WORLD BANK DEVELOPMENT POLICY FINANCE PROPS UP FOSSIL FUELS AND EXACERBATES CLIMATE CHANGE:

Findings from Peru, Indonesia, Egypt, and Mozambique

Executive Summary

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World Bank Development Policy Finance Props Up Fossil Fuels and Exacerbates Climate Change: Findings from Peru, Indonesia, Egypt and Mozambique

Executive Summary

The World Bank acknowledges that "Ending extreme poverty and fighting climate change are inextricably linked. We cannot do one without the other."[1] As such, the Bank is committed to help countries avoid exceeding a 2°C warmer world – the globally agreed limit.[2] Towards this goal, the World Bank pledges to assist countries onto a low-carbon development path by:[3]

- Creating the right incentives for a low-carbon transition, and
- Phasing-out fossil fuel subsidies.

Infrastructure Investments are the Key: According to the Intergovernmental Panel on Climate Change (IPCC), the most promising window of opportunity for low-carbon development is the significant amount of infrastructure to be built in the coming decades.[4] Much of this new infrastructure will be built in developing countries. The World Bank plays a significant role in creating infrastructure investment incentives through Development Policy Finance (DPF) programs in many developing countries.

The Right Infrastructure Investment Incentives: Investment incentives most often involve subsidies. Subsidies are made possible with public resources, largely through direct government expenditure or forgone government revenue. Such subsidies include, *inter alia*: government loans at concessionary rates; tax exemptions or reduced tax rates; free land; below cost infrastructure (such as power lines) and exemptions from regulations (such as development restrictions in protected forests). Subsidies are powerful instruments that distort prices of products and the costs of production. As such, subsidies significantly influence the decisions of policy-makers, producers, consumers, investors and financiers.

The climate crisis and staying under 2°C warming not only requires increasing investments in renewable energy but also drastically decreasing fossil fuel investments. In order for the World Bank to get the incentives right for a low-carbon transition, the Bank must determine what kinds of investment incentives are most effective for renewable energy projects while at the same time ensuring subsidies are not being created and granted to fossil fuel projects.

The World Bank's main instrument to create "the right incentives" is Development Policy Finance (DPF). Through DPFs, the World Bank influences government policies and institutions. The reforms implemented under DPFs are often aimed at facilitating and increasing investments in a country. As such, DPFs can influence investment decisions towards either carbon-intensive development or low-carbon development.

Main Findings on World Bank DPFs: The following document provides an assessment of recent World Bank DPF operations involving infrastructure investment frameworks in Peru, Indonesia, Egypt and Mozambique.[5] While the Bank's DPFs did support incentives aimed at increasing renewable energy investments, **overall the World Bank's DPF operations did not get the incentives right for a low-carbon transition**. Specifically, the DPF operations:

- Introduced new fossil fuel subsidies, including for coal;
- Lacked adequate policy support and incentives for renewable energy;
- Undermined environmental governance – exacerbating climate change risks of large-scale infrastructure;
- Heightened deforestation risks; and

- Lacked adequate climate change risk assessment

World Bank DPFs and Prior Actions: This paper specifically focuses on investment incentives contained within the World Bank's policy and institutional reforms supported by DPF programs. Required policy reforms, such as new laws pertaining to infrastructure development, are determined by the DPF's Prior Actions. According to the World Bank:[6]

> Prior actions are a set of mutually agreed policy and institutional actions that are deemed critical to achieving the objectives of the program supported by a development policy operation and that a country agrees to take before the Board approves a loan (credit or grant). Prior actions are legal conditions for disbursement.

New Fossil Fuel Subsidies – Including for Coal

The DPF operations in all of the countries studied contained Prior Actions requiring new or revised laws regarding frameworks for infrastructure investment. Table 1 lists the incentives/subsidies contained in the new infrastructure investment frameworks stipulated by the Prior Actions of the assessed DPF programs. In three of the countries, the Prior Actions are stipulating Public-Private Partnership (PPP) investment frameworks. PPP projects by definition are subsidized projects, i.e., they involve government resources otherwise not available to the private sector.

In addition to new subsidies, Table 1 lists the PPP infrastructure projects that were being offered by each government leading up to the World Bank's DPF operation, and thus, represent the projects slated to benefit from the Bank-sponsored investment incentives. In each country, the planned/pending PPP projects were overwhelmingly fossil fuel projects, including coal projects in Indonesia and Mozambique. None of the countries were offering climate-smart renewable energy PPP projects such as solar, wind, geothermal or distributed renewable technologies, which are often the most appropriate for addressing energy access for the rural poor.

In Egypt, the incentives/subsidies provided in the new Investment Law – not a PPP-specified framework – apply to all electricity generation. Thus, such subsidies apply to the government's planned 12.5 GW of new coal power plants. Egypt currently has no coal power plants. These new coal investments are slated to take place during the current DPF operation timeframe (December 2015 to June 2017).

In addition to laws pertaining to overall infrastructure investments, DPF operations in Indonesia, Egypt and Mozambique included new laws specific to oil and gas investment, including incentives for exploration (see Table 1). Mozambique's accelerated rate of depreciation for oil and gas exploration is especially concerning due to its potential to significantly reduce tax rates. Such tax reductions are the opposite of a carbon tax, which the Bank purports to support.

According to the IPCC's Fifth Assessment Report (AR5, 2014) with regards to the remaining carbon budget and fossil fuel reserves, in order to meet the internationally agreed goal of limiting global average temperature increase to 2°C, at least two-thirds of already existing fossil fuel reserves must be left in the ground.[7] Thus, any DPF measures supporting fossil fuel exploration are directly incompatible with the Bank's 2°C pledge. It is worth noting that the Asian Development Bank already excludes finance for oil and gas exploration.

The World Bank contends that their DPF operations do not promote fossil fuel subsidies because the infrastructure investment frameworks apply generally across the spectrum of infrastructure investments. Furthermore, the Bank contends that it supports specific low-carbon incentives within the renewable energy laws supported by the DPFs and other Bank operations (see Annex of World Bank comments for Egypt and Peru). **This paper argues that the Bank's approach to infrastructure investment incentives must ensure it does not introduce new subsidies, including through general investment frameworks, to fossil fuels, especially any subsidies for coal power plants or fossil fuel exploration because such support directly conflicts with remaining below 2°C warming.**

Table 1 Infrastructure Investment Frameworks and Planned Infrastructure Projects

Country	New Subsidies	Planned Infrastructure Projects
Peru	**New Public-Private Partnerships Law:** - Project finance - Government guarantees - Project preparation costs - Tax exemptions & reductions - Land acquisition costs	**PPP Projects:** - Liquid petroleum gas pipeline - 500 MW diesel/gas power plant - 3 natural gas pipeline networks (in the Amazon) - 26 new oil and gas PPP concessions in the Amazon - 2 energy efficient street lights - 200 MW hydropower - No solar or wind
Indonesia	**Public-Private Partnerships Framework:** - Project finance - Government guarantees - Project preparation costs - Tax exemptions & reductions - Land acquisition costs **Revised Fiscal Terms for Gas Contracts:** - Contract incentives for oil and gas exploration - Incentives for marginal/unconventional gas fields	**PPP Projects:** - 4 coal power plants (4,800 MW); - 1 large hydropower - 3 coal transport railways (in forest-rich Kalimantan & Sumatra) - No climate-smart renewables (e.g., geo-thermal, solar, or wind)
Egypt	**New Investment Law:** - Reduced price for electricity - Free or low cost land - Extension of infrastructure (e.g., power lines) - Any investment in electricity production is eligible as well as investments in targeted locations **New Natural Gas Law:** - Incentives for gas investments (still being drafted)	**Pending Infrastructure Projects:** - targeted locations have more than a dozen oil and gas projects - 12.5 GW of new coal power plants - 12 pending oil and gas exploration agreements
Mozambique	**New PPP, Mega Projects & Concessions Law:** - Project preparation costs - Land acquisition costs - Government guarantees for non-profitable PPPs **New Petroleum Tax Law (oil and gas)** - Accelerated rate of depreciation for exploration - VAT exemptions for exploration - reduced royalty rate for domestic use of oil and gas - customs duty exemption - tax stabilization guarantees **New Mining Tax Law (Bank trigger*)** - reduced royalty rate for domestic coal use, benefits new coal power plants - customs duty exemption - tax stabilization guarantees	**Pending PPP Projects:** - 4 coal power plants (~1,280 MW) - 3 coal port terminals - 2 coal transport railways - 1 hydropower plant - 1 natural gas plant - No climate-smart renewables (e.g., geo-thermal, solar, wind)

*Mozambique's new Mining Tax Law was originally intended as a Prior Action for DPF II (i.e., listed trigger of DPF I). However, the Bank decided not to include it in DPF II over concerns that the approved law imposed excessive burdens on potential investors. It is still included here as Bank supported investment incentives because the Bank's statements indicate that the Bank was pushing for more favorable fiscal terms, specifically for coal investments. This indicates that the Bank was in support of the investment incentives contained in the new law (see Box 2 of Mozambique case study).

Lacking Incentives for Low-carbon Transition

The World Bank's main DPF Prior Actions in support of a low-carbon transition involve the introduction of Feed-In Tariffs for renewable energy and reduced energy price subsidies (see Table 2). While these DPF-supported reforms are very welcome, they do not go far enough and in some cases have not been adequately designed to bring about the intended positive climate change outcomes.

Each country in the study has great potential to develop several forms of renewable energy. Egypt has among the best solar and wind resources in the world. Indonesia has the largest geothermal resources in the world. In general, the Bank contends that it is supporting countries through DPF operations to increase the use of renewable energy. The assessment found that in three of the four countries studied the DPFs did contain Prior Actions on new renewable energy laws. The investment incentives contained in these laws were Feed-in-Tariffs for one or more forms of renewable energy (see Table 2). However, this paper finds the Bank's actions are lacking on renewable energy incentives.

DPF Prior Actions need to go beyond Feed-in-Tariffs to bring about the low-carbon transition. In the countries studied, it was found that there remained barriers to renewable energy investments that the World Bank DPFs could have addressed, such as:

- Adequate legal frameworks to accommodate renewable energy sources
- Grid operation policies to prioritize the dispatch of renewable power
- Sufficient Feed-in-Tariffs
- Economic incentives for geothermal exploration and for feasibility studies for solar, wind, geothermal etc.

Table 2. Renewable Energy and Energy Price Subsidies

Country	Renewable Energy	Fossil Fuel Price Subsidies
Peru	- No actions in current DPFs - Lacking legal framework for solar, wind, geothermal and distributive technologies - Lacking feasibility studies for solar, wind, and geothermal	Associated Bank technical assistance recommended subsidized gas for **Southern Peru Gas Pipeline** contradicting other Bank studies concluding subsidized gas was a barrier to renewable energy.
Indonesia	**New Geothermal Law:** - Feed-in-Tariffs considered inadequate - Lacking feasibility studies for geothermal, solar, and wind - Lacking funds for geothermal exploration	**Reduced Energy Price Subsidies:** - Reduced government expenditure on electricity and fuel - Government savings from reduced energy subsidies partially used to fund coal power projects
Egypt	**New Renewable Energy Law:** - Feed-in-Tariff regulations - Competitive bidding process - Lacking grid upgrades, legal framework, & feasibility studies for renewable energy	**Reduced Energy Price Subsidies:** - Reduced government expenditure on electricity and fuel - Increase in natural gas tariffs linked to cement plants switching from natural gas to coal*
Mozambique	**Climate Change DPO (2014-2015):** - Renewable energy Feed-in-Tariff - Lacking grid upgrades, legal framework, & feasibility studies for renewable energy	

*Note: While the World Bank's DPF Prior Actions only specified increases in electricity tariffs, the DPF results indicators specified an overall energy subsidy reduction that could only be obtained through both fuel and electricity tariff increases, hence, it is assumed the Bank supported the natural gas tariff increases.

Unintended Boost to Coal from Energy Price Subsidy Reforms: DPF Prior Actions in Indonesia supported the reduction of electricity and fuel price subsidies. However, the potential climate benefits linked to associated reductions in GHG emissions from potential cut backs in electricity/fuel consumption are severely diminished because the government announced savings from reduced subsidies will be used to partially fund coal power plants and transmission lines for coal power distribution.[8] In Egypt, increased natural gas tariffs have been linked to significant fuel switching from natural gas to coal across the cement industry. In the case of Egypt, even though fuel subsidy reductions were not specified as a Prior Action, the DPF's results indicator on reducing energy subsidies could not be reached without the natural gas subsidy reductions. The main takeaway is that the World Bank's support for energy subsidy reforms may not be an effective climate change mitigation strategy if the DPF actions do not safeguard against subsidies being redirected for new coal power plants or against a switch to more carbon-intensive fuels.

Coal's Share in Electricity Mix Increases

The World Bank contends that the DPFs are supporting the countries' climate change agendas and intended nationally determined commitments to the Paris climate change agreement. This paper argues that simply because the Bank is supporting some incentives for renewable energy in line with the countries' climate change agenda does not mean the Bank is supporting an actual transition to low-carbon development.

The IPCC's AR5 (2014) found that even though renewable energy growth was stronger than anticipated – the climate benefits were negated by the tremendous growth in GHG emissions from fossil fuels. The Bank's DPF approach to infrastructure investment incentives perpetuates the same outcome. The DPFs are introducing new subsidies for fossil fuels, which not only accelerate fossil fuel development but are also barriers to renewable energy investments.

Table 3 provides the expected electricity generation fuel mix for the energy sector development plans supported by the DPF operations in Indonesia and Egypt. Given both countries significant increase in power from coal, neither plan is low-carbon or consistent with keeping global temperature rise below 2°C. The World Bank DPF programs in both countries support subsidies for coal.

In the case of Indonesia, even if the country meets its renewable energy development targets and its goal to reduce land use change and forestry (LUCF) emissions by 26%, given its carbon intensive energy sector development plans supported by DPF Prior Actions, emissions from fossil fuel burning and LUCF would still come in at approximately 1,408 $MtCO_2$ or 4.9 tCO_2 per capita in 2025 (an increase from 2.3 tCO_2 per capita in 2011).[9] Such high emissions are not consistent with keeping global temperature rise below 2 degrees.

Table 3. Planned Electricity Generation Fuel Mix

Indonesia*	2008	2014	expected 2022
Coal	35%	47.5%	65.6%
Natural gas	17%	29.2%	16.6%
Oil	36%	12.3%	1.7%
Renewables	12%	11%	16%
Hydropower		[6.5%]	[5%]
Geothermal		[4.4%]	[11%]

Egypt	2015	expected 2022	expected 2030
Coal	0%	20%	27%
Natural gas & Oil	70%/19%	NA	29%
Nuclear			9%
Renewables	11%	20%	35%
Hydropower	[9%]	[6%]	[5%]
Solar	[.5%]	[2%]	[16%]
Wind	[2%]	[12%]	[14%]

*The year 2008 represents the beginning of the first DPF series.

Undermining Environmental Governance and Heightened Deforestation Risks

Table 4 lists DPF actions that promote expediting licensing procedures and land acquisition for infrastructure investments. This paper argues that these changes exacerbate existing weak environmental governance, land tenure rights, and pressures on forests from drivers of deforestation, including coal mining and large infrastructure projects. For example, in Indonesia one of the DPF's prior actions stipulates that the Minister of Environment and Forestry relinquishes the licensing authority for setting up Independent Power Producer projects to the Indonesia Investment Coordinating Board, whose mandate is to increase investments, not protect the environment or manage the forests.

Heightened Deforestation Risks: Prior Actions that undermine governance are especially of concern in the forest rich countries of Indonesia and Peru. Indonesia and Peru have the third and fourth largest extent of rainforest in the world. Their forests are of paramount importance not only to the many indigenous peoples that depend upon them for their livelihoods, but also to the climate. For example, the forests of Peru store more carbon than the US emits every year.[10]

The DPF's promotion of large-scale infrastructure projects in the context of further weakened environmental governance is dangerous. Many of the upcoming PPP projects involve identified drivers of deforestation in Indonesia and Peru, such as oil, gas, coal mining, large hydropower, and roads. For example, as much as 84% of the Peruvian Amazon has been granted as oil and gas concessions, threatening the wholesale destruction of the forests and communities which depend upon them.[11] The licensing and land acquisition reforms prompted under DPFs greatly undermine efforts to improve the governance structures critically needed in Indonesia, Peru and Mozambique to abate forest loss and climate change. They also have the potential to undermine the land tenure security of forest communities, whose rights to ancestral land and forests are routinely violated. These communities play a crucial role in the sustainable stewardship of forests, with the co-benefits of maximum carbon storage and protection of ecosystem services, yet DPFs do little to consult or engage them in the government reforms that directly affect their livelihoods.

Inadequate Assessment of Risks to the Climate and Forests

The World Bank's environmental assessments of the DPFs all concluded that the operations would have neutral or positive environmental impacts. The assessments tended to be very selective, focusing largely on potentially positive climate measures; dismissing any potential climate change risks; and not recognizing risks to forests.

It is interesting that in the case of Indonesia and Egypt, the Bank determines that the overall outcome of its supported policy reforms will decrease GHG emissions and it attributes this directly to its policy support for renewable energy investments and reduced energy price subsidies. However, the Bank is unable to determine GHG emissions increases associated with its support for fossil fuel investment incentives. Furthermore, the Bank does not recognize the linkages between its supported infrastructure investment incentives and the significant increase in coal powered electricity in these two countries.

Table 4. DPF Actions to Expedite Permits and Land Acquisition for Infrastructure Investments

Country	Undermining Environmental Governance	Heightened Deforestation Risks
Peru	New PPP Law 30230: - Expedites permitting process by limiting the authority of regulatory agencies, such as the Ministry of Environment. - Restricts sanctions for regulatory violations, i.e., benefits Southern Peru Gas pipeline during construction phase and early operation phase.	- Upcoming PPP projects involve drivers of deforestation, such as oil, gas, large hydropower and roads. - Oil and gas concessions now cover 84 percent of Peru's Amazon territory, an increase of 41 percent from 2009. - 26 new oil and gas exploration PPP concessions pending in the Amazon.
Indonesia	- New Land Acquisition Law speeds up land acquisition for infrastructure - Licensing for Independent Power Producers on forested land switched from Minister of Environment and Forestry to Investment Coordinating Board	- PPP projects involve drivers of deforestation - 8.6 million hectares of forest at risk from coal mining or 9% of forest cover.
Mozambique	Implementation of existing Land Law towards facilitating access to land: - Systematic delimitation of all community lands in rural areas; - Comprehensive rural zoning/land use planning to support Mozambique's development potential - Revised Article 35 stipulates communities are now subject to the same 3-tier approval system of development plans as investors. Poses risks to tenure rights for local communities.	- Coal mining concessions and exploration licenses approved and pending cover around 60% of Tete province's area. - Double threat to forest cover, not only do large-scale mines clear forests, but mines often relocate farming communities, resulting in further land clearance to establish new farms

In cases where the Bank does note that the increase in economic activity resulting from the implementation of its DPF operation may have environmental effects, including increased GHG emissions, the Bank states that the effects will be mitigated/managed by the existing legal framework. In cases when the legal framework is inadequate, the Bank will increase the capacity of the government to manage Environmental Impact Assessments.

Unless a country has adequate regulations to restrict GHG emissions and protect forests, which none of the studied countries has, improving the implementation of an EIA will not sufficiently address climate change risks. Furthermore, the Bank does not assess any DPF-supported investment incentives against the 2°C goal even though the World Bank's Climate Action Plan states that getting the incentives right is the key to the low-carbon transition.

Recommendations

World Bank development policy finance represents a crucial opportunity to re-orient countries onto a low-carbon development path and better protect climate vulnerable poor communities. The Bank must heed its own advice on confronting climate change by providing the right incentives for a clear pathway to low-carbon development. Most importantly, the Bank must stop introducing new fossil fuel incentives, including those provided through general infrastructure investment frameworks. Towards getting the incentives right for a low-carbon transition, the World Bank should adopt:

1. **Robust Climate Change Assessment for DPFs**
   Assessments should answer the following questions:
   - Does the DPF operation support policy reforms that put the country on a 2°C development path

(based on 2 t/CO_2 emissions per capita) by 2030.
- Have all possible low-carbon alternatives been adequately explored?
- How will DPF reforms strengthen or weaken the implementation of laws relating to forest protection, including land tenure and international commitments regarding forest conservation?
- How will DPF reforms enhance or undermine the governance capacity of key ministries regarding social and environmental safeguards, including forest protection?

2. Comprehensive End to Fossil Fuel Subsidies
- DPFs should not support new fossil fuelsubsidies
- No DPF measures should support fossil fuel exploration
- The World Bank should institute a fossil fuel exemption from government infrastructure investment incentives, including for PPP projects

3. Ample Low-Carbon Incentives – not just Feed-In-Tariffs

Incentives may include:
- Incentives targeted at climate-smart grid upgrades, feasibility studies and exploration (e.g., geothermal)
- Project preparation costs for climate-smart renewable energy
- Adequate legal framework to accommodate market transition to climate-smart renewables

4. Comprehensive Forest Protection
- DPF reforms should seek to help resolve sectoral conflicts over forested land through improving governance in partnership with local communities
- DPF reforms should strengthen and at the very least must not undermine land tenure rights for local communities and forest-dependent peoples

5. Strengthened Governance – DPF Reforms Must Not Undermine Governance
- DPFs should not limit or undermine but rather strengthen the project approval functions of regulatory ministries, including the Ministry of Environment
- DPFs should include more extensive assessments of climate change and forest risks and mitigation strategies that go beyond strengthening borrower capacity on Environmental Impact Assessments

6. Improved DPF Transparency –

DPFs should require public disclosure of:
- All corresponding measures and incentives (not just a selected sub-set) embodied within a DPF-supported policy or institution
- All potential projects to benefit from DPF reforms

End Notes

1. See http://www.worldbank.org/en/news/press-release/2016/11/03/statement-from-world-bank-group-president-jim-yong-kim-on-the-entry-into-force-of-the-paris-climate-change-agreement [As viewed on November 15, 2016]

2. According to the IPCC: Scenarios consistent with a likely chance to keep temperature change below 2°C relative to pre-industrial levels require 40 % to 70 % lower global GHG emissions in 2050 than in 2010, and emissions levels near zero GtCO2eq or below by 2100.

3. See http://www.worldbank.org/en/news/feature/2015/03/18/5-ways-reduce-drivers-climate-change [As viewed on April 16, 2016]

4. IPCC, 2014. Drivers, Trends and Mitigation. In: Climate Change 2014: Mitigation of Climate Change. Contribution of Working Group III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC). Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA.

5. Peru – $1.25 billion Public Expenditure and Fiscal Risk Management Development Policy Financing (2016-2019) and $1.25 billion Boosting Human Capital and Productivity Development Policy Financing (2016-2019); Indonesia – $850 million (mil) Infrastructure Development Policy Loans (2007-2011) and $500 mil First Sustainable and Inclusive Energy Development Policy Loan (December 2015 – June 2016); Egypt – $1 billion First Fiscal Consolidation, Sustainable Energy and Competitiveness Programmatic Development Policy Financing (December 2015 – June 2017); and Mozambique – $305 mil Poverty Reduction Support Credit 6-8 (2009-2012)and $290 mil Poverty Reduction Support Credit 9-11 (2013-2016).

6. See: http://siteresources.worldbank.org/PROJECTS/Resources/40940-1244732625424/Q&Adplrev.pdf

7. Carbon Tracker Initiative, 2013. Unburnable carbon 2013: Wasted capital and stranded assets. In *Initiative*: Carbon Tracker (ed.).

8. EY, 2015. Opportunities and challenges of the Indonesian electrification drive. EY, March 2015. http://www.ey.com/Publication/vwLUAssets/opportunities-and-challenges-of-the-indonesian-electrification-drive-february-2015/$FILE/ey-opportunitiesand-challenges-of-the-indonesian-electrification-drive.pdf

9. Estimate is based on a reduction of 208 $MtCO_2$ LUCF emissions (or 26% of 800 $MtCO_2$) and 816 $MtCO_2$ from the energy sector in 2025 based on Republic of Indonesia, 2009. Indonesia Climate Change Sectoral Roadmap. December 2009. http://adaptation-undp.org/sites/default/files/downloads/indonesia_climate_change_sectoral_roadmap_iccsr.pdf Furthermore, estimate is based on a population of 288 million in 2025 representing a growth rate of 1.2% per year from 2013 base of 250 million.

10. https://www.theguardian.com/world/2014/nov/12/perus-forests-store-more-co2-than-us-emits-in-a-year-research-shows

11. http://wrm.org.uy/wp-content/uploads/2013/11/Masking_the_Destruction.pdf