



# Handbook on the OECD-DAC Climate Markers

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This handbook provides information about OECD-DAC’s statistical markers on climate change mitigation and adaptation. These markers help to measure and report on climate finance.

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# 1. Background

The OECD Development Assistance Committee (DAC) gathers statistics on aid and other resource flows to developing countries from bilateral and multilateral donor agencies every year. The data are publicly available in the Creditor Reporting System (CRS) database.

Since 1998 the DAC has monitored aid targeting the objectives of the Rio Conventions through the CRS using the so-called “Rio markers”. The **Rio marker on climate change mitigation** was established by the DAC in close collaboration with the Secretariat of the United Nations Framework Convention on Climate Change (UNFCCC). It tracks aid flows that support the implementation of the Convention.

In December 2009 the DAC approved a new marker to also track aid in support of **climate change adaptation**. This complements the climate change mitigation marker, and thus allows the presentation of a more complete picture of climate-change-related aid. First data on the new marker, relating to 2010 flows, will become available at the end of 2011.

These climate markers indicate **donors’ policy objectives in relation to each aid activity**. A principal objective (mitigation or adaptation) score is given when promoting the objectives of the UNFCCC is stated in the activity documentation to be one of the principal reasons for undertaking the activity. In other words, the activity would *not* have been funded but for that objective. Activities marked “significant” have other prime objectives, but have been formulated or adjusted to help meet climate concerns.

The markers allow an approximate quantification of aid flows that target climate objectives. In marker data presentations the figures for principal and significant objectives should be shown separately and the sum referred to as the “estimate” or “upper bound” of climate-change-related aid.

There is no internationally agreed methodology for assessing the exact share of aid activity expenditure that contributes to climate change adaptation or mitigation although some donors compile for their internal purposes more detailed data based on project budgets.

When analysing policy marker data, it is necessary to verify the coverage of donors’ reporting. Donors are requested to screen each aid activity reported to the CRS, though data gaps still exist for some donors.

Donors report on the basis of agreed definitions and reporting instructions that are gathered in this document.

## 2. Definition: climate change mitigation marker

### AID TARGETING THE OBJECTIVES OF THE FRAMEWORK CONVENTION ON CLIMATE CHANGE

#### Climate change mitigation

<p><b>DEFINITION</b> An activity should be classified as climate-change-mitigation related (score Principal or Significant) if:</p>	<p>It contributes to the objective of stabilisation of greenhouse gas (GHG) concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system by promoting efforts to reduce or limit GHG emissions or to enhance GHG sequestration.</p>
<p><b>CRITERIA FOR ELIGIBILITY</b></p>	<p>The activity contributes to</p> <ol style="list-style-type: none"> <li>the mitigation of climate change by limiting anthropogenic emissions of GHGs, including gases regulated by the Montreal Protocol; <b>or</b></li> <li>the protection and/or enhancement of GHG sinks and reservoirs; <b>or</b></li> <li>the integration of climate change concerns with the recipient countries' development objectives through institution building, capacity development, strengthening the regulatory and policy framework, or research; <b>or</b></li> <li>developing countries' efforts to meet their obligations under the Convention.</li> </ol> <p>The activity will score "<b>principal objective</b>" if it directly and explicitly aims to achieve one or more of the above four criteria.</p>
<p><b>EXAMPLES OF TYPICAL ACTIVITIES</b> <b>1. Typical activities take place in the sectors of:</b> <i>Water and sanitation</i> <i>Transport</i> <i>Energy</i> <i>Agriculture</i> <i>Forestry</i> <i>Industry</i></p>	<ul style="list-style-type: none"> <li>GHG emission reductions or stabilisation in the energy, transport, industry and agricultural sectors through application of new and renewable forms of energy, measures to improve the energy efficiency of existing generators, machines and equipment, or demand side management.</li> <li>Methane emission reductions through waste management or sewage treatment.</li> <li>Development, transfer and promotion of technologies and know-how as well as building of capacities that control, reduce or prevent anthropogenic emissions of GHGs, in particular in waste management, transport, energy, agriculture and industry.</li> <li>Protection and enhancement of sinks and reservoirs of GHGs through sustainable forest management, afforestation and reforestation, rehabilitation of areas affected by drought and desertification.</li> </ul>
<p><b>2. Typical non-sector specific activities are:</b> <i>Environmental policy and administrative management</i> <i>Biosphere protection</i> <i>Biodiversity</i> <i>Env. education/training</i> <i>Environmental research</i></p>	<ul style="list-style-type: none"> <li>Protection and enhancement of sinks and reservoirs through sustainable management and conservation of oceans and other marine and coastal ecosystems, wetlands, wilderness areas and other ecosystems.</li> <li>Preparation of national inventories of greenhouse gases (emissions by sources and removals by sinks); climate change related policy and economic analysis and instruments, including national plans to mitigate climate change; development of climate-change-related legislation; climate technology needs surveys and assessments; institutional capacity building.</li> <li>Education, training and public awareness related to climate change.</li> <li>Climate-change-mitigation related research and monitoring.</li> <li>Oceanographic and atmospheric research and monitoring.</li> </ul>

### 3. Definition: climate change adaptation marker

AID TARGETING THE OBJECTIVES OF THE FRAMEWORK CONVENTION ON CLIMATE CHANGE

Climate Change Adaptation

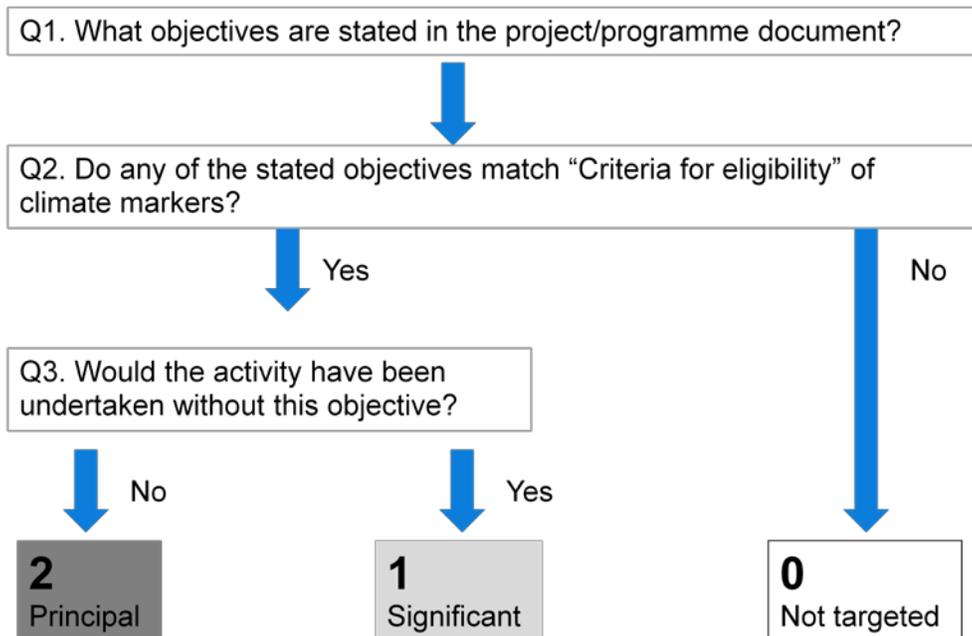
<p><b>DEFINITION</b></p> <p>An activity should be classified as adaptation-related (score Principal or Significant) if:</p>	<p>It intends to reduce the vulnerability of human or natural systems to the impacts of climate change and climate-related risks, by maintaining or increasing adaptive capacity and resilience.</p> <p>This encompasses a range of activities from information and knowledge generation, to capacity development, planning and the implementation of climate change adaptation actions.</p>
<p><b>CRITERIA FOR ELIGIBILITY</b></p> <p>An activity is eligible for the climate change adaptation marker if:</p>	<p>a) the climate change adaptation objective is explicitly indicated in the activity documentation; and</p> <p>b) the activity contains specific measures targeting the definition above.</p> <p>Carrying out a climate change adaptation analysis, either separately or as an integral part of agencies' standard procedures, facilitates this approach.</p>
<p><b>EXAMPLES OF TYPICAL ACTIVITIES</b></p> <p><b>1. Examples of typical enabling activities for adaptation</b></p> <p>Environmental policy and administrative management (sector 41010)</p> <p>Environmental education / training (sector 41081)</p> <p>Environmental research (sector 41082)</p>	<p><i>The list is not exhaustive. The activities may be scored against the objective only if the above criteria for eligibility are fulfilled.</i></p> <ul style="list-style-type: none"> <li>Supporting the integration of climate change adaptation into national and international policy, plans and programmes.</li> <li>Improving regulations and legislation to provide incentives to adapt.</li> <li>Education, training and public awareness raising related to the causes and impacts of climate change and the role of adaptation.</li> <li>Adaptation-related climate research including meteorological and hydrological observation and forecasting, impact and vulnerability assessments, early warning systems, etc.</li> </ul>
<p><b>2. Examples of typical sectoral activities</b></p> <p>Health (Sector 120)</p> <p>Water and sanitation (Sector 140)</p> <p>Agriculture (Sector 311)</p> <p>Forestry (Sector 312)</p> <p>Fishing (Sector 313)</p> <p>Flood prevention/control (Sector 41050 under Gen. env. protection)</p> <p>Disaster prevention and preparedness (Sector 740)</p>	<ul style="list-style-type: none"> <li>Implementing measures to control malaria in areas threatened by increased incidence of diseases due to climate change.</li> <li>Promoting water conservation in areas where enhanced water stress due to climate change is anticipated.</li> <li>Promoting heat and drought resistant crops and water saving irrigation methods to withstand climate change.</li> <li>Promoting a diverse mix of forest management practices and species to provide a buffer against uncertainties of climate change.</li> <li>Promoting changes in fishing practices to adapt to changes in stocks and target species. Introducing flexibility in the gear that is used, the species that are fished, the fishing areas to be managed, and the allocations that are harvested.</li> <li>Implementing measures for flood prevention and management such as watershed management, reforestation or wetland restoration.</li> <li>Developing emergency prevention and preparedness measures including insurance schemes to cope with potential climatic disasters.</li> <li>Implementing measures to respond to glacial lake outburst flood risk, such as the creation or improvement of early warning systems and widening or deepening of glacial lake outlet channels.</li> </ul>

See page 13 for more examples.

## 4. The scoring system for climate markers

Data collection on the climate markers is based on a scoring system with three values:

- principal objective (2);
- significant objective (1);
- not targeted to the policy objective (0).



**Principal (primary) policy objectives** are those which can be identified as being fundamental in the design of the activity and which are an explicit objective of the activity. They may be selected by answering the question "would the activity have been undertaken (or designed that way) without this objective?"

**Significant (secondary) policy objectives** are those which, although important, are not one of the principal reasons for undertaking the activity.

The score **not targeted** means that the activity has been screened against, but was found not be targeted to, the policy objective.

An activity can have more than one principal or significant policy objective. To qualify for a score "principal" or "significant", the objective has to be explicitly promoted in project documentation. Avoiding negative impact is not a sufficient criterion.

## Watch out!

1) The same activity could score differently depending on the level of focus on the policy objective - it is important to examine whether the policy is the main objective or a subsidiary objective, and

2) An activity can be marked as both mitigation and adaptation related. Therefore, total amounts targeting the different objectives should not be added-up to avoid double-counting (users are advised to prepare statistical presentations for a single policy objective/marker at a time).

### Example of scoring

Note: the data of adaptation marker will not be available until the end of 2011.

Donor	Recipient	Project title	USD amount, '000	sector	Biodiversity	Climate Change	Desertification
Belgium	Morocco	Thinghir and Zagora cities sanitation	20 914	Water Supply and Sanitation	1	1	1
Switzerland	Laos	Preserving agrobiodiversity	4 208	General Environmental Protection	2	0	0
Denmark	Niger	Food security and organisation of villages in North Niger	1 401	Agriculture	0	0	1

### Reporting form

17. Expected starting date.....	-----	<b>E. For loans only</b>  <b>Terms of repayment</b>  43. Commitment date..... ----- 44. Type of repayment..... ----- 45. Number of repayments per annum..... ----- 46. Interest rate..... ----- 47. Second interest rate..... ----- 48. First repayment date..... ----- 49. Final repayment date..... ----- 50. Interest received..... ----- 51. Principal disbursed and still outstanding -----  52. Arrears of principal(included in item 51) ----- 53. Arrears of interest..... ----- 54. Future debt service: First year, principal ----- 55. Future debt service: First year, interest -----
18. Expected completion date.....	-----	
19. Description.....	-----	
-----		
<b>Policy objectives</b>		
20. Gender equality.....	-----	
21. Aid to environment.....	-----	
22. PD/GG.....	-----	
23. Trade development.....	-----	
<b>Type of aid</b>		
24. Free-standing technical co-operation	-----	
25. Programme-based approach.....	-----	
26. Investment project.....	-----	
27. Associated financing.....	-----	
<b>Rio markers</b>		
28. Biodiversity.....	-----	
29. Climate change - mitigation.....	-----	
30. Climate change - adaptation.....	-----	
31. Desertification.....	-----	

## 5. Frequently asked questions (FAQs) on Rio Markers (including climate markers)

**(“Rio Markers” include climate change mitigation, climate change adaptation, biodiversity and desertification. These FAQs are part of the Reporting Directives formerly approved by DAC members in June 2011)**

### ***When does an activity qualify for a Rio marker?***

Scores are assigned “1” or “2” for a Rio marker if the activity in question contributes to meeting the objectives of the corresponding Rio Convention(s). For example, if an activity is designed to improve the capacity of a healthcare system to cope with increased incidence of water and vector borne diseases, due to the impacts of climate change, the marker CAN be applied (principal or significant to be decided – see FAQs on scoring). However, if the objective is to improve the capacity of a healthcare system to treat diseases including water and vector-borne diseases, with no reference to climate change, the marker CANNOT be applied as climate change is not a factor driving the design of the project.

***The adaptation marker states that the climate change adaptation objective should be explicitly indicated in the activity documentation. What does “activity documentation” consist of?***

Activity documentation refers primarily to the written material which forms the basis for the donor’s decision to provide funding. This may be the actual project or programme document, or a proposal for funding an action which is outlined in a partner country document such as national programme, sectoral strategy, climate change strategy or PRSP. The emphasis here is the donor’s reasons for providing support for the activity in question.

*Example:* a donor contributes to a basket fund that supports a partner country programme in the forestry sector because of its links to climate change adaptation.

The specific motivation for contributing to the basket fund should be made clear in the activity documentation, i.e. in the programme document and in the donor’s supporting documentation: the donor, through its contribution to the basket fund, **intends to address climate change adaptation**. It is not enough simply to reference a whole PRSP or sector programme which may have an element of climate change adaptation.

### ***Can the same activity qualify for more than one Rio marker?***

**Yes.** The Conventions often complement and reinforce each other. In some cases, the same policies or measures can simultaneously address climate change, biodiversity and desertification objectives. The most obvious examples relate to the sustainable

management of natural resources. For example, a sustainable forest management project can contribute to biodiversity conservation, to capturing carbon (climate change mitigation) and to reducing climate risk (climate change adaptation). In drylands such a project can also help to combat desertification.

Therefore, in certain cases, the same activity can obtain more than one principal or significant objective score (i.e. score “2” for biodiversity and score “2” for climate change mitigation; or “2” for biodiversity and “1” for climate change mitigation).

### ***What is the distinction between the value “0” and the value “blank”?***

The Rio markers, as other markers, can show three values: “0” for not targeted, “1” for significant and “2” for principal (and “3” for desertification). However, the “0” value can only be assigned to activities that have been examined against the Rio markers and that were found as not targeted to the objectives.

For activities that have not been assessed with the Rio markers in mind, the “0” value should not be used, but rather the marker field should be left empty. This way, there is no confusion between activities that do not target the objective (score =“0”), and activities for which the answer is not known (score=“null”).

This important distinction has implications for statistical presentations of Rio marker data.

### ***What is the distinction between significant (“1”) and not targeted (“0”)?***

“Not targeted/0” means the activity does not explicitly target the Convention objectives (see also FAQ 6) while in the case of “significant/1”, it does. “Significant” implies that contributing to the Rio Convention’s objectives is a secondary objective of the activity.

*Example:* a water supply and sanitation project that includes provision for the recovery and use of methane for energy generation can be scored significant (“1”) for the climate change mitigation marker, as methane capture reduces greenhouse gas emissions. The same project without measures to capture methane would score a “0” as the Rio Conventions are not targeted. This is a standard water and sanitation project which does not include climate change mitigation as a driver in its design.

### ***When should an activity be marked as “principal objective”, when as “significant objective”?***

A **principal objective score** should be given when promoting the objectives of the Conventions is stated in the activity documentation to be one of the principal reasons for undertaking the activity, in other words the activity would *not* have been undertaken in this particular way without this objective.

*Example:* a project to increase local income generating opportunities through improved management and sustainable use of biodiversity would be marked for the biodiversity

marker as a principal objective. However, if a similar project aimed to increase local income generating opportunities through a number of activities including, for example, livestock rearing, food processing, vegetable gardening, and the management and use of biodiversity, then the principal objective would not apply, although the significant score could be considered.

A **significant objective score** should be assigned when promoting the objectives of the Conventions is an important aspect, but is not one of the principal drivers of the design of the project or programme.

*Example:* a programme addressing food insecurity which also builds capacity to cope with the impacts of climate change on food production could be marked as “significant”. In this example the principal objective is food security and a “significant” objective is adaptation to climate change.

Activities should be marked according to their stated objectives. Below are two examples of typical activities in the energy sector that further clarify the difference between principal and significant objective:

**A** *The first activity aims to **limit anthropogenic greenhouse gas emissions** through switching from a coal-fired power plant to cleaner energy sources including a mix of geothermal, hydro-electric and solar power. In this example climate change mitigation is a primary motivation for undertaking this activity and it should be marked with climate change (mitigation) as a principal objective (i.e. “2”).*

**B** *The second activity aims at improving **access to safe and reliable energy services** as a means of achieving social and economic development, especially for the poor. One component of the activity is to support end users in obtaining access to reliable and cleaner energy services by switching to improved stoves and to liquefied petroleum gas. In this case, energy provision is the primary objective, with cleaner energy resulting in reduced emissions (i.e. climate change mitigation) as a secondary objective. It should be marked with climate change (mitigation) as significant objective (i.e. “1”).*

***If the objectives of the Rio Conventions have been mainstreamed into an aid activity, should it be scored as “principal objective”?***

**Not necessarily.** If mainstreaming is systematically practiced, the Rio Conventions’ objectives will be integrated to projects across a wide range of sectors, and the activities will often qualify to be marked against the Conventions but will be likely to obtain the “significant objective” score (the activities should be assessed to see if the “significant” score should be awarded). However, mainstreaming can in some cases transform the activity to the point that it deserves to be scored “principal objective”. For example, if mainstreaming has led to the redesign of a traditional power project to now rely on renewable energy and energy savings, the entire activity can be considered as having

climate change mitigation as its principal objective. If the transformation is more limited, a “significant objective” score should be awarded.

It is also worth noting that an activity that facilitates mainstreaming can qualify for a principal score. For example, an activity that is primarily designed to build capacity and develop tools to integrate biodiversity, climate change or land degradation into national and sub-national policies, planning and investment frameworks, should obtain the “principal objective” score.

***Should an activity arising from a national action plan linked to a Rio Convention be assigned the score “principal objective”?***

**Yes.** The Rio Conventions call upon Parties to formulate action plans or strategies to implement the Conventions. An activity arising from such an action plan or strategy (e.g. National Biodiversity Strategy and Action Plan under the CBD; NAPAs or NAMAs<sup>1</sup> under the UNFCCC; and National Action Plans under the CCD) automatically qualifies as principal objective<sup>2</sup>, as the Conventions provide the motivation for the design of the activity.

***Do activities in the forestry sector target loss of biodiversity and climate change mitigation by definition?***

**No.** For example, a monocrop forest plantation with important economic and social benefits might have negative or neutral impacts on biodiversity. The climate change mitigation benefits of such a project will depend on how the trees grown are utilised after they are cut. If they are used for energy production (i.e. turned into charcoal for fuel) there are no net carbon sequestration benefits. Forestry projects need to be examined on a case-by-case basis to determine how they should be marked.

***Do disaster prevention and preparedness activities automatically qualify for the adaptation marker?***

**No.** Aid activities for disaster prevention and preparedness do not necessarily qualify for the adaptation marker. However, activities which enhance disaster prevention and preparedness in such a way that it contributes to climate change adaptation can be marked. Examples include:

- Developing emergency preparedness plans and disaster risk reduction strategies in order to protect key infrastructure assets from the impacts of climate change; this includes setting up early warning systems, addressing governance issues and promoting awareness.

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1 . NAPAs: National Adaptation Programmes of Action; NAMAs: Nationally Appropriate Mitigation Actions.

2. In other words, score “2”. In the case of the Rio marker on desertification, activities arising from National Action Plans under the CCD should be assigned score “3”.

- Promoting disaster preparedness and the links to climate change adaptation at various levels of government as well as at community level.
- Developing, testing and building capacity for emergency preparedness plans at various levels, in collaboration with other relevant authorities, to improve the handling of extreme weather events.

***Does flood prevention/control automatically qualify for the adaptation marker?***

**No.** Aid activities for flood prevention/control do not necessarily qualify for the adaptation marker. However, activities which enhance flood prevention/control in such a way that it contributes specifically to climate change adaptation can be marked. Examples include:

- Restoring the function of floodplains in combination with sound land-use planning of watersheds and wetlands thereby reducing the exposure to floods and improving water availability in areas affected by water scarcity and /or variable rainfall patterns.
- Flood control measures in areas which are becoming increasingly flood-sensitive (e.g. closing of estuaries, building of dikes and sea defences) – with due consideration for the potential environmental impacts of such measures.

***What are the links between the purpose (sector) classification and policy markers?***

The term “purpose of aid” signifies the sector of the recipient’s economy that the aid activity is designed to assist, e.g. health, energy, agriculture. It does not refer to the type of goods or services provided. Some contributions are not targeted to a specific sector, e.g. general budget support, debt relief, humanitarian aid. These are called “non sector allocable aid”.

DAC statistics on aid by purpose can be supplemented with information on the policy objectives of aid. Certain aspects of environmental sustainability can be captured through purpose codes (e.g. biodiversity conservation, biosphere protection, environmental policy and planning). But activities across a wide range of economic sectors can also be targeted to environmental sustainability. Infrastructure projects designed with integrated environmental protection components, water resources protection or sustainable forest management programmes are examples of typical environment-oriented aid activities that would not have been classified in an environmental purpose (sector) code. They can be identified as supporting environmental improvements with the help of the environmental sustainability marker, and Rio markers as well.

***How to use and interpret Rio marker data?***

Marker data do not allow exact quantification of aid targeted at a particular objective. They give an indication of the policy objectives of aid (best estimate). The full amounts of activities marked as “principal” can be considered as contributing to the policy objective in question. Less than the full value of activities marked as “significant” target

the objective and these amounts should be considered with caution: only a proportion may have actually targeted the Convention (e.g. an energy project of USD 50 million may be designed with an integrated climate change mitigation component of USD 10 million). These proportions can be very variable between activities and are not known.

**Watch out!** An activity can have more than one principal or significant policy objective (i.e. it can be marked for several Rio markers). Total amounts targeting the different objectives should not be added-up to avoid double-counting (users are advised to prepare statistical presentations for a single policy objective/marker at a time).

When calculating shares, use the right denominator:

The score **not targeted** (score "0") means that the activity has been screened against, but was found not to be targeted to environmental sustainability. But there are activities for which the field is **empty**. This means the activity has not been marked. (With a view to reducing the administrative burden, some Members have decided to exclude certain activities from their marker systems.) When examining the share of a donor's aid that targets environmental sustainability, activities not screened against the objective should be excluded.

## 6. Examples of activities that qualify for score “principal” under the climate change adaptation marker

### ***Enabling activities***

- Improving weather and climate information systems.
- Supporting the development of climate change adaptation-specific policies, programmes and plans.

### ***Policy and legislation***

- Strengthening the capacity of national institutions, including Finance and Planning Ministries, responsible for coordinating and planning adaptation activities and the integration of adaptation into planning and budget processes.
- Making Disaster Risk Reduction (DRR) information and tools more accessible for climate change adaptation negotiators and managers; promoting the role of DRR in climate change adaptation policies, strategies and programmes.
- Encouraging systematic dialogue, information exchange and joint working between climate change and disaster reduction bodies, focal points and experts, in collaboration with policy makers and development practitioners.

### ***Agriculture***

- Promoting diversified agricultural production to reduce climate risk (e.g. growing a mix of different crops and different varieties of each crop). Engaging in soil and water management to increase water availability in areas experiencing increased water stress due to climate change.

### ***Coastal Zone Protection***

- Conservation of mangroves and coral reefs to protect coastal zones from weather-related catastrophes (storms and typhoons). This also benefits biodiversity and fisheries as spawning grounds for fish are preserved.

### ***Energy***

- Strengthening of energy transmission and distribution infrastructure to cope with the impacts of climate change.
- Design and construction of measures to protect critical energy infrastructure from the impacts of floods and storms.

### ***Fisheries***

- Mapping changes in the range of fish species and strengthening the monitoring of fish stocks to determine the impacts of climate change.

### ***Forestry***

- Restoration of former forest areas utilising natural seed banks and existing plants, in order to reduce vulnerability to the impacts of climate change.
- Securing local and indigenous people’s rights and systems for a sustainable and long-term utilisation of the forest in order to increase resilience to climate change.
- Promoting sustainable forest management and adopting harvesting techniques that reduce soil erosion and exposure to wildfires, and promote the

conservation of biodiversity in order to safeguard forest ecosystems from the impacts of climate change.

### ***Health***

- Developing or enhancing systems for monitoring drinking water, food and air quality, in areas affected by higher temperatures, floods and rising sea level.
- Strengthening food safety regulations, notably in terms on microbiological quality, avoidance of contact with pest species, conservation duration and conservation temperatures, in areas affected by higher temperatures.

### ***Transport***

- Building protection from climate hazards into existing transport infrastructures.
- Building alternative transport infrastructure to replace/complement existing transport infrastructure at risk of climate hazards.

### ***Water and sanitation***

- Monitoring and management of hydrological and meteorological data for decision making on impacts of climate change (possible synergy for early warning systems or agro-meteorological information systems).
- Strengthening capacity for integrated planning and management of water resources, in response to climate change, including supply, demand and water quality issues.
- Promoting water conservation and rainwater harvesting in areas where enhanced water stress due to climate change is anticipated.

## 7. Glossary for the climate change adaptation marker

**Adaptation assessment:** The practice of identifying and evaluating, in monetary and/or non-monetary terms, the effects of climate change on natural and human systems. (IPCC 2007. Contribution from Working Group 2 – Impacts, Adaptation and Vulnerability)

**Adaptive capacity** is the ability to cope with the impacts of climate change. In many cases a country's ability to cope is related to its level of development. Generally, the more developed a country is, the more resources it has at its disposal with which to adapt to climate change; this includes financial, technical and human resources (Secretariat's definition).

**Adaptation technologies:** In addition to changing behaviour, adaptation to climate change will involve the use of technology, including "hard" forms, such as new irrigation systems or drought-resistant seeds, and "soft" technologies, such as insurance schemes for crop rotation patterns. There can also be combinations of hard and soft technologies such as early warning systems that combine hard measuring devices with soft knowledge and skills that can raise awareness and stimulate appropriate action. Many of these technologies are already available and widely used, and include both indigenous and high tech approaches. Climate change will challenge the use and evolution of these technologies. (Adapted from UNFCCC 2006, Technologies for Adaptation to Climate Change.) *See also Technology co-operation below.*

**Climate change adaptation analysis:** The practice of assessing and evaluating the impacts of climate change on an activity, investment or ecosystem in order to identify any relevant adaptation measures. (IPCC 2007. Fourth Assessment Report) There is no standard way of conducting such analysis although a variety of tools exist which can be used to inform the assessment.

**Climate change screening**<sup>3</sup>: Climate change screening is a systematic process of examining activities, outputs and programmes in order to identify their vulnerability to climate change, including assessment of the extent to which vulnerability is being or could be addressed. (Danida, 2009, Bangladesh Climate Screening Report.)

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<sup>3</sup> A pragmatic interpretation of the difference between climate change screening and climate risk screening would be that the former provides a systematic approach to establishing information on climate change impacts and adaptation options, without specific inclusion of risks. It would be expected that so-called 'pre-screenings' or 'rapid screenings/ assessments' entail establishing an initial, quick overview of key linkages between development and climate change and identifying core vulnerabilities and so would fall under the climate change screening classification. At the practical level, however, it is almost impossible to distinguish between the approaches to climate change screening and the approaches to climate risk screening, and the two terms seem to be used synonymously. (UNDP, 2010. Screening tools and guidelines to support the mainstreaming of climate change adaptation into development assistance - a stocktaking report P. 16)

**Climate hazard:** A climate hazard is a physically defined climate event with the potential to cause harm, such as heavy rainfall, drought, storm, or long-term change in climatic variables such as temperature and precipitation. A hazard may be a transient, recurrent event with an identifiable onset and termination such as a storm, flood or drought, or a more permanent change such as a trend or transition from one climatic state to another. Hazards may be characterised in terms of climatic variables, and coping range may be defined in terms of the same variables for the various systems on which human populations depend". (UNDP 2005. Adaptation Policy Frameworks for Climate Change: Developing Strategies, Policies and Measures. Eds. Bo Lim and Erika Spanger-Siegfried.)

**Climate proofing:** A shorthand term for ensuring that the risks identified through a climate change analysis are reduced to acceptable levels. When changes are made to an activity in anticipation of the impacts of climate change, it can be said to be climate-proofed. For example, a sea wall being built or rehabilitated might be built somewhat higher to account for sea level rise (ADB 2005. Climate Proofing: A Risk-based Approach to Adaptation.)

**Climate resilient development** is development which is based on an assessment of the impacts of climate change and which has integrated climate change adaptation measures into its policies, plans and activities.

**Climate risk:** The risk posed to a human or natural system by a climate related hazard. The level of risk relates to the severity and probability of occurrence of the hazard and the way in which its consequences are likely to be mediated by the social vulnerability of the human system in question. Risk may be quantified in terms of outcome, for example in terms of human mortality and morbidity and/or economic losses. (Based on Brooks 2003: Vulnerability, Risk and Adaptation: A conceptual framework. Tyndall Centre for Climate Change Research. Working Paper 38.)

**Climate risk screening**<sup>1</sup>: Analysing project concepts, with a view to identifying i) whether climate risks have been taken into consideration, ii) whether the concepts are vulnerable to climate change, iii) whether plans could lead to increased vulnerability, and iv) what steps taken in project design are needed to reduce risks and associated costs. (ADB 2009 p.67. Understanding and Responding to Climate Change in Asia.)

**Capacity building:** In the context of adaptation to climate change, capacity building is developing the technical skills and institutional capabilities in developing countries and economies in transition to enable their participation in all aspects of adaptation to climate change. (IPCC 2007. Fourth Assessment Report.)

**Disaster risk reduction** represents the systematic development and application of policies, strategies, and practices to minimise vulnerabilities and disaster risks throughout a society, to avoid or to limit adverse impact of hazards, within the broad context of sustainable development. (UNISDR 2002. Living with Risk: A global review of disaster reduction initiatives.)

**Human systems:** Any system in which human organisations play a major role. Often, but not always, the term is synonymous with society or social system, e.g. agricultural system, political system, technological system, economic system. (IPCC 2007. Fourth Assessment Report.)

**Integrated planning (cf. links to mainstreaming):** In the context of adaptation to climate change, integrated planning is planning which takes climate change adaptation into account in planning and decision making, across all sectors and at all levels. It is distinct from planning for climate change adaptation as a separate or stand alone activity. (Secretariat's definition.)

**Adaptation mainstreaming:** Refers to the integration of adaptation objectives, strategies, policies, measures or operations so that they become part of the national and regional development policies, processes, and budgets at all levels and stages. (UNDP 2005. Adaptation Policy Frameworks for Climate Change: Developing Strategies, Policies and Measures.)

**Maladaptation:** maladaptation is defined as business-as-usual development, which by overlooking climate change impacts inadvertently increases exposure and/or vulnerability to climate change. (OECD 2009. Integrating Climate Change Adaptation into Development Co-operation.)

**NAPAs (National adaptation programmes of action):** Documents prepared by least developed countries (LDCs) identifying urgent and immediate needs for adapting to climate change. The NAPAs are then presented to the international donor community for support.

(UNFCCC 2010. [http://unfccc.int/essential\\_background/glossary/items/3666.php](http://unfccc.int/essential_background/glossary/items/3666.php))

**Natural systems** refer to the ecosystems and resources of the earth. The IPCC 4AR identifies natural systems at risk from climate change including glaciers, coral reefs and atolls, mangroves, boreal and tropical forests, polar and alpine ecosystems, prairie wetlands, and remnant native grasslands.

**No regrets adaptation** is measures that will benefit development regardless of future climate trends, but which will be particularly beneficial if projected climate change occurs. Since projections of future climate will always involve a degree of uncertainty, it is important to identify no regret adaptation measures. Examples include water conservation and enhanced public health systems, among others. (OECD 2009. Integrating Climate Change Adaptation into Development Co-operation.)

**Resilience:** Amount of change a system can undergo without changing state. (IPCC 2001. Third Assessment Report.)

**Technology co-operation:** Technology co-operation encompasses a wide range of measures which can identify and address obstacles to the diffusion of more advanced technologies in developing countries. This includes, in particular, the establishment of a

policy environment conducive to domestic and foreign investment; the development of stable and transparent regulatory standards as well as associated capacity development for monitoring and enforcement. Supportive technical, educational and information services also play a critical role in the diffusion of more advanced technologies. These can include the provision of specialised technical expertise and training services to raise awareness of the benefits of improved technologies among engineers, managers and staff of financial institutions; and the development of databases to keep track of best techniques and technologies. Technology co-operation therefore encompasses support provided at the policy level as well as the industry or enterprise level. (Secretariat's definition)

**Vulnerability** encompasses exposure to risk, hazards, shocks and stress, and the capacity to respond or cope with these stressors and impacts. In the context of climate change and development, vulnerability to climate change is the risk that climate change will cause a decline in the well-being of poor people and poor countries. This means the degree to which a system is susceptible to adverse effects of climate change, including climate variability and extremes. This vulnerability is a function of the character, magnitude, and rate of climate variation to which a system is exposed, and the level of response or adaptive capacity. (Adapted from the Joint Agency Paper 2005. Poverty and Climate Change: Reducing the Vulnerability of the Poor through Adaptation.)



*[www.oecd.org/dac/stats/rioconventions](http://www.oecd.org/dac/stats/rioconventions)  
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