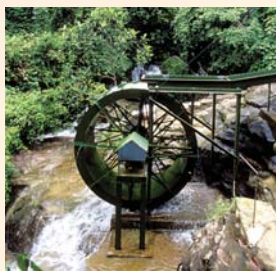


Handbook for Conducting Technology Needs Assessment for Climate Change



This TNA handbook was jointly developed by UNDP and UNFCCC Secretariat, under the auspices of the Expert Group on Technology Transfer (EGTT), in cooperation with the Climate Technology Initiative (CTI). It builds on the earlier edition published in 2004. This TNA handbook should be considered a living document and is subject to improvements based on field-testing, after which an updated edition will be made available.

Handbook for Conducting Technology Needs Assessment for Climate Change

Advance document
September 2009

This advance document of the updated Technology Needs Assessment Handbook (TNA) was first endorsed in June 2009 by the Expert Group on Technology Transfer. The current version, dated September 2009, includes several modifications in terms of editorial corrections while the main content remains exactly the same as the June edition.



Copyright © UNDP 2009

By the United Nations Development Programme

1 UN Plaza, New York, New York 10017, USA

All rights reserved.

The views expressed in this publication do not necessarily represent those of the member countries of the UNDP Executive Board or of those institutions of the United Nations system that are mentioned herein. The designations and terminology employed and the presentation of material do not imply any expression or opinion whatsoever on the part of the United Nations concerning the legal status of any country, territory, city or area, or of its authorities, or of its frontiers or boundaries.

Cover photo credits (insets from left to right)

Top row: UNDP/Elisabeth Clemens; © Samson Tolessa/GTZ, courtesy of Photoshare; World Bank/Yosef Hadar; World LP Gas Association. Second row: IFAD/L. Dematteis; World Bank/Dominic Sansoni, 2002; UN Photo/Logan Abassi. Third row: World Bank/Dominic Sansoni, 2002; UNDP-GEF Community-Based Adaptation Project. Bottom row: UNDP/Elisabeth Clemens.

Design and layout: Laurie Douglas Graphic Design

Proof reading: Gail Karlsson

Table of Contents

Foreword	v
Acknowledgement	vi
Glossary	vii
 Part I Context and organization of the TNA process	 1
1. Introduction	2
1.1. Context: technology needs in light of a changing climate	2
1.2. Technology Needs Assessment: why, how, what and who?	5
1.3. Key steps elaborated in this Handbook	10
 2. Organizing a National TNA Process	 12
2.1. A suitably structured National TNA Team	12
2.2. Organizing stakeholder involvement	15
2.3. Work plans and data collection	18
2.4. Training and support tools supplied for TNA	20
2.5. Checklist	22
 Part II Making Strategic Choices – priority sectors and priority technologies for mitigation and adaptation	 23
3. Making Strategic Choices: priority sectors and priority technologies for climate change mitigation	24
3.1. Introduction	24
3.2. Before you start – preparatory stage for technology prioritization	27
3.3. First stage of analysis – strategic choice of priority sectors	28
3.4. Second stage of analysis – strategic choice of portfolios of priority technologies	34
 4. Making Strategic Choices: priority sectors and priority technologies for adaptation	 51
4.1. Introduction	51
4.2. Before you start – preparatory stage for technology prioritization	54
4.3. First stage of analysis – strategic choice of priority sectors for adaptation	55
4.4. Second stage of analysis – strategic choice of portfolios of priority technologies	61
 Part III Moving forward to a low carbon future	 77
5. Accelerating Technology Development, Deployment and Diffusion: enabling frameworks and capacity building	78
5.1. Introduction	78
5.2. Process for this chapter	79
5.3. Step 1 – Acceleration of technology development: R&D activities	84

Table of Contents *(continued)*

5.4. Step 2 – Acceleration of technology deployment	88
5.5. Step 3 – Acceleration of technology diffusion in the country context	93
5.6. Priority measures for mitigation and adaptation involving non-market technologies	96
6. From Technology Needs to Technology Strategies	101
6.1. Developing a national strategy for acceleration of technologies	101
6.2. Developing combined technology implementation and acceleration strategies . .	104
6.3. Development of projects or sector combined implementation and acceleration programs	105
6.4. Funding Sources	106
6.5. TNA National Synthesis Document	107
List of References	111
Annexes	113
Annex 1	114
Technical annexes to Chapter 3 and 4	
Annex 2	124
Mitigation & adaptation technology options	
Annex 3	131
Technology Information Sources	
Annex 4	136
Some stakeholder engagement resources	
Annex 5	139
The MCDA process	
Annex 6	147
Factsheets for prioritized technologies	
Annex 7	161
A Multi-polar World of Innovation	
Annex 8	162
Market mapping for identifying barriers and inefficiencies (in support of Chapter 5)	
Annex 9	168
Spreadsheet example cost assessments	
Abbreviations	inside back cover

Foreword

In 2004, the Expert Group on Technology Transfer and the UNFCCC secretariat worked with the United Nations Development Programme to prepare the first Handbook for conducting technology needs assessments for climate change. The handbook supported the preparation of technology needs assessments by developing countries which have stimulated a wide range of technology transfer initiatives in developing countries.

To share best practices and lessons learned with conducting technology needs assessments and to identify specific needs and practical actions that could assist Parties in implementing the results of TNAs, a workshop on best practices with conducting TNAs was organized by the EGTT and UNFCCC secretariat in Bangkok, Thailand on 27-29 June 2007.

The workshop provided an opportunity for countries' experts to exchange views with representatives from the private sector in particular the financial community on possible ways to enhance access to funding for the implementation of the results of TNAs. In this context, regional training sessions on project development are being conducted for participants from developing countries utilizing a UNFCCC guidebook for preparing technology transfer projects for financing.

Lessons learnt from the workshop have been drawn upon in developing this updated Handbook on technology needs assessments for climate change. The updated Handbook provides a more detailed framework for the development and implementation of technology needs assessments and in particular in the development of technology programmes and strategies in developing countries. It also seeks to support capacity building and to help with the establishment of the enabling environments for technology transfer.

The publication of this handbook is the result of the dedicated efforts of all those involved in its production, the United Nations Development Programme and the Secretariat of the United Nations Framework Convention on Climate Change in collaboration with the Expert Group on Technology Transfer and numerous practitioners engaged in the development of technology transfer projects in developing countries.

Arthur Rolle
EGTT Chair
June 2009

Acknowledgement

This advance document of the updated Technology Needs Assessment Handbook (TNA Handbook) was jointly prepared by the United Nations Development Programme and the United Nations Framework Convention on Climate Change Secretariat, under the auspices of the Expert Group on Technology Transfer (EGTT) and in cooperation with the Climate Technology Initiative. This updated Handbook was developed as a response to the request from the United Nations Framework Convention on Climate Change Conference of Parties (COP) Decisions as reflected in 3/CP.13 and 2/CP.14.

The Handbook builds on and expands the scope of the first Handbook, entitled “Conducting Technology Needs Assessment for Climate Change” that was published in 2004 and prepared by United Nations Development Programme. The first Handbook was designed to provide practical guidance on how to conduct a technology needs assessment in developing countries.

This updated Handbook is the result of close collaboration with experts from the Joint Implementation Network, the University of Edinburgh-Centre for Environmental Change and Sustainability and the Stockholm Environment Institute (USA-Boston) each of which contributed substantially to the drafting of the handbook. Members of the Expert Group on Technology Transfer provided valuable comments and guidance throughout the development of this handbook.

The Handbook also went through a number of iterative processes and received substantive comments and contributions from experts from the Global Environment Facility Secretariat, United Nations Development Programme, United Nations Environment Programme, United Nations Environment Programme Risoe Centre on Energy, Climate and Sustainable Development, and the World Bank.

Acknowledgement is also due to experts from the National Renewable Energy Laboratory and University of San Martin – Centro de Ideas, who provided substantive comments throughout the development of this advance copy and also drafted some key sections of the Handbook.

Special acknowledgement is to due to the Sustainable Energy Programme of Environment and Energy Group of United Nations Development Programme and the Technology team within the United Nations Framework Convention on Climate Change Secretariat. These two teams spearheaded the conceptualization of the updated handbook and led the production process and coordinated a number of technical drafting meetings to develop this advance document.

The drafting and production of this advance document of the TNA Handbook was financed by the United Nations Development Programme, with contribution from the Climate Technology Initiative.

预览已结束，完整报告链接和二维码如下：

https://www.yunbaogao.cn/report/index/report?reportId=5_13136

