



Checklist on Establishing Post-2020 Emission Pathways

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PMR Upstream Analytical Work on Setting Post-2020 Mitigation Scenarios: Background

- To contribute to countries' efforts to establish post-2020 mitigation scenarios and identify a package of effective and cost-efficient policies and policy instruments to achieve mitigation objectives.
 - Including analysis of carbon pricing instruments
- To provide useful technical inputs to countries currently devising their intended nationally determined contributions (INDCs) which will be submitted to the UNFCCC.

Some technical & analytical challenges we have discussed so far...

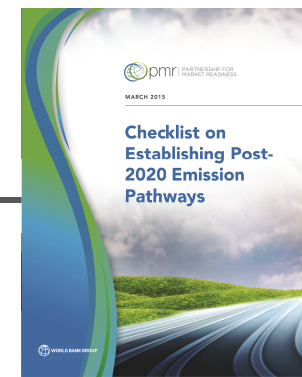
Prioritizing sectors for INDC

Assessing ER potential and costs of mitigation actions

Data availability; quality of information; uncertainty

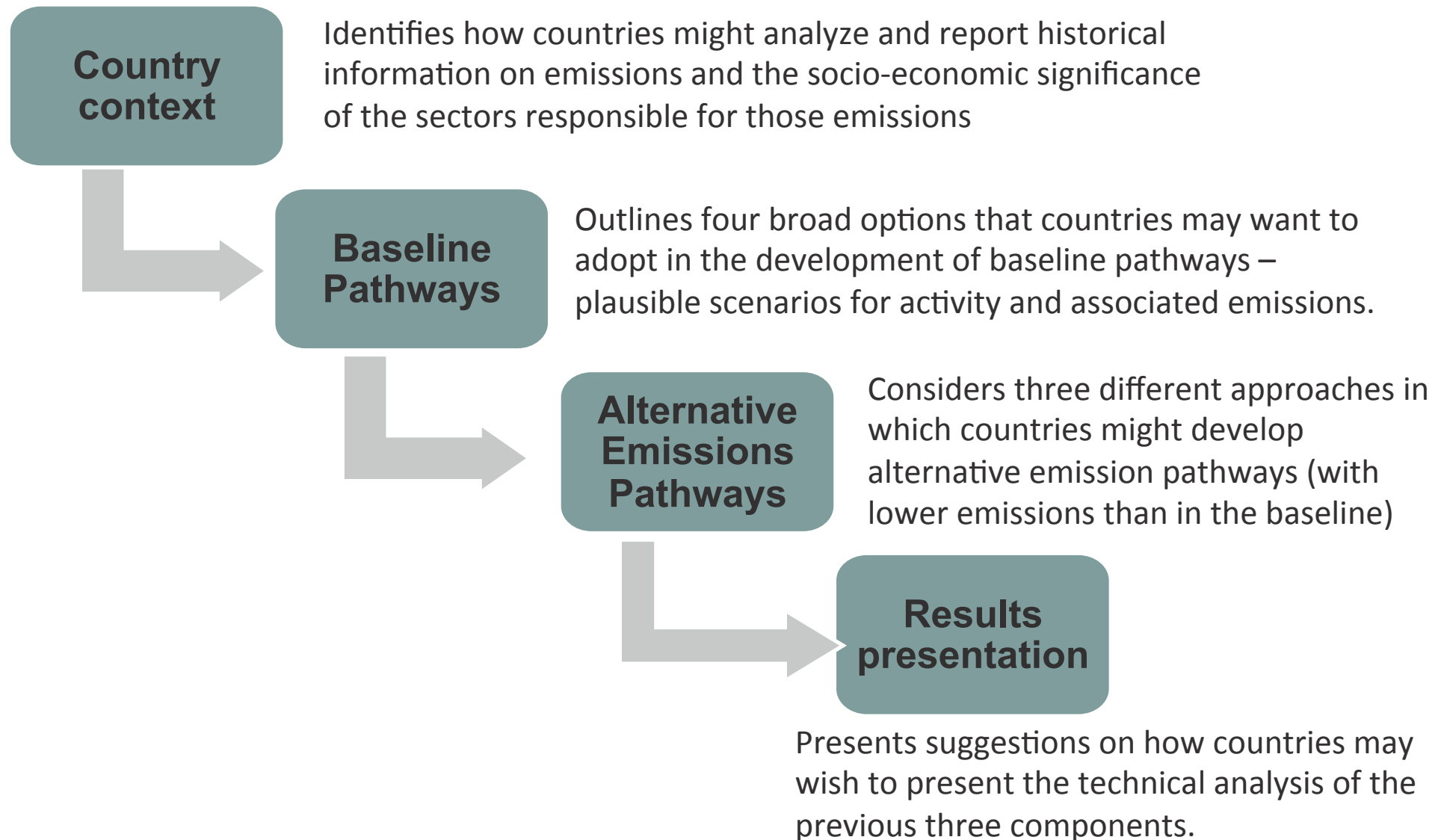
Understanding economy-wide impacts of mitigation options and enabling policy instruments

Checklist: good practice guidance for development and analysis of mid- and long-term emissions scenarios



- Checklist proposes a common framework to foster mutual understanding of approaches and basic principles
 - it aims at facilitating transparency and comparability of analytical approaches, technical methodologies and processes used by countries to construct and present post 2020 mitigation scenarios
- It provides suggestions on methodological approaches, data sources, models and analytical tools, and presentation of results (flexible menu of latest analytical tools)
 - good practices are highlighted together with transparent processes;
 - includes tools for both, sector and economy-wide analysis.

Checklist: four building blocks



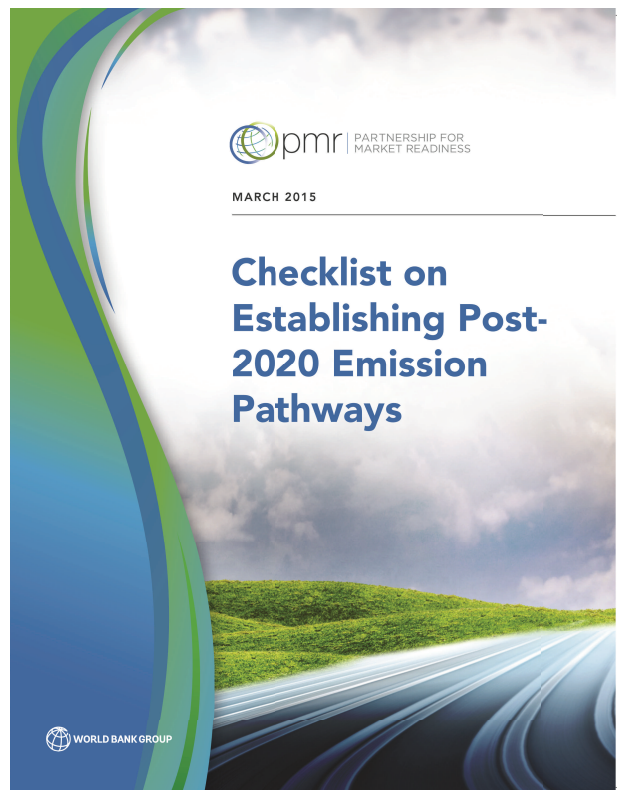
Each component follows a similar structure...

- **Key issues and questions**
 - Contains discussion of approaches and suggested questions to cover
- **Models and analytical tools**
 - functions, features and structural assumptions and how different models and tools might be linked
- **Data and assumptions**
 - sources, filling gaps and how they link to the models and analytical tools
- **Dealing with uncertainty**
- **Results reporting**
 - suggestions on what can be reported and methods of aggregation and presentation

	Analytical approaches available	Analytical techniques available (further breakdown)	Key observations about techniques	Data options/ sources
<i>What are plausible alternative emission reduction scenarios?</i>	1. Assessment of technical abatement opportunities and selection of scenarios	a) Optimisation models like MARKAL-TIMES	Comprehensive approaches that identify dynamically optimal emission mitigation strategies and links between different options. However, detailed data	Depend on particular modelling option but MARKAL models require energy use by source, electricity generation by source, energy use by activity and sector, heating use by sector and activity and, if transport
		b) Bottom-up modelling techniques to identify opportunities (as appropriate supported by diagnostic tools and software packages like MacTool or TRACE)	missing synergies between ER opportunities Risk of misinterpretation of results unless clarity over issues such as i) assumed speed of diffusion, ii) discount rates; iii) extent to which institutional barriers have been taken into account.	bespoke data on emission intensities of different options, likely penetration rates, costs of different technologies. May be possible to make use of existing studies with ad hoc adjustments.
		c) Top-down models such as CGE models	Takes into account interaction between different sectors and policies. Can be linked to results from bottom-up models.	Requires detailed input/output database with energy use and emissions, and information about substitution factors, embedded in a suitable economic modelling framework.
		d) ...		

Sample summary table
Matching key questions with analytical techniques

This checklist will be available online at PMR website



THANK YOU FOR YOUR ATTENTION!

FOR MORE INFORMATION ON THE PARTNERSHIP
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CIII – Combining analysis of abatement options and enabling policy instruments for more robust assessment

