



GRaBS Climate Change Adaptation Action Plan Guidance

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Introduction

This document provides practical guidance to help GRaBS project partners develop individual **Climate Change Adaptation Action Plans**. Climate Change Adaptation Action Plans are one of the key outputs of the GRaBS project to be completed by Spring 2011.

The guidance focuses on the **process** of producing an Adaptation Action Plan (AAP). The guidance is not intended to provide a prescriptive format for all partners to follow in the same way. Partners may decide to apply their own methodology, building on experience to ensure that their local approach to planning and strategy development is applied. This guidance sets out **generic good practice principles** and a **six-stage process** relating to developing strategies and plans for climate change adaptation.

Partners may wish to use an alternative description to 'Action Plan', such as 'Guidance' – that is acceptable. Equally, the results of the adaptation action planning process do not have to lead to the production of a separate document, but may make a contribution to a wider planning and strategy development process and

document – such as a chapter in a regional or sub-regional Climate Change Action Plan.

However, it is important that, by the end of the GRaBS project, partners can demonstrate that positive steps have been taken in planning for climate change adaptation. For the purpose of reporting to the JTS (Joint Technical Secretariat) and to facilitate the GRaBS Mentoring Programme and Partnership Exchange, each partner must produce an **'Adaptation Action Plan Document'**, in English, by Spring 2011.

The adaptation action planning process must be seen in the context of other key GRaBS project components (for example, community involvement and network development, the Mentoring Programme, the Risk and Vulnerabilities Assessment Tool, etc.) and in many respects the AAP lies at the heart of the GRaBS project.

Annex 1 provides details on the relationship of the production of AAPs with other key GRaBS activities.

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The Fundamental Principle and the Purpose of a GRaBS Climate Change Adaptation Action Plan

The **fundamental principle** of a Climate Change AAP is to protect and enhance the quality of life in each GRaBS partner area and to help GRaBS partner organisations and their communities to prepare for the impacts of climate change and extreme weather. The key focus of the GRaBS project is the role of blue and green infrastructure in providing climate change adaptation in urban areas – the partner AAPs must reflect this.

Some of the key **objectives** for each GRaBS partner when producing a Climate Change AAP are:

- To raise general awareness and understanding of climate change and the need to adapt to its potential impacts within each partner organisation and respective community of stakeholders, with a particular focus on the role of green and blue infrastructure.
 - To strengthen decision-making processes in order to encourage the adoption of climate change adaptation principles and practices.
 - To improve the capacity of each partner organisation and respective community to respond to changing climate vulnerabilities and risks.
 - To provide partners with the capacity to improve the resilience of existing development and infrastructure to the impacts of climate change.
 - To ensure that new development and infrastructure is located, designed and constructed for the climate it is projected to experience over its expected lifespan.
- To promote and facilitate the adaptation of the natural and built environment.
 - To help business, public sector organisations and other institutions incorporate the impacts of climate change into their strategy and plan-making processes.

The **purpose** of the AAP is to build the capacity of each GRaBS partner and its local community of stakeholders to deliver individually tailored adaptation responses appropriate to each partner's locality. In particular, AAPs will need to address the existing barriers to implementing climate change adaptation faced by GRaBS partners – as identified by the individual partner SWOT Analyses.

Examples of current barriers to climate change adaptation in urban areas using green and blue infrastructure include:

- Political resistance.
- Lack of internal organisational capacity and support.
- Shortage of funds and resources.
- Lack of awareness and understanding (of both climate change and the value of green and blue space).
- Lack of expertise and skills.
- Insufficient or non-existent community and other stakeholder networks.

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Scope and Format of the Adaptation Action Plan

Before starting the adaptation action planning process, partners must identify realistically the potential **scope and format** of the 'plan' that will result from the GRaBS project. Important questions to ask include:

- What focus will the plan have in terms of climate change adaptation? Will it have a specific focus on adaptation through blue and green infrastructure? Will it be broader? (*Note:* If broader, it must specifically emphasise the role of green and blue space infrastructure.)
- At what spatial scale is the AAP targeted? At a regional, local or neighbourhood level? (*Note:* The area you have selected for piloting the Risk and Vulnerabilities Assessment Tool may be at a different spatial scale from the AAP.)
- What format will the AAP take? A policy document? A guide? A statutory planning document?
- How does the AAP relate to other local, regional and national existing and future policies, regulations, plans and strategies?
- Will the document form part of wider plans or documents, or will it stand alone?
- Where will the plan sit within the organisation? Or will the plan be owned by an external partnership structure?
- Who takes responsibility in managing the AAP once it has been produced? What other support will be required?
- What monitoring and review mechanisms need to be put in place, and for how long? (*Note:* These will

probably operate after the end of the GRaBS project but should still be indicated or referred to in the AAP.)

Partners should address these questions at the outset and decide on the scope and format of their plan as soon as possible.

Although the individual AAPs produced by GRaBS partners are a key output of the GRaBS project, it is important to remember that **the process of learning – through the exchange of experience and knowledge and involvement in the adaptation planning process – lies at the heart of the GRaBS project and the INTERREG IVC programme.** GRaBS will provide project partners with a range of knowledge, resources, tools, inspiration and peer support that they may need to advance climate change adaptation in their area of operation.

The **process** of developing the AAPs is, therefore, as important as the actual end product for the GRaBS partners directly involved in their preparation. Moreover, it is hoped that the AAPs that will be produced will have a life beyond the GRaBS project and its immediate stakeholder community, and will continue to strengthen decision-making in the context of adaptation to climate change in the planning process.

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Proposed Climate Change Adaptation Action Planning Cycle

Making progress with climate change adaptation is a **cyclical process**. The proposed **Climate Change Adaptation Action Planning Cycle** (see **Figure 1**) leads local and regional planners through a number of **key stages** which, when repeated periodically, help their locality to gradually advance their capacity to adapt to climate change impacts. Objectives that may be much too ambitious to find support today may turn out to be common sense in 3-5 years' time – hence the need to review the adaptation planning process. Nevertheless, it is important to begin the process of planning for climate change adaptation now in order to encourage organisations and communities to begin thinking about the scale and scope of the challenge. The Climate Change Adaptation Action Planning Cycle

proposed below is intended to help partners with this task.

Cyclical climate adaptation planning also enables local and regional governments to respond to **changing conditions**, such as **political change, new technology, the evolution of climate science** or **changes in society**, by periodically updating the adaptation targets and AAPs. It is recommended that the cycle is repeated every 3-5 years, ideally alongside other significant planning processes being undertaken at the authority, such as the preparation of spatial plans. Seeing adaptation as an iterative process can help to build long-term resilience to climate change.

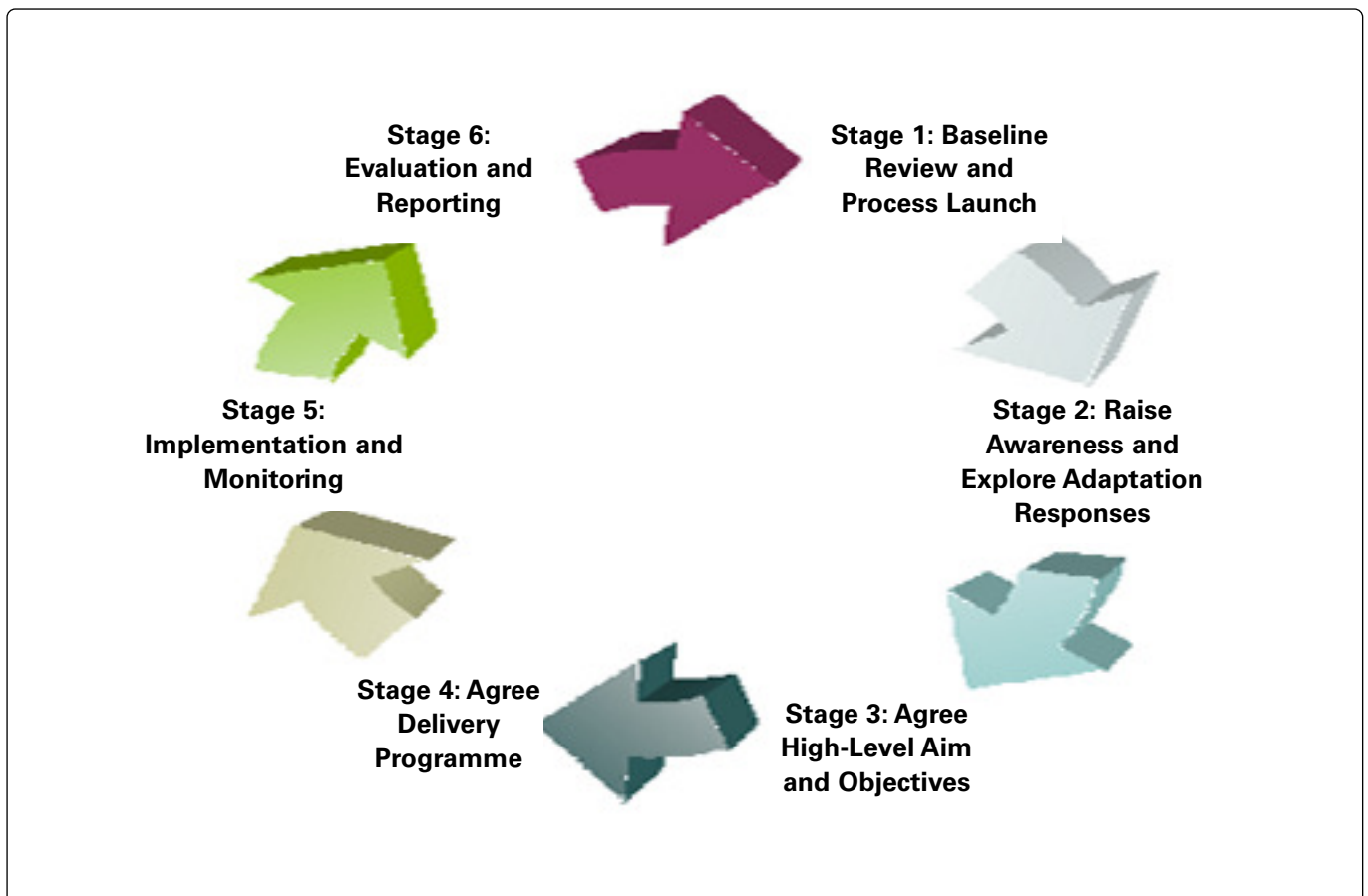


Figure 1 The proposed Climate Change Adaptation Action Planning Cycle

Involvement and Participation

A fundamental principle of planning effectively for climate change adaptation is the continuous involvement and participation of public, private, community and non-governmental stakeholder groups in the process of planning and implementing adaptation responses. This will result in benefits which include adaptation responses that are locally supported and appropriate to local needs – often of vital importance in the planning process. The Mentoring Programme (especially with SGS – City District of Geuzenveld-Slotermeer) will assist partners in identifying and developing their stakeholder groups – see below.

More fundamentally, for climate change adaptation to take place, partners must be able to mobilise significant contributions from a large range of organisations and individuals outside their organisation, such as infrastructure providers, developers, environmental groups, etc. Climate change adaptation does not fall neatly into one sector or one organisation's remit.

Through the SWOT Analysis, partners will have mapped out their current internal organisational strengths and weaknesses and external opportunities and threats in terms of community and stakeholder involvement. This will provide an important platform for taking forward this element of the adaptation planning process.

With the guidance of SGS, partners will need to **decide on the approach to community and stakeholder involvement** that will underlay their climate change adaptation planning and delivery process. Partners should refer to the 'Trigger Paper' on community engagement produced by SGS for further guidance on this important element of the adaptation process, and should contact SGS directly for specific advice or to arrange mentoring meetings.

Stage 1: Baseline Review and Process Launch

The first stage of the Climate Change Adaptation Action Planning Cycle involves establishing each partner's **baseline situation** from which the AAP will be developed. Having identified the baseline, Stage 1 then allows each partner to **start or re-launch** the adaptation action planning process.

The **baseline situation** for each partner has several components, which include:

- A description of the area to which the AAP relates.
- A description of climate change impacts projected to affect the area.
- Identification of vulnerable elements (communities, health and mobility issues, infrastructure, etc.) particularly at risk from climate change impacts.
- Organisational strengths and weaknesses related to the development of climate change adaptation responses – such as knowledge, responsibility and capacity.
- External opportunities and threats relevant to the partner producing a climate change AAP.
- Identification of existing organisational and policy conditions and capacity.

Data for the **Baseline Review** will be obtained through the implementation of a **SWOT Analysis** and by analysing the findings of the GRaBS Risk and Vulnerabilities Assessment Tool. Guidance on the SWOT Analysis is provided in **Annex 2**.

Partners will assess their local situation and identify their **specific climate change challenges and priorities**. Partners can supplement the outputs of the Assessment Tool by identifying key climate change risks using the latest climate change scenarios relating to their area – if available. Indeed, as the Assessment Tool will not be implemented by the partners until 2010, it may be necessary for partners to draw on available climate change scenario data in order to complete their Baseline Review. Once the partners begin to implement the Assessment Tool, further data will be available to strengthen the baseline.

The Baseline Review also involves the **identification of existing organisational and policy conditions** (internal and external to the partner organisation) which can aid or slow the process of achieving climate change adaptation, as well as the management of the Climate Change Adaptation Action Planning Cycle itself.

Identify National and Regional Policy and Legislation

To ensure the effective implementation of the GRaBS project Climate Change AAPs it is essential for partners to identify and understand:

- The key national policy drivers for local action in the context of climate change adaptation (for example, building regulations or permitted development rights).
- The regional policy and legislation impacting on strategy and policy-making processes (and who the key players are) – this is important for partners operating at the municipal level.
- How climate change adaptation fits within the national, regional and local planning framework – it is important for AAPs to fit within each Member State's regulatory spatial planning framework.

The results of the Baseline Review are compiled and published by the partners in their **Baseline SWOT Report**. The results will also be a key element of the AAP Document itself. (*Note: Please remember to use the mentoring process – partners are here to help each other.*)

In addition to the completion of the SWOT Analysis, Stage 1 involves **starting or re-launching** the actual adaptation action planning process. This includes:

- Defining what constitutes the Climate Change Adaptation Action Planning Cycle (stages, themes, scale, time-frames). The first plan should be completed with the implementation of Stage 4 of the planning cycle by Spring 2011.
- Setting up internal organisational structures and procedures to deliver the planning process (launch of the process, internal and external resources, motivation of technical staff, allocation of financial resources).
- Activating participative processes (identification of relevant groups and networks, decision-making procedures, organisation and management of participation).

Stage 2: Raise Awareness and Explore Adaptation Responses

The second stage of the Climate Change Adaptation Action Planning Cycle involves **raising further awareness** about climate change and the need for climate change adaptation, especially the role of green and blue infrastructure.

It is recommended that this **involves the process of exploring** and then **identifying** the potential climate change **adaptation responses** (listed below) that are most appropriate and effective for each partner's situation. The Baseline Review (Stage 1) will have provided partners with a picture of the climate change impacts that are most relevant to their location, and some of the organisational and institutional factors likely to influence the development of adaptation responses to these impacts.

Stage 2 has a major focus on engaging with stakeholders, both internal to partner organisations and external, such as other authorities (local, regional), land owners, infrastructure providers, environmental groups, developers and businesses, etc. Engagement with politicians and community organisations must also begin at this stage.

Using the findings of the SWOT Analysis and the Potential Adaptation Responses listed below, this stage should be used by partners to stimulate discussion and debate among stakeholders. In order to achieve this, partners may go through established channels or may consider implementing new, specific approaches. Led by SGS, the TCPA GRaBS Communications Officer and GRaBS mentoring partners will be able to provide assistance in this process of awareness-raising and communication.

Annex 3 also provides a number of key messages on climate change adaptation that you may find useful in the process of raising awareness.

Potential Adaptation Responses

The UK Climate Impacts Programme (UKCIP) breaks down adaptation responses into two broad categories – **building adaptive capacity** and **delivering adaptation actions**. This framework will be used within the GRaBS project.

UKCIP defines **building adaptive capacity** as:

'the information (research, data collecting and monitoring, awareness raising), supportive social structures (organisational development, working in partnership, institutions), and supportive governance (regulations, legislations, and guidance) that are needed as a foundation for delivering adaptation actions.'

UKCIP defines **delivering adaptation actions** as:

'actions that help to reduce vulnerability to climate risks, or to exploit opportunities.'

It is important that the GRaBS AAPs address both of these issues through the generation of an appropriate range of adaptation responses. Indeed, it is often essential to build adaptive capacity within an organisation before actions can be delivered 'on the ground.'

Building Adaptive Capacity

Within the GRaBS project, **building adaptive capacity** is divided into two key areas: **policy measures** and **operational measures**:

- **Policy measures:** Partners can decide to adopt new or to strengthen existing strategic policies, which will provide the incentive and regulatory framework to encourage future urban development to incorporate climate change adaptation responses. Examples include setting a ratio between open and developed land for each new development, or a policy of no development in flood plains. These may be statutory measures, or may take the form of guidance for policy development. The TCPA's Eco-towns Green Infrastructure Worksheet is available for reference to partners – see www.tcpa.org.uk/pages/green-infrastructure.html, or ask the GRaBS Project Management Team for information.
- **Operational measures:** Partners may put in place new operational mechanisms that have the capacity to strengthen climate change adaptation responses. Examples of such measures include the establishment of a climate change adaptation team in the organisation and/or climate change adaptation partnership with other stakeholders and the community. Other operational measures include the development of new or changes to existing local or regional policies and agreements to allow different agencies to pool resources and work together

towards a common goal. It may also be necessary for partners to undertake a programme of education and awareness-raising within their organisation and among their immediate stakeholder network.

Delivering Adaptation Actions

Delivering adaptation actions involves design and development measures that can be implemented in practice by the partners. Here, an impact-based approach is taken, with a focus on adaptation responses to four key climate change impacts – high temperatures; flood risk; water resources and quality; and ground conditions. Within these categories, adaptation responses at three spatial scales are considered – conurbation; neighbourhood; and building. Illustrative examples of each impact category are provided below.

The **Case Study Database** being developed as part of the GRaBS project will provide partners with examples of where adaptation responses (building adaptive capacity and delivering adaptation actions) have been successfully implemented in practice.

Managing high temperatures

Adaptation options and strategies might include:

- Area-wide or conurbation scale:
 - Increased evaporative cooling.
 - Groundwater cooling using aquifers or surface water cooling.
 - Use of open water and water features.
 - Green infrastructure.
- Building or neighbourhood scale:
 - Solar control – including shading, orientation and building morphology.
 - Increased ventilation through orientation and urban morphology.
 - Cool or reflective building materials or roofs or facades.
 - Cool pavement materials.

Managing flood risks

Adaptation options and strategies might include:

- Area-wide or conurbation scale:
 - 'Set-back' flood defences and, as a last resort, permanent defences and hard barriers.
 - Diversion of flood flows away from affected areas.
 - Flood attenuation and temporary water storage, including use of green space.
 - Source control – for example, upland land management.

- Building or neighbourhood scale:
 - Green roofs.
 - Sustainable drainage systems (SUDs).
 - Raising floor levels and removable household products.
 - Rain-proofing and overhangs, and flood-resistant materials.

Managing water resources and quality

Adaptation options and strategies might include:

- Area-wide or conurbation scale:
 - Creative use of waste water from treated sewage.
 - Managing point source pollution – for example, from power stations.
 - Upland and lowland reservoirs.
 - Effective storm overflow management.
- Building or neighbourhood scale:
 - Rainwater harvesting and storage.
 - Sustainable drainage systems (SUDs).
 - Utilisation of low-grade aquifers for irrigation of trees and green spaces in urban areas.

- Separate drainage systems for surface water and foul water.

Managing ground conditions

Adaptation options and strategies might include:

- Area-wide or conurbation scale:
 - Development of coastal evolution and landslide risk maps.
 - Groynes and other cross-shore structures.
 - Land use management.
 - Reinforced slopes and planning to deter erosion.
- Building or neighbourhood scale:
 - Moisture control systems or soil rehydration.
 - Surface erosion control structures.
 - Control and maintenance of drainage systems.
 - Vegetation management.

More information on these adaptation responses can be made available through the GRaBS project. Please contact the GRaBS Project Management Team.

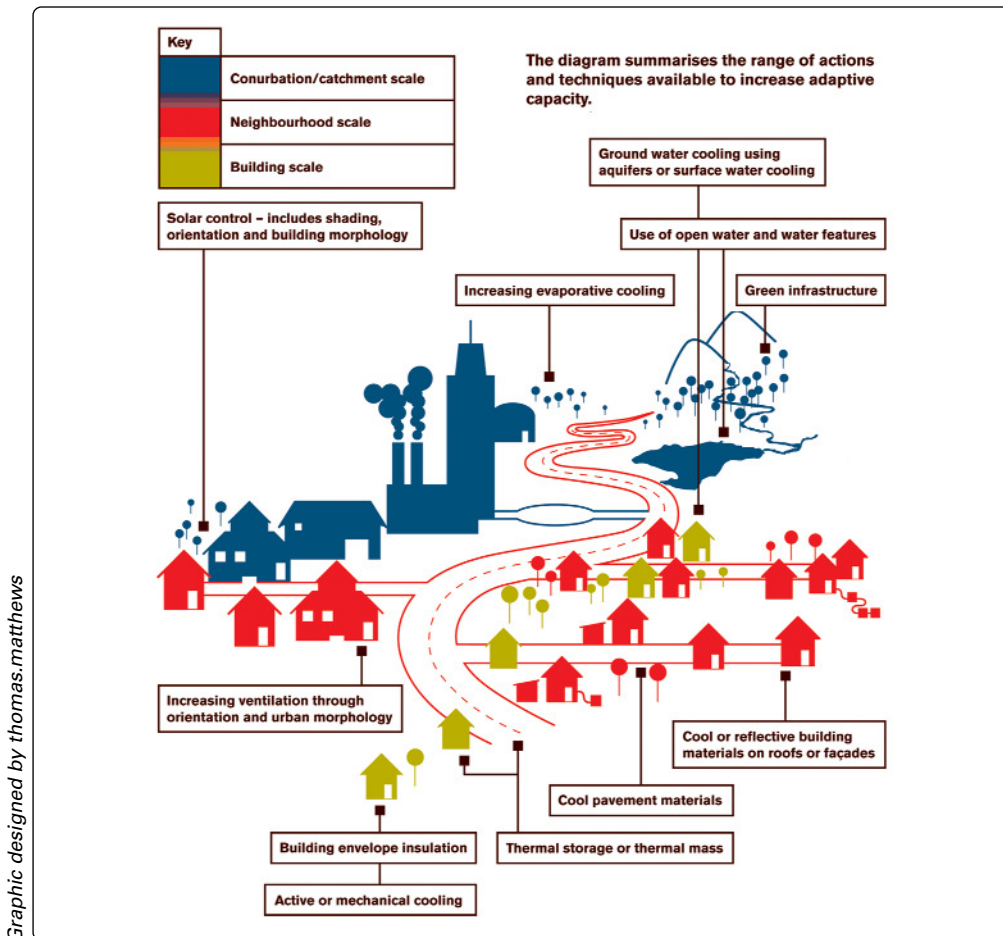


Figure 2 Menu of strategies for managing high temperatures

Source: R. Shaw, M. Colley and R. Connell: *Climate Change Adaptation by Design: A Guide for Sustainable Communities*. TCPA, 2007. www.tcpa.org.uk

Stage 3: Agree High-Level Aim and Objectives

Having raised further awareness on climate change adaptation and potential adaptation responses, Stage 3 of the Climate Change Adaptation Action Planning Cycle involves the process of defining in greater detail what each partner and its stakeholders and community want to achieve in terms of climate change adaptation.

This involves identifying the **high-level aim** of the AAP as well as a number of transparent specific **objectives** in the plan.

The aim and objectives will generally be a compromise between what is desired by stakeholders and what is feasible in practice. In order to set deliverable and effective objectives, it is extremely important to **think about the adaptation measures** and the **responsible parties** needed to deliver them (see Stages 2 and 4).

Make the aim and objectives:

- **Specific:** Focus on important factors; avoid broad expressions like 'being more environmentally friendly'.
- **Achievable:** If the objectives are set too high it is unlikely that they will be realised, and this will demotivate those involved. It is also important to avoid setting too many goals.
- **Realistic:** On the other hand, if objectives are set too low, it may not be possible to reach the full potential for action.
- **Prioritised:** If *everything* matters, then what matters most? Prioritising will ensure that the most appropriate adaptation responses are selected.

In addition to the high-level aim and objectives, it may be worth setting a small number of **high-level targets**, with time-frames for their achievement. Climate adaptation requires both strategic, long-term targets (10-15 years) and operational, short-term targets (1-3 years). Targets are defined in comparison with a reference or base year. Targets must be quantitative in order to be measured. Targets must be chosen carefully to gain feedback on progress, as this depends on the availability of the relevant data and information.

Once a draft aim and a set of draft objectives have been identified, it is important to **review** these in light

of the **fundamental climate change adaptation aim/principle** as outlined in Section 2 above. Potential conflict and synergies with other existing plans, strategies, regulations and statutes must also be explored and resolved at this point.

Who Is On Board?

Agreeing the high-level aim and objectives (and targets) and prioritising them is an ideal opportunity to develop further **ownership** of the process and **responsibility** to implement climate change adaptation action by all relevant stakeholders and the community. The process must also generate essential ongoing support for implementing the Climate Change Adaptation Action Planning Cycle and its continuation in the future.

Achieving **political commitment** and obtaining **political approval** is extremely important for launching an effective climate change adaptation process. Having political involvement in the process, at all levels, will help to encourage the administration to support adaptation responses from the beginning.

Different countries, regions and areas have different systems and approaches to, for example, administrative and community organisations, communication styles, levels of environmental awareness, and technical capacity. However, in each case, when the Council/Municipality decision-making process on an important development issue is initiated, it is very important to involve the key decision-makers (for example, mayor, vice-mayor, councillors) from the start. The formal decision-making process may involve the Council/Municipality Board of Directors (or equivalent), specialised Committees (environment, finance, executive) and finally the whole Council/Municipality. In addition, the major political groups and their leaders should be informed in order to create political support during the implementation of the climate change adaptation process.

High-Level Policy Statement

A key output of the GRaBS project is the **High-Level Policy Statement** in each of the partners' AAPs. This is because a key effective way to engage politicians and decision-makers in the Climate Change Adaptation Action Planning Cycle is through the development of a High-Level Policy Statement, which publicly summarises the organisation's or partnership's fundamental commitment to working towards climate change adaptation goals. The production of such a statement also has the potential to be officially signed and launched, involving the press and media. Further guidance will be offered to partners concerning the form and function of the GRaBS High-Level Policy Statement.

Stage 4: Agree the Delivery Programme

Having identified the aim and objectives (and potentially the targets) of the AAP, in this stage of the process the activities supporting the achievement of the adaptation aim and objectives (and targets) are set in place – i.e. **how** do you aim to get there?

Working with partner organisations, stakeholders and the community, Stage 4 of the Climate Change Adaptation Action Planning Cycle involves the development of the necessary **activities** to deliver the agreed adaptation aims and objectives. This includes **assigning responsibilities** and **scheduling deadlines for delivery** for each activity.

Activities can first be defined and agreed more generally, and then gradually further refined in order to progress to the implementation stage (Stage 5). It is recommended that all activities planned to be implemented within one Climate Change Adaptation Action Planning Cycle should be compiled and published in a clear **Delivery Programme**. This programme can then be separately reviewed and updated annually.

Once a draft Delivery Programme has been produced, it should be reviewed again in light of the high-level aim and objectives of the AAP as developed in Stage 3.

Potential conflict and synergies with other existing or planned activities must also be identified and resolved at this point.

Working Together

Within the arrangements to deliver the necessary activities, compromises have to be made. The needs of all stakeholders will never fully coincide. Learning to identify and resolve such differences – to compromise in ways that do not alienate particular stakeholders – is an essential element of the action planning process. The Mentoring Programme will assist partners in achieving this.

It is also recommended that at this stage a **'co-ordination role'** should be assigned in order that the implementation of the Delivery Programme can be co-ordinated and events that have actually occurred can be recorded. This comprises monitoring the implementation of the list of agreed activities; identifying progress made towards achieving the aim and objectives of the plan (and targets set); and ensuring that corrective action is undertaken if deadlines are missed or do not lead to the desired result.

Stage 5: Implementation and Monitoring

Stage 5 of the Climate Change Adaptation Action Planning Cycle focuses on the actual implementation of the activities agreed under Stage 4 of the cycle by all responsible parties and partner organisations.

It is recommended that the Delivery Programme is reviewed annually, led by the co-ordinator of the programme. This will enable both regular identification of progress made towards delivering the agreed activities, and the implementation of corrective actions if deadlines are missed or do not actually lead to the delivery of the plan's aim and objectives (and targets). Exploring ways to monitor the actual impacts of climate change adaptation measures may also be explored at this stage.

Stage 6: Evaluation and Reporting

The final stage of the Climate Change Adaptation Action Planning Cycle involves evaluating what has been achieved and reporting these findings. During Stage 6, the level of progress towards achieving the high-level aim and objectives (and targets) of the AAP (developed in Stage 3) is identified and the effectiveness of the implementation of the Delivery

Programme (agreed in Stage 4) is assessed, and shortcomings are analysed and reported. This evaluation contributes to the preparation of the next Baseline Review/SWOT Analysis in order to restart the Climate Change Adaptation Action Planning Cycle and to progress adaptation efforts further.

It is recommended that the results of this evaluation are published in an **'Evaluation Report'** made available to all stakeholders and the community.

Annex 1

Adaptation Action Plans within the GRaBS Project

Figure A1 demonstrates that the Adaptation Action Plan (AAP) planning process is firmly situated in the context of key other GRaBS project components, and in many respects lies at the heart of the project.

Different elements of the GRaBS project have an important role to play in creating the AAPs. These include the Risk and Vulnerabilities Assessment Tool, the Case Study Database and the Mentoring Programme. Broad links to these elements of the project are discussed below.

Relationship with the Risk and Vulnerabilities Assessment Tool

The Risk and Vulnerabilities Assessment Tool is one of several elements of the GRaBS project with an important role to play in the preparation of the AAPs. Indeed, one of the key motivations for developing the Assessment Tool is to provide data for the GRaBS

partners to inform the preparation of the plans. The Assessment Tool will screen for climate change vulnerabilities and risks in urban areas (with a particular focus on flooding and heat stress). One of the key outputs will be the spatial mapping of climate change vulnerabilities and risks for each partner’s chosen area of investigation. As the Assessment Tool’s outputs depend in part on the extent of the data made available by partners to feed into it, partners will obtain different information to feed into the preparation of their AAP, depending on the functions that the Assessment Tool can provide in each case. Nevertheless, the Assessment Tool will offer the GRaBS partners an enhanced capacity to develop and implement climate change adaptation strategies. It will help them to identify which elements within their area (communities, retail centres, energy supplies, critical infrastructure, etc.) are particularly vulnerable to climate change impact. Where the supporting data are available, the Assessment Tool will also map spatial

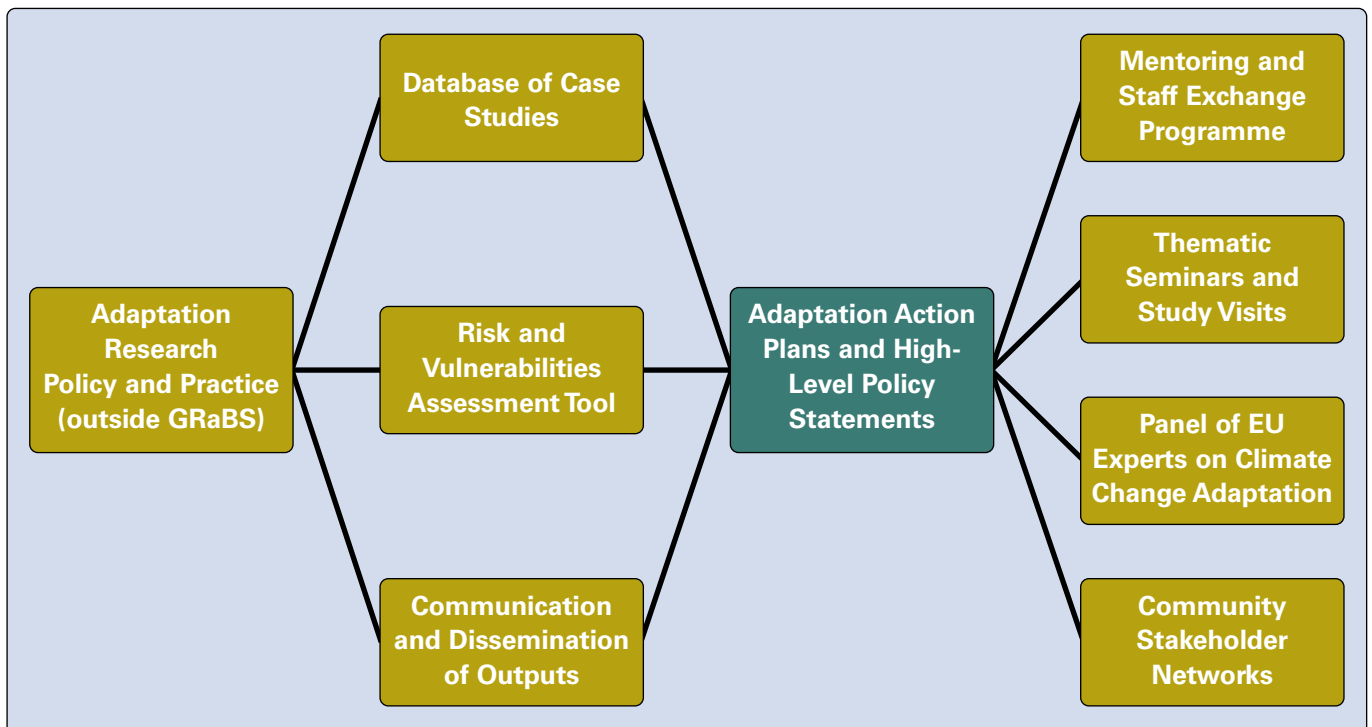


Figure A1 Situating the Adaptation Action Plans within the GRaBS project

patterns of risk to these impacts. Ultimately, the Assessment Tool will enable the partners to make better-informed decisions in the context of climate change adaptation.

Relationship with the Case Study Database

The Case Study Database is an important output of the GRaBS project. The Database will consist of a series of case studies that highlight examples of green and blue space measures that have been successfully implemented in practice. It will also include examples of activities that build capacity to deliver practical actions 'on the ground' – for example, the development of supportive policy or guidance documents. Although not all of these examples will have been motivated exclusively by the need to adapt to climate change impacts, they will nevertheless have been chosen to reflect interventions that could be applied to respond to projected changes in the climate and impacts associated with these changes. Partners will also be invited to propose case studies from their locality, and the Database will include examples from beyond the scope of the GRaBS project.

In terms of the preparation of AAPs, the Case Study Database will provide partners with tangible examples of where the type of actions that they will be required to develop to respond to projected climate change impacts have been successfully implemented in practice. The Database will be presented in a clear and accessible way, and will give GRaBS partners an insight into adaptation responses that they could consider developing for their locality – in terms of both climatic change as well as the capacity and resource available. It will be organised around different climate change impacts (for example, flooding and heat stress) and different spatial scales (conurbation,

neighbourhood, and building). The Database is scheduled to be completed by June 2010.

Relationship with the Mentoring Programme

As well as a series of Study Visits and Thematic Workshops, GRaBS involves a Mentoring Programme to assist with the process of exchanging good practice, expertise and knowledge between GRaBS project partners. In particular, the Mentoring Programme is designed to assist partners in the process of preparing Climate Change AAPs.

The GRaBS Mentoring Programme involves setting up mentoring groups of three project partners, with each partner being both mentor to, and mentee of, the other two partners for a given period of time and task.

The GRaBS Mentoring Programme runs in two phases:

- Phase one (running between April and December 2009) focuses on the Stage 1 of the partner AAP preparation with the implementation of a SWOT Analysis. It will also include mapping out the individual partner content of the AAP and the initiation of the process necessary to produce the plan, including community and policy- and decision-maker involvement (see Stage 1 of the Climate Change Adaptation Action Planning Cycle).
- Phase two (running between January and December 2010) focuses on the implementation of Stages 2, 3 and 4 of the Climate Change Adaptation Action Planning Cycle.

Detailed guidance on the Mentoring Programme and the Mentoring Programme phases has been produced separately.

Annex 2

SWOT Analysis Guidance

Introduction

What is a SWOT Analysis?

The **SWOT (Strengths, Weaknesses, Opportunities and Threats) Analysis** is a useful tool for stimulating some proactive thinking. It is a subjective assessment of data and information which is organised by the SWOT format into a logical order that helps understanding, discussion, and effective planning and decision-making. The aim of the GRaBS SWOT Analysis is to identify the key internal and external factors that exert an important influence over achieving these objectives.

What you are assessing: _____

	Helpful to achieving objective	Harmful to achieving objective
Internal issues	STRENGTHS	WEAKNESSES
External issues	OPPORTUNITIES	THREATS

Figure A2 Classic SWOT Analysis grid

Objectives for GRaBS

A key objective of the GRaBS project is to develop, collaboratively, regional and local good practice Adaptation Action Plans (AAPs), including a High-Level Policy Statement, in order to aid the delivery of climate change adaptation through urban greening and water management and co-operation among decision-

makers, planners, stakeholders, the private sector and local communities.

The SWOT Analysis is key to developing the AAP, and written material from this analysis will feed directly into the Action Plans. The exercise will prompt you to consider the strengths, weaknesses, opportunities and threats that your organisation/authority is exposed to in delivering adaptation actions at your local and/or regional level. It will also play a role in analysing issues you may face in actually being able to develop an AAP.

Implementing the SWOT Analysis

The purpose of this Annex is to provide guidance on what to consider when partners 3-12 and 14 implement and document their individual SWOT Analysis. As an output of the exercise, each partner is expected to produce a **SWOT Analysis Report**, both in their partner language and in English, which will then provide a starting point for the AAP. We strongly encourage the use of visual material such as maps, photographs, graphs, etc. in the report.

Through the GRaBS Mentoring Programme, partners will receive and deliver peer assistance in the process of implementing and preparing their SWOT Analysis. In particular, the team at City District of Geuzenveld-Slotermeer (SGS) will be providing an extended mentoring role to partners on considering the strengths, weaknesses, opportunities and threats of existing and potential community networks.

It is also essential for partners to understand the key national policy drivers for local action (for example, building regulations or permitted development rights), and how climate change adaptation fits within the national and local planning framework. The 'User Needs and Requirements Analysis' for the Risk and Vulnerabilities Assessment Tool will stimulate some thinking around this, but the SWOT Analysis is the time to consider the strengths, weaknesses, opportunities and threats surrounding the policy framework impacting on adaptation activity. It is important that the AAPs fit within each Member State's regulatory framework.

SWOT Analysis Structure and Questions

1 Please provide a brief **Introduction** to the area you have chosen to develop an AAP for (i.e. regional, sub-regional, local, neighbourhood level). Your PowerPoint presentations from the first PSC meeting cover many of these points, but the SWOT Analysis Report provides an opportunity to set this out in a structured way, to subsequently include in an AAP. Suggested topics to include are:

- Location and description of the environmental characteristics of your case study area.
- An overview of development in your area – for example, principal housing types and densities, key retail, commercial and utilities infrastructure.
- Some basic demographic facts and figures on the area (if available), including population, age/sex composition, health patterns, and key economic sectors.
- Reasons why the area was chosen for the project and what you expect to gain from being involved.

2 Summary of Expected Climate Change

Challenges facing your target area: drawing on your answers from the Requirements Analysis for the Risk and Vulnerabilities Assessment Tool, please broadly describe expected climatic changes – for example, temperature, precipitation, soil moisture, sea level – and how these may impact the area in the future – for example, increased heat, drought, flooding, coastal erosion, air pollution, etc.

3 What are your ideal **Objectives** in terms of climate change adaptation in your area? Please begin to prepare a statement of what you would like to achieve through your GRaBS AAP. This might already exist as a result of previous planning and policy-making. Alternatively, you may have to formulate new draft objectives on climate change adaptation. This statement will be the first step towards the High-Level Policy Statement you will be preparing as part of the AAP.

The aim of the SWOT Analysis is to identify the key internal and external factors that exert an important influence over achieving these objectives.

4 Step 1 – Internal Organisational Strengths and

Weaknesses: Identify the strengths internal to your organisation (i.e. that are in the control of your organisation). What are the attributes of your

organisation/authority that are helpful to achieving your objectives? Then in turn identify the internal weaknesses of your organisation. What are the attributes of your organisation/authority that may hinder achieving your objectives? These strengths and weaknesses should relate to the capacity of (or lack of) your organisation to develop measures and effective action to adapt to climate change.

Strengths: Internal organisational attributes that encourage/facilitate the planning of green and blue infrastructure to adapt to climate change. Points to consider in the context of climate change adaptation could include:

- a What does the authority/your department do well?
- b What resources and capabilities can you draw on to address adaptation issues?
- c What experience, knowledge, data do you have? (Answering the Requirements Analysis will help with this task.)
- d Are there any processes or tools available internally that would aid the adaptation agenda?
- e What organisational policies, plans and regulations support climate change adaptation actions?

Weaknesses: Internal organisational attributes that discourage/act as barriers to the planning of green and blue infrastructure to adapt to climate change. Points to consider in the context of climate change adaptation could include:

- f How could your authority/department improve?
- g Where do you have fewer resources or capabilities than others? Are there any budget restraints?
- h What experience, knowledge, or data do you lack?
- i The level of communication between departments and the existence of silo mentalities.
- j What organisational policies, plans and regulations may hinder climate change adaptation actions? What policies, plans and regulations are missing?

5 Step 2 – External Opportunities and Threats:

Identify opportunities external to your organisation/authority that exist now and in the future. Opportunities are *external conditions* that are helpful to achieving your objectives. Then, in turn, list all threats that exist now and in the future.

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Threats are also *external conditions* which act as barriers or are harmful to achieving your objectives.

Opportunities for adaptation: What external conditions could build upon your area's strengths? What trends (for example economic/lifestyle/political) could you take advantage of? Are there any external policy frameworks and networks that would provide opportunities for adaptation actions to be applied? Points to consider could include:

- a Environmental advantages (including geography, geology, etc.).
- b Attitudes/cultural/behavioural strengths.
- c Political commitment/awareness.
- d Existing policy and legislation (national/regional/local) that will provide a helpful framework for planning adaptation.
- e External processes or tools that would aid the adaptation agenda.

Threats to adaptation: What external conditions and trends could act as barriers to the delivery of effective climate change adaptation? The Assessment Tool being produced within GRaBS will focus principally on vulnerability and will enhance partners' knowledge of this aspect of climate change adaptation, so for this exercise focus on what you already know:

- f Environmental challenges (including geography, geology, etc.).
- g Any geographical and demographic vulnerabilities (for example, age, health, social deprivation).
- h Attitudes/cultural/behavioural strengths.
- i Political commitment/awareness.
- j Existing policy and legislation (national/regional/local) that will provide a helpful framework for planning adaptation.
- k External processes or tools that would hinder the adaptation agenda.

- 6 Community Engagement:** Community engagement is important in identifying and delivering effective climate change adaptation action. Therefore, you should consider:
- 1 The internal strengths and weaknesses of your organisation in terms of effective community engagement.
 - 2 External opportunities and threats to effective community engagement.

In particular please look at the following issues:

- a Which elements of the planning system (laws, rules and regulations; planning traditions)

influence the way participation in planning is organised in your region/municipality?

- b Are there specific arrangements (rules and regulations) on community involvement in planning for climate change adaptation or sustainability in general?
- c Apart from this formal regulatory context there often exists a social or institutional network or infrastructure which offers a valuable background for individual citizens, community organisations and/or NGOs in planning processes, or even is suited to give support for those who want to be actively involved in a plan: is there an infrastructure (of support) for participants in planning processes (residents, community groups, NGOs, other stakeholders) in your region/municipality?
- d Is this infrastructure specifically tailored to the demands of climate change adaptation and sustainable development in general?
- e When considering the actual implementation of AAPs it will be highly relevant to review the strengths and weaknesses in the repertoire of available participation techniques to engage communities affected and involved: are there specific participation techniques in your region/municipality which are suited for the challenges of climate change adaptation and/or sustainable development in general?

Final Considerations on SWOT Analysis Implementation

Some final considerations for your SWOT Analysis:

- Remember that your mentoring visits are vital in exchanging knowledge and ideas for your SWOT Analysis.
- To prepare Part 6 (Community Engagement) of your SWOT Analysis the team at City District of Geuzenveld-Slotermeer (SGS) will be providing extended mentoring support.
- Involve a wide range of colleagues and contacts in your SWOT Analysis if appropriate – those people directly involved in the GRaBS project may not know all the answers!
- Think holistically – consider social, economic and environmental issues. Impacts of climate change have many implications and adaptation is needed for a variety of reasons (for example, on health and recreation) ...
- ... but at the same time keep it focused – prioritise the issues that are most important to your area.

- Be realistic about the strengths and weaknesses of your authority/organisation.
- You can also include issues based on gut feeling or intuition, as well as facts and figures.
- Refer to your Requirements Analysis to feed into your SWOT Analysis.

SWOT Analysis Stages and Timeframe

Each partner should aim to complete their SWOT Analysis by July 2009 – the whole process, from preparing the structure to producing the final report, will take place over the next three months. **Table A1** below sets out timings in more detail.

Table A1
Timeframe for SWOT Analysis Report

Stage	Action	Timing	Completed? (Y/N)
1	Preparing the SWOT Analysis structure and final report headings	By end April 2009	
2	Review of structure by mentoring partners	Early May 2009	
3	Implementing the SWOT Analysis (data and information gathering)	Mid-May 2009	
4	Preparation of first draft SWOT Analysis Report	Mid-June 2009	
5	Peer review of draft report by mentoring partner, and further information gathering (if applicable)	End June 2009	
6	Production of final SWOT Analysis Report	End of July 2009	

Annex 3

Key Messages for Climate Change Adaptation Action Planning

There are a number of broad messages that should motivate partners to strengthen their capacity to develop strategies and plans for adapting to climate change impacts. Indeed, many of these issues stimulated the development of the GRaBS project itself:

- Adaptation planning is needed now because the climate is already changing. Looking at one particular region, mean temperatures have increased by 1.4°C in North West England since 1961. Over the same period, summer rainfall has decreased by 13% and winter rainfall has increased by 43%. It is also apparent that climate change impacts are being experienced more quickly than predicted – for example, sea level rise and the melting of glaciers.
- Many of the climatic changes forecast for the next 30-40 years are ‘locked into’ the climate system as they are the result of past greenhouse gas (GHG) emissions. Regardless of the success, or otherwise, of emissions reduction efforts, further climate change is therefore inevitable.
- The built environment generally has a design life of 40-100 years, and the urban form around it has even greater longevity. This further emphasises that climate change adaptation is a current, rather than future-oriented issue. In order to help communities take action, planners, urban designers, architects and developers should take into account predicted climate change over this century at the design stage of any new development, refurbishment or regeneration programme.
- Climate change is a fast-moving policy area, and climate change adaptation is increasingly a requirement of European and national planning and design guidance. Through GRaBS, partners have an opportunity to begin to prepare for these changes in policy frameworks.
- Climate change presents designers, architects and planners with significant opportunities to create or re-model outdoor spaces and buildings that are resilient in the face of future projected climates. Adaptation will enhance the liveability of, and quality of life in, communities in the future, helping to meet broader goals relating to issues including health and biodiversity protection. Seen in this way, adaptation responses such as the managed re-alignment of hard flood defences can offer multiple benefits beyond climate change adaptation.
- Climate change presents opportunities to develop new services and products that respond to changing customer preferences. The first to seize these opportunities can gain an ‘early mover’ competitive advantage.
- Evidence of ‘climate-proofing’ can enhance an organisation’s reputation with its stakeholders, which in the case of planning authorities includes their local communities. Adaptation can also protect investments, reduce health risks, and reduce insurance costs.
- Planners, developers, architects and urban designers should aim to implement zero- and low-carbon adaptation strategies, in accordance with GHG emissions reduction targets. Effectively, climate change mitigation and adaptation approaches must be considered in a co-ordinated manner.
- Adaptation is an essential component of truly ‘sustainable development’.