On behalf of

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Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

AdaptationCommunity.net

Input report for the development of an

M&E System for the 'Integrated Climate Change Adaption Strategy' in Grenada

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Disclaimer

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Framework conditions for the development of an adaptation M&E system

1.1. General framework

As a small island, Grenada is particularly vulnerable to the adverse effects of projected climatic changes. Whilst Grenada has developed several policies and projects relating to adaptation over the years, a strategic and comprehensive approach to adaptation, including coordination across sectors and the implementation of concrete measures is needed. The German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU) committed 5 million EUR to support the country's climate change adaptation efforts and commissioned GIZ and UNDP to implement the project "*Integrated Climate Change Adaptation Strategies*" (ICCAS). The overarching goal of the project is to increase resilience of vulnerable communities and ecosystems to climate change risks in Grenada through integrated adaptation approaches. The official launch of the project was in April 2013.

An important element of a comprehensive approach to adaptation is a sound M&E system that allows to measure progress and shortcomings with regards to adaptation in Grenada. Therefore, an M&E system is aimed to be developed in the early stages of the ICCAS project.

In order to strengthen the capacity of the Government of Grenada for adapting to the impacts of climate change the M&E system for adaptation should allow to

a) allocate and steer adaptation interventions,
b) track success and failure with regards to adaptation measures and thereby allow for iterative learning processes in this relatively new field, and
c) promote accountability and efficient funding.

The M&E system will be closely linked to other activities of the ICCAS project, e.g. the access to international funds, and the adaptation strategy to be developed.

An international consultancy was commissioned to initiate the M&E system development. It conducted a multi-stakeholder training on adaptation M&E, which took place from 22nd-23rd July 2013, a stock-taking of existing M&E systems with relevance to adaptation and the development of first recommendations for developing the adaptation M&E system. This report condenses the main findings of the consultancy input. It is based on various interviews (see list of interview partners in Annex 3) and on review of relevant documents.

1.2. General situation of M&E in the country

There are several M&E systems in place in Grenada, which are operated within the responsibility of sector ministries and other institutions. An overview is provided in a kind of preliminary M&E inventory in Annex 1. None of them specifically focuses on adaptation. In general, they are quite sporadic and heterogeneous. As a general challenge, many M&E activities in Grenada are not digitalized, are not undertaken on a regular bases but rather project related and/or do not result in a systematic analysis and reporting but merely compile data. Annex 1 includes in its last column a ranking on how far these M&E systems or selected data sets might (partly) be used for the adaptation M&E system. The ranking indicates that some M&E systems are of particular relevance. Most of the others might provide a source for selected data.

Two M&E systems with higher potentials for the future adaptation M&E system are being further explored:

- The **Water Information System (WIS)** comprises various datasets such as topography, agricultural land-uses, water-sheds, water-streams, rainfall monitoring

stations etc. It can be accessed through the web-site www.cariwin.gd with the username: aeberhardt, password: welcome. WIS's potentials for the future adaptation M&E system can be seen in its connectability with other geographical data sets. Furthermore, it is based on a GIS and as such provides capacities for integration of other data and for producing individual maps with specific contents.
- The **Annual Agriculture Review** compiles various agricultural data (e.g. yields, irrigation intensity) but also extracts key findings such as strength and weaknesses of political relevance. Its regular preparation (annual) provides potentials for the adaptation M&E system.

1.3. International and other bilateral activities

The development of an adaptation M&E system for Grenada has to reflect several relevant activities at international / regional (Caribbean) level as well as other bilateral cooperations. Cooperation within the framework of the Caribbean Community Climate Change Centre (CCCCC) is of great importance. Relevant CCCCC activities include in particular:

- The 'Regional Framework for Achieving Development Resilience to Climate Change'[1] including an Implementation Plan has been adopted in 2009. For its implementation an M&E system is being developed. Baastel Consulting is being commissioned with developing this M&E framework. They subcontracted Mr. Leon Charles for the activities in Grenada. The first activities of the consultant focused on an inventory of existing or envisaged M&E systems. In distinction to the approach within this study, the inventory considers only M&E systems with a clear focus on adaptation. For Grenada, only 2 systems (PPCR and ICCAS) were reflected so far. Further reflections on potential links with the ICCAS project are documented under section 3.
- The Pilot Program for Climate Resilience (PPCR) by the World Bank produced the Grenada Specific Programme for Climate Resilience of 2011, which includes also data and monitoring elements.
- The CARIWIG Project within the CCCCC framework includes the provision of locally relevant information on CC impacts.
- CCCCC launched a programme with a specific focus on databases: The Database Management System for Regional Integrated Observing Network for Environmental Change in the Wider Caribbean (DBS).

In general, this indicates the high relevance of the CCCCC activities for the development of the adaptation M&E system in Grenada. This is especially true for the first project mentioned. In this respect, an interview was hold with Mr. Leon Charles. Further links with other CCCCC activities may be explored in more detail.

Beside the CCCCC activities other international and bilateral activities which might be of relevance to the adaptation M&E development were also mentioned during the interviews. These include:

- The Regional Disaster Vulnerability Reduction Project (World Bank)
- Caribbean Catastrophe Risk Insurance Facility (CCRIF)
- Several projects on Disaster Risk Management with the Caribbean Disaster Emergency Management Agency (CDEMA), inter alia with support from JICA, Italy, CIDA and USAID.

[1] Accessible through http://www.caribbeanclimate.bz/ongoing-projects/2009-2021-regional-planing-for-climate-compatible-development-in-the-region.html

2. Recommendations for approaches and key elements for the M&E system development

2.1. Context definition

A key framework condition for the development of the adaptation M&E system can be seen in the fact that it will be developed in parallel to the elaboration of the adaptation strategy. This already defines framework and context for the adaptation M&E system:

Context / framework element	Recommended features for the adaptation M&E system
Objective of M&E system	• Steering the implementation of the adaptation strategy with an result based approach; • using lessons learnt for further improving the strategy in an iterative process; • foster understanding of the further CC process in Grenada (baseline against which the strategy's outcomes have to be measured); • promote accountability also with a view to mobilizing external funds for adaptation.
Subject of M&E system	In line with the objectives as mentioned above, the subjects of monitoring (which will be reflected in indicator definition) should include: • **Response monitoring (results):** How far are goals / outcomes of the strategy being achieved? • **Response monitoring (processes):** How far are activities and outputs being realized as envisaged? • **CC impact monitoring:** How do key parameters of CC impacts further evolve?
Users of the M&E system	The users will comprise a comparably large group: • Government institutions concerned with and / or affected by CC. • Stakeholders involved in CC activities • Politicians and decision-makers • General public • International institutions, especially the CCCCC in respect to its implementation of the Regional Framework for Achieving Development Resilient to Climate Change

2.2. Recommendations for the M&E system development process

In operationalizing the parallel development of the adaptation strategy and the adaptation M&E system, synergies should be ensured through the following mechanisms:

- M&E should focus on some **key sectors**, which were identified in the strategy as most important. It might be appropriate to start with the M&E development in selected key sectors first and then extend it step-wise. Such an approach is being pursued in the United Kingdom and helps to avoid over-complexity during the initial stages of M&E.
- The strategy should apply **result chains** to systematically elaborate envisaged goals/ results and link them to outcomes, outputs and activities. These result chains will support the M&E system development, e.g. through consistent systematics for developing adequate indicators, which represent the performance of the adaptation process in total.

- The strategy should include a **chapter on M&E**, which specifies how the M&E system will operate in detail and which identifies responsible actors as well as necessary resources.
- The **timing and milestones** for developing the adaptation strategy and the M&E system should be harmonized from the beginning. M&E system development should not start too late. The institutions responsible for the strategy development (especially the Climate Change Committee) should also receive the mandate to take over responsibility for the M&E system development.

An overarching challenge of the development of the M&E system will be the limited financial and human resources available in Grenada. This challenge should be addressed through the following strategic approaches:

- Use as much as possible **existing data and M&E systems**. With this background, the first inventory of existing data and M&E systems was compiled during the mission as explained in section 1.2 (see Annex 1). This stocktaking, however, presents only an initial assessment, since only 3 days were available for interviews. Based on these findings, an in-depth inventory should be elaborated during the first steps of the ICCAS project. This should include a 'physical inspection' of the data quality and the specification of those indicators, which could be used by the adaptation M&E system – potentially also in modified versions.
- **Limit the number of indicators:** A too large number of indicators might overstress the existing resources of the involved institutions. Therefore, the indicator set should be condensed to 'key indicators', which might represent larger parts of the adaptation systems and form 'proxies' also for other indication fields (e.g. selected species, selected watersheds, selected crop varieties).
- **Clearly provide resources and indicate responsibilities for the M&E system:** An implementation plan should earmark, who is to implement which part of the M&E system with which resources. A useful format for this are '**indicator factsheets'**, which specify for each indicator, *i.a.*, the following issues:
    - Who are responsible actors for data collection, processing and evaluation?
    - What are the specific levels (local – regional – national) of data collection for each indicator?
    - Who condenses information gathered to consistent reports, which are especially providing focused support to decision-making?
    - In which way will different actors cooperate? Specification of process flow.
    - Which resources (funds, personnel, equipment) are necessary for the M&E system. Who provides which resources?

  An example of an indicator factsheet as developed for the German adaptation M&E system is documented in Annex 5.

As mentioned, the development of indicators will be an important step towards an operational adaptation M&E system. The following indicators will be relevant (see also the above table):

- **CC impact indicators:** These could include natural resource data such as river flow or groundwater tables; damage data such as number of floods, damage through floods; ecosystem data such as forest / mangrove coverage; social data such as disease incidence etc. It is an important part of the 'learning function' of the M&E system to include CC impact indicators, since the future evolvement of CC cannot precisely be predicted, only projected based on assumptions and models. It should be verified, how far these projections will really materialize in the future. In addition, the CC impact indicators provide the 'baseline' for all interventions which vulnerability reduction will be measured against.

- **Response indicators (results):** Results indicators should refer to the key goals / outcomes as formulated in the adaptation strategy (preferably through result chains). They should monitor how far these goals are being achieved over time. Result indicators could focus on aspects of food security, functionality of water supply systems or effectiveness of disaster risk management systems.
- **Response indicators (process):** It can take years or even decades until a result indicator clearly shows whether expected outcomes of adaptation processes have been achieved. To enable a more process-oriented steering, it is important to also include indicators focusing on activities and outputs, which allow a monitoring at shorter time periods. Examples are the installation of certain irrigation schemes or the afforestation of mangrove areas. Both examples document implementation efforts but do not themselves indicate the effect of these measures on vulnerability reduction.

It is crucial that the indicators follow the 5 'Smart Rules'. A quality assessment should assure that all selected indicators are:

- **S**pecific: Clearly connected to defined outcome / output
- **M**easurable: Possible to measure progress
- **A**ttainable: Possible to achieve the information
- **R**elevant: Focusing on relevant issues
- **T**ime bound: have a timeframe attached to them

2.3. Institutional set-up

The development of an M&E system is a complex process, which needs resources, time and coordination. The following principles should be applied in defining the institutional set-up:

- The M&E development should be imbedded into a **multi-sector process** since many institutions in Grenada will be involved in the provision of data, processing of the M&E system and use of monitoring results.
- At the same time, indicator development and data processing imply **complex technical tasks**, which require adequate competences and capacities.
- The M&E system development should also **institutionally be linked to the adaptation strategy development**.
- Use of **existing bodies** and structures provided they are adequately functioning.

Taking into account the short timeframe and the limited information basis during this mission, it was not possible to provide a comprehensive recommendation for an institutional set-up. Rather, some key elements are being proposed:

- **Overarching steering:** It should be ensured that the overall steering structure for the adaptation strategy development includes also a steering of the M&E system development. If the Climate Change Committee will be made responsible for the overall steering of the adaptation strategy, it should receive also a clear mandate for M&E system development. Such a steering function would, however, require a quite different set-up and focus of the Climate Change Committee compared to the existing Sustainable Development Council, which evolved more as an information exchange platform.
- **Cooperation among involved institutions:** Different government and other institutions (sector ministries, Met Office, NAWASA, NaDMA etc.) will have to cooperate on the development and operation of the M&E system. The cooperation should be well coordinated. Subject to in-depth exploration and discussion, it might be possible to use the existing network of planning units of all sector ministries, which was formed to operationalize the results monitoring for the National Strategic Development Plan. This new monitoring programme was established through the

Cabinet Office and is now operational. A lead agency seems to be indispensable for such a network. Previously, the Ministry of Finance, Planning, Energy & Cooperatives used to perform this function, which is now abandoned due to personnel changes. The Ministry of Finance, Planning, Energy & Cooperatives would be a good option in so far as it is a quite powerful. Another option would be a M&E Task Force to be newly established. Also in this case, a lead agency should be nominated. In any case, the coordinating bodies including the lead agency should receive adequate staffing to perform their expected functions.

- **Feeding in required expertise and performing technical tasks:** As already mentioned, the development of an adaptation M&E system comprises also tasks of relatively high technical expertise and cannot be management merely by discussion processes. This is especially relevant for the development of indicators and the inventory of existing data and monitoring schemes. It is recommended to acquire expert input from a regional or national expert – potentially in connection with the above mentioned M&E development processes launched by CCCCC. If needed, international experiences and quality back-stopping could be provided by an international expert with some limited inputs.

The mentioned set of functions – steering body / task force / consultant input – was quite successfully applied in the case of the adaptation M&E system development in the Philippines. It might be useful to directly exchange experiences with Philippine experts, e.g. through the communication networks provided by IMACC.

The last exercise of the Training Workshop conducted on 22 / 23 July 2013 in Grenada focused on the elaboration of key recommendations for adaptation M&E system development under 'real conditions' in Grenada. The results as compiled by the participants are documented in Annex 2. It is highly encouraging that many of these visions coincide with recommendations given in this report.

3. Recommendations regarding supportive interventions by the ICASS Project

The ICCAS project will fully start its operations within the next weeks. This will also include the development of an operational plan for the adaptation M&E development. The following intervention elements are recommended for a targeted support:

- One of the first support activities could be the development of a **detailed inventory of existing M&E systems** building on the first screening as condensed in Annex 1. It should include a physical inspection of data sets to be able to appraise data quality and other specifications. The inventory might already result in a collection of potential CC impact and response indicators for the future M&E system (which will be later ranked and further specified).
- In-depth exploration of the activities of other **international and bilateral cooperation processes** seems to be necessary. The limited timeframe of this mission did not allow activities into this direction beside a discussion with the expert involved in the CCCCC M&E system development (Leon Charles). He envisages forwarding the first draft of the inventory of adaptation M&E systems, which is actually being compiled under the CCCCC project to GIZ. In exchange, GIZ could feed relevant working results into the exchange as soon as they are available. In general, an important added value could be provided by GIZ through networking with various relevant activities being undertaken in the Caribbean and beyond.
- As explained, for the more technical development steps (especially indicator development, and indicator factsheets) **expert inputs** seem to be necessary. GIZ could commission a competent national / regional consultant for undertaking this task and potentially also a supporting international expert.

- As also mentioned, the M&E development should be closely linked to the adaptation strategy development. This connection should also be reflected in all implementation processes at GIZ side.
- GIZ might provide / support an initial '**secretariat function'** to the Climate Change Committee if it is mandated with a more pronounced steering and coordination function than the existing Sustainable Development Council.
- Demand was indicated at partner side to continue and intensify the **training inputs** as launched through the 2-days training during the mission. Selected and in-depth capacity development inputs might be provided during the process of M&E system development.
- At a later stage, GIZ might support the development of a consistent **Implementation Plan** for the adaptation M&E system. This should include consistent responses to the following questions:
    - Who are responsible actors for data collection, processing and evaluation?
    - What are the specific levels (local – regional – national) of data collection for each indicator?
    - Who condenses information gathered to consistent reports, which are especially providing focused support to decision-making?
    - In which way will different actors cooperate? Specification of process flow.
    - Which resources (funds, personnel, equipment) are necessary for the M&E system. Who provides which resources?
    - Time horizons and frequency for data collection, assessment and reporting.

Annex 1: Assessment of relevant existing M&E and data systems

M&E / data system	Responsible institution	Main goal	Regular operation / single application	Under development Under operation	Digitalised	Resulting in a report / analysis	Relevance for Adaptation M&E (High – Medium – Low)
Sector-wide performance monitoring	Cabinet Office Policy Monitoring and Evaluation Unit	Accountability of sectors towards PM for accomplishing main government goals	Regular	Operational	No	No	Medium M&E of overarching key goals of Adaptation Strategy (Response monitoring)
Water Information System (WIS) / GIS including agricultural land-use, weather and water management data	MoAFFLE, Land use Division	Planning tools for government, researchers, consultants etc.	Regular	Operational	Yes	No Only rainfall	High Compilation and visualization of CC impact data of geographical relevance. Important for sectors water and agriculture.
Irrigation consumption	MoAFFLE, Land Use Division	Database on water consumption for irrigation	Regular	Under Development	Yes	No	Medium Element for impact as well as response monitoring
Land degradation assessment	MoAFFLE, Land Use Division	Land degradation assessment within project framework	Single	Under Development	Partly	Yes	Low Source for specific land data within CC impact monitoring
Annual Agricultural Review	MoAFFLE, Planning Unit	Annual performance report of all sectors of agriculture	Regular	Operational	No	Yes	High CC not included yet but high potentials for CC impact and response monitoring
Coastal Monitoring	MoAFFLE, Environmental Unit	Monitoring of the quality of coastal areas	Regular	Under Development	Not clear yet	Not clear yet	Medium Data source for impact as well as response monitoring
Reporting by agricultural	MoAFFLE,	Feedback by	Regular	Operational	No	No	Low

extension service	Extension Unit	extension officers on key agricultural developments					Potential information source for CC impact as well as response monitoring
Meteorological Data	Met Office	Regular Met. Monitoring Warning functions (hurricane, heavy rainfall, tsunami)	Regular	Operational	Yes	Very limited	Medium Basis for all weather correlations in the adaptation M&E system. Limited geographical focus since only one station with full set of parameters.
Drinking Water Production Monitoring	NAWASA	Operational accounting and reporting	Regular	Operational	No	Very limited (annual report)	Medium Potentials for CC impact monitoring, however, digitalization and increased frequency necessary.
Disaster Damage Assessment Monitoring	NaDMA	Damage assessment after disasters for compensation claims, reconstruction needs etc.	After each disaster	Operational	No	No	Low Usable if digitalized and resulting in reporting.

Annex 2: Documentation of comments given by the participants during the M&E Training Workshop

Strategy dimension / potential challenges	Possible approaches for enhancing capacities and conditions for development of an adaptation M&E system in Grenada
Ensure a smooth cooperation among all agencies and offices involved in adaptation M&E	• Establishment of a National Coordination Body / Committee to meet monthly + broader multi-sectorial committee to meet quarterly • Revitalize Climate Change Committee to include key stakeholders • Sub-committee to manage M&E
Acquire the necessary expertise for developing an M&E system	• Build capacities in relevant institutions through training, proper recording, documentation and clear procedures.
Ensure financing for the M&E system development and its future implementation	• Establish adaptation fund • Mainstream adaptation into departmental plans • Develop sustainable funding / financing mechanisms • Proper budgeting
Get access to all necessary data	• Establish data collection sub-committee • Pursue citizen science (?) • Inventory of existing data systems needed • Make data accessible to various stakeholders • Identification of additional data systems
Limit complexity of the M&E system	• Focus on a few key indicators • Focus on key sectors (water management, coastal zone management, land use, food security, waste management) • Begin with areas that are most relevant
Ensure that crucial results of the M&E system are reflected by decision makers / politicians	• Write policy briefs / executive summaries • Presentation to cabinet, politicians and senior managers • Involve policy makers in Climate Change Committee • Involve media, ensure outreach • Conduct community meetings / consultations • SDC meetings
Ensure awareness building	• Address CBOs, NGOs, Farmers' Organization, Academia

Annex 3: List of interview partners

Name	Institution
Roland Bhola	Minister for Agriculture, Forestry, Fisheries, Lands & Environment
Sally Bagwhan Logie	Ministry of Agriculture, Forestry, Fisheries, Lands & Environment Permanent Secretary
Ann Issacs	Ministry of Agriculture, Forestry, Fisheries, Lands & Environment Permanent Secretary
Mr. Steill	Ministry of Agriculture, Forestry, Fisheries, Lands & Environment Permanent Secretary
Trevor Thompson	Ministry of Agriculture, Forestry, Fisheries, Lands & Environment Land-use division
Daniel Lewis	Ministry of Agriculture, Forestry, Fisheries, Lands & Environment Chief Agricultural Officer
Paul Phillip	Ministry of Agriculture, Forestry, Fisheries, Lands & Environment Environmental Unit
Randolph Sheares	Ministry of Agriculture, Forestry, Fisheries, Lands & Environment Extension Unit
Gregory Delsol	Ministry of Agriculture, Forestry, Fisheries, Lands & Environment Planning Unit
Gemma Baen Thomas	Public Administration Department Permanent Secretary
Merina Jessamy	Cabinet Office Policy Monitoring and Evaluation Unit
Hubert Whyte	Meteorological Services
David Lewis	National Water and Sewage Agency (NAWASA)
Mike Sylvester	Ministry of Finance, Planning, Energy & Cooperatives Deputy Permanent Secretary
Fabian Purcell	Ministry of Works Physical Planning Unit
Terence Walters	National Disaster Management Agency (NaDMA)
Leon Charles	Charles & Associates Ing. Consultant

Annex 4: List of acronyms

CARILEC	Caribbean Electric Utility Services Corporation
CCRIF	Caribbean Catastrophe Risk Insure Facility
CCC	Climate Change Committee
CCCCC	Caribbean Community Climate Change Centre
CCRIF	Caribbean Catastrophe Risk Insurance Facility
CDEMA	Caribbean Disaster Emergency Management Agency
CIDA	Canadian International Development Agency
CIF	Climate Investment Fund
DBS	Database Management System for Regional Integrated Observing Network for Environmental Change in the Wider Caribbean
GIS	Geographic Information Systems
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH
GoG	Government of Grenada
ICCAS	Integrated Climate Change Adaptation Strategies in Grenada
IMACC	Inventory of Methods for Adaptation to Climate Change
MoAFFLE	Ministry of Agriculture, Forestry, Fisheries, Lands & Environment
NaDMA	National Disaster Management Agency
NAWASA	National Water and Sewage Authority
OECS	Organization of Eastern Caribbean States
PPCR	Pilot Program for Climate Resilience
SDC	Sustainable Development Council
UNDP	United Nations Development Program
UNFCCC	United Nations Framework Convention on Climate Change
WB	World Bank

Annex 5: Example of an Indicator Factsheet from Germany

Source: Umweltbundesamt (Federal Environment Agency)

For an overview of the Indicator System of the German Adaptation Strategy see the IMACC Method Brief at www.AdaptationCommunity.net ➔ Knowledge ➔ Monitoring and Evaluation

Fact Sheet author:	*Name and Organisation of Fact Sheet author, contributors e.g. from mini-groups*	**Next update:**	*Date of/reason for a prospective update (e.g. when there are further developments in individual government departments in terms of methodology or data collection)*
Last update:	*Date*		

I Description

Internal No. *Number in the DAS Indicator set on the basis of the following convention:* *FW-I-1* ← *consecutive number within category FW-1* *I = Impacts, R = Responses* *Action Field*	**Title:** *Short title of the indicator ('List title')*
Unit: *Unit of measurement in which the indicator is calculated*	**Brief description of the indicator:** *Long title of the Indicator*
	Definition of calculation requirements: *Mathematical formula for calculating the indicator, unless it is a straightforward adoption of data*
Interpretation of the indicator value:	*To aid with interpretation, especially of indicators based on complex calculations or of indicators without indication of the unit of measurement, comment on which direction is indicated by high or low indicator values.*

II Allocation

Action Field:	*Stating the DAS Action Field to which the indicator will be allocated*	Observable impact	Risk (sensitivity, vulnerability)	Measures	Status quo	Development
Indication Field:	*Stating the Indication Field to which the indicator will be allocated*					
Sub-theme:	*Stating the sub-theme to which the indicator will be allocated*					
DPSIR:	*Allocating the indicator within the DPSIR scheme. The DAS Indicator System focuses on the categories of Impacts and Responses; this is why one of these two categories is referred to in this context. However, if it is considered appropriate to extend the Indicator System, indicators from other categories can be incorporated too. The process of categorisation takes its bearings from the interpretation of the DPSIR approach as developed for the project.*	*To be marked with a cross to indicate whether the Impact Indicator concerned describes a physically observed impact or whether it is an indicator which describes current or projected sensitivities or vulnerabilities (cf. ch. 3.2).*		*To be marked with a cross to indicate whether this is a Response Indicator*	*To be marked with a cross to indicate whether it is an indicator that describes a temporal development or not, i.e. if it refers to a spatial comparison. It is possible to mark both fields with a cross, if the indicator value can be given a status quo rating (i.e. for a single year).*	

III Derivation and Rationale

References:	*Statement as to whether the indicator may perhaps be contained in other indicator systems or already recorded in reports (preferably on the subject of Adaptation).*
Rationale:	*Stating the cause-and-effect relationship between Indicator and Climate and description of the ' indicator performance'.*
Legal basis, strategies:	*Precise statement of laws, programmes, strategy papers (with exact indication of section numbers, chapters or page number) in which aims are mentioned whose contents refer to the indicator.*
Objectives:	*Indication of targets (quality or action targets) which are stated in the documents mentioned above and can be used as a benchmark for rating the indicator values.*
Reporting duties:	*Indication of reporting duties to which reporting on indicators has contributed or can make a contribution.*

IV Technical Data

Data source:	*Indicating the data source from which the data for calculating the indicator originates.*	
Spatial distribution:	*Stating the spatial dimension of the indicator and whether area, line or point data values are calculated for the indicator.* *(Caution: the indicator's spatial resolution does not necessarily equate with the type of resolution in which the data is available)*	**NUTS** *If areal values are calculated for the indicator, the NUTS level should be stated, wherever possible, for which the indicator values are outlined.* *The NUTS levels are defined as follows:* *NUTS 0 Germany* *NUTS 1 Federal States (Laender)* *NUTS 2 Regions* *NUTS 3 Administrative districts* *LAU 1 Associations of municipalities (e.g. administrative associations)* *LAU 2 Municipalities*
Geographical cover:	*Indicating the area for which the indicator can be calculated (e.g. all of Germany or just individual Federal States or parts thereof. If the latter, the following applies: precise statement of the Federal State/s or parts thereof)*	
Frequency:	*Indicating a meaningful frequency in which the indicator should be calculated in order to reflect the desired effect (Caution: the indicator's temporal resolution does not necessarily equate with the type of resolution in which the data is available)*	
Restrictions:	*Indicating the data secrecy/non-disclosure requirements or other (legal, not content-related !) requirements Restrictions governing the calculation of the indicator*	
Reference to Data Fact Sheets:	*Indicating the consecutive number/s of the Fact Sheet/s which contains the data to be used for calculating the indicator*	

V Qualitative Data

Strengths and weaknesses:	*Comments on strengths and weaknesses regarding the communicative value of the indicator in respect of the issue. Weaknesses for instance can be due to inadequate spatial and/or temporal resolution of data or to the possibility that the underlying study focuses (focused) on other issues.*	
Feasibility, development needs:		*Grading the indicator with regard to its implementability and explanation of the underlying rationale:*
	1	*1 = Indicator can be implemented on the basis of available data (subject to political agreement).*
	2	*2 = On principle, the indicator can be implemented on the basis of available data; however, it cannot be determined without additional calculations based on statistics or the available data source. Timely implementation seems probable.*
	3	*3 = There is/are a clear perspective or tangible prospects for calculating the indicator. However, further development stages will be required, or repeat surveys will have to be initiated on the basis of extant methods.*

VI. Supplementary Information

Glossary of Terms:	*Explanation of terms used in the indicator titles or which play a role in connection with the explanations provided for indicators.*
Further Information:	*References to literature which provides further details concerning the indicator - full citation*