

Overview paper of new TNA and TAP reports of the Phase II TNA project

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1. Background

- The rolling workplan of the TEC for 2016-2018 includes an activity to provide an overview of new TNA and TAP reports of the Phase II TNA project and to prepare such an overview paper. The TEC TNA task force has reviewed the Phase II TNA and TAP reports and prepared an overview paper of these reports for consideration and possible action by the TEC at its seventeenth meeting.



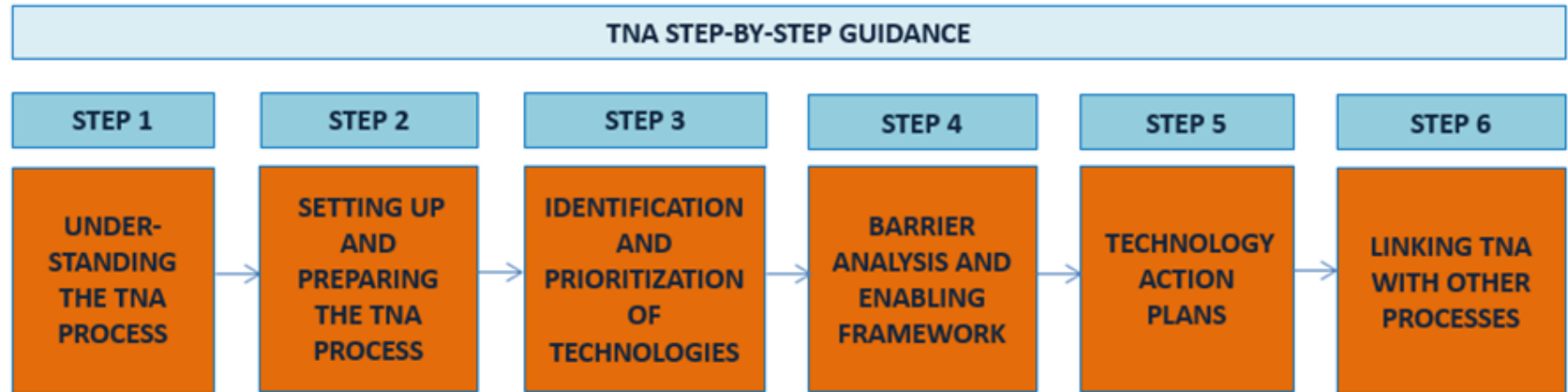
2. Overview of the TNA guidance

- The methodology of the TNA process is organized around three main activities:
 - a) Identifying and prioritizing mitigation and adaptation technologies for selected sectors.
 - b) Identifying and analyzing the barriers that hinder the successful deployment and diffusion of the prioritized technologies, including its enabling framework.
 - c) Creating, based on the inputs obtained from the previous two steps, Technology Action Plans (TAPs) – medium or long-term plans to support implementation of the identified technologies. The TAPs outline activities that are further elaborated as project concept notes.



2. Overview of the TNA guidance

- TNA step by step guidance



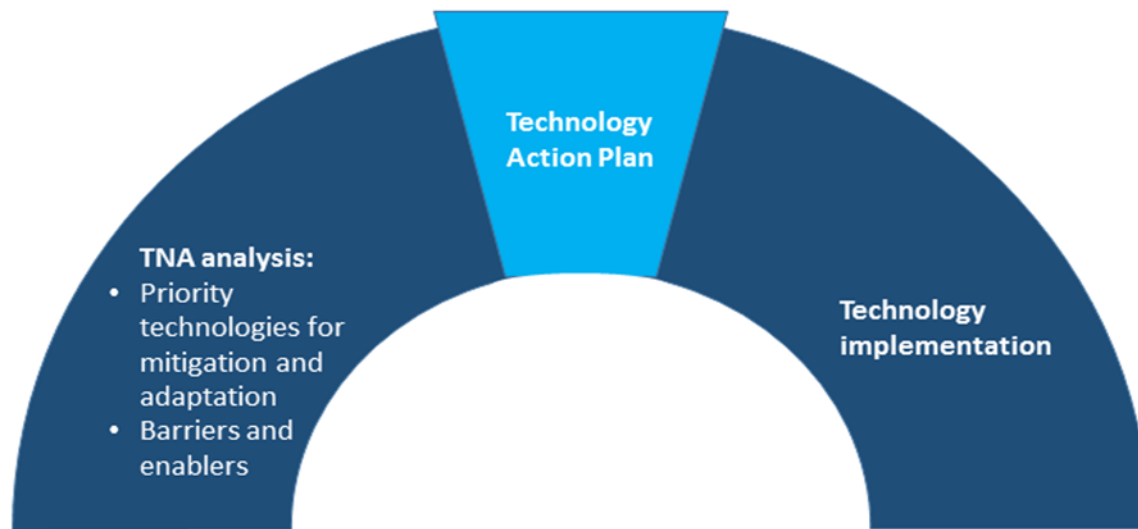
2. Overview of the TAP guidance

- Reflecting the good work of developing countries on their TAPs as the part of the global TNA project Phase I, the TEC has decided to strengthen the process of TAP preparation and developed a comprehensive guidance for preparing a Technology Action Plan.
- The TAP guidance was designed to assist countries in making informed decisions in their technology choices, to articulate their own technology actions, and to formulate relevant and appropriate activities. The TAP guidance offers a systematic approach for conducting TAPs, to address barriers and accelerate development, transfer, deployment and dissemination of priority technologies.
- The TAP was designed to identify concrete actions needed for successful technology implementation and develops an indicative investment technology inclusive proposals, which can be considered for funding by private and public funders.



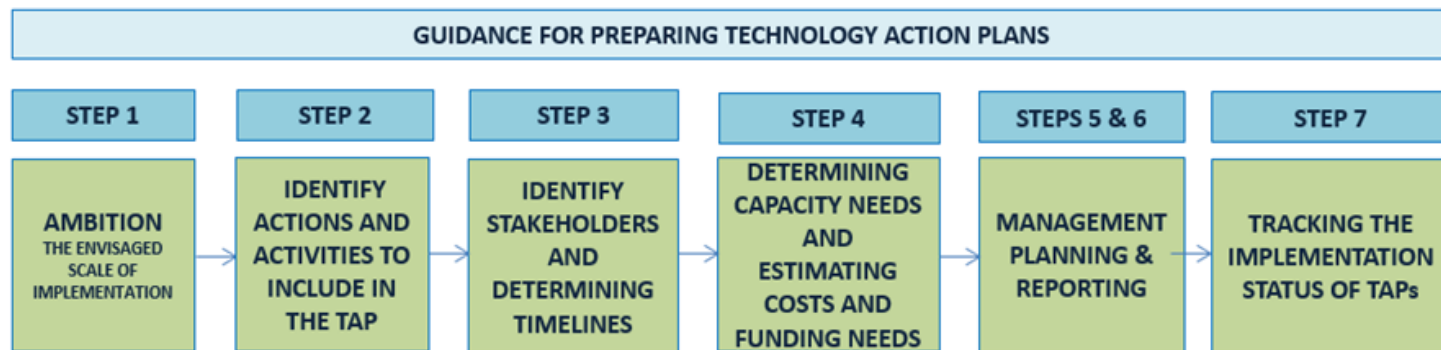
2. Overview of the TAP guidance

- TAP as “keystone” between TNA analysis and technology implementation



2. Overview of the TAP guidance

- Structure of the TAP guidance



3. Comparing the TNA Phase II reports with the guidance

- Countries followed the guidelines closely setting up and preparing the TNA process.
 - A total of 36 TNA reports have been submitted by 19 participating non-Annex I countries in Phase II of the technology needs assessment project. Of those, all of the countries prepared TNA reports on adaptation and 17 were prepared for mitigation. 12 countries prepared the reports in English, 4 in French and 3 in Spanish.
 - For mitigation a list of 250 technologies was prepared in 17 TNA mitigation reports. After weighting and scoring 119 technologies were prioritized for further analysis.
 - For adaptation, a total of 310 technologies were considered for prioritization in the 19 TNA adaptation reports. After weighting and scoring 122 technologies were prioritized for adaptation in Phase II.
 - Regarding the Barrier Analysis and Enabling Framework (BAEF) reports, a total of 28 BAEF reports were submitted, half of them for mitigation and half of them for adaptation.
 - A total of 24 Technology Action Plan Reports have been prepared by 13 countries taking part in the global TNA project Phase II. Of those, 12 have been prepared for mitigation and 12 for adaptation.
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4. Comparing the TAP Phase II reports with the guidance

- Countries followed the guidelines closely setting up and preparing the TAP process.
- A total of 24 TAP reports have been prepared by 13 countries taking part in the global TNA project Phase II. Of those, 12 have been prepared for mitigation and 12 for adaptation.
- From 130 TAPs, 63 were in mitigation sector, and 67 in adaptation sector.
- All TAPs were based on the technology prioritization in the TNA process, all TAPs were driven by demand based on country priorities, as revisited by domestic stakeholders, and all TAPs followed on the analysis of market barriers and enablers.
- A majority of TAPs aimed at deployment and diffusion of priority technologies at a larger scale within countries, while some of the TAPs were designed to prepare for an implementation of a single project.



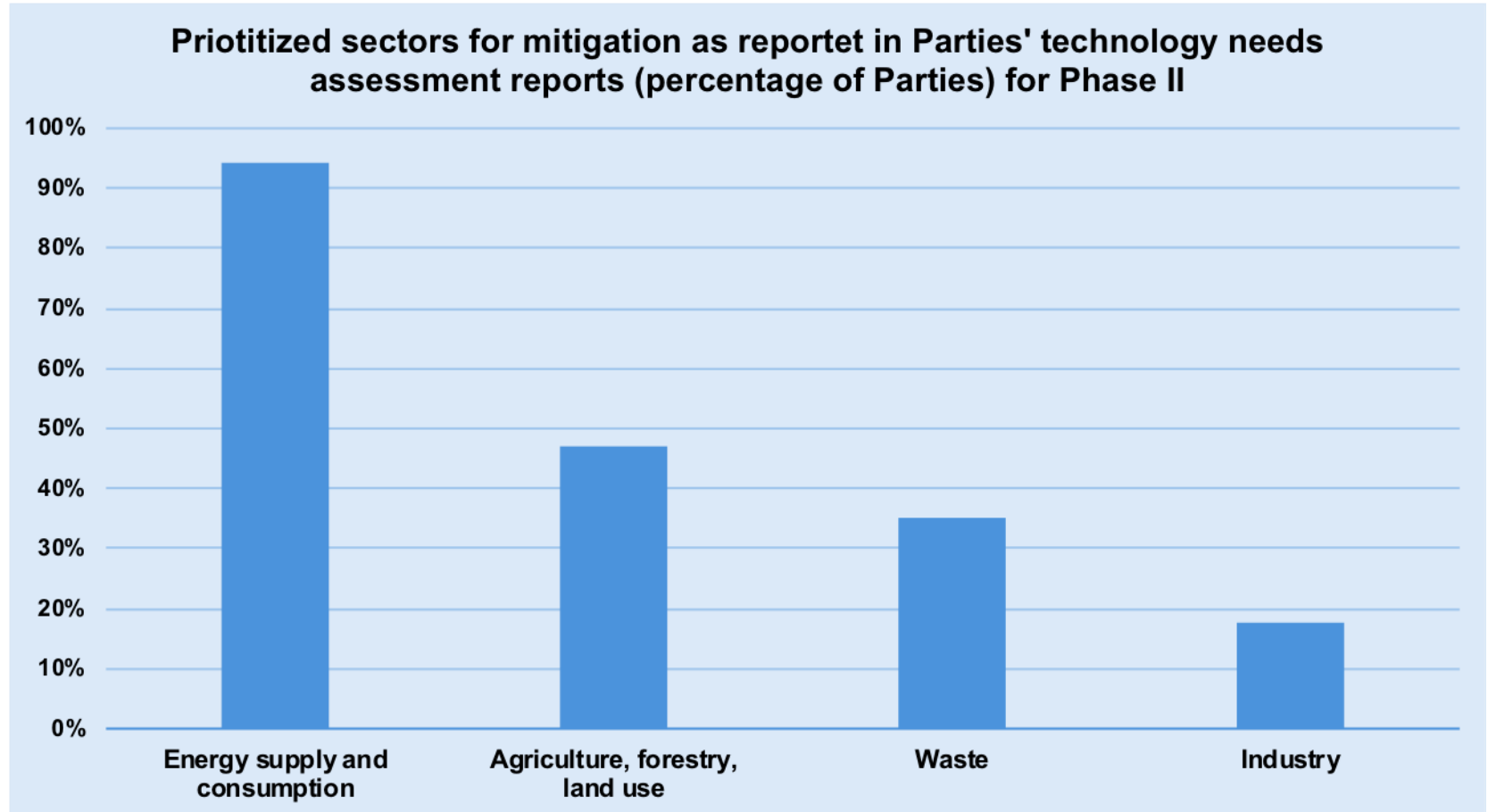
4. Comparing the TAP Phase II reports with the guidance

- Most of TAPs included a cost indication per action plan and per each activity included in the action plan, including indication of potential domestic and international funding sources.
- Almost all TAPs contain either technical or institutional capacity building, including awareness campaigns, trainings to enhance: human skills, technology operation and maintenance, data collection and organization. Financial incentives or allocating and rising budget is also included in almost every TAP.
- TAPs indicated roles of various stakeholders in the process of their implementation, including which actors will be involved for each activities.
- Most of the TAPs included indicators for monitoring the implementation of action plan, success criteria, possible risks and benefits of the implementation of the TAPs.



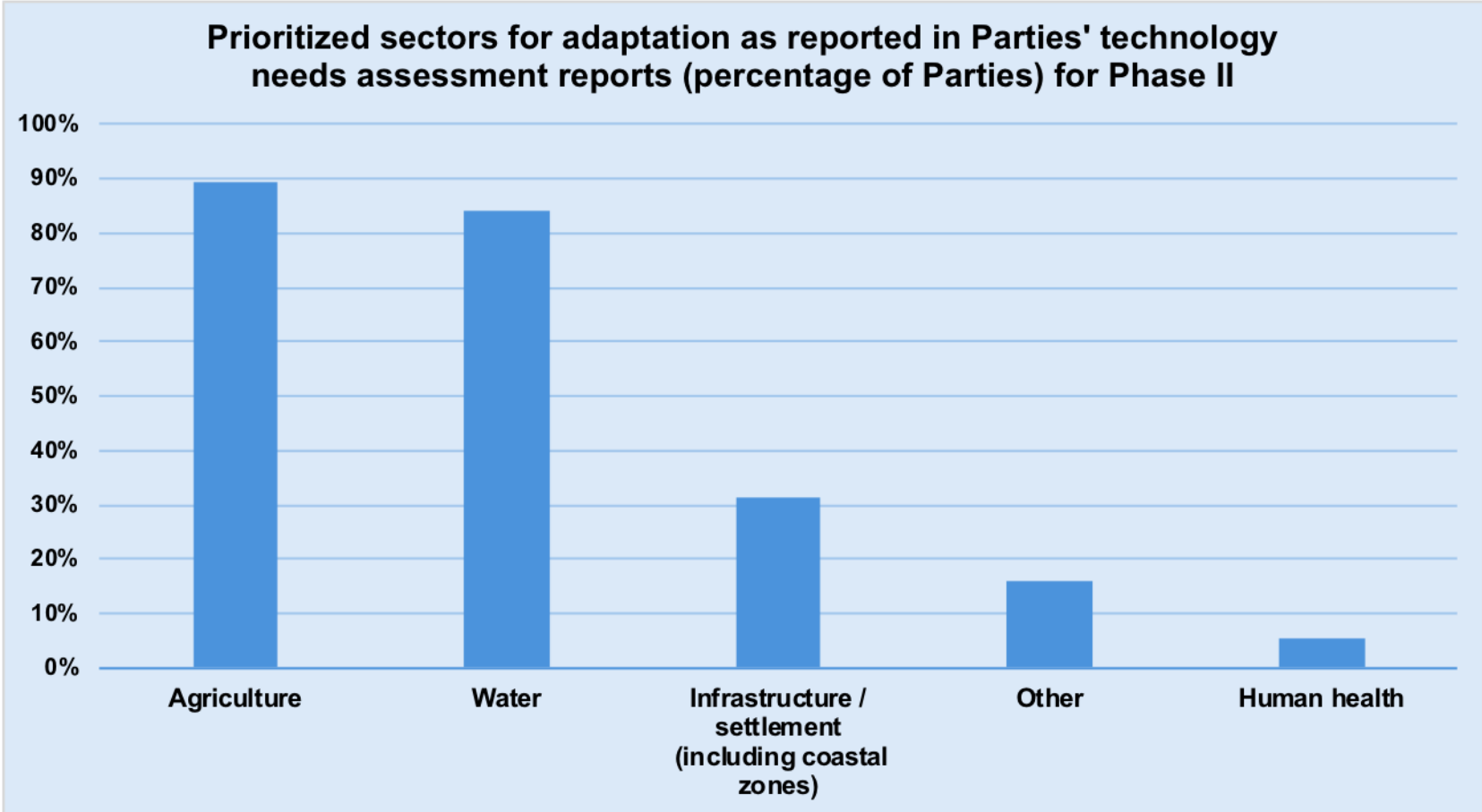
5. TNA reports overview

a. Sectors and technologies identified, prioritized



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a. Sectors and technologies identified, prioritized

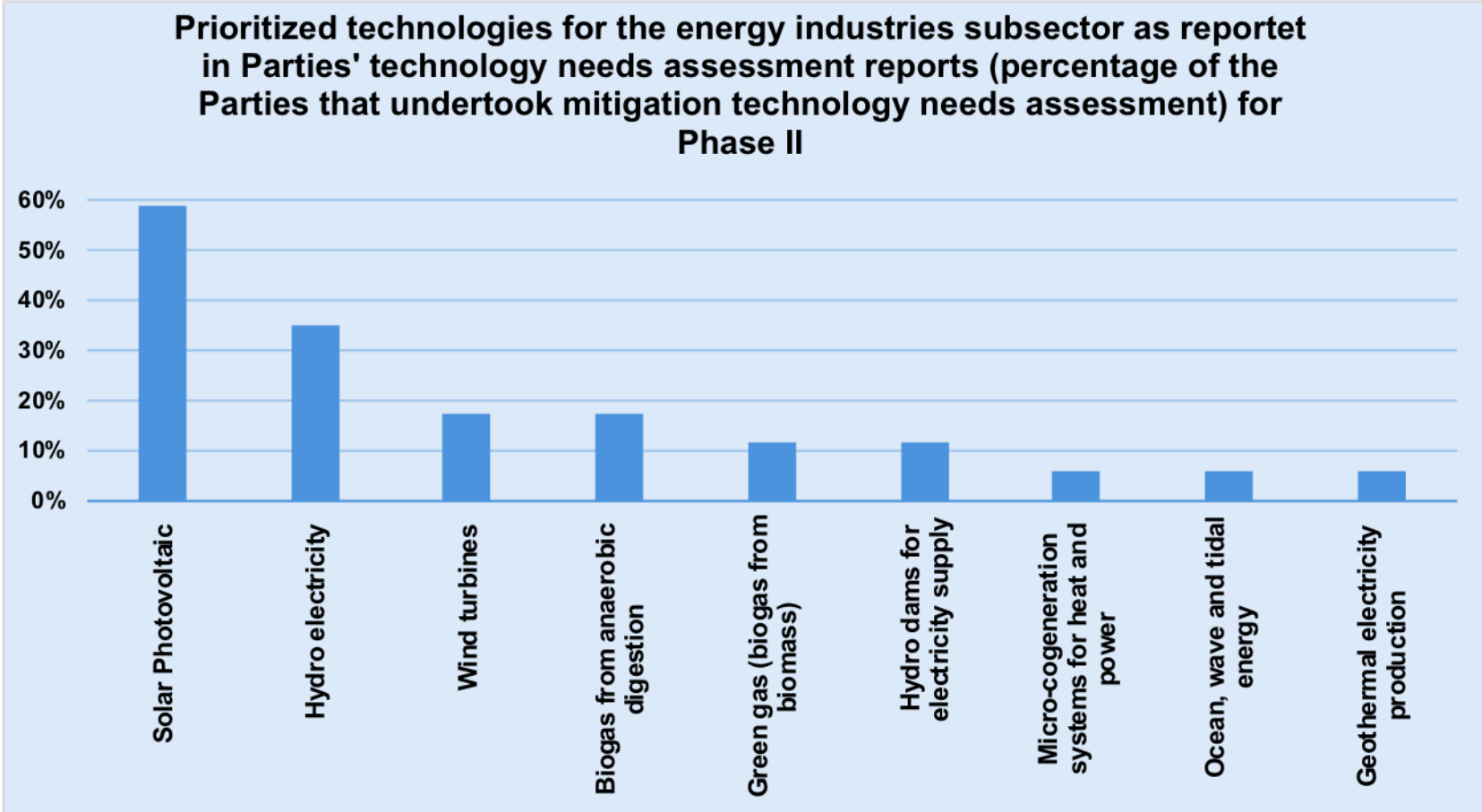
Technologies prioritized for mitigation

- Within the energy sector (the most prioritized mitigation sector), the majority of the technologies prioritized for the energy industries subsector were related to electricity generation. Solar photovoltaic and hydro electricity were the most prioritized technologies, prioritized by 58, respectively 35 per cent of the Parties that undertook mitigation TNAs.



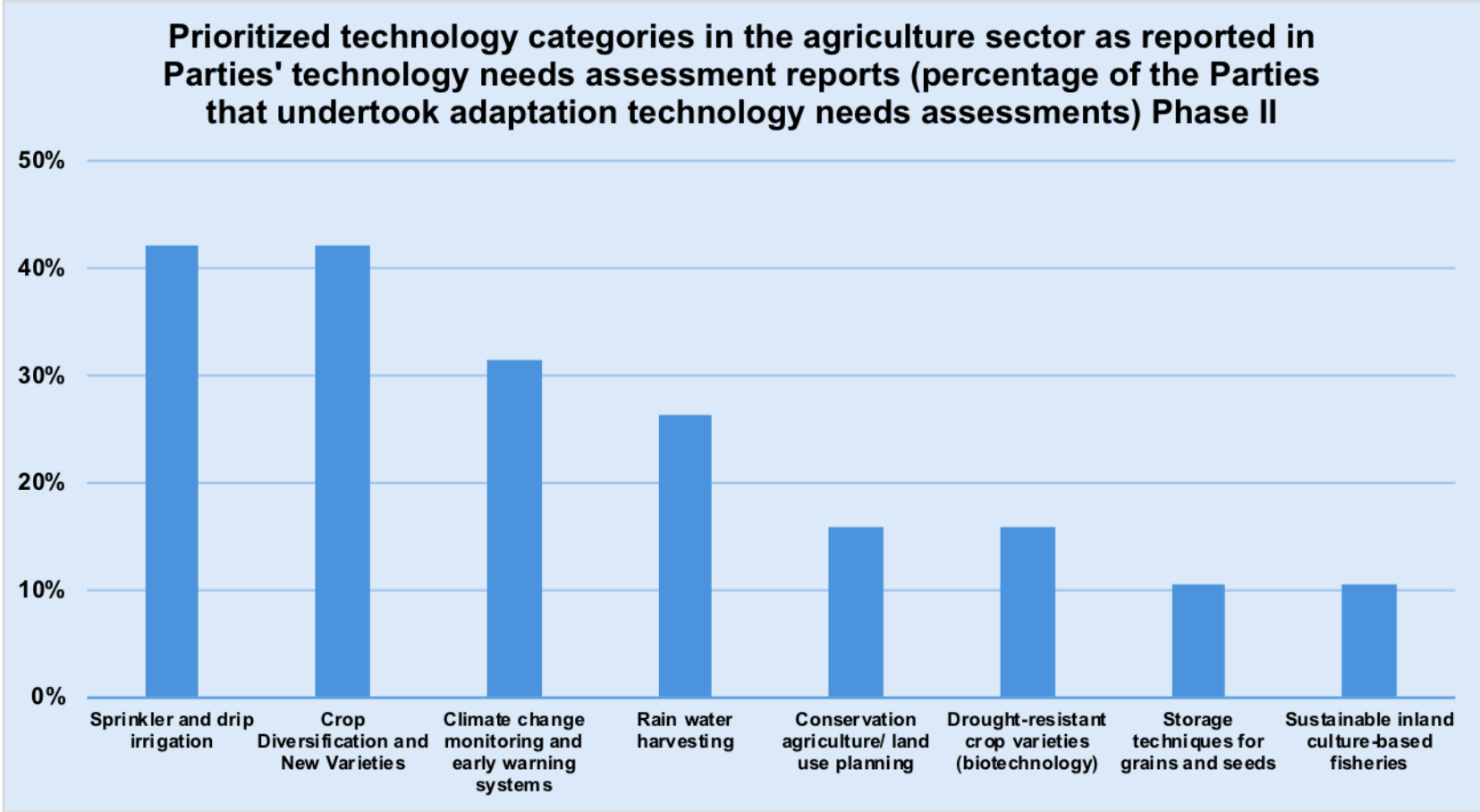
5. TNA reports overview

a. Sectors and technologies identified, prioritized



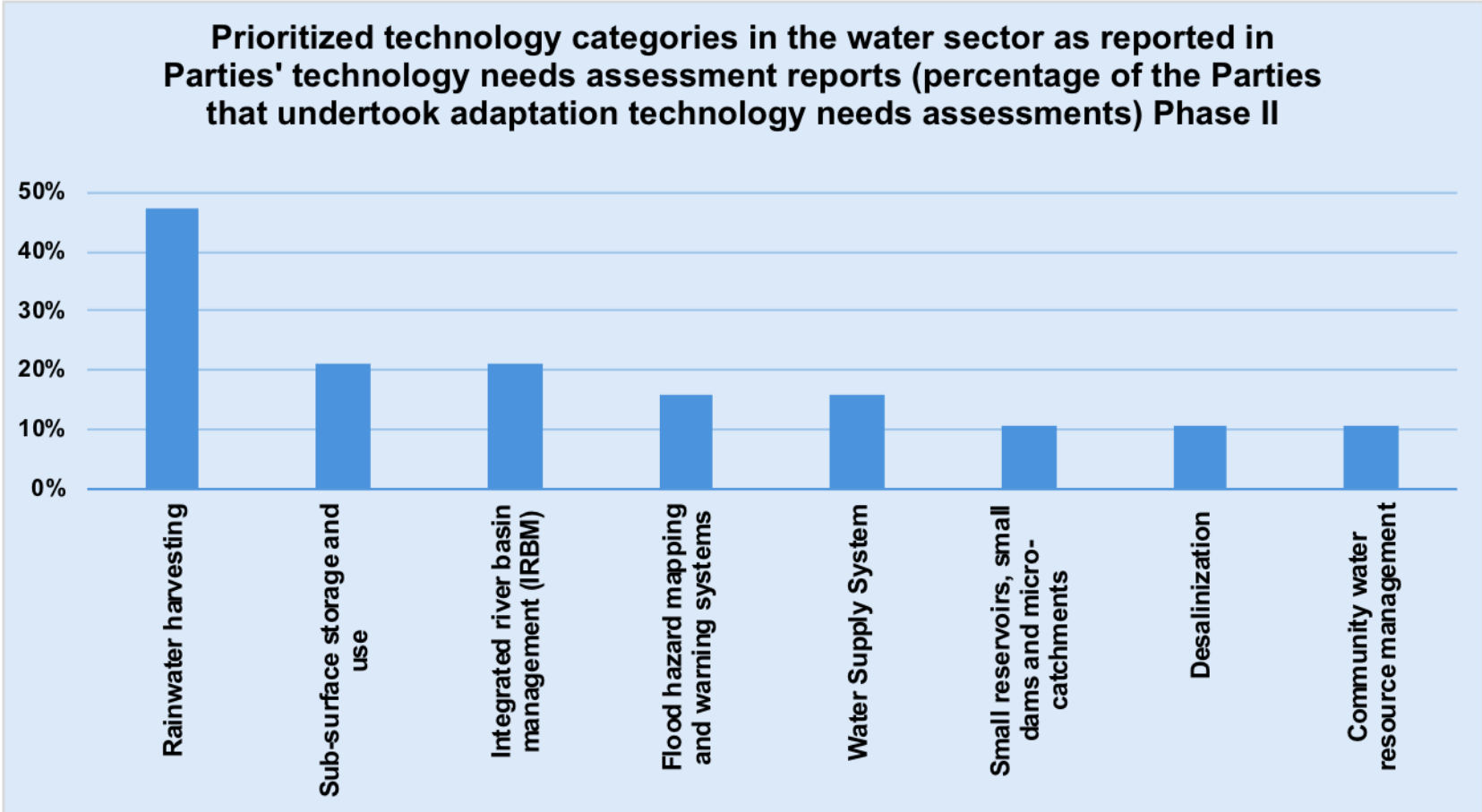
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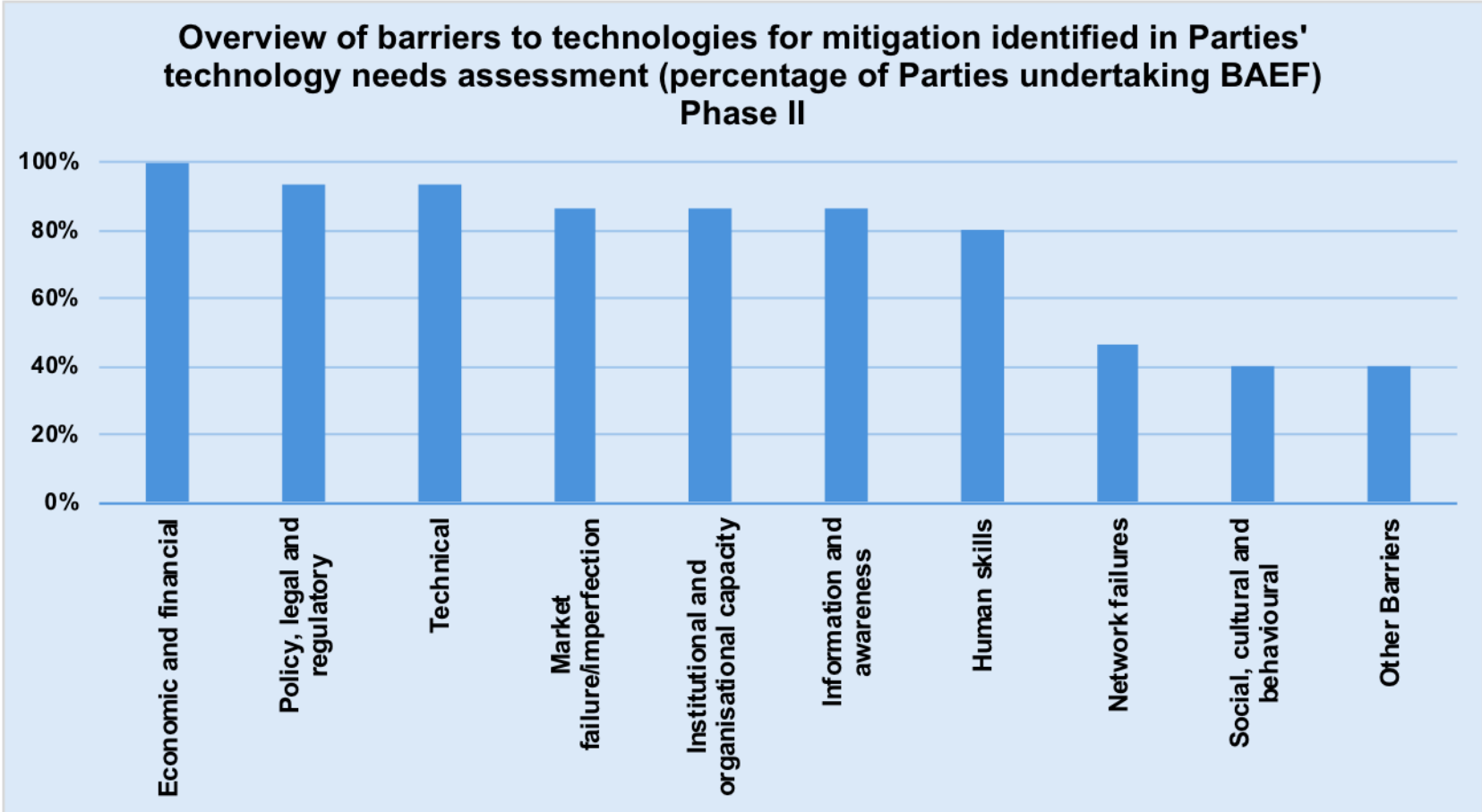
b. Barriers and enablers identified, prioritized

- Following the prioritization of technologies, most of the Parties identified and analyzed technology-specific barriers to the development, deployment, transfer and diffusion of their prioritized technologies and identified possible measures required to overcome such barriers.
- Overall, irrespective of the sector, all of the Parties identified economic and financial barriers as barriers to the development and transfer of prioritized technologies for mitigation. More than 90 per cent of Parties, identified policy, legal and regulatory as well as technical barriers to the development and transfer of prioritized technologies.



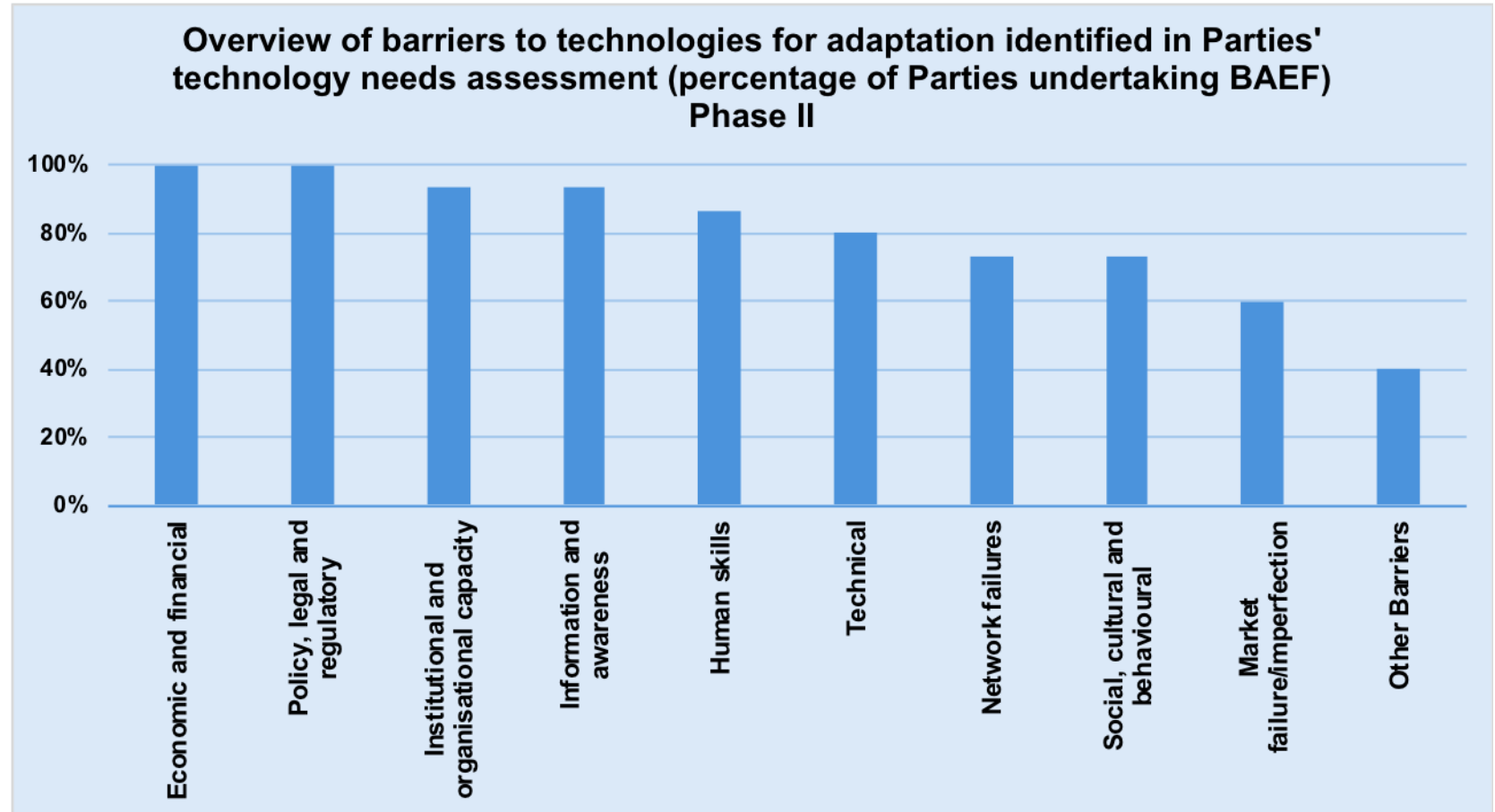
5. TNA reports overview

b. Barriers and enablers identified, prioritized



5. TNA reports overview

b. Barriers and enablers identified, prioritized



5. TNA reports overview

b. Barriers and enablers identified, prioritized

Enablers mitigation

- For mitigation, the most commonly mentioned enabler on a cross-sectoral basis was the measure to provide or expand financial incentives for the implementation and use of the prioritized technology. Another commonly mentioned measure was the formulation or updating of regulations, policies and standards related to the technology. The provision of capacity-building and the establishment of information and awareness programs to promote and develop capacity with regard to the specific technology were also mentioned frequently.



5. TNA reports overview

b. Barriers and enablers identified, prioritized

Enablers adaptation

- For adaptation, the most commonly mentioned enabler on a cross-sectoral basis was the measure to increase the financial resources available for the technology, by introducing or increasing the allocation in the national budget or identifying and creating financial schemes, funds, mechanisms or policies. Another commonly mentioned measure was to strengthen the current relevant institutions, via increased human resources and facilities, in order to accelerate the research and development of the technology.



6. TAP reports overview

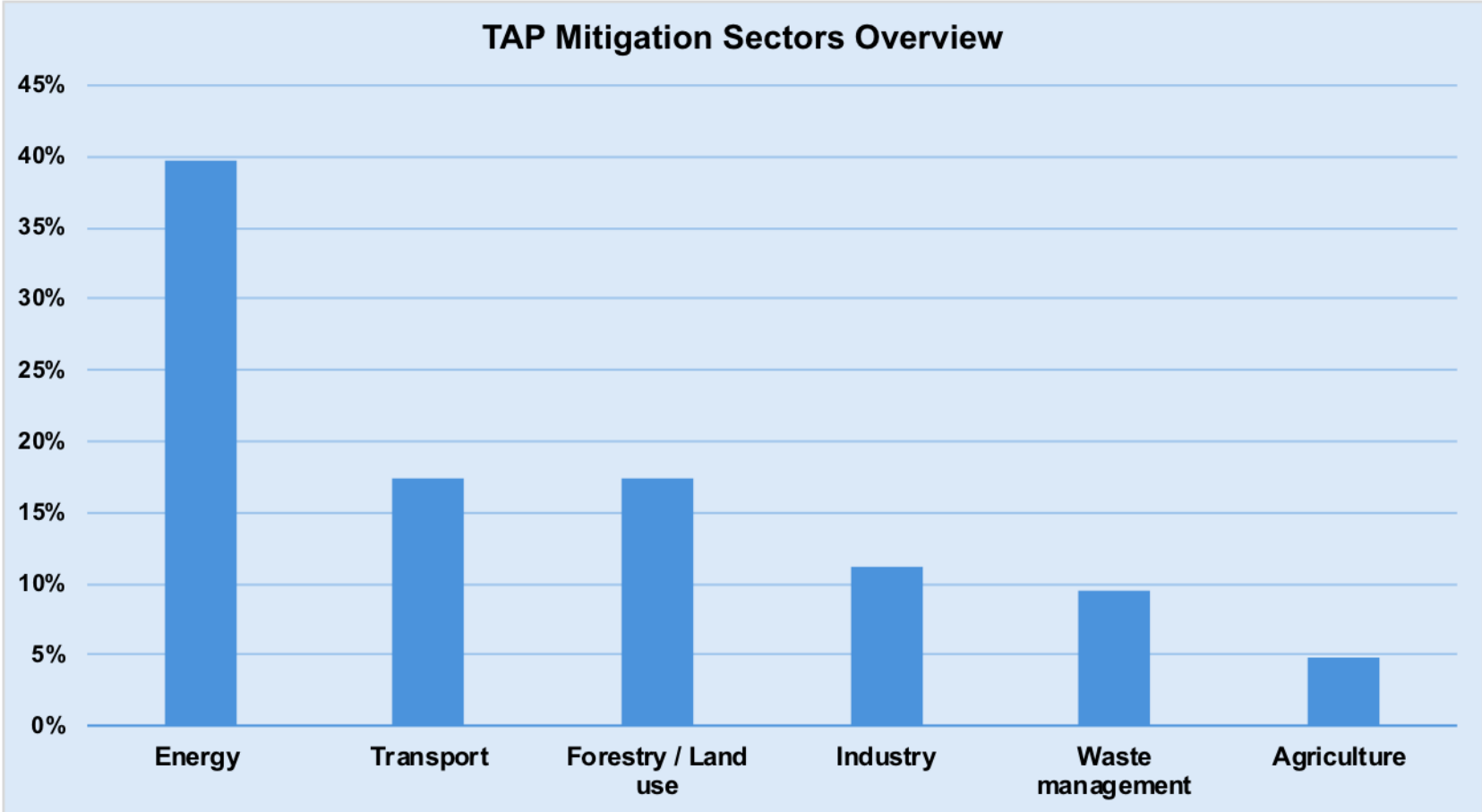
a. Mitigation technology action plans – identified sectors

- Energy was the dominant sector for mitigation TAPs in all regions. In total 25 out of 63 TAPs in mitigation were conducted by developing countries in the energy sector. TAPs were conducted in each region in transport and forestry sectors. Waste management and industry sectors were prioritized in Africa & Middle East and Asia & CIS regions. Agriculture sector was prioritized in Latin American & Caribbean countries.



6. TAP reports overview

a. Mitigation technology action plans – identified sectors



6. TAP reports overview

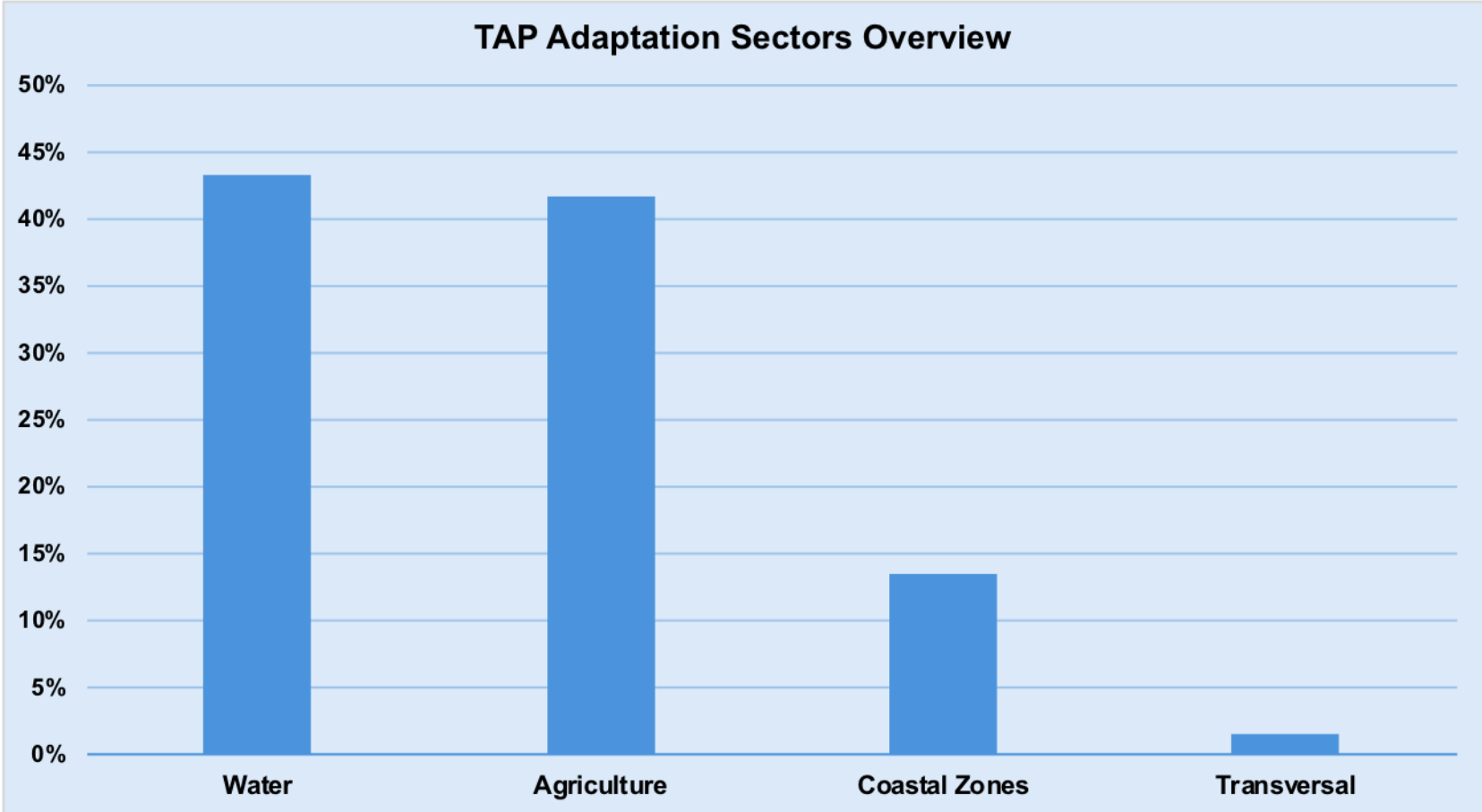
b. Adaptation technology action plans – identified sectors

- In all regions for adaptation almost 30 TAPs were conducted in water sector and almost 30 in the agricultural sector. Both sectors were prioritized in all regions. TAPs including coastal zones sector were conducted in Africa & Middle East and Latin America & Caribbean. The so called transversal sector was prioritized once in Latin America & Caribbean countries.



6. TAP reports overview

b. Adaptation technology action plans – identified sectors



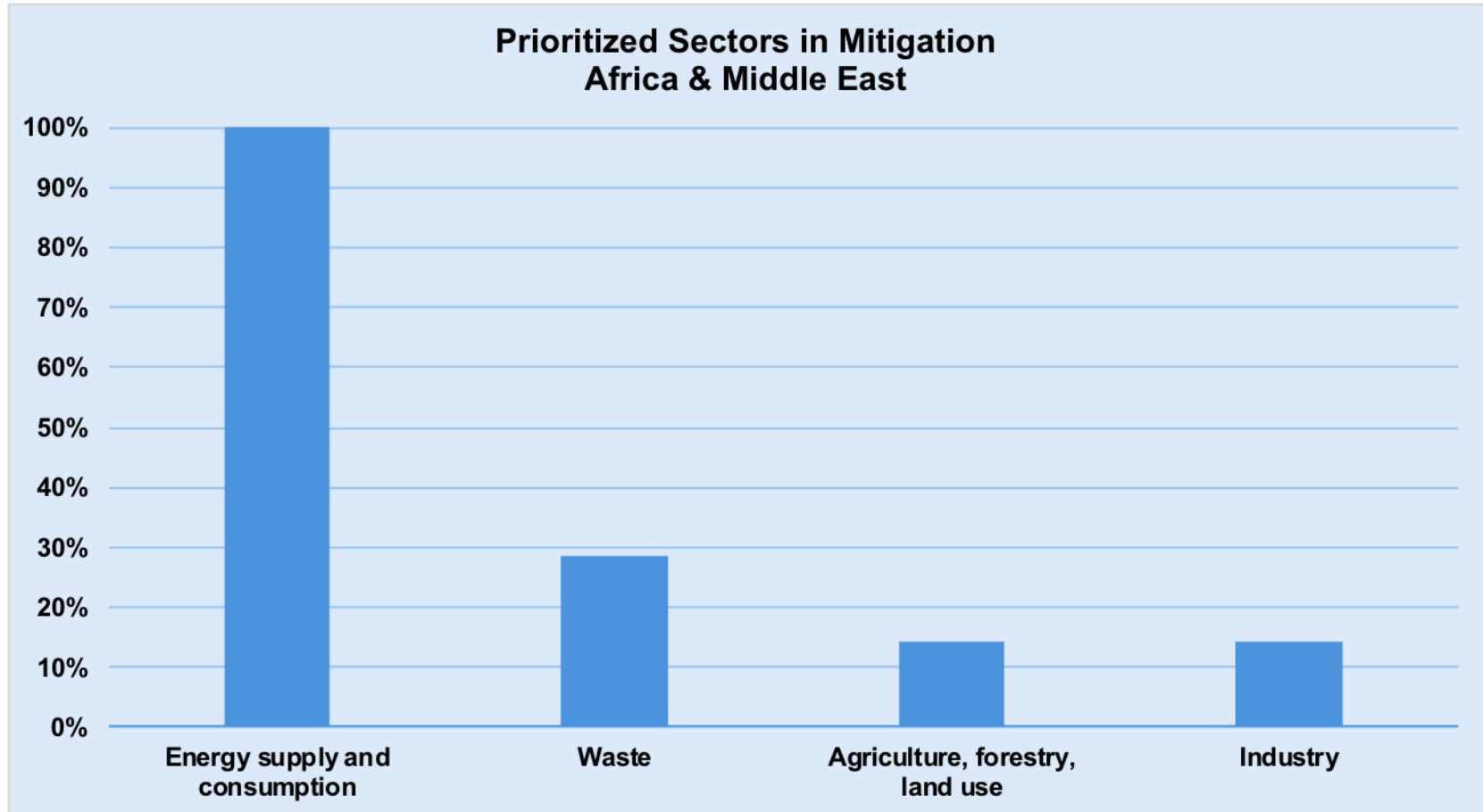
7. Regional analysis of the findings - Mitigation and adaptation sectors prioritized in TNAs

Mitigation and adaptation sectors prioritized in TNAs divided into the regions:

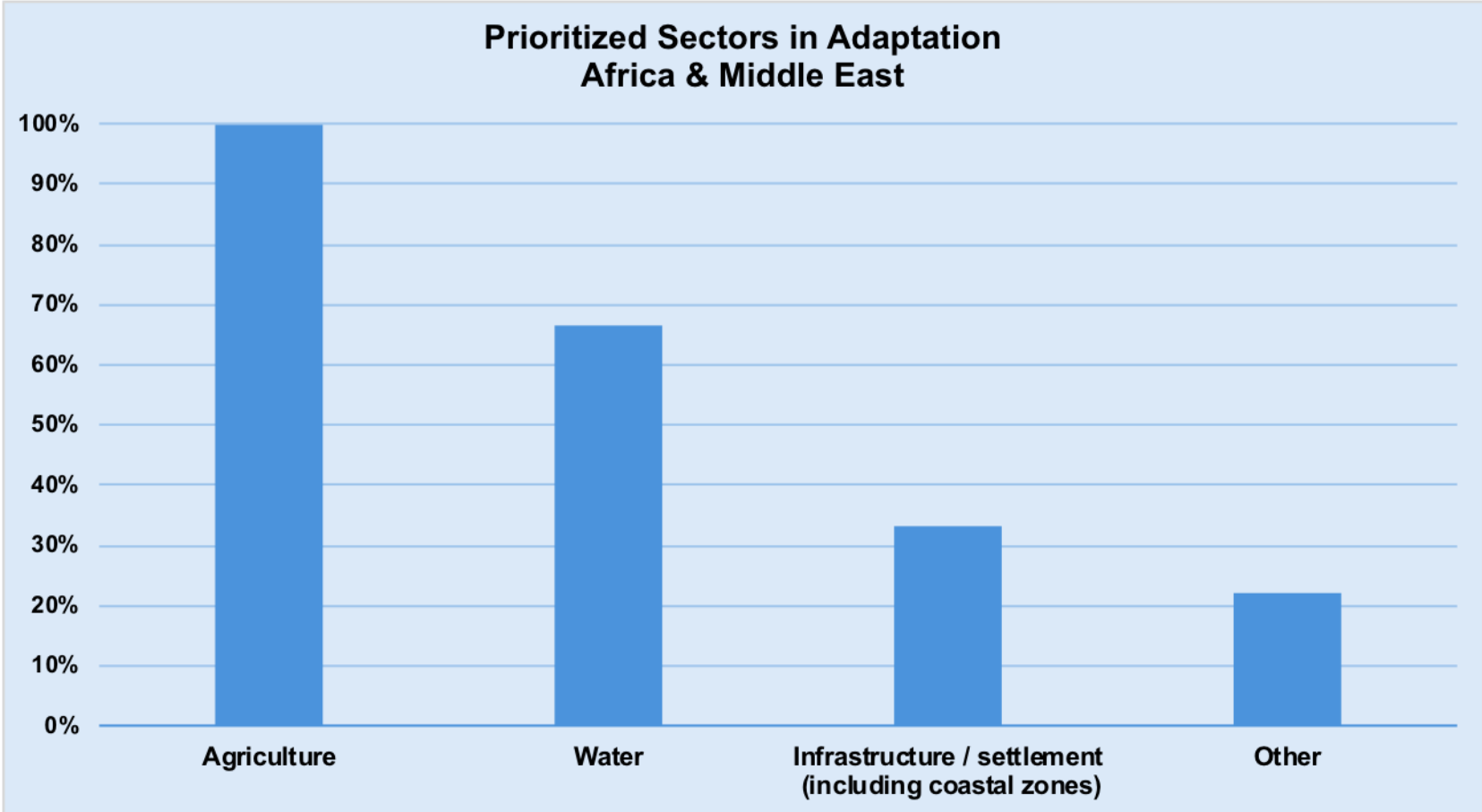
- **Africa & Middle East – MTG and ADP**
- **Asia & CIS – MTG and ADP**
- **Latin America & Caribbean – MTG and ADP**



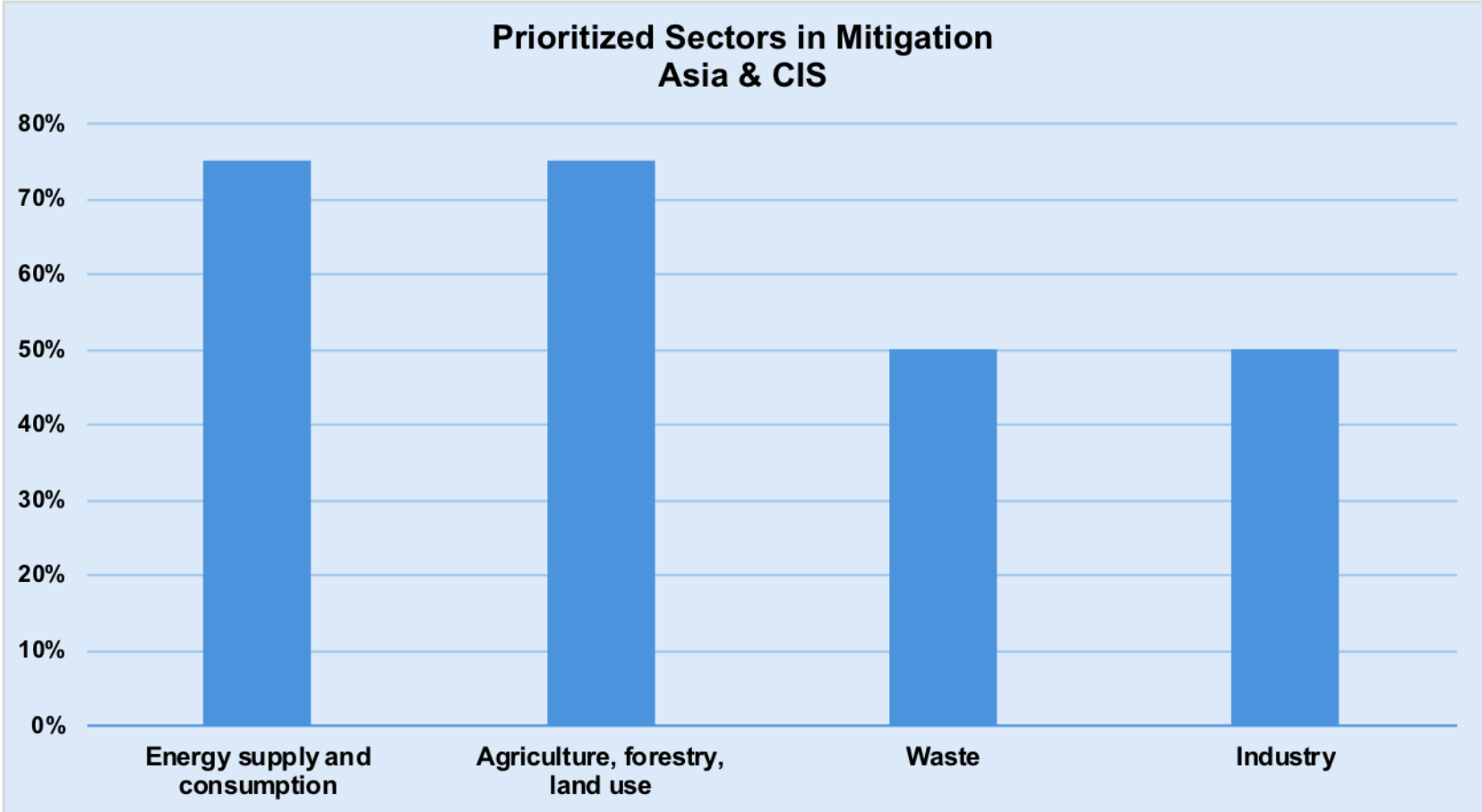
7. Regional analysis of the findings - Mitigation and adaptation sectors prioritized in TNAs



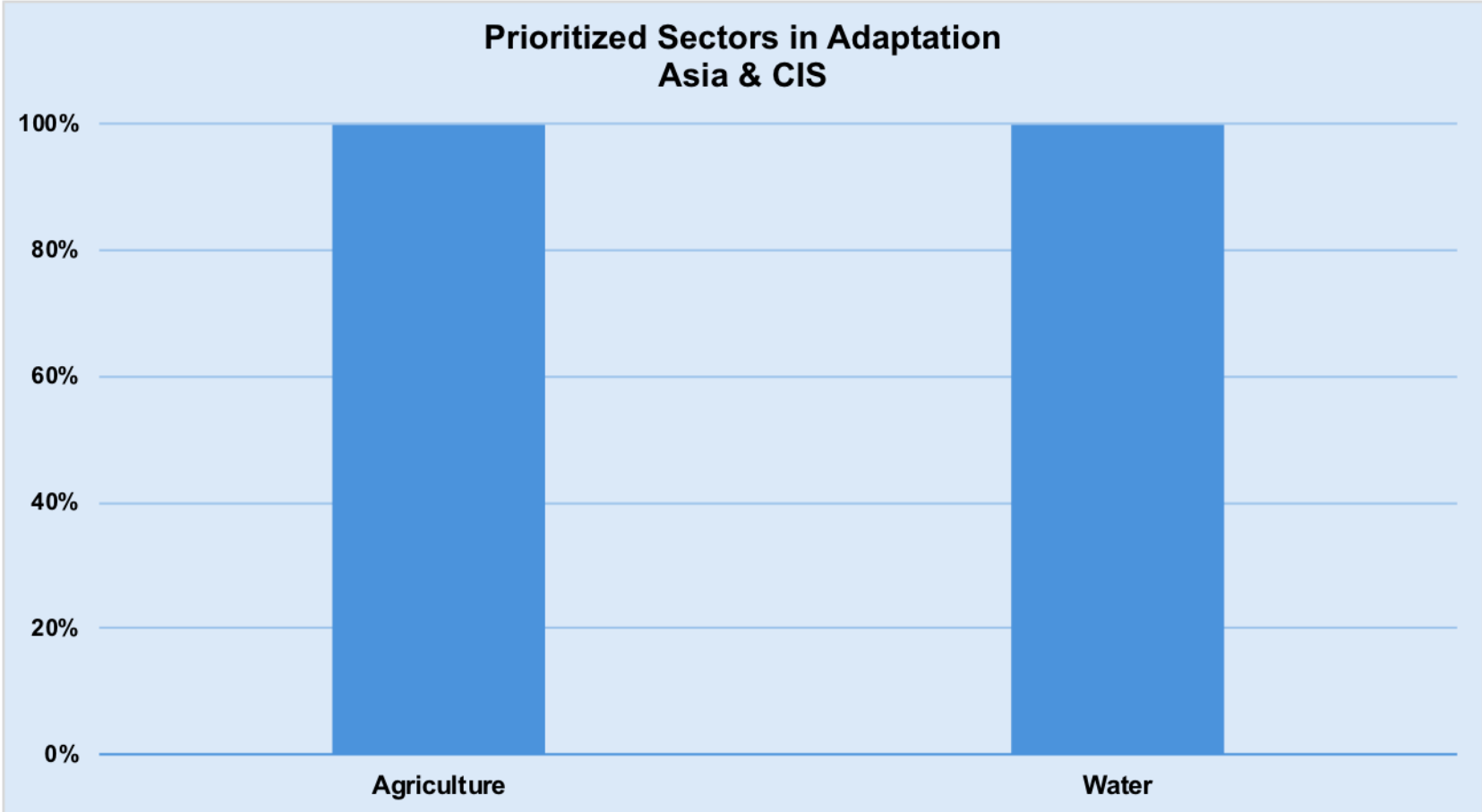
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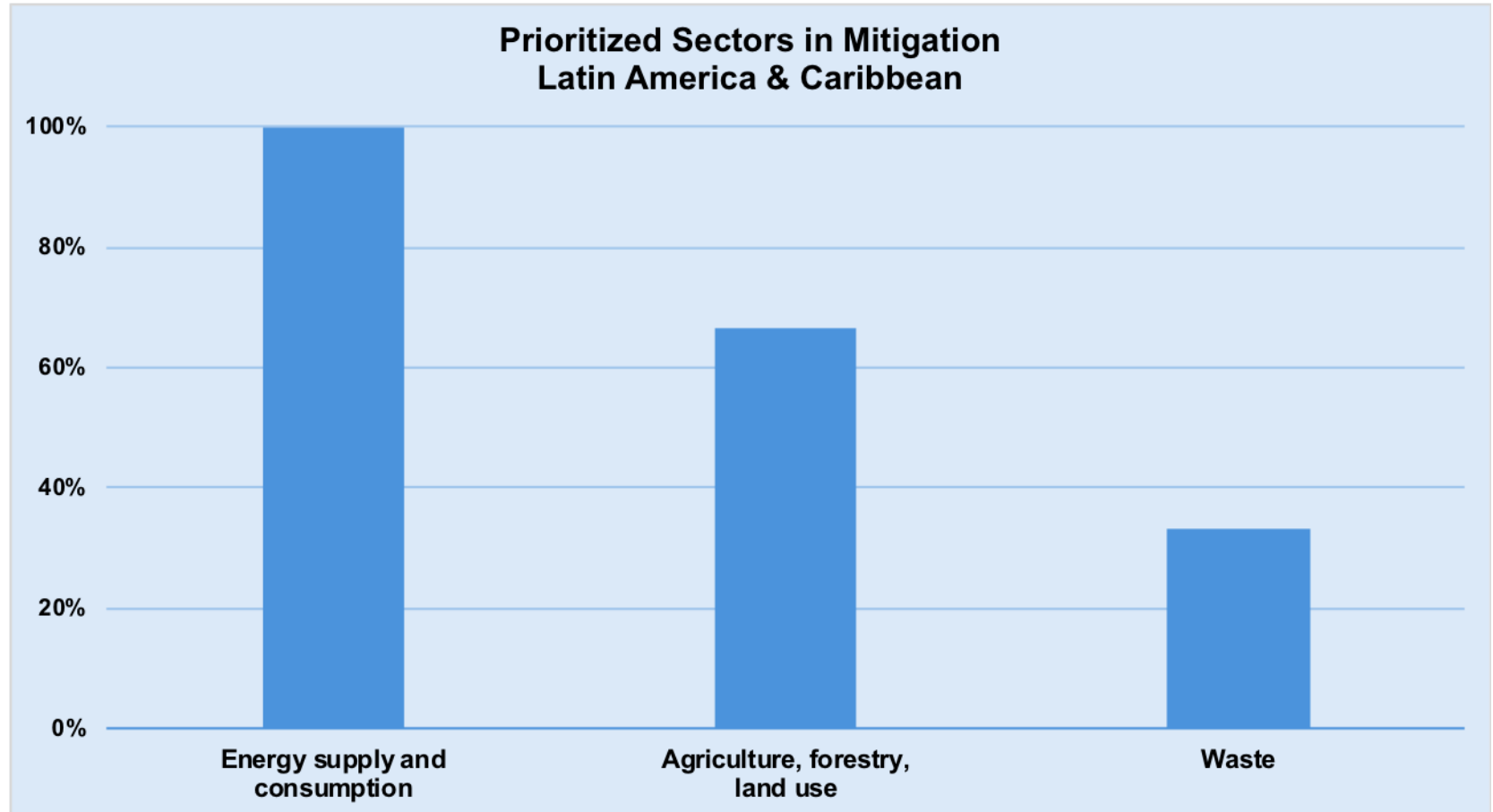
7. Regional analysis of the findings - Mitigation and adaptation sectors prioritized in TNAs



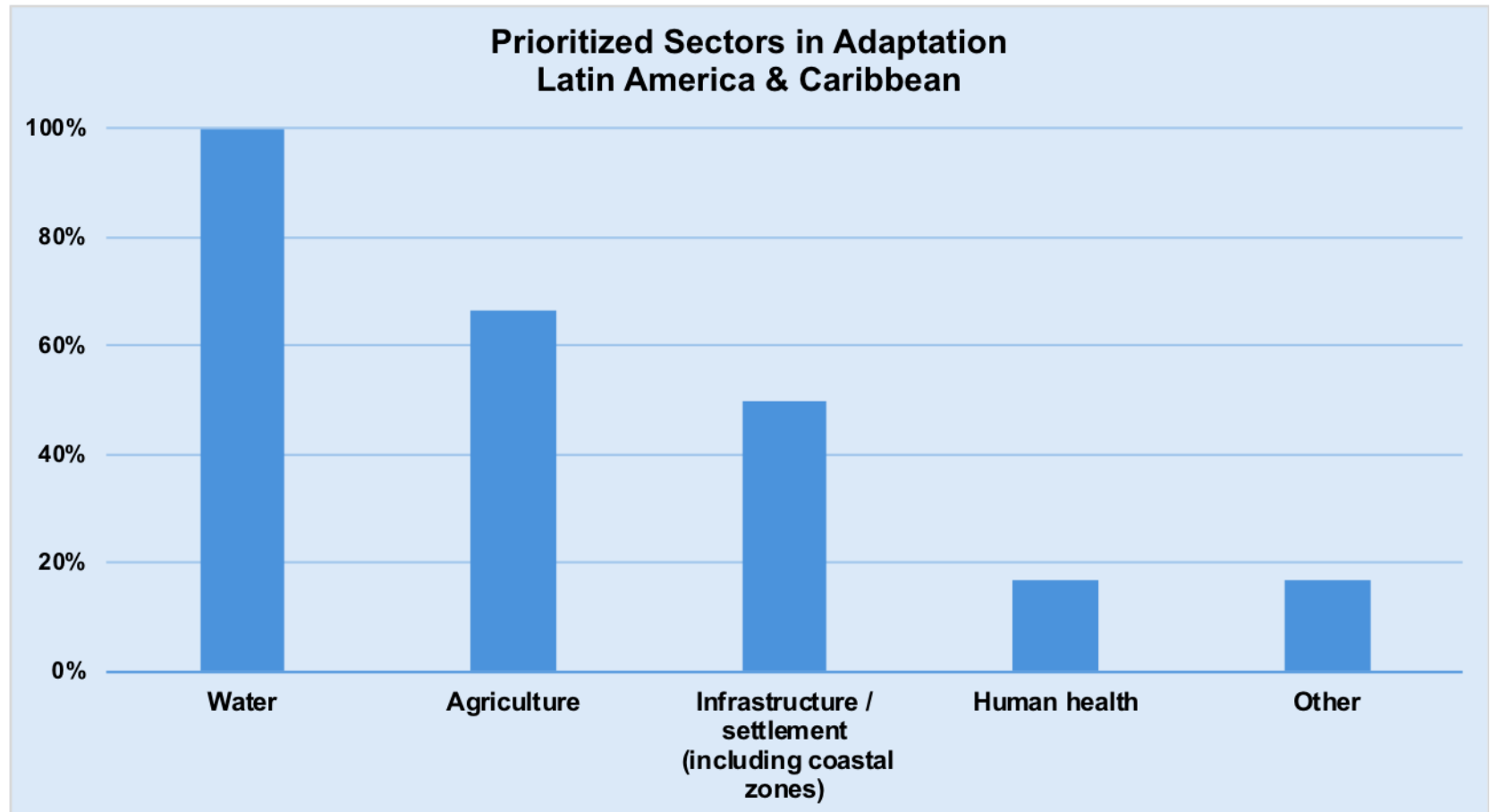
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7. Regional analysis of the findings - Mitigation and adaptation sectors prioritized in TNAs



8. Linkages between the TNA process and other mitigation/ adaptation processes

- Many of the Parties (almost 90 per cent) described possible interlinkages between TNAs and other domestic processes and other processes under the Convention. The majority of those Parties reported possible interlinkages between TNAs and existing domestic processes related to national sustainable development priorities and goals.
- One third of the Parties that prepared TNAs for either mitigation or adaptation reported that their TNAs referenced completed work on NAMAs and NAPAs. Some of those Parties identified outputs from their TNAs that could serve as inputs to the preparation of national communications, NAMAs or NAPAs.



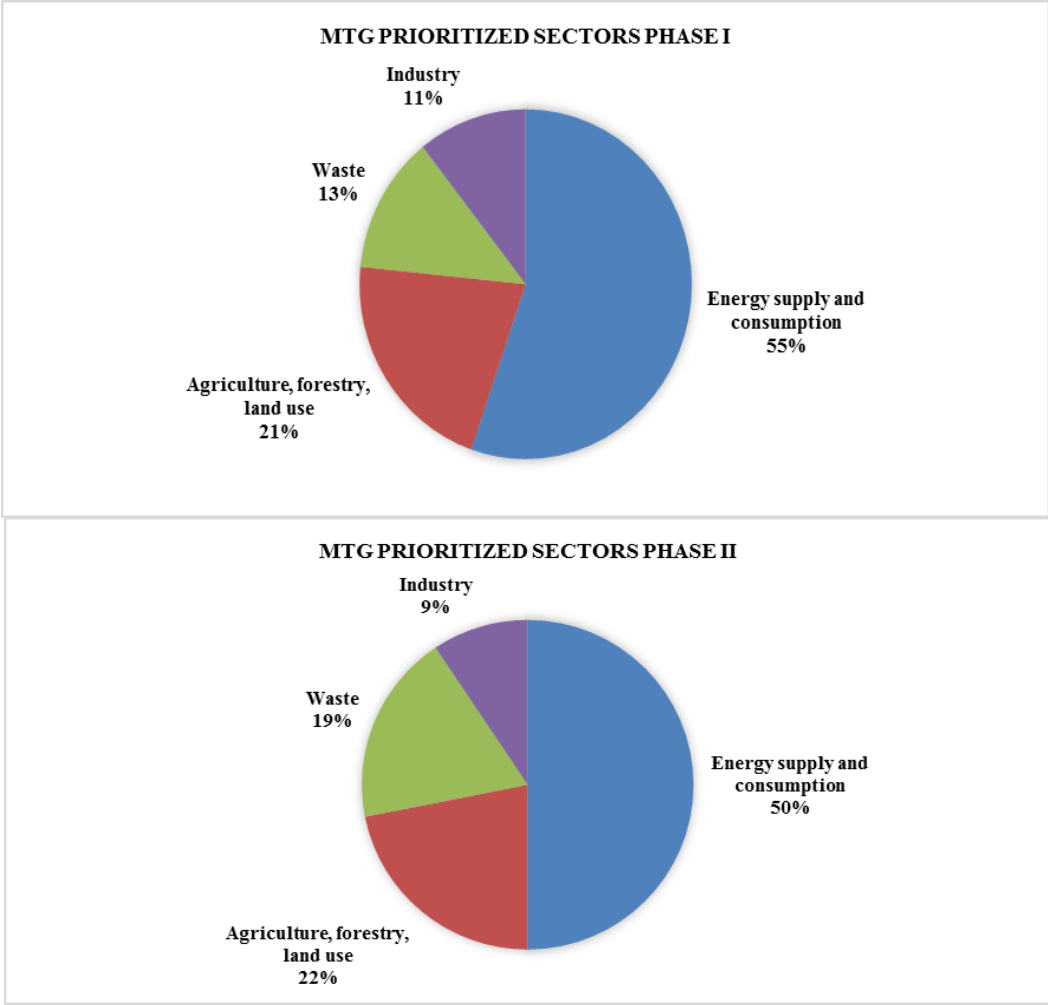
8. Linkages between the TNA process and other mitigation/ adaptation processes

- More than 60 per cent of Parties made reference or extracted information from their Intended Nationally Determined Contributions (INDCs) when preparing their TNAs for either mitigation or adaptation. Some countries used information from all three, National Communications, National Adaptation Plans and INDCs and used relevant information in order to better assess which sectors and technologies should be prioritized under the TNA process.
- Although not all of the Parties specified how their TNAs could build upon or provide input to other processes, it is clear that Parties seldom saw the TNA process as a stand-alone process. Instead, TNAs were often seen as complementing national policies and plans for mitigating GHG emissions and adapting to climate change.



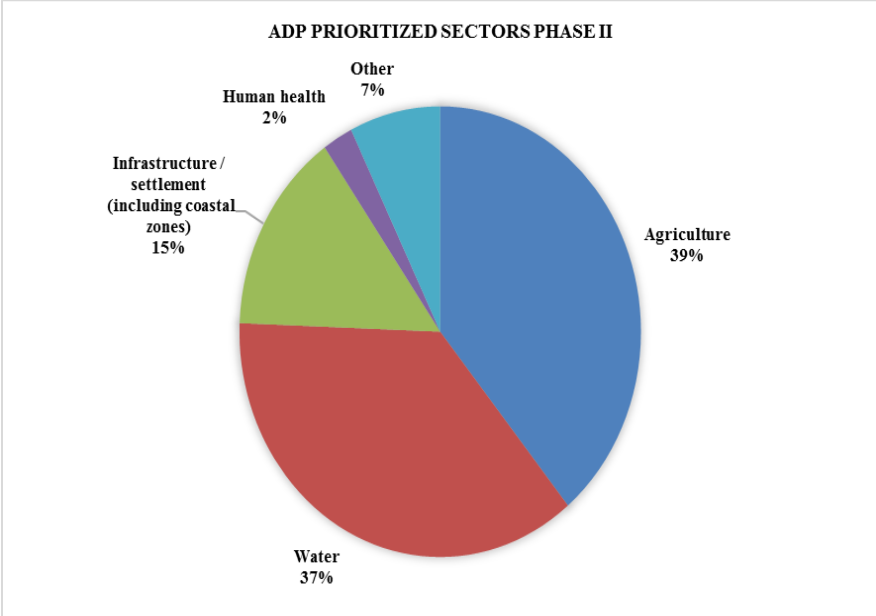
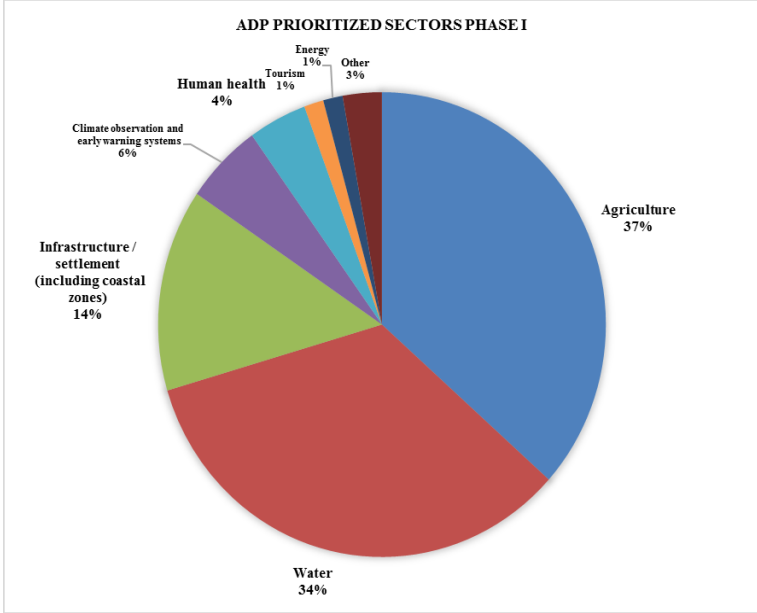
9. Comparing the findings with 3rd TNA Synthesis report

- Prioritized sectors Mitigation



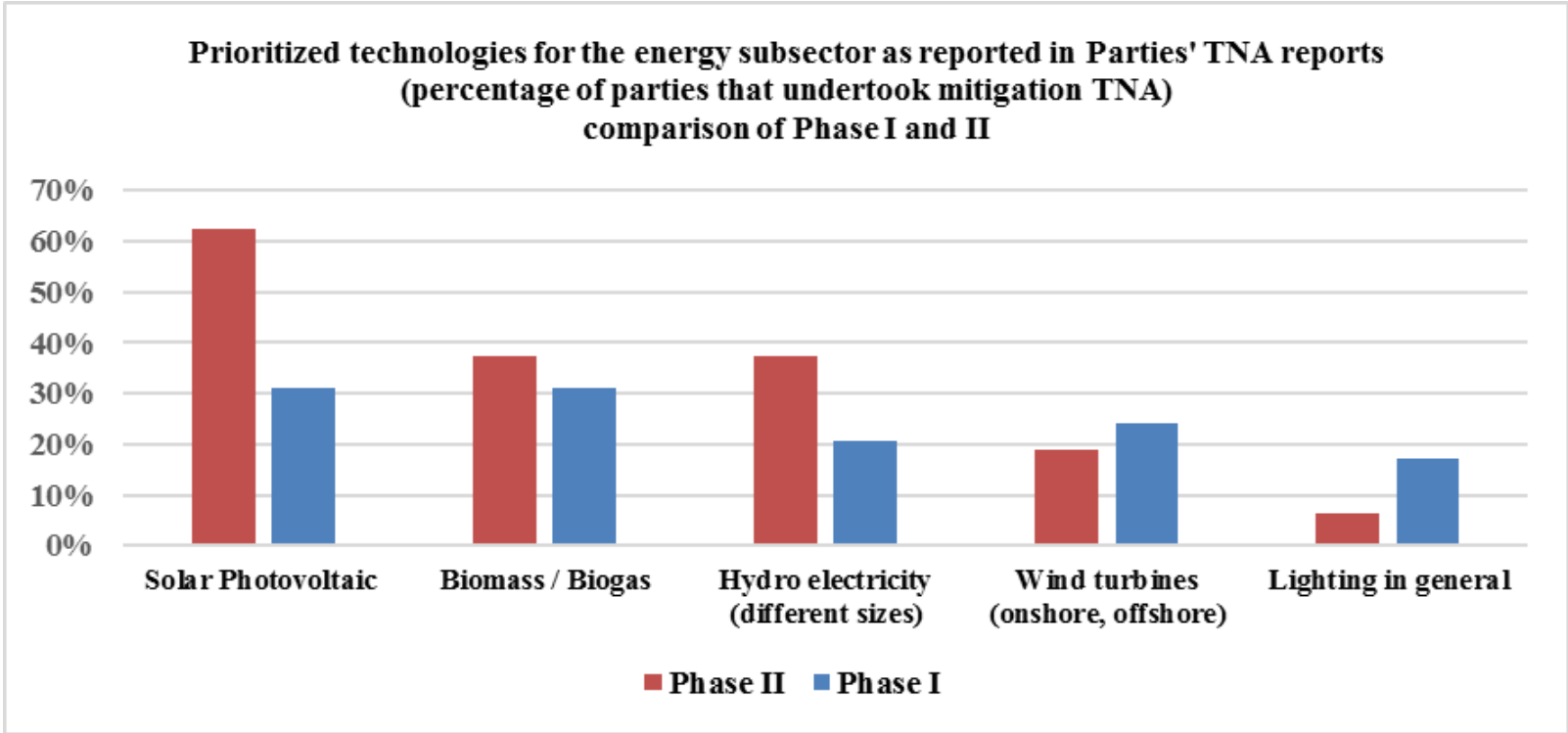
9. Comparing the findings with 3rd TNA Synthesis report

- Prioritized sectors Adaptation



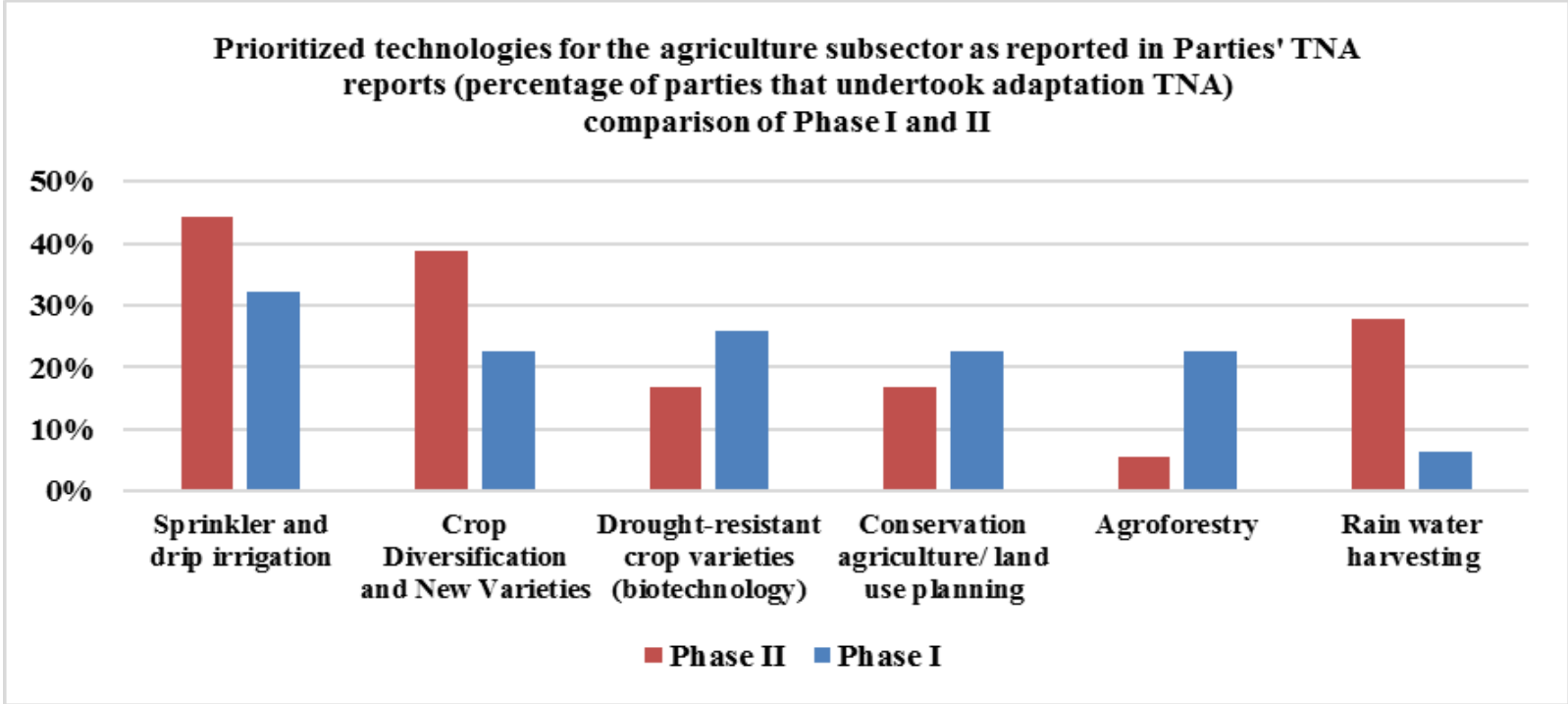
9. Comparing the findings with 3rd TNA Synthesis report

Prioritized technologies mitigation (energy)



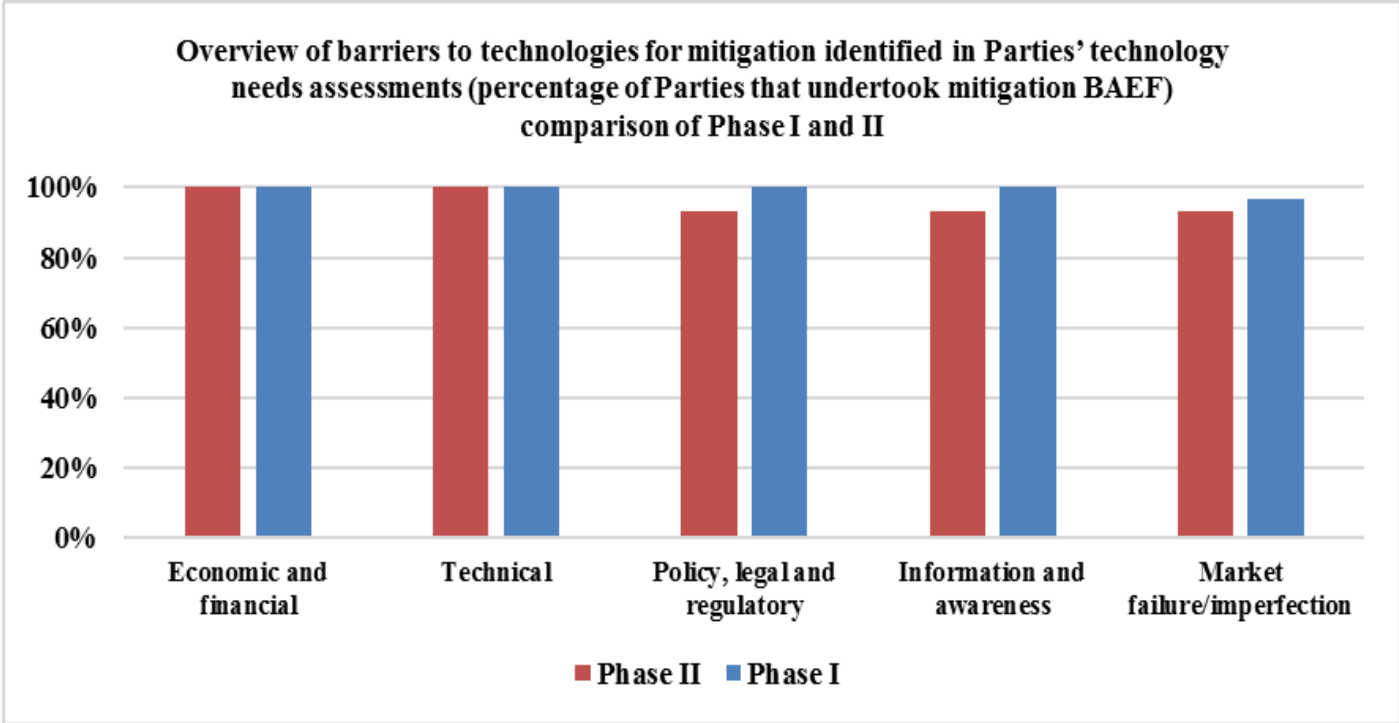
9. Comparing the findings with 3rd TNA Synthesis report

Prioritized technologies adaptation (agriculture and water)



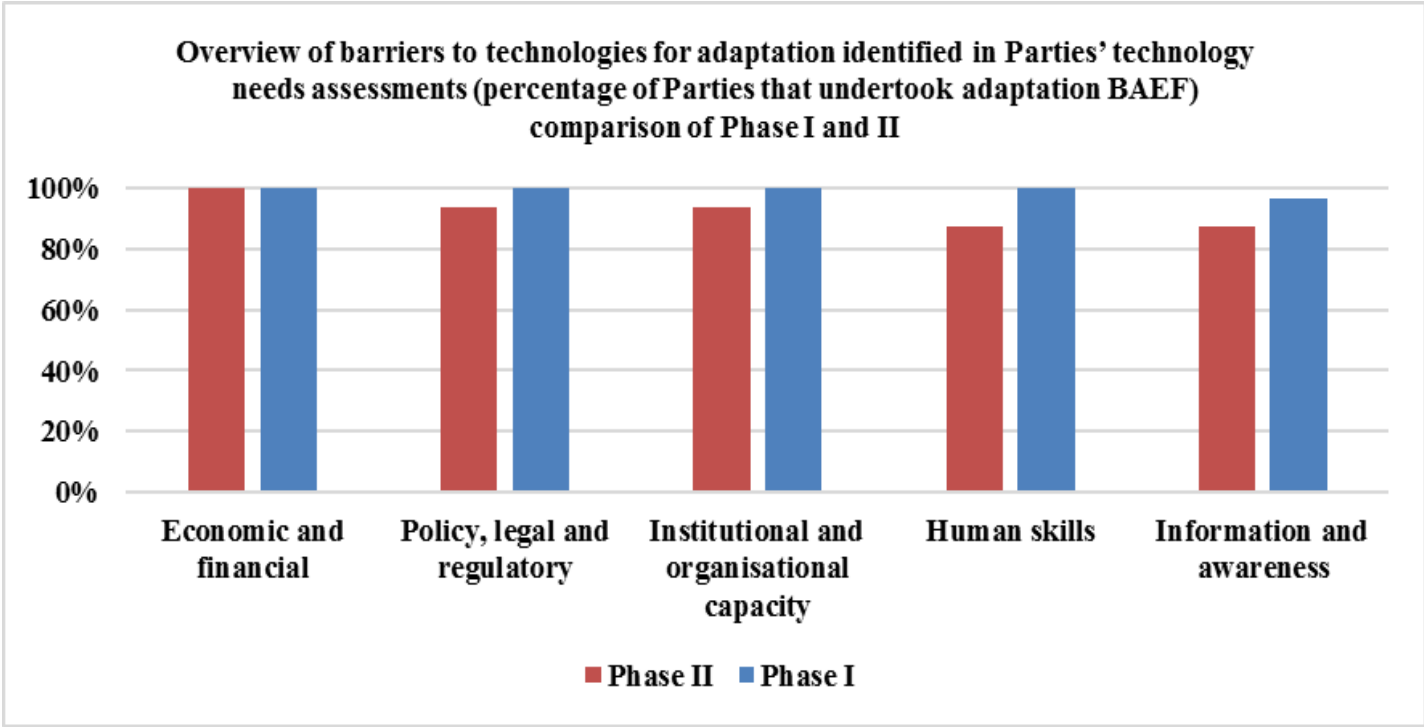
9. Comparing the findings with 3rd TNA Synthesis report

- Barriers mitigation



9. Comparing the findings with 3rd TNA Synthesis report

- Barriers adaptation



10. Summary of findings

- Summary of findings
- On the process, most of the TNAs and TAPs have followed the guidance, as seen in the chapters V and VI, and were undertaken in a way to be easily compiled, and organized.
- On the substance in the reports, energy sector in mitigation, and agriculture and water sectors in adaptation were the main prioritized sectors by TNA Phase II countries.
- The main barriers identified were economic, market, policy, legal and regulatory, information and awareness, institutional and organizational, and technical capacity barriers.
- The main enablers to overcome the identified barriers were increasing funding for technology, employing suitable financial mechanisms, enforce technology supporting policies, review regulatory framework, and strengthen existing institutions.
- The TAPs were conducted in energy, agriculture and water sectors dominantly. Countries reported their project ideas in these sectors. A total of 24 TAP reports have been prepared by 13 countries taking part in the global TNA. Some countries did not deliver their TAP reports. For those delivered, the TEC Guidance for preparing a TAP was followed, the step 7 – tracking the implementation status of TAP may not be yet checked at this stage, due to significant time needed to implement the TAPs.



11. Issues for further consideration

- Issues for further consideration
- There is a need to further assist developing countries in strengthening their capacity to assess their climate technology mitigation and adaptation needs, and in implementing their project ideas and technology action plans. This may be done with a solid technical and financial assistance available and strong and well communicating network of NDEs. Financial institutions under and outside the Convention may be better informed of the TNA results and their potential.
- Further promote the mature methodology and the results of TNAs and TAPs in a broad international context with a view to recognize their added values in medium to long term horizon would be beneficial in highlighting the added value of the TNA and TAP work of developing countries, in helping other processes to be more implementation oriented and to bring results to assist the implementation of Paris Agreement and global climate objectives.



11. Issues for further consideration

- Issues for further consideration
- The TNA was seen by countries as the process complementing national policies and plans for mitigating GHG emissions and adapting to climate change. There is a further potential to use the TNA results and their implementation lessons learned to assist countries in undertaking and implementation of their mitigation and adaptation processes, such as NDCs and NAPs. Such assistance and linkages should be strongly supported by relevant national and international stakeholders and institutions.
- Conducting of the TAPs is one of the most important elements of the TNA process and countries should be further stimulated to undertake TAP exercise. The Phase III projects targets mostly SIDS and LDC countries, where work on conducting the TAPs may be even more beneficial as only few climate related investments were reported in these countries and there is a need to leverage climate funding to these mostly vulnerable countries.



Thank you!

More information: ttclear.unfccc.int

