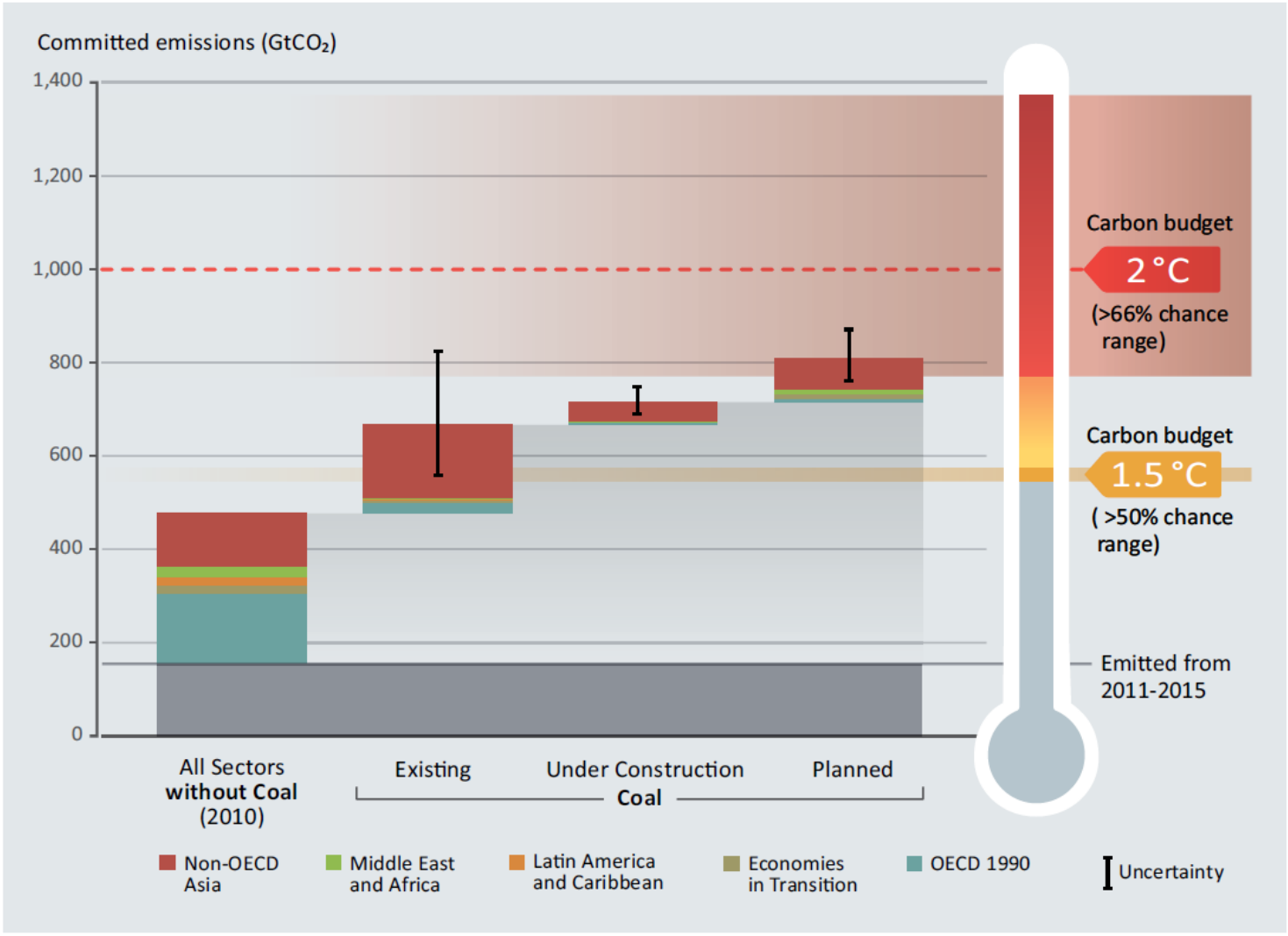
Coal and the carbon budget

Figure 5.1: Committed emissions to the atmosphere from coal-fired power plants (existing, under construction and planned) and other economic sectors, by region.



Source: UN EGR 2017

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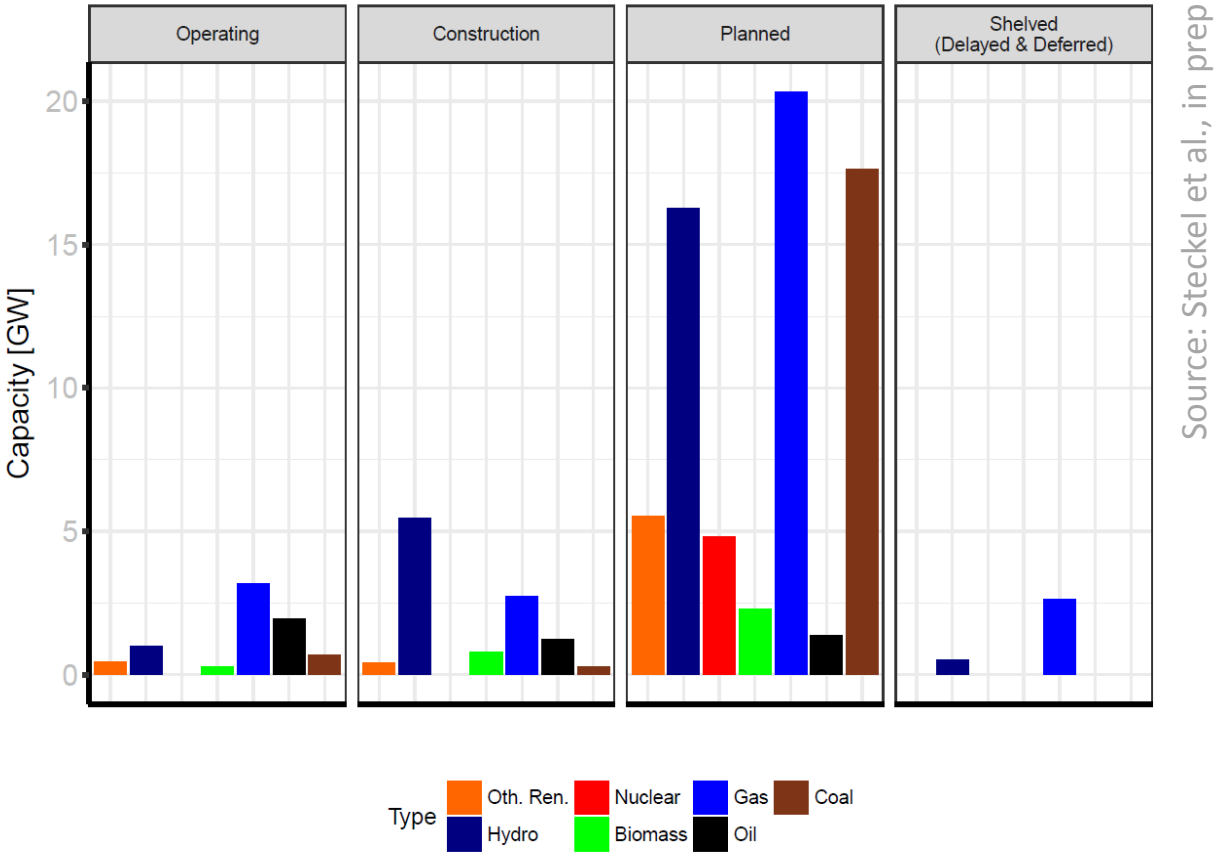
Existing and planned capacity in the power sector in SSA



Source: Steckel et al., in prep

SSA countries investing in coal (July 2017)

Country	Announced	Pre-permit	Permitted	Announced + prepermited + permitted	Construction	Shelved	Operating
Botswana	1204	300	900	2404	432	1500	600
Democratic Republic of Congo	0	0	0	0	0	500	0
Ghana	0	0	0	0	0	2,100	0
Guinea	0	0	0	0	0	250	0
Kenya	0	1,050	130	1,180	0	0	0
Madagascar	0	0	0	0	0	0	120
Malawi	3,100	0	420	3,520	0	0	0
Mauritius	0	0	0	0	0	0	195
Mozambique	1,340	500	600	2,440	0	1,620	0
Namibia	0	0	0	0	0	300	120
Nigeria	0	0	1,200	1,200	0	2,000	0
Senegal	0	350	0	350	125	250	30
Sudan	0	0	0	0	0	0	0
Swaziland	0	0	0	0	0	200	0
Tanzania	670	670	600	1,940	0	0	0
Zambia	300	0	600	900	0	0	330
Zimbabwe	3,330	0	3,850	7,180	0	1,200	950
Total w/o South Africa	9,944	2870	8,300	21,114	557	9,920	2345
South Africa	1700	1260	2580	5540	7940	1650	40513

Source: Steckel et al., in prep

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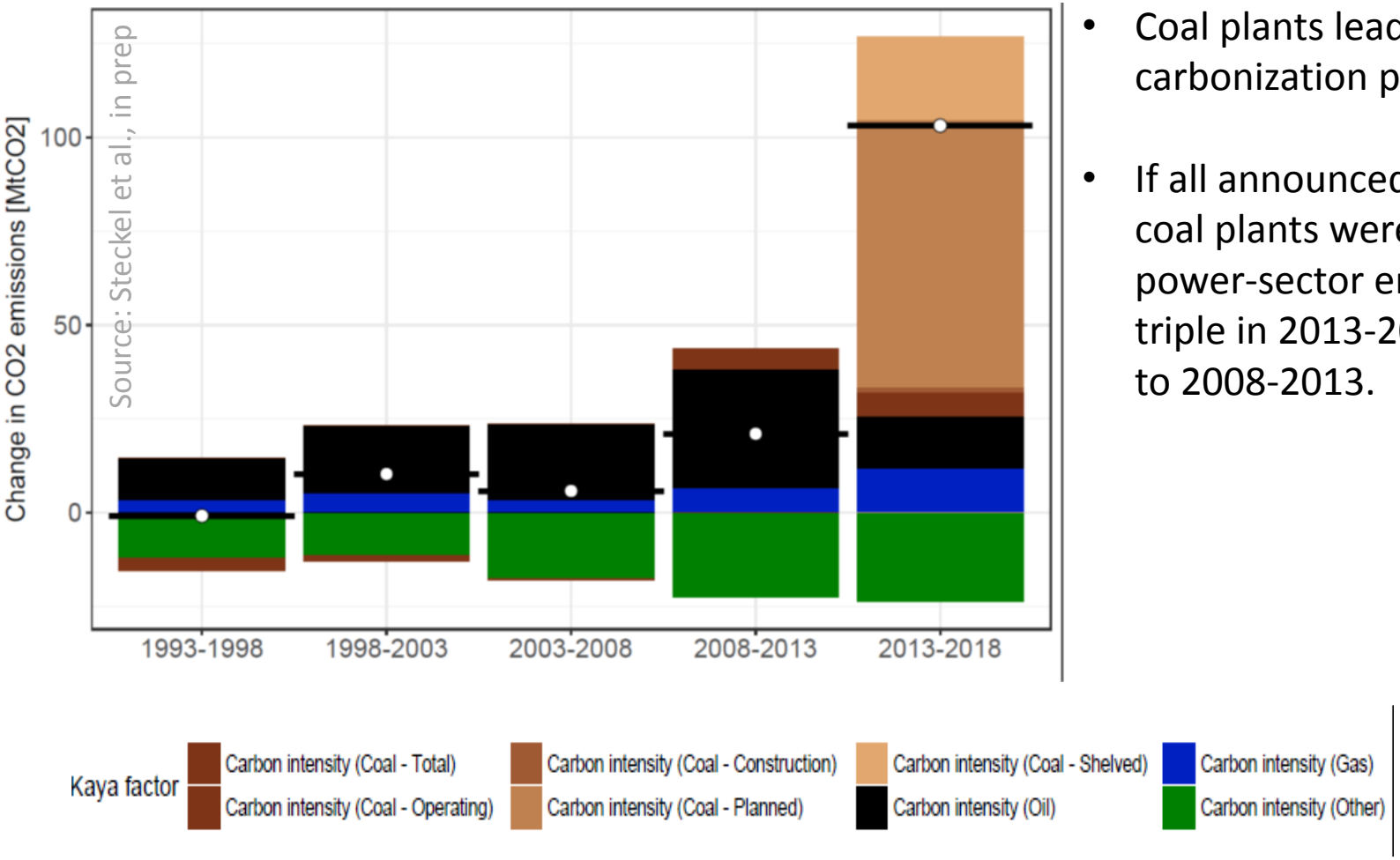
Resulting carbonization patterns



- Coal plants lead to a change of carbonization patterns in SSA
- If all announced and planned coal plants were realized, power-sector emissions would triple in 2013-2018, compared to 2008-2013.

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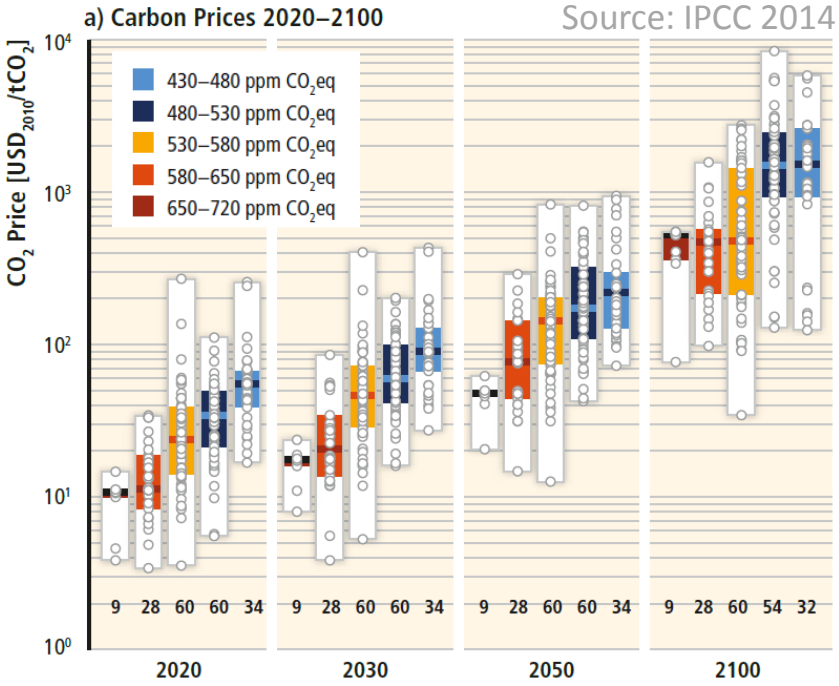
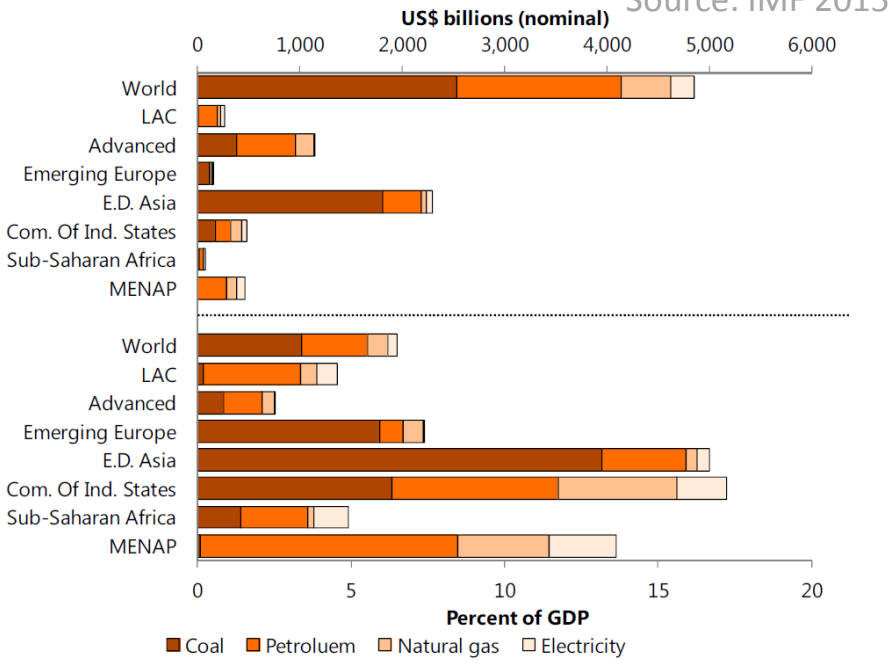
Carbon pricing disincentivizes carbon intensive development

Source: IPCC 2014



Source: IMF 2015



Carbon prices (ideally economy wide, and harmonized across the globe) are seen as a "condicio sine qua non" for climate change mitigation

Globally in average CO_2 is subsidized by USD 150 per ton (including externalities)

Fuel subsidies for fossil fuels are high, IMF estimates USD 5 trl in 2013 (~6% of global GDP)

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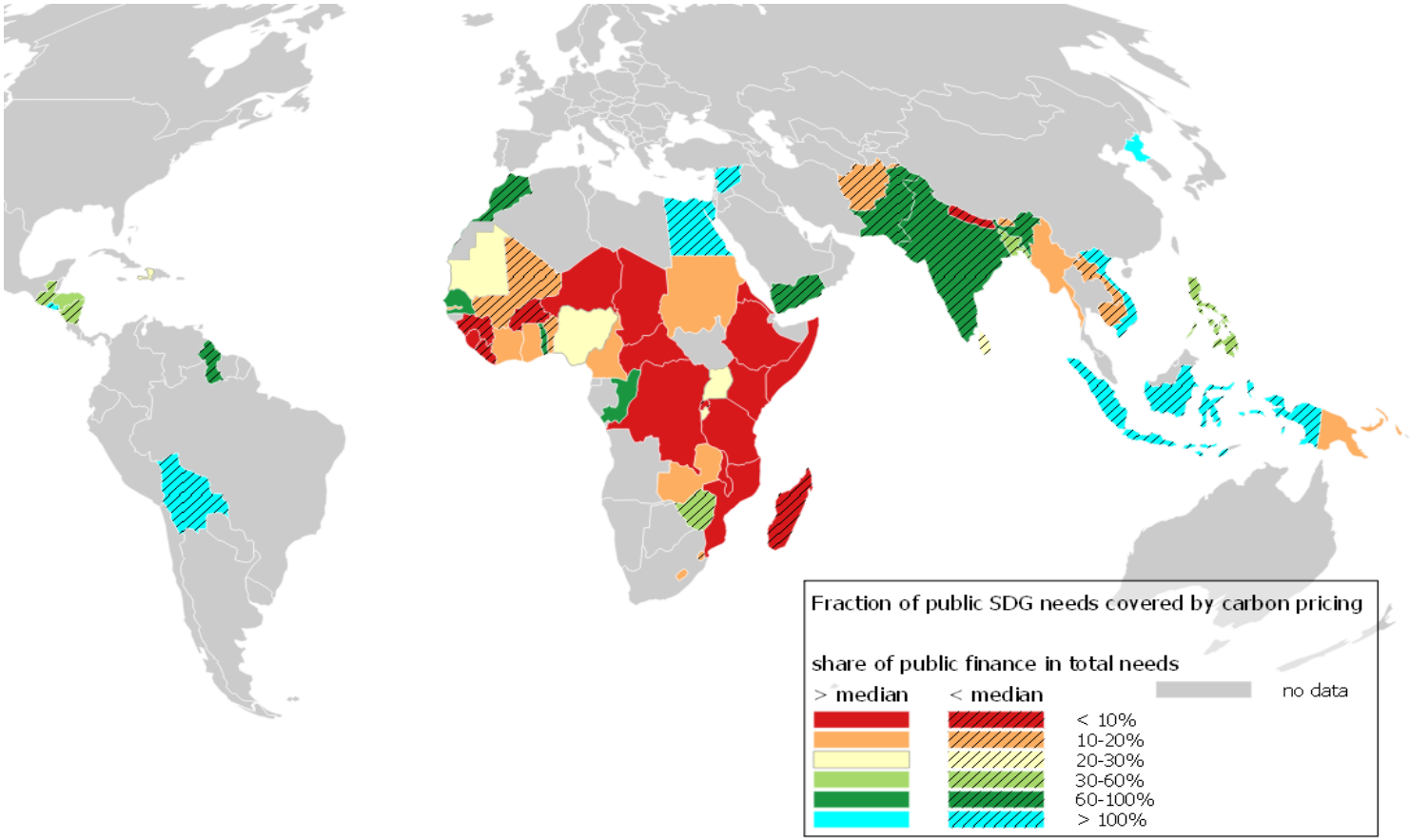
Carbon pricing revenues can finance SDGs

Subsidy Reforms + Carbon Pricing Revenues

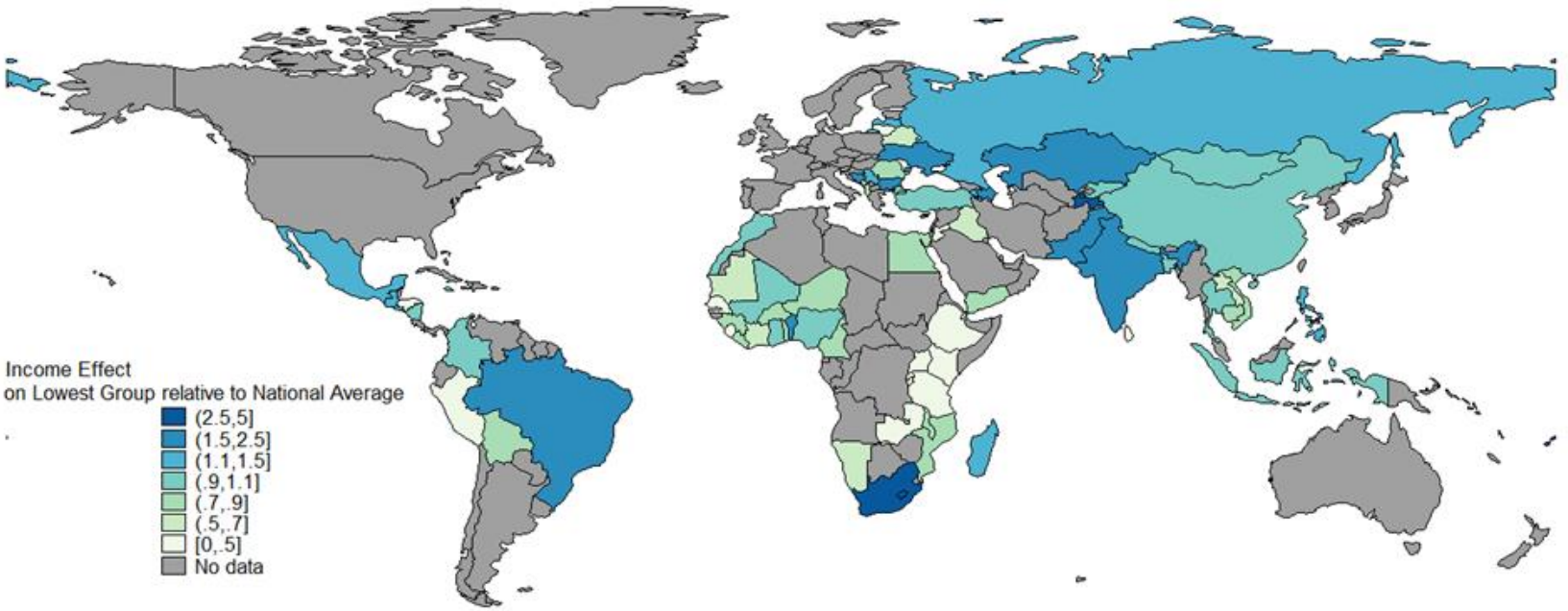


Source: Franks et al., in prep.

Fraction of the total financing need for the SDG agenda that could be financed by a national carbon price consistent with the 2°C target.

Fraction of the total financing need for the SDG agenda that could be financed by abolishing fossil fuel subsidies.

Carbon pricing likely progressive in poor countries



Dorband, Jakob, Kalkuhl, Steckel, in prep.

In many countries around the globe, carbon pricing would have a progressive effect on the income distribution.

Compensation schemes to avoid adverse impacts on poor households required.

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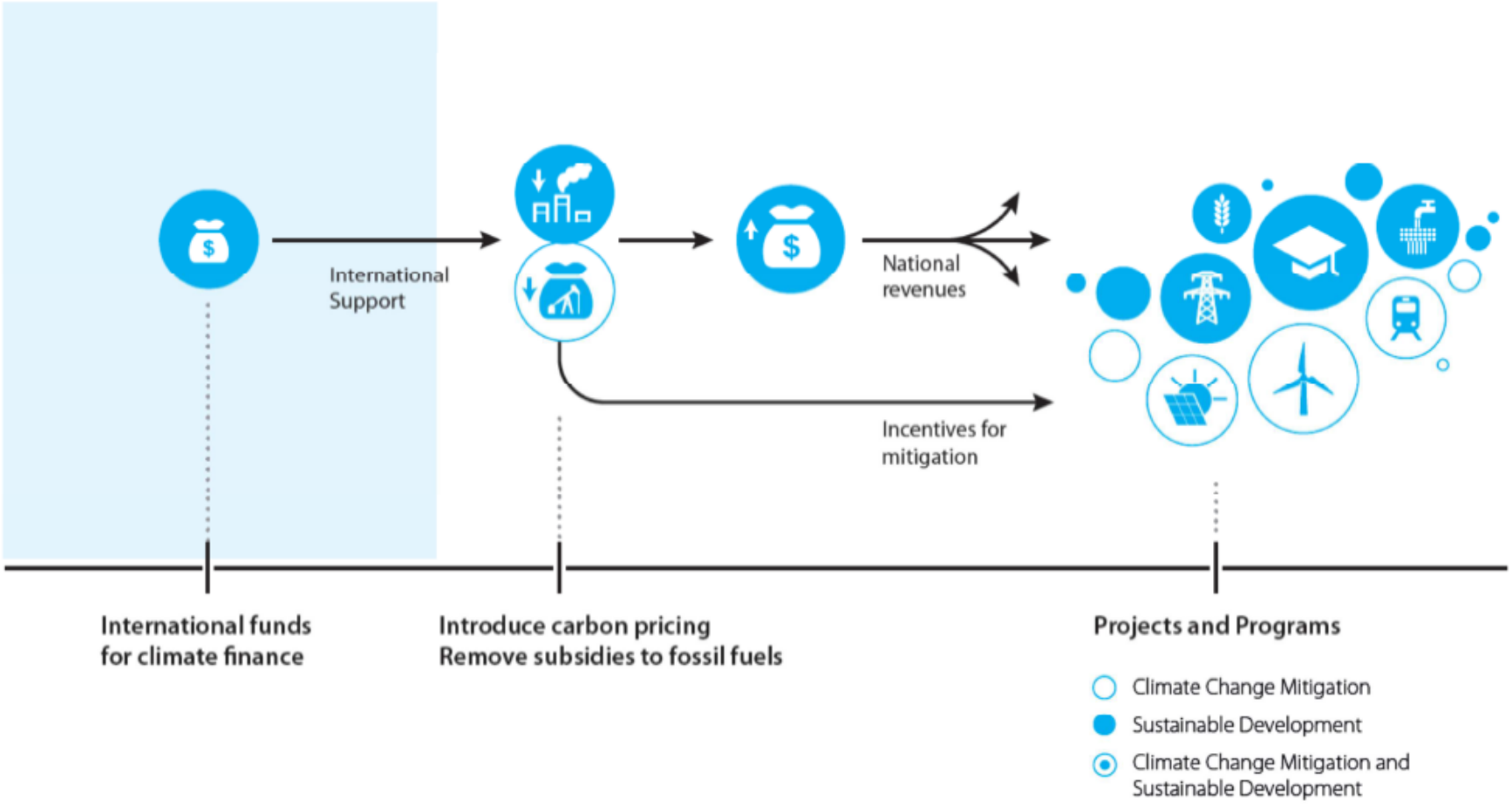
A proposal for reform



Steckel et al., 2017, WIREs CC

How international climate finance could support climate change mitigation and sustainable development

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Conclusions

- Climate change mitigation in Sub-Sahara Africa important and timely to avoid lock-ins into fossil fuel based infrastructure (e.g., coal)
- Carbon pricing can generate revenues to finance necessary infrastructure investments
- Carbon pricing is likely to be progressive in most Sub-Sahara African countries
- Global climate finance should be modified to enable structural reforms that combine climate change mitigation and sustainable development goals

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