




# **Requirement for Technology Transfer and Adaptation Prioritization**

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# adapting to changes that cannot be prevented

- ◆ After many years in which adaptation was considered mainly a political distraction from the need to reduce greenhouse gas emissions, the global community has begun to take the issue seriously
- ◆ With a collective failure to date to halt greenhouse gas emissions, the world now must face the task of adapting to changes that cannot be prevented.

# Adaptation will be urgent if post 2012 target is still less than expected

| St<br>a<br>Sc. | CO2       | CO2 -e     | CO2<br>emission<br>peak | Global CO2<br>Emission<br>changes by<br>2050 (% of<br>2000<br>Emission) | Global<br>Temp.<br>changes<br>vs pre-<br>indus. | Annex I<br>Need a<br>large<br>amount<br>of<br>Emission<br>reduction |
|----------------|-----------|------------|-------------------------|---|---|---|
|                | ppm       | ppm        | year                    | %   | °C  | %   |
| I              | 350 – 400 | 445 – 490  | 2000 -2015              | -85 to -50  | 2.0 – 2.4                                       | -90 more  |
| II             | 400 – 440 | 490 – 535  | 2000 -2020              | -60 to -30  | 2.4 – 2.8                                       | -80 to -60  |
| III            | 440 – 485 | 535 – 590  | 2010 -2030              | -30 to +5   | 2.8 – 3.2                                       | -80 to -60  |
| IV             | 485 – 570 | 590 – 710  | 2020 -2060              | +10 to +60  | 3.2 – 4.0                                       | -60 to -40  |
| V              | 570 – 660 | 710 – 855  | 2050 -2080              | +25 to +85  | 4.0 – 4.9                                       | -60 to -40  |
| VI             | 660 – 790 | 855 – 1130 | 2060 -2090              | +90 to +140   | 4.9 – 6.1                                       | < -40   |

# Big Gap of Demand and Supply

- ◆ The United Nations Development Program's *Human Development Report 2007/2008* estimates the cost of adaptation in developing countries will reach \$86 billion per year by 2015. In contrast, current international funds dedicated to adaptation amount to less than \$1 billion total.

# Getting Beyond Funding to Action

- ◆ Debates about the additionality of funding, the scale of the funding need, and appropriate operating principles for financing mechanisms have slowed the generation of adaptation funding and limited effective action.
- ◆ Approaches to categorizing, prioritizing, technology listing and assessing the effectiveness of adaptation investments may be needed if funding for adaptation action is to continue to grow.

# What we need

- ◆ Concrete technology needs and technology be able provided, priorities and evaluative criteria can help reassure international funders, and can provide guidance to practitioners and policy-makers at the national level.
- ◆ Evaluation itself will need to adapt as adaptation needs become better understood, those responsible for evaluation will need a mechanism through which to learn, share experience, and identify emerging best practices.

# How to act

- ◆ launch a global dialogue on increase the funding, technology transfer and priorities for use of adaptation funding;
- ◆ build a community of practice through which researchers, evaluators and decision-makers can develop and test options for monitoring and evaluation of adaptation technology transfer; and
- ◆ explore the utility of tools for prioritization and evaluation in a range of policy arenas.



# Expected Results

- ◆ prioritization framework and assessment criteria for adaptation technology transfer
- ◆ Key international funders use them
- ◆ The post-2012 United Nations climate agreement draws upon them in creating a mechanism
- ◆ The framework and criteria form the basis for the development of more location- and sector-specific planning tools and policy models.
- ◆ The community of practice fosters effective action by capturing and sharing experience in implementing and evaluating adaptation.

# Framework for Multi-Criteria Analysis for Adaptation Options

| Criteria and Indicator   | Rating   |
|--|--|
| <b>Win-win options</b> Does option address current climate variability <i>and</i> future climate change?                 | 1 = uncertainty 2= based only current<br>3= Both current and short term (3-5yeas)<br>4 = medium to long-term (more than 5 years) |
| <b>Existing risk management</b> Is the option consistent with existing risk management activities?                       | 1= No 2= consistence in short term (extreme event) 3= consistent in long term (average change) 4= both short and long term       |
| <b>Cost effectiveness</b> Can costs and benefits of option be easily determined?   | 1= very difficult 2= difficult<br>3= easy 4= very easy   |
| <b>Adaptive flexibility</b> Does the option focus on narrow range of future scenarios, or allow flexibility of response? | 1= no, irreversible 2= limit flexible<br>3= flexible 4= very flexible and easy   |
| <b>Unintended impacts</b><br>Potential negative spin-off impacts beyond targeted activity?                               | 1=Adverse impact 2= uncertain<br>3= no impacts 4= benefit impact   |
| <b>Practical considerations</b> Is the option practical and feasible for implementer?                                    | 1 = unfeasible, impossible 2=More problematic 3= Relatively simple<br>4= more easily   |
| <b>Knowledge level</b><br>How certain we are in predicting a particular change in hazard and its impact?                 | 1= uncertainty 2= low certainty 3= medium certainty 4= High certainty  |
| <b>Policy Coherence</b><br>Does option reflect local and national DRR / adaptation plans or studies?                     | 1=only long-term or only medium term need 2=long and medium term need<br>3= short term need 4= both above all                    |
| <b>TOTAL</b>   | ?/32   |

# Adaptation Trials in China

|                                   |  |  |   |  |  |   |
|-----------------------------------|--|--|---|--|--|---|
| Site                              | Ningxia<br>poor<br>farming<br>? ?              | Forest<br>mana. of<br>W.<br>Sichuan<br>? ? | Prev. of<br>schistosom<br>iasis in N.<br>Jiangsu<br>? ? | Recov. of<br>Extrame<br>E.in C Q?<br>? ? | Recov. Of<br>Taifeng in<br>GuangDon<br>g<br>? ?  | Yellow<br>river<br>source in<br>md QH?<br>? |
| Observ.<br>Impact<br>? ? ?<br>? ? | Dry with<br>drought<br>stress                  | Changes of<br>diseases<br>and pests        | Temp and<br>human<br>disease                            | Extreme<br>events                        | Changes<br>of Taifeng:<br>num.landi<br>ng, inten | dryer?<br>degenera<br>ted<br>grasslan       |
| Future<br>Risk?<br>? ? ?          | Big gap of<br>wat dem &<br>supply              | Forest fire<br>aggravate<br>d              | Epidemic<br>area exten<br>north                         | Disaster<br>frequency<br>increased       | Serious<br>impacts of<br>Taifeng                 | Serious<br>degenera<br>tion                 |
| Adaptat<br>ion? ?<br>? ?          | Water<br>saving,<br>diversity of<br>livelihood | Monitoring<br>and pre-<br>warning          | Colligated<br>measures                                  | forecast?<br>meet<br>emergenc<br>y       | pre-<br>warning<br>and cross<br>action           | De-<br>pasture<br>&recover<br>grass         |
| Impr.<br>of asses<br>? ? ?<br>?   | Integrated<br>assessmen<br>t                   | Recover<br>degenerat<br>ed forests         | Monitor of<br>temp and<br>epidemic s.                   | Relation<br>of disa. &<br>CC             | Relation<br>of TF. &<br>CC                       | Climate<br>and grass                        |

The slide features a decorative layout with thin grey lines. A vertical line is on the left, and a horizontal line is near the top. A small grey circle is at the top-left intersection. Another vertical line is on the right, and a horizontal line is near the bottom. A small grey circle is at the bottom-right intersection. The main text is centered between these lines.

**Looking forward the further  
cooperation for Adaptation**