



Technology needs assessments under the UNFCCC process

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Valorising the Experience of European support to Technology Transfer for the
Enhancement of Technology Transfer System under the UN Climate Change
Convention, Maastricht, 05 February 2009



The Technology Transfer Framework

- To develop **meaningful and effective actions** to enhance the implementation of **Article 4, paragraph 5**, of the Convention by increasing and to improve **the transfer of** and access to environmentally sound technologies (**ESTs**) and know-how, The framework for meaningful and effective actions to enhance the implementation of Article 4.5 of the Convention was established in COP 7 by Decision 4/CP.7.
- Five key themes and areas were identified:
 - **Technology needs and needs assessments**
 - Technology information
 - Enabling environments
 - Capacity-building
 - Mechanisms for technology transfer



Technology Needs Assessments – what are they?

- The technology transfer framework defines TNAs as a set of **country-driven activities** that identify and determine the mitigation and adaptation technology **priorities** of Parties,..., particularly developing country Parties.
- TNAs involve different **stakeholders in a consultative process** to identify the **barriers** to technology transfer and measures to address these barriers through **sectoral analyses**.
- These activities may address soft and hard technologies, such as mitigation and adaptation technologies, identify **regulatory options** and **develop fiscal and financial incentives** and **capacity building**.





Technology Needs Assessments – what are they?

- The **purpose** of TNAs is to assist in identifying and analysing priority technology needs, which can form **the basis for a portfolio of EST projects and programmes** which can facilitate the transfer of, and access to, the ESTs and know-how in the implementation of Article 4, paragraph 5, of the Convention.
- TNAs are **central to the work on technology transfer** they follow a country-driven approach, bringing together stakeholders to identify needs and **develop plans** to meet those needs



Technology Needs Assessments – Progress

- Since COP 7, developing country Parties have been assessing their technology needs in the areas of climate change mitigation and adaptation through an analysis that takes account of **their development plans and strategies**.
- Through its interim **financing for capacity-building** in priority areas – enabling activities phase II (also known as “top-ups”) – the Global Environment Facility (GEF) provided **funding to 94 Parties** not included in Annex I to the Convention (non-Annex I Parties) to enable them to conduct TNAs.
- Of these 94 Parties, 80 are being supported by UNDP and 14 by UNEP.
- **Fifty three TNA reports** are already available @ **TT:Clear** web portal (<http://unfccc.int/ttclear/jsp/CountryReports.jsp>.)





Technology Needs Assessments – Progress

- 1 expert meeting was organised to identify methodologies to conduct TNAs → UNDP developed a simplified, user-friendly [Handbook on Conducting TNAs for climate change](#). The TNA handbook, produced in collaboration with CTI, the EGTT and the secretariat, was made available to Parties in 2004.
- CTI, in collaboration with UNDP, organized [3 regional workshops](#) to [field-test and further develop](#) the TNA handbook, to discuss regional concerns and priorities in assessing technology needs and to further assist Parties in conducting TNAs
- In 3/CP.13, Annex I. The UNFCCC Secretariat has been requested in collaboration with EGTT, UNDP, UNEP and CTI to [update the handbook for conducting TNAs](#) taking into account experience, lessons learned indicated in the Synthesis report on TNAs, cross referencing the work on innovative financing, and technologies for adaptation.



Technology Needs Assessments – Progress

- As requested by the SBSTA at its twenty-first session, the secretariat prepared a [Synthesis report on technology needs identified by NAI Parties](#) based on the TNAs available and on the technology needs identified by NAI Parties in their NCs. This report was made available for consideration by the SBSTA at its twenty-fourth session.
- Synthesis of technology needs assessments (TNAs) – FCCC/SBSTA/2006/INF.1:
 - Highlights [priority technology needs](#) to reduce greenhouse gas emissions and facilitate adaptation to the adverse impacts of climate change based on information contained in 23 TNAs and 25 initial national communications submitted by non-Annex I Parties.
 - Draws attention to specific [barriers to technology transfer](#) and suggests measures to address them, including through capacity-building.
 - Highlights ways used to [involve stakeholders](#) in a consultative process to conduct TNAs, including the methodologies and criteria used to prioritize technology needs.



Technology Needs Assessments – Progress

- The secretariat is currently preparing a [Synthesis of 30 newly submitted TNAs](#) not available when the Synthesis report was prepared.
- The new submissions of TNAs came from the following Parties:
 - Armenia,
 - Benin, Botswana, Burkina Faso,
 - Cambodia, Comoros, Congo, Cote D'Ivoire, Croatia,
 - Egypt, Ethiopia,
 - Republique de Guinee, Guyana,
 - Jamaica
 - Laos, Lebanon,
 - Macedonia, the former Yugoslav Republic of, Madagascar, Republic of Mauritius, Mali,
 - Namibia, Niger,
 - Samoa, Senegal, Sri Lanka,
 - Tanzania, Thailand, Turkmenistan, Tunisia,
 - Uzbekistan;

Technology Needs Assessments – Process

Figure 2. Main activities for conducting a TNA for mitigation technologies

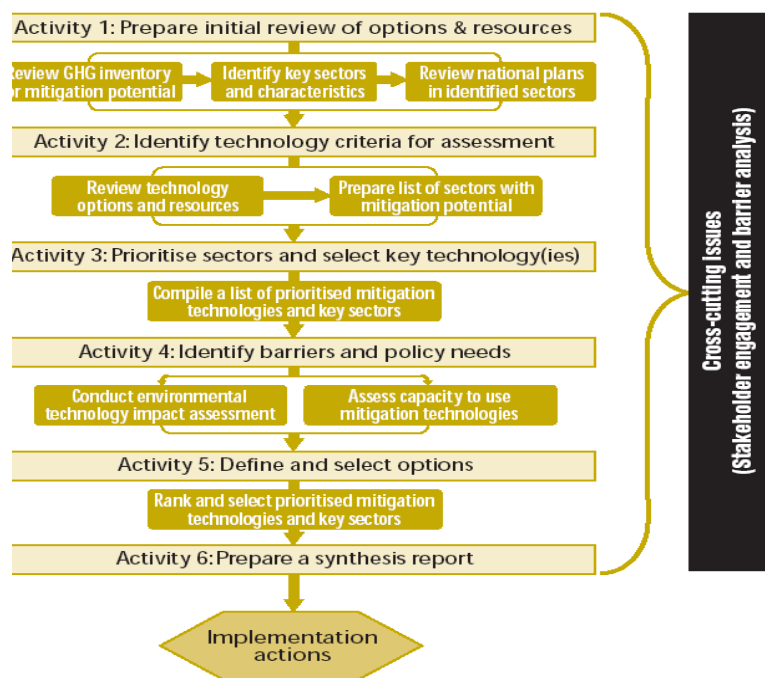


Table 4. An overview of the TNA process

Country	Select target area	Conduct initial review	Set criteria	Select key sectors	Prioritize technologies	Identify barriers	Identify measures	Identify capacity building needs	Describe stakeholder participation	Identify next steps	Project proposal	Total	Per cent
	Albania	●	●	●	●	●	●	●		●		●	8
Azerbaijan	●	●	●	●	●	●	●	●	●		●	9	90
Bolivia	●	●	●	●	●	●	●	●		●	●	9	90
Burundi	●	●	●	●	●	●	●		●		●	8	80
Chile	●	●	●	●	●	●	●			●		7	70
China	●	●	●	●	●	●	●		●	●	●	9	90
Congo DR	●	●	●	●	●	●	●					7	70
Dominican Republic	●	●	●	●	●	●	●			●		6	60
Ecuador	●	●		●	●	●	●	●		●	●	8	80
Georgia	●	●	●	●	●	●	●		●		●	6	60
Ghana	●	●	●	●	●	●	●	●	●	●	●	10	100
Haiti	●	●	●	●	●	●	●	●	●	●	●	8	80
Indonesia	●	●	●	●	●	●	●			●	●	10	100
Kenya	●	●	●	●	●	●	●			●	●	10	100
Lesotho	●	●	●	●	●	●	●	●	●	●	●	9	90
Malawi	●	●	●	●	●	●	●	●	●	●	●	9	90
Mauritius	●	●	●	●	●	●	●	●	●	●	●	9	90
Moldova	●	●	●	●	●	●	●			●	●	4	40
Niue	●	●	●	●	●	●	●	●	●	●	●	9	90
Paraguay	●	●	●	●	●	●	●	●	●	●	●	8	80
Tajikistan	●	●	●	●	●	●	●		●		●	9	90
Viet Nam	●	●	●	●	●	●	●	●		●	●	8	80
Zimbabwe	●	●	●	●	●	●	●			●		7	70
Total	23	23	19	23	20	21	18	12	16	11	12		
%	100	100	83	100	87	91	78	52	70	48	52		

Note: Similar activities are carried out for a TNA of adaptation, but the tasks differ.

Source: TNA handbook.



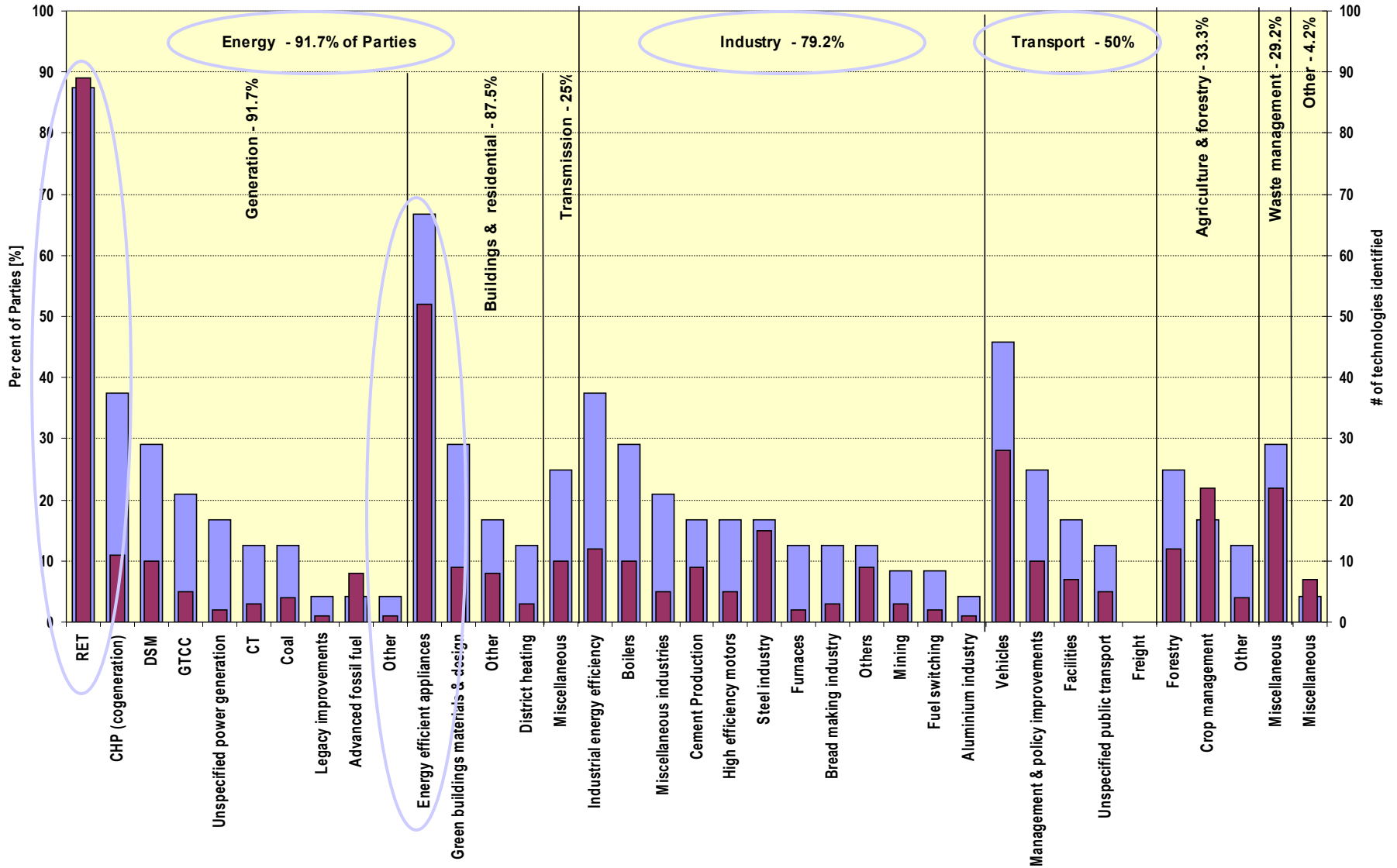
TNAs - how priorities were selected?

How they relate to national development objectives?

Country	Development benefits								Climate change		Market			Environmental protection				Total	Per cent				
	Employment generation Wealth creation	Utilization of local resources	Rational utilization of resources	Improvement in health and quality of life	Food security	Capacity-building	Environmental sustainability	Gender equality	Socio-economic importance	GHG reduction potential	Potential for adaptation	Investment costs	Maintenance costs	Life time of the inv.	Possibilities for replication	Social acceptance	Minimum impact on the environment			Pollution reduction	Recovery of water resources	Potential for reuse and recycle	
Albania	●	●	●	●	●	●	●	●	●		●				●	●				12	54.5		
Azerbaijan								●	●		●				●	●				6	27.3		
Bolivia									●											1	4.5		
Burundi	●		●	●					●		●				●	●				7	31.8		
Chile			●											●						2	9.1		
China	●	●	●	●					●		●		●	●				●		9	40.9		
Congo DR	●		●			●			●	●	●	●	●	●	●	●	●	●		13	59.1		
Dominican Republic			●	●					●	●	●					●	●			6	27.3		
Ecuador									●	●										1	4.5		
Georgia									●	●	●		●							3	15.8		
Ghana	●		●	●					●	●	●		●		●	●	●			8	42.1		
Haiti				●	●				●	●						●	●			3	15.8		
Indonesia			●	●					●	●	●				●	●				7	36.8		
Kenya	●			●	●				●	●	●					●				5	26.3		
Lesotho	●			●	●				●	●	●				●	●				6	31.6		
Malawi			●	●					●	●	●				●	●				7	36.8		
Mauritius			●	●					●	●	●					●	●			5	26.3		
Moldova									●	●	●					●				4	21.1		
Niue			●						●	●	●									4	21.1		
Paraguay									●	●	●				●					2	10.5		
Tajikistan			●	●					●	●	●					●				6	31.6		
Viet Nam			●	●					●	●	●					●				6	31.6		
Zimbabwe	●		●						●	●	●					●				5	26.3		
Total	8	2	14	14	1	0	1	1	1	16	21	1	1	16	1	3		3	9	13	2	0	0
%	34.8	8.7	60.9	60.9	4.3	0.0	4.3	4.3	4.3	69.6	91.3	4.3	4.3	69.6	4.3	13.0		13.0	39.1	56.5	8.7	0.0	0.0

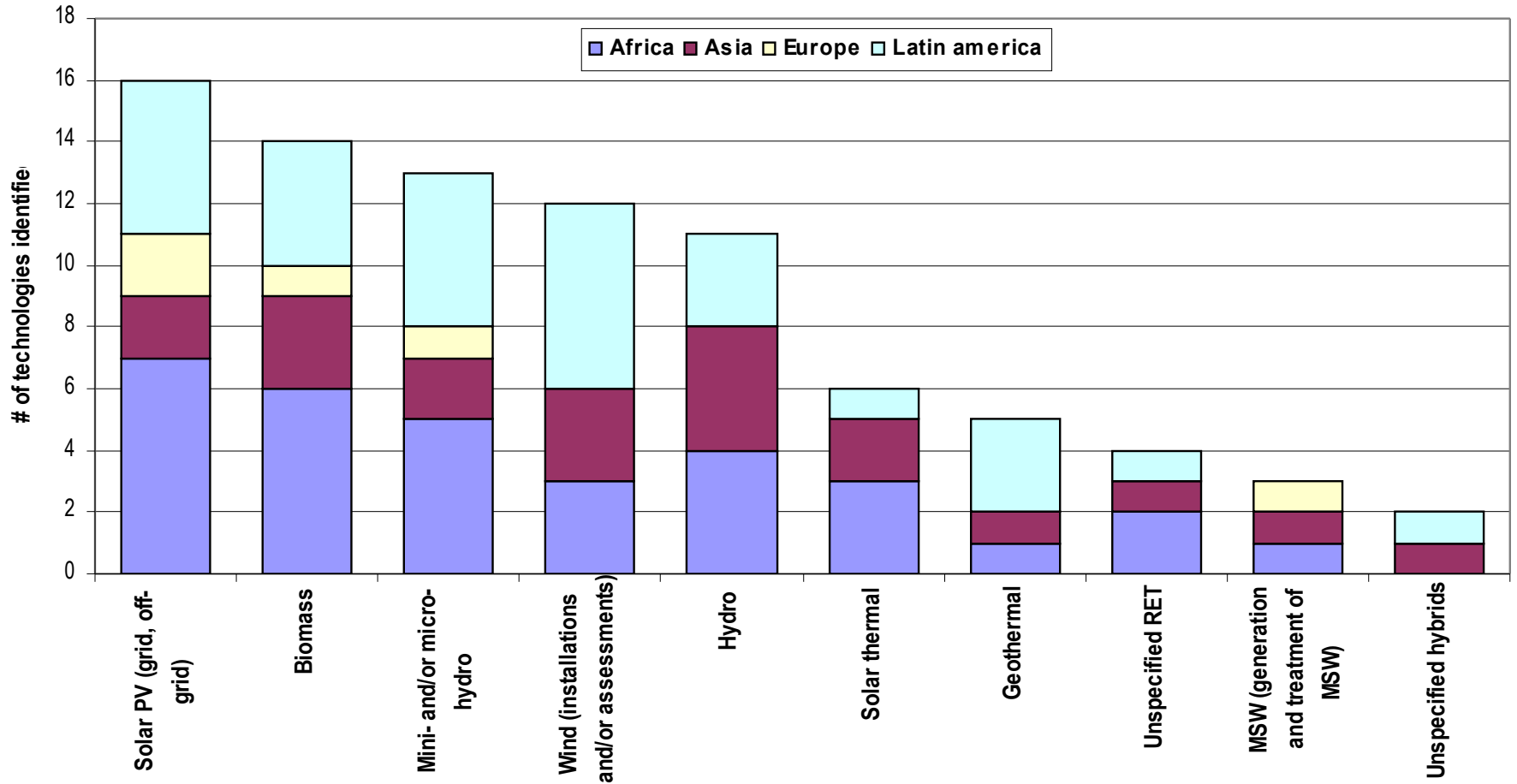
Technology Needs Assessments

What are commonly identified mitigation technologies?



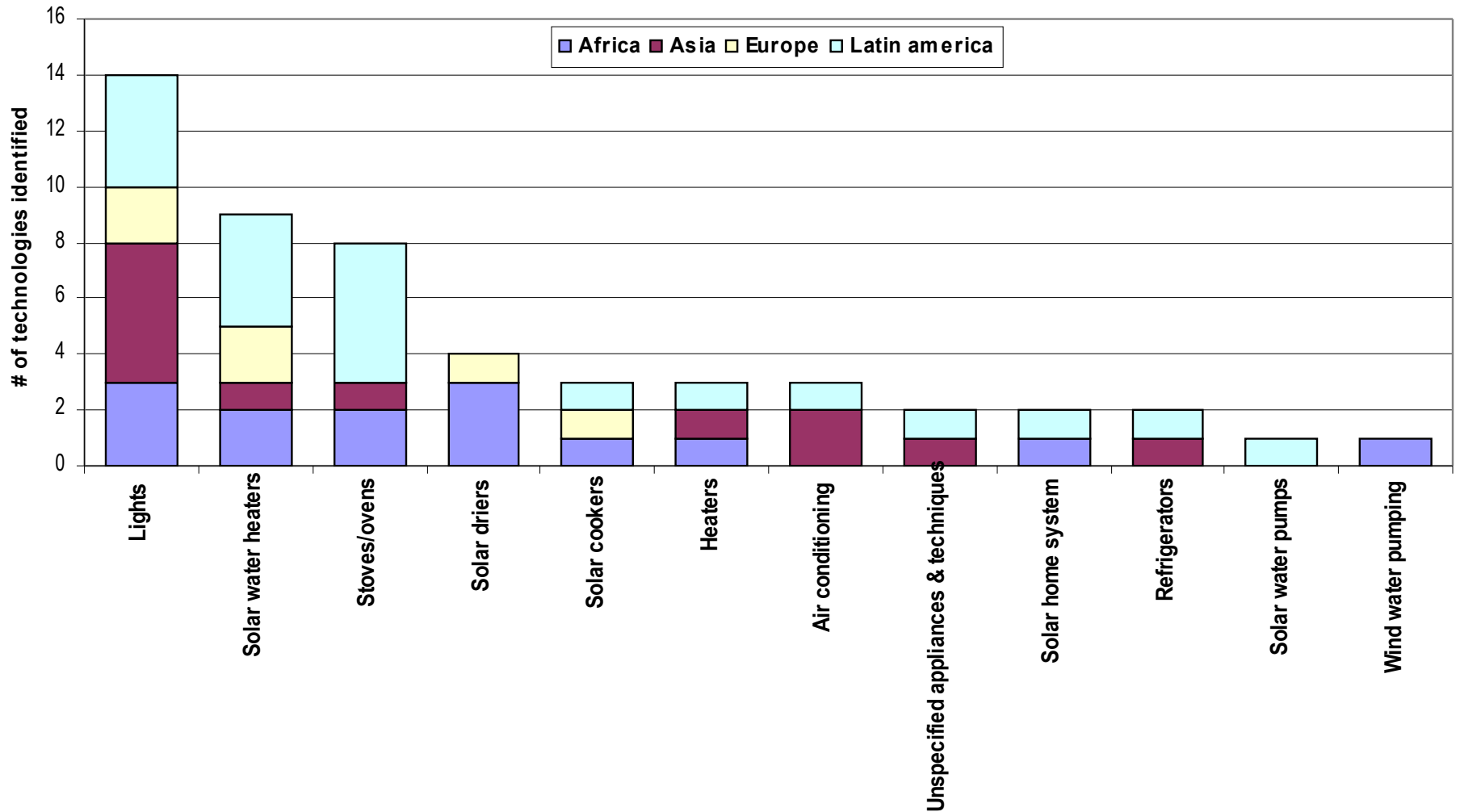
Technology Needs Assessments

What are commonly identified renewable energy technologies?



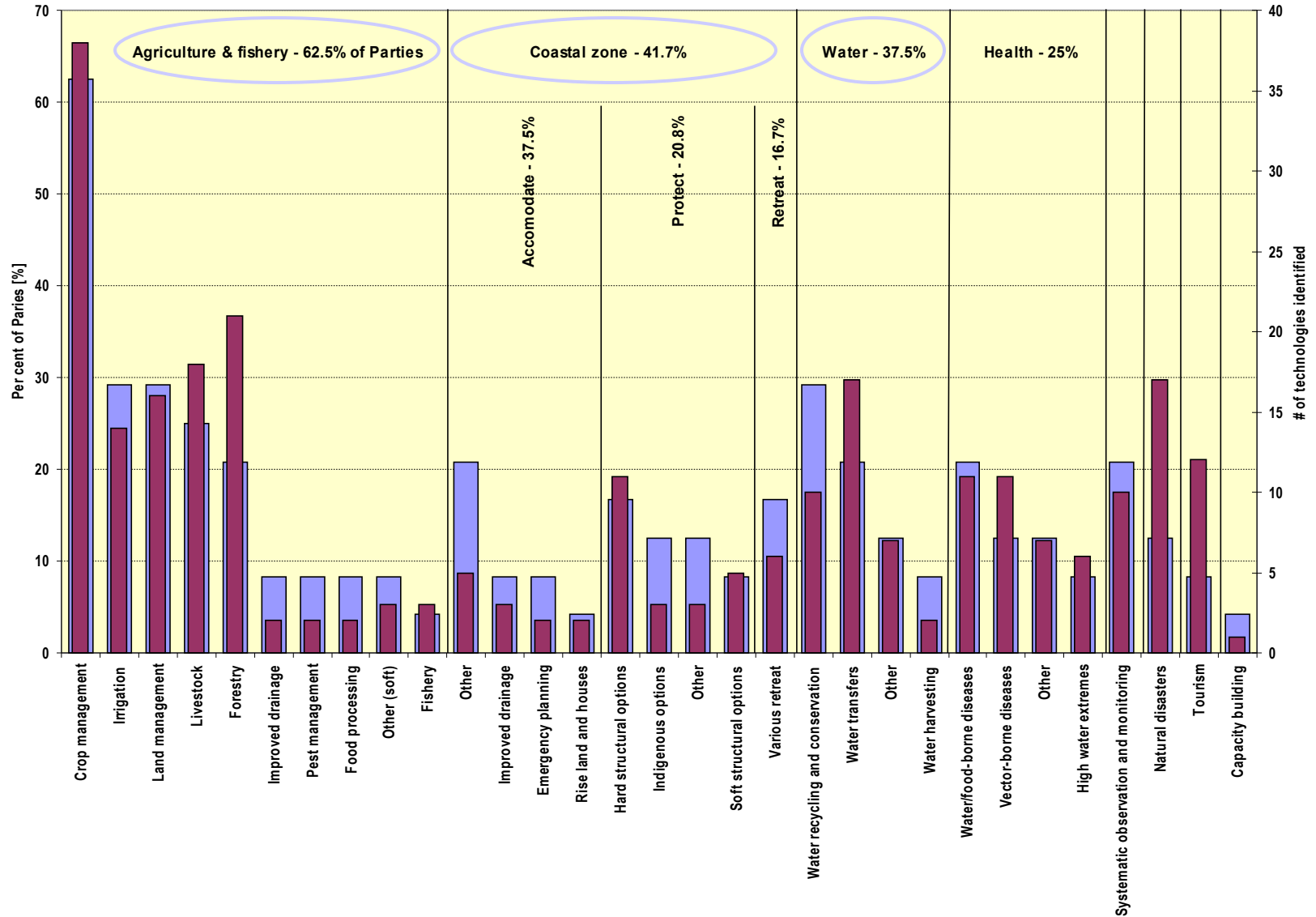
Technology Needs Assessments

What are commonly identified energy efficient technology needs (buildings & residential)?



Technology Needs Assessments

What are commonly identified adaptation technologies?



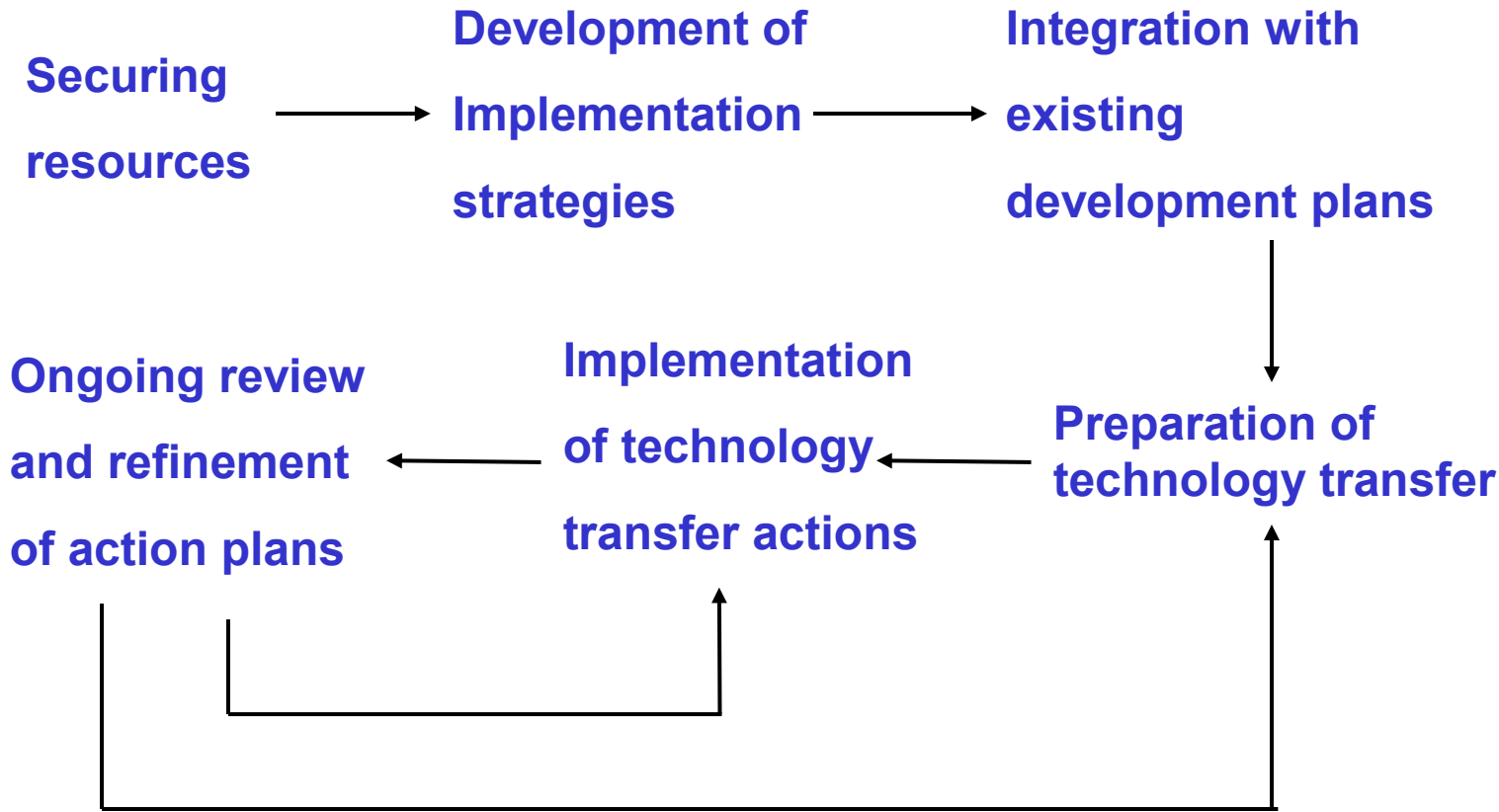


Implementation of the TNA results

- The **TNAs** may be an **effective tool for decision makers** and **international institutions** that may be involved in the facilitation of the technology transfer process. The TNA process not only helps identify specific technology needs, but also points out the direction in which future **policies** and **regulations** will need to progress.
- The **main beneficiary of the TNAs are the Parties that conducted them**, as these reports provide a good basis for follow-up activities to further enhance the transfer of climate friendly technologies.
- To meet national objectives to combat CC and to meet UNFCCC objective of implementing technology transfer framework **TNA results should be translated into applications.**



Implementation of the TNA results – many different approaches and ideas





Implementation of the TNA results - innovative options

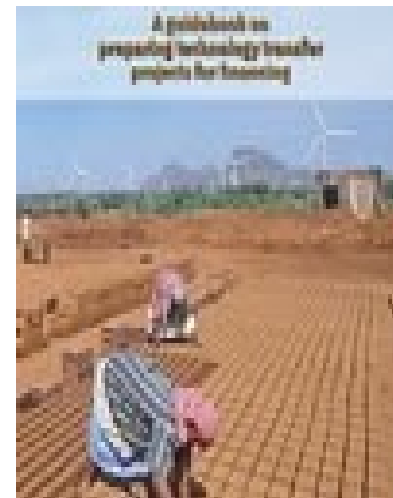
- ❑ Prepare and disseminate a [Practitioner's guide](#) to support projects developers to prepare project proposals that meet the standards of financial community

Available in several languages

Including a roll-out programme

(regional training workshops, learning centres, help desk)

- ❑ CTI – [Private Financing Advisory Network](#)
- ❑ [The updated TNA handbook](#) focusing also on linking TNA to Implementation and Identifying practical Needs





Thank you for your attention!

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