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more



Pause for a moment and acknowledge how far your community has come. Every decision in favour of sustainability — each planted tree, every dialogue, each shared idea — has moved you forward.  
Step by step, you are building a stronger, more climate-resilient future. Take pride in the path you are shaping.

Milieukontakt Macedonia

USAID Municipal Climate Change Strategies Project

# The process of GREEN AGENDA

Development Community Climate Change Strategies

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## ACRONYMS

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USAID – United States Agency for International Development

MKM – Milieukontakt Macedonia

MKI – Milieukontakt International

ASD – Association for sustainable development

GA – Green Agenda

GAP – Green agenda process

CC – Climate Change

CCA – Climate change adaptation

CCM – Climate change mitigation

CSO – Civil society organization

NGO – non-governmental organization

WG – Working group

MCCS – Municipal climate change strategy

CCCS – Community climate change strategy

LEAP – Local environmental action plan

LED – Local economic development

CCRD – Climate change resilience development

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At last but not the least we would like to thank the members of our local partner organizations and target municipalities – Krivogashtani, Pehchevo, Tearce, Bogdanci, Bogovinje, Studenicani, Mavrovo Rostushe, Vinica, Delcevo and Prilep for taking part and investing their potentials in creating the first Municipal climate change strategies in Macedonia, and the first municipal climate change strategies developed with the innovate method called the Green Agenda.

## PREFACE

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This manual is designed to help communities prepare municipal climate change strategies. To support these efforts, specific methods, tools, and examples of implementation experiences are provided including the experience of Milieukontakt in Macedonia acquired through the implementation of the process in the municipalities Delchevo, Bitola, Vevchani, Radovish and Gevgelija (conducted in the period 2007-2010), as well as throughout the implementation of the Green Agenda process for preparing municipal climate change strategies including the municipalities Bogdanci, Krivogastani, Pehchevo and Tearce (2012-2014). The process has been further developed and improved with the assistance of USAID Climate Change Resilient Development Programme to incorporate climate change concerns and prioritizing adaptation measures. Implementation of the Green Agenda has demonstrated that the process is an excellent tool for promoting and expanding cooperation between all sectors on a local level, and at the same time a great tool to promote and to preserve local values of the communities while ensuring conditions for sustainable development, specific long-term investments and climate change resilience. The Manual covers the entire process, providing the necessary information for each phase and for each step of the Green Agenda, considering adapting international experiences to the needs and demands of local communities in Macedonia for developing local (municipal) strategies and action plans for preservation of local values and encouraging sustainable development. The Manual is based on the experience and lessons learned from all processes implemented by now, including the difficulties and obstacles encountered and modes we surpassed. Thus, this is the first Manual of its kind, developed exclusively for the preparation of municipal climate change strategies in Macedonia through the Green Agenda process and may be freely and without restrictions used by anyone who seeks to engage in the Green Agenda network.

However, this is not the final version of the Manual. Rather, it should constantly adapt, grow and mature, supplemented with new experiences and new examples of new “Green Agendas” which will be further implemented in the Republic of Macedonia. Therefore, this Manual was developed in both paper and electronic form (available online) which allows easy upgrading and enrichment with new content.

Last, but not least in importance, to all those who decided or will decide to develop a local climate change strategy through the Green Agenda process using this Manual, the office of Milieukontakt Macedonia and our team of experienced trainers and climate change consultants are open to further cooperation, with the goal of expanding the process throughout Macedonia and also internationally.

Igor Slavkoski, *Executive Director*  
Association for Sustainable Development  
MILIEUKONTAKT MACEDONIA

## EXECUTIVE SUMMARY

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# INTRODUCTION

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## What is Green Agenda?

Everyone who has been active in community development knows how hard it can be to get citizens involved, let alone be active in the development of a sustainable policy for their community. There is always the paradox of initiating and supporting a process of which you want citizens to feel ownership. Since 1998 Milieucontact has worked on the development of a methodology that supports citizens' groups that have ownership of the process and its results. This methodology is called Green Agenda.

Green Agenda is a participatory method for developing and implementing local sustainable development strategies and plans with active involvement of the different sectors in the local community where the process is conducted.

Two international events can be considered as the starting point of Green Agenda. The first was the UN meeting in Rio de Janeiro 3 June to 14 June 1992. The concept of sustainable development including social, economic and environmental aspects as three pillars of development was adopted in the Agenda 21 and became the main framework for development. The second event was the Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters, usually known as the Aarhus Convention, signed on June 25, 1998. The Aarhus Convention meeting took place in the framework of 'Environment for Europe'. In the Aarhus Convention countries agreed that citizens have the right to be informed on, and participate in decision making, on the environment and to have access to justice if they think decisions are not according to national or international law.

## Who is the manual for...?

This manual is designed to help communities prepare municipal climate change strategies. To support these efforts, specific methods, tools, and examples of implementation experiences are provided.

This Manual is for all environmental organizations, citizens and municipalities interested in improving their communities. The Green Agenda methodology we present in this manual needs broad involvement of the community as well as a certain amount of time. The Green Agenda is not comparable to an ordinary awareness campaign or a small project. It is a planning process that requires a certain deal of skills, not just knowledge on environment, nature and climate change but also organizational, financial, management and "people skills".

It is a time-consuming process, and it has to be time-consuming as it is a bottom up approach that aims to involve as many people and organizations from the community as possible. The broad participation in the Green Agenda process will greatly enhance the quality and sustainability of the results, support for the further implementation of the strategic goals and commitment of the citizens' involvement in the realization of the plans developed with this methodology.

This Manual is for all interested, and indeed we hope that many of you will be interested. But we would also recommend that before you start dreaming of your own local Climate

Change strategy, you read this Manual carefully and check if you have or can find the human, financial and management resources you need, as well as the time and commitment needed to make your dream come true. This may necessitate securing support from allies prior to initiating any initial steps, which could result in some delays. But it is the best way to avoid some of the disappointments that you may experience otherwise, and it certainly is a must for your success.

## How to use it

In this Manual we have tried to present a conceptual framework for the Green Agenda and for the methodology used. But we also focus on the concrete steps that any Green Agenda process needs.

This Manual is not a cookbook: it is not the kind of book where you start on page 1 and work your way through until the end. Some steps may not be needed in your community, or may have been completed previously, or a different sequencing of the steps may make more sense in your community. We would recommend you try to get an overview of the manual as a whole first. Some of the texts, pictures or boxes can be used directly in your presentations or analyses, and you can just photocopy them and disseminate them between those present and participating. Others may need more elaboration by you before they can be used.

It is recommended to utilize the experience and expertise of the individuals involved in the Green Agenda projects. More information, including contact details about the partners who contributed to the implementation of the methodology, can be found at the end of this manual.

# ” GREEN AGENDA” – STEP BY STEP TOWARD A SUSTAINABLE FUTURE

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## Green Agenda Principles

Every society recognizes three fundamental elements. The Green Agenda process aims to develop the relationships among these elements of sustainability to enhance quality of life. It emphasizes the importance of linking natural, social, and economic values, underscoring the interconnectedness of society, economy, and environment.

The current system was established by past generations, who based their actions on notions that framed human interactions with nature as domination, exploitation, and control. Development is deeply rooted in traditions and customs and should relate to them through contemporary values.

The restoration, development, or preservation of values is influenced by present generations. They build on tradition while incorporating innovative knowledge and new opportunities, taking responsibility for the future.

Future generations will benefit from the Green Agenda process. This initiative may preserve values at risk of being lost, as it is challenging to restore an ecosystem or historic value once it is gone and easily forgotten by those who have never experienced it.

The Green Agenda methodology evaluates the relationship between society, environment, and economy across past, present, and future. It strives for full citizen participation in shaping their future and quality of life. There are five main principles guiding this process:

### Principle 1: Local VALUES

VALUES are all resources (natural, social, economic) available to the community, in function of the sustainable development of communities that are important to the community and the citizens are especially proud of them.

At the outset of the process in the community, the local stakeholders identify the values of the community. The main idea is to set focus on the things the locals are proud of, rather than focusing on problems. In terms of value, the stakeholders can identify the natural resources or objects in the environment and nature (natural monuments, protected area, certain plant or animal species, and entire ecosystems). For example, a value may be different local agricultural products, but also the entire farming or some other economic activity. Values as objects of culture and infrastructure facilities can also represent a media environment and entire eco-systems etc.

### Principle 2: Active community PARTICIPATION

The Green Agenda process is open to everyone who shows interest, regardless of their level of knowledge on climate change and environmental protection. Anyone who is committed to his community can contribute to the success of the process and the results of it. This suggests that special attention is given to building local capacities, with the purpose locals to acquire tools for active participation in the process and in the implementation of activities.

### Principle 3: Joint OWNERSHIP

After selecting values, local WGs will be established that will work on at least one value. WGs will analyze the status of each value that defines the vision of the community, but will also contribute with ideas and drafting of project activities within the agreed strategy. All these steps will be taken by the local population, and based on their priorities, needs and desires. Because of this, all citizens are truly motivated by the inclusion of their plans in the final document of the Green agenda.

Since, in this case, the Green agenda is a process to analyze issues related to climate change and the environment, in the context of human society, the invitation for participation in the process should receive not only the environmental activists, but also other stakeholders of the society, as women and youth, farmers, landowners, people with disabilities, religious organizations, etc. This approach is extremely important, because climate change may have different effects on different categories of people who might feel the consequences of climate change in a different way.

#### Principle 4: Communal STRATEGY of the community

As a result of this process, the community acquires a document or a strategy that is based on consensus and addressing the needs of civil society, including an action plan of identified measures to adapt and mitigate the effects of climate change. In addition, to raise public awareness of the local population and its willingness to global climate change strengthened activism, and developing parallel processes for future actions that will help participants to recognize short-term results of the project.

Basically, the Green agenda is a process aimed at developing a strategy for bridging the defined gap (difference) between the current situation, trends (tendencies), and the desired future (vision). After completion of the process, monitoring (tracking sheet) is conducted to analyze the results and provide conclusions and recommendations, after which a new cycle may begin.

#### Principle 5: Strengthened capacity

Building capacities on the local level is essential in ensuring local ownership and encouraging local people to take responsibility for their own sustainable development and thus to improve the quality of life of current and future generations.

## Relevance and objectives of the Green Agenda

The significance of the Green Agenda is twofold:

- It is a participatory process that is achieved through mutual agreement, strengthened communication and cooperation, or public participation in the decision-making process and good governance at the local level.
- The results of the process - local climate strategy and an action plan, may contribute to sustainable local development and improving the quality of life.

Short-term goals of the Green Agenda are:

- Analysis of community development in the context of environmental protection and adaptation to climate change.

- Analysis of the vulnerability to climate change in the context of sustainable development,
- Creating a vision for the community and strategic approach to adaptation to climate change and its mitigation.
- Encourage initiatives and interactive processes with the relevant stakeholders and keepers of community development.

Long-term goals of the Green Agenda are:

- Integrating the environmental issues, sustainable development and climate change, in all relevant processes of planning and policy creating/making.
- Raising the level of awareness of the local population on environmental issues, sustainable development and climate change.
- Raising awareness of the impact of climate change on local development and vice versa.
- Increased participation of the civil sector in decision-making processes in the community and good governance.

## Green Agenda Methodology

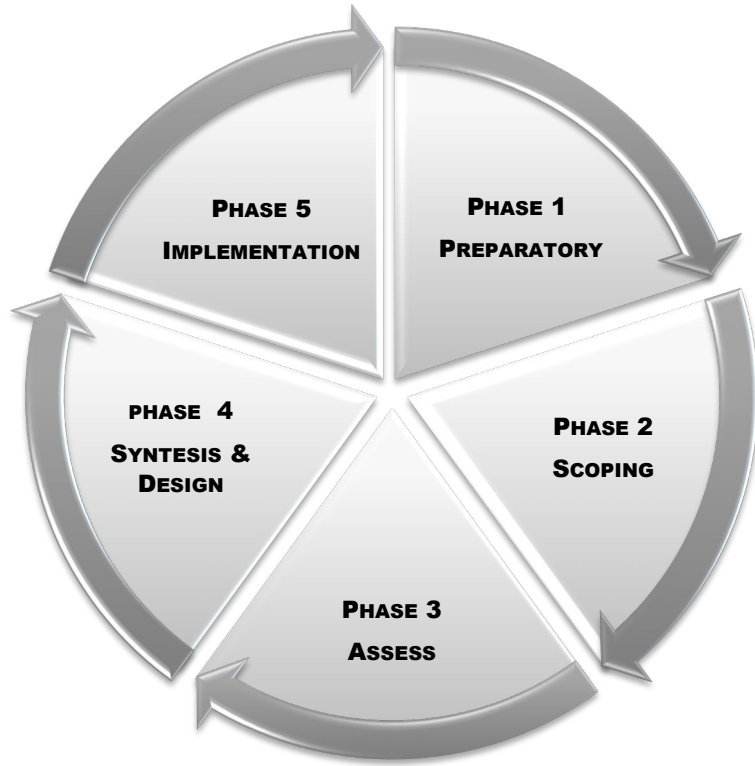
The Green Agenda is a continuous cyclic process: once all the phases and steps are completed, it can start again. Based on the results from the first cycle, a second cycle may start which will identify and solve new problems or would find new solutions to problems that could not be successfully addressed before. In this sense, the Green Agenda is a dynamic process, which should not end as another document or with minor activities.

However, each cycle of the process has a clear beginning and end. The entire process of the Green Agenda can be divided into five Phases of implementation. Each phase has different goals and different activities needed to achieve the objectives.

The total duration of the process, or the implementation of all five phases may vary, though experience shows that the time required ranges between 10 and 15 months.

Certainly, the ultimate timing and responsibility should be established during the first, preparatory phase, by the organization that will carry out the implementation of the Green Agenda.

It would be beneficial to all stakeholders to have this overview, whether they are active participants in the WGs or just want to be informed about the process and the progress. This will add to supporting the transparency and public effort of the WGs.



## PREPHASE

- Select NGO and Municipality
- Form local team
- Start-up capacity building

## PHASE 1 - Preparatory

- STEP 1 - Understand the Community
- STEP 2 - Form working groups

## PHASE 2 - Scoping

- STEP 3 - Analyse the Function of the Community Values
- STEP 4 - Determine Trends and Develop Scenarios

## PHASE 3 - Assess

- STEP 5 - Analyze Climate Impacts
- STEP 6 - Analyze Adaptive Capacity
- STEP 7 - Determine Climate Related Problems and Causes
- STEP 8 - Set up Community Climate Change Vision

## PHASE 4 - Synthesis & Design

- STEP 9 - Identify Mitigation and Adaptation Measures
- STEP 10 - Evaluate and select adaptation and Mitigation Measures
- STEP 11 - Develop Community action and monitoring plan
- STEP 12 - Adopt Community Climate Change Strategy

## PHASE 5 - Implement and follow-up

- STEP 13- Implement Pilot Project
- STEP 14 - Monitor, Evaluate and Adjust

## PREPHASE

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This phase sets the foundations of successful implementation of the Green Agenda process to create local climate change strategy.

This is the beginning of the work in the community and introduction with the key figures that will enable the implementation of the process. This phase concerns the CSOs or core group of citizens that will lead the process until the end and will help the citizens to understand the process and to develop their community climate change strategy.

Activities:

- Select implementing CSO together with the municipality.
- Sign award agreement
- Establish local team
- Develop training curricula for the CSO or local core group, depending on their capacities and needs. The following trainings need to be adjusted for the local needs:
  - Process of Green Agenda – step by step implementation
  - Climate change – Basics
  - Climate change – Statistics and data analysis
  - Climate change and gender
  - Climate change and people with disabilities

Once these trainings are delivered and the CSO or Local Core group is well introduced with the process of implementation of the Green Agenda, phase 1 of the process can begin.

The organization (Civil Society Organization – CSO) or local core group which is the holder and enforcer of activities, overall, should be enthusiastic to work with interested stakeholders, who are generally not members of organized associations. These are ordinary citizens, some of them for the first time to meet with civic associations, project activities and strategic planning, or for the first time to participate in community activities.

But it should be anticipated that the whole process depends exactly on the citizens, for whom it is intended. The role of the CSO or Core Group that is implementing the process is only to help the citizens to fulfill what they want, in order to preserve and promote common values in the community.

Before any contact is made with the community (municipality) to cooperate with, the CSO or Core group should be prepared to complete the entire process to the end. Firstly, it should assemble its own working team that will actually run the process. CSO's or Local Core group's working team may count a various number of members of different background, but with clearly defined roles.

However, the required minimum is 3-5 persons, and the most important roles certainly are the working team coordinator, the administrator – assistant, the data provider (it is best at the very beginning to identify a person for this role who is employed with the municipal administration, for example, from the local economic development unit.)

It is necessary that the members of the working team possess a certain level of knowledge about:

- the Green Agenda Process,
- Climate change,
- Statistics and data analysis, etc.

In case they do not possess such knowledge, the CSO or Local Core group should seek support and assistance for the provision of training for the working team members which can be provided by Milieukontakt Macedonia.

Finally, the CSO or Local Core group should receive formal supports from the local government, primarily by the mayor and his administration, and establish a partnership as an important enabling condition for the application process. The formalization of such partnership should be expressed by signing a Memorandum of cooperation between the CSO/ Local Core Group and the municipality as a prerequisite for continuing the work.

Since this is a preliminary phase, it is required, in the community where it is implemented, to raise interest about the process and to identify all stakeholders who should take part in the process. Activities need to be aimed at promotion of the process, and depending on the size and features of the community, the CSO should select the most effective method for promoting this process in the community, including:

- Use of local media;
- Meetings with citizens;
- Door to door visits and inform people in the community about the process, etc.

Besides collecting general information about the community, at this phase CSO should provide data that will be used later in the work. This is done through mapping and analysis of existing strategic documents, laws and bylaws, policy documents, etc.

*The aptitude of the civil society organization is crucial for the implementation of all phases of the process and all required activities.*

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## PHASE 1 –PREPARATION THE PROCESS

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Aim of the phase is to generate interest and support for the process, to identify the stakeholders that you need to be involved and to collect basic background information that you need to prepare for the process and for its content (legal framework, etc.)

At this stage of the process it is really important to take into consideration that the Green Agenda should be fully integrated into existing planning processes, strengthening these and avoiding parallel processes and ensuring continuity.

Implementation and preparation of the Green Agenda process should be integrated with and strengthen existing (strategic) planning processes, identifying weaknesses and needs for improvement. You should avoid the Green Agenda being applied as a parallel process from other planning processes.

The results can be considered as an advice to planners or decision-makers, for new policies or plans, or adjustment of existing ones. Thus, the Green Agenda process forms part of the continuous policy cycle instead of being a stand-alone activity that could be conveniently ignored by the local authorities if it becomes too complex or costly. The Green Agenda team or formed working groups may continue to play a role in coordination of monitoring activities focused at priority Green Agenda issues, updates at regular instances (once every 3-5years), and coordination of a stakeholder platform.

## Step 1 – Understand the community better

### Objective:

To map relevant stakeholders, i.e. all those groups or individuals with primary (direct) and secondary (indirect) interests affected by the process. The analysis includes an analysis of their (sub-) sectors, their interrelations, power relations and their interests in the process. To inventory relevant documents and legislation, to analyze the legal and administrative framework in which the process is to take place.

### Description:

This step sets the foundations of successful implementation of the Green Agenda process in order to create local climate change strategy. This is the beginning of the work in the community and introduction with the key figures that will enable the implementation of the process. This phase is dedicated to the CSOs or core group of citizens that will lead the process until the end and will help the citizens to understand the process and to develop their local climate change strategy.

### Activities/tasks:

- Participate in trainings
- Develop and distribute community survey to collect baseline information
- Identify and rank community values through survey
- Identify and map/characterize stakeholders
- Compile information on geography, demography, and economy
- Compile list of local strategies, laws, policies
- Prepare Local GHG Inventory
- Create community profile by compiling information collected in this step

### Outcomes:

- ☞ *CSO is prepared to implement the Green Agenda*
- ☞ *CSO understands the characteristics of the community*

### Outputs:

- ✓ Community Profile
- ✓ List and grouping of values
- ✓ Map of stakeholders
- ✓ Inventory of policy/strategy documents
- ✓ Summary of the geography, demography, and economy

### Necessary trainings:

- Process of Green Agenda – step by step implementation
- Climate change – Basics
- Climate change – Statistics and data analysis
- Climate change and gender
- Climate change and people with disabilities

Step 1 of the process is started by reading the manual in order to understand the concept of creating local climate change strategies by providing participation to all interested stakeholders to be a part of the process.

Once these preparatory activities are completed and the capacity building component of this phase of the process is over only then you can move further in the process and start to create the local climate change strategy of your community.

What is extremely important in this step is to understand that climate change has a major impact not only on the environment, but also the economic and social development and shows the existing inequalities in the community even more.

This step also includes mapping of all relevant laws, local and national strategies and plans implemented before or ongoing projects that have some impact on climate change.

During this step the climate profile of the municipality is prepared. The profile includes a brief overview of the geography, with an emphasis on present climate features and a prognosis scenario for the climate over the next 25-100 years, demographic characteristics with analysis of the genders, socio-economic characteristics, as well as an inventory of GHG emissions in the community.

While preparing the profile of the municipality, it is very important that data are gender separated, i.e. to determine the social and economic characteristics and conditions of men and women in the community.

The effects of climate change will be distinctive for different regions, generations, groups, different professions for men and women. Understanding how social expectations, roles, status, and economic power of different categories of citizens and especially of women and men affect, and are affected differently by climate change, will reduce the vulnerability and improve the activities undertaken in the battle against climate change.

Apart from all the research and data collection, it is required to sort a list of all associations in the community where you work. Ask from the ones that have been working on this in the community so you can benefit from their data.

In order to create better and more accurate list of community values it is necessary to collect more data. You can do this by organizing meetings with associations in the municipality, which later can be included as partners in the process.

The analysis of the municipality is conducted by the CSO or local core group that initiated the process. Documents will be obtained through direct cooperation with the local administration, by consulting the laws of the country, as well as through the analysis of all the plans and strategies of the country that directly involve your community.

If the community has no strategies or analysis, it is desirable to discuss with elder members of the community that might provide information about the relationships in the community.

During the preparation of the climate profile of the municipality and the inventory of greenhouse gases, it is best to seek help from outside experts who are experienced in this.

List of values of the community can be prepared after all data is collected and analyzed. In order to rank and prioritize the values you need to conduct a simple survey that incorporates all the values that you discovered while researching and data collecting..

## *Mapping of stakeholders*

*Public institutions – drivers of public life, which control, collect and hold information, create and implement policies, guarantee stability and legitimacy in the community;*

*Business sector – drivers of economic development of the community, inventive, quick and profit oriented;*

*Civil sector – organizes citizens and civic activities, prompts initiatives, creates and ensures the democratic society, monitors the operation of public institutions.*

*DIRECTIONS:*

*Think of those that MUST be involved in the process? And why be involved?*

*Think of those who SHOULD get involved in the process?*

*Think of those who WOULD like to get involved in the process?*

*Make a list of all these local stakeholders;*

*Think about gender equality, ethnic and age presentation of the stakeholders involved in the process.*

*It would be good to prepare a graphic display in the form of a map with all stakeholders marked.*

*Create a matrix to display mutual common interests and relationships and conflicting interests of stakeholders.*

- Hold consulting meetings with representatives of the municipalities (urban planning, environment, economic development, utilities, etc.)
- Ask what kind of documents have been developed and adopted by the municipality (strategies, programs, decisions, etc.: e.g. urban plans, LEAP, local plans for waste management, LED, regional strategies for regional development, urban planning program, energy efficiency program, waste management program, education program, a program for agriculture and rural development projects, implemented projects, produced studies (scientific, feasibility, EIA, SEA, etc.)
- Make a summary of the national reports on climate change
- National Spatial Plan
- Environmental Legislation
- Energy Legislation
- National Energy Strategy
- National Strategy for Renewable energy sources
- Strategy for environmental investments
- National Strategy for Environmental Protection (NEAP)
- National Plan for Protection, Rescue and Crisis Management
- National Health Plan
- National Strategy for Waste Management
- National Strategy for Sustainable Development
- National strategy for agricultural and rural development, etc.

Finally, make a list of all relevant documents that will be beneficial for initiating the process and preparation of your Green Agenda

### List of documents, strategies and regulations at the local and national level

Name of document	Scope of document (local /regional /national/ international)	Description Link to the process/ if climate change are treated in the document	Maker and enforcer of the document	Importance (Time line of the document)

### Identifying and analyzing the community values

- Ask yourself: “What is common to all and is most valuable in our community?”
- Take a topographic map (or google map) or spatial / urban plan of your community and try to locate all values (*resources/products /locations /landmarks/infrastructure etc.*) that exist on the territory of your municipality. Find the answer why those items are important to your community?
- The list of functions of values, on page XX of this Manual, can be helpful to identify the values. Take a look at the list of features that contain the values and according to the functions you could identify the values in your community.
- In developing the list of values consult with people who are familiar with field work (teachers, businessmen, scouts, hikers, foresters, farmers etc.) since they know best what is present on the territory of your community and where is it located;
- Browse all the identified values and try to group them and organize them by making a map of values (natural values, societal and social values, economic values etc.)
- Make a questionnaire of the identified values. It takes a broader consensus for the selected values therefore it is sound to carry out a survey of the citizens’ opinion on the selected values. The representative sample of persons covered in the survey should be at least 1% (or at least 100 respondents for communities of less than 1,000 inhabitants) of the total population in the municipality, male and female should be equally covered, also consider the age of respondents, since young and old are important in the process; ethnic representation should also be taken into account in the survey;

### Map of community values

Natural values	Societal, social and cultural values	Economic values
eg. Water resources (river, lake, springs, drinking water impoundments, etc.)	eg. Public buildings and areas	eg. Agriculture and farming
eg. Forest resources (forest belts and complexes)	eg. Cultural manifestations, events and facilities	eg. Industry and energetics

e. biodiversity (specific types of flora and fauna)	eg. Education, training, youth, sport	eg. Traffic, transport and communication
eg. Mineral resources (minerals, energy sources)	eg. Historical monuments and archeological sites	eg. Services and trade

## Gender issues

Today in the world it is quite certain that the impact of climate change will most affect poor people because they have the least possibilities and resources to adapt to changes and will deepen the existing inequalities in the communities.

On the other hand, women who make most poor people in the world, are more vulnerable to changes of the environment, because they are socially excluded and they do not have equal access to land, resources, mobility and decision making.

For this reason, women are unequally affected by natural disasters and extreme time events, such as floods, droughts and landslide etc.

Interventions that create greater awareness and understanding of the complex relations between gender equality and the environment can help to build the capacity. Especially in rural communities' women can adapt to the impact of climate change and undertake an action for reduction of consequences of climate change.

Hence, what is of exceptional importance in every step of the implementation of the program Green Agenda is to sensitize the citizens about vulnerability of different categories of citizens from climate change, but also to create policies, strategies and other measures that will mitigate the impact of climate change on women and men.

Below, we present several key tools for integration of gender issues in the implementation of the Green Agenda.

### *1: A list of questions on the inclusion of gender issues in the Green Agenda and climate change*

The list of questions on the inclusion of gender issues in the Green Agenda and climate change contains a series of questions that should be used as a guide for provision that gender issues are incorporated in the different phases of policies, programs and projects related to climate change.

List of issues	
	Do information about climate change also speak of the social and economic conditions of men and women
	Can one recognize the specific vulnerability of women and the other marginalized groups of climate change?
	What social groups (men, women, elderly, youth etc.) and what economic sectors inside the community are most vulnerable to climate change?
	Is this knowledge and recognition translated in the policies and in the implementation of programs or sectoral programs?
	Do the people responsible for creation of policies and programs understand the impact of climate change on different groups and support strengthening of the most vulnerable groups, including women?
	Are the processes of planning of strategies for climate change adaptation and mitigation participatory and do they include women and men?
	Was the voice of women and the other vulnerable groups heard in the process of planning?
	What other factors prevent the adjustable capacity of the most vulnerable groups, including women?
	Do women and men work together on addressing of challenges?
	Does the domestic economy have control over resources for welfare?
	Do women and other marginalized groups have equal access to information, skills and services?
	Do women and other marginalized groups have equal rights and access to resources?

	Are there other social, political or economic issues that make certain individuals or group of people inside the community much vulnerable to climate change than others?
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## 2: General framework of gender equality

This tool is a framework for supporting the implementation of gender equality in policies, programs and projects directed towards climate change. The framework provides a review of the main questions that should be asked and proposes general questions and manners of integration of gender perspective in all phases of creation of policies, programs and projects. This tool can be used as a guide that ensures that the rights question is asked in each phase.

List of questions		How to implement it
<b>Identification of needs</b>		
	Were men and women equally included in the assessment of needs?	Formation of focus groups which will make sure that men and women are equal in expressing the community needs
	Were the specific interests of men and women addressed?	Women and men in the community can meet in order to give priority to specific issues that the community is facing with  Identification of the different roles and interests of men and women in the community
	What is the impact of the identified problems on men and women?	Focus groups can be used in order to get representation of how the identified problems have different impact on women and men
<b>Phases of creation of policies, projects or programs</b>		
	Are women and men included in the phase of creation awareness and do they have experience on gender issues?	Ensure that women and men included in the process were trained and have experience in gender issues.
	Are women and men equally included in this phase?	Identify the main sources of information and provide balance between the male and female groups in the community.
	Does creation of the policies, the program or the project provide security for women and men if their workload is changed?	Ensure that resources are available in order to meet the changes which will impact on women and men
	Have men and women who are affected by these policies, programs and projects been asked about their viewpoint of the problem and how these policies, programs or projects address this problem?	Organize meetings with female and male groups in order to determine how they define the issues in the community and include the different observations in this phase
	Did women and men benefit from the policy, the program or the project? How?	In this phase get a feedback form the male and female groups in regard to what is their benefit
	To ensure that all existing limitations of female and male participants have been identified?	To get feedback information from the female and male groups about the possible limitations
<b>Phases of implementation</b>		
	Are there equal opportunities for women and men to participate in the project management positions?	The policy, the program or the project should identify appropriate support in the structures, the facilities and the agreements and to provide participation in men and women in the activities
	Is there gender balance in the team that is directly included in the implementation?	The policy, the program or the project should ensure equal representation of men and women in management and demand qualified individuals or to provide training for individuals of both gender in order to fulfill these positions

	Are there human resources, funds, awareness and expertise or skills provided for the management required for coping with the gender dimension in policies, programs or projects?	The management should ensure that there are resources distributed in the budget in order to ensure that the training is at the disposition of those who need it.
	What trainings and additional techniques were used in other to help the project to be sensitive to gender problems?	To ensure that the identified training and the additional activities are gender based
<b>Monitoring and evaluation</b>		
	Is the management team trained to monitor from gender perspective?	Make sure that the training is available for gender-sensitive monitoring and evaluation if necessary.
	Are there developed indicators which will measure the impact of women and men separately?	The management team together with women and men – users should develop gender-sensitive system of monitoring and evaluation and to measure the impact of policies, programs and projects. The measurement should be made separate for women and men, clearly indicating the demands for data, collection and interpretation of data.
	Are the indicators designed to measure equality and inequality in the approach and control of resources of women and men?	It is necessary to collect data about the differences in the access to resources by women and men
	Are measures conducted often enough so that the required adjustments can be made although the project is under way?	Measurement should be conducted sufficiently often and interpretation of the beginning, whereby the results can be used for modification of the project, if necessary.

## Step 2 - Form Working Groups around Priority Values

### Objective:

To organize a meeting to attend a greater number of community members, for their introduction to the Green Agenda process and their involvement in the process through Working Groups (WG).

### Description:

The *meeting of stakeholders* is a public meeting where all interested stakeholders identified in the first step are invited. The process will be presented at this meeting, as well as determined the community values and the WGs formed.

### Activities/tasks:

- Organize First Stakeholder Meeting (prepare agenda, invites, venue, presentations, etc.)
- Conduct the First Stakeholder Meeting
- Present the community profile
- Present the Green Agenda process
- Select the values
- Organize the working groups (community members sign up for the working group they want to be involved in)

### Outcomes:

☞ *Working groups are formed for the priority values of the community*

### Outputs:

- ✓ Materials for the First Stakeholder Meeting (invitations, presentation on Green Agenda, presentation on community profile)
- ✓ Working group sign-up sheets
- ✓ List of selected values

✓ Summary of the meeting (minutes, participant list, etc.)

Before the first stakeholder meeting, it would be useful to assess the needs and interests of a broader group of stakeholders on specific issues, while taking care of the needs of different groups of people, if it concerns a multi-ethnic environment and the needs of men and women in the community. They can easily obtain all required information through a questionnaire or a survey. While processing data it is important to perceive the priorities and needs of different categories of citizens, men, women, people with disabilities, members of different cultures or sub-cultures in the community, etc.

Regarding the most important stakeholders, direct contact with them will encourage them to take part; it may increase their understanding and therefore their interest in participation. Please note that due to certain cultural values and norms in the community, it is possible a certain group of people to be completely excluded from the process of consultations. Access how to encourage certain categories of citizens, especially women, to engage in the process, is particularly significant.

Depending on the size of the community where you work, you can have several preparatory meetings with different stakeholder groups. In rural areas ruled by strong traditional values and where women often do not attend public meetings or committees, it is good to have a special preparatory meeting with them, so you may hear their opinion and get support for the implementation of the Green Agenda from all citizens of the municipality. These meetings are a good preparation before the first public meeting with all stakeholders.

#### Organizing the first meeting of stakeholders

- Make a list of those who will be invited to participate at the first meeting, make sure you have a sufficient number of participants.
- Make an agenda and a scenario (plan) for the event;
- Provide an adequate room where you can organize the first meeting;
- Provide appropriate audio-visual equipment for the realization of the meeting;
- Create appropriate presentations;
- Inform local/regional media;

#### IMPORTANT:

In organizing the first meeting of stakeholders it is important to take into account the following three factors:

- Quantity - the number of participants should be between 50 - 100 people;
- Quality - relevance of the attending participants on the selected topics/values;
- Balance representation - representatives from different sectors, gender and ethnic participation, age and participation of marginalized groups in the community;

In all cases where these factors were met, the meetings were able to reach actual results. Unlike where any of these factors were not met the final results were incomplete. Therefore, some groups were working to review the values, while others were placing additional values and some values were excluded from the process.

At this meeting, your organization as holder of the process should present the stakeholders with as much as possible information that will facilitate the further course of the work. The scope of information will depend on your assessment of the level of understanding of the process by the stakeholders. As a minimum, on this first meeting you should prepare short presentations on:

- You, your organization and the team that will coordinate the process;
- Objectives, activities and expectations of the process;
- Municipal climate profile (prepared by your organization during the first step, with the support of experts hired for this project);
- Map of all relevant documents, with emphasis on their importance for the future strategic document on climate change in the community;
- Present the results of the carried out survey;

## Checklist of activities to organize the first meeting of stakeholders in your community

### Two weeks before the meeting

- Establish a coordinative body (local group) for implementation of the Green Agenda process in the community (local coordinator, representative of the council, members of your organization or from other local organizations 5 – 6 people).
- Defining the exact date, time and location of the first meeting. You need adequate space where you can receive all invited participants at the meeting.
- Providing support and attendance of local authorities, relevant institutions, local media etc.
- Preparing a list of persons/institutions/organizations to be invited to participate at the first meeting.
- Preparing the invitation with the defined agenda for the first meeting and brief information about the process, activities and outcomes.
- Conducted survey and prepared draft list (map) of the community values upon which WGs will be formed during the first meeting.
- Providing information (call) for local people to get involved and attend the first meeting (local radio, local TV, Facebook page/group, posters, billboards, etc.)
- Timely dispatch/delivery of written invitations to persons/institutions previously identified.
- Preparing presentations for the meeting with information on
  - The Green Agenda Process
  - Municipality profile (demographic, social, economic state, the environment, legal acts of the municipality, strategies etc.)
  - Presentation of the values identified in the community;

### Two days before the meeting

- Checking the condition of the hall/room where the first meeting will be held (power supply sockets, chairs, tables etc.)
- Providing adequate equipment for the meeting:  
Projector, sound system, refreshments, etc.
- REMINDER on the meeting (phone contact to all who received the invitation, text message, email, Facebook)
- Checking the presentations and presenters at the meeting
- Providing a speaker/ announcement of the meeting

### At the day of the meeting

- Appropriate tagging of the place where the meeting will be held
- Setting up the chairs (theater system or different formation depending on the expected and planned number of attendants)
- Marking the seats of special guests (Mayor, representatives of certain institutions etc.)
- Provide a table for registration of participants. A blank LIST OF PARTICIPANTS is required, as well as pens and a person who will assist the participants.
- Setup and installation of appropriate equipment:
  - Projector screen (or white wall)
  - Projector
  - Computer (laptop)
  - Sound system (if necessary) and microphones
  - Blue screen for setting the flipcharts
  - Presentations

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- Banners

- Other needed items: flipchart paper, tape, blank sheets of paper, markers, stickers, pens, scissors, extension cord, etc.
  - Minutes of the meeting. Appoint one person from the team to be a minute clerk/recorder and take all important notes of the meeting.
- 

After mapping the values, conducting the survey and ranking them by survey results, group the values if possible and form WGs by value. The number of WGs may vary from case to case but past practices show that the optimum number of WGs is 3 to 5 WGs per community.

The result of the first stakeholder meeting should be establishing WGs and the choice of subject areas to be handled by the WGs. The number of WGs will depend on the number of specified values.

It is important that each WG is based according to certain value, so everyone present at the first meeting of stakeholders may determine in which WG to participate in the process. Insist that the participants choose in which WG they wish to contribute and save their contacts to inform them about the time and place of the first meeting of the WG. It is necessary for each WG to have participants from different sectors.

Once you define the number of WGs, you should prepare materials for the first meeting of the WGs. Each WG should hold a preparatory meeting.

### Establishing Working groups

- Group the related (similar) values and organize them by themes to which the value adheres to;
- Type the group names on flipchart paper and place them in a prominent place in the room where the first meeting of stakeholders is being held;
- Refer each participant to apply to the group he thinks suits him best and to which he can make his contribution.
- Ask them to leave their contacts (phone number, email) so you can contact them later about meetings of the WGs.

#### IMPORTANT:

- The number of members of the WG is not limited, but it will depend on the process of work, or do not expect that everyone who applied for participation in WGs will remain there until the end of the process.
- Expect that later some people will look to move to another workgroup. It is allowed and it is normal for the Green Agenda process, since it is an open process and always welcomes new members into the WGs.
- If the number of members drops significantly during the process, try to recruit new members who would like to get involved.
- If members do not have enough knowledge about some topics that are the subject of the WG, they are free to call experts or people who have experience with the subject matter of the discussion of the WG.

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## Running the WG's

The teamwork in the organization initiating the project and in the local WG's is most crucial to the success of the whole project. Therefore, we would like to highlight some principles and tips related to team development, teamwork and the role of the initiating organization in support of these local working groups (teams).

The working groups will consist of local people, willing to work further on one of the selected values. It is important that the groups are open to everyone who wants to join. People who join in general may not have a lot of experience in conducting meetings, working as a team, elaborating climate change issues, etc. The initiating organization will have to invest in training and educating the groups (and the individual members). In order to have efficient meetings in the future and to develop working dynamics you should agree with the WG members the following:

- Who will take minutes of the WG meetings
- Meeting reports and who will make them
- After each meeting of the WG's finishes and you have the following outcomes:
  - Name/Title of the WG;
  - Number of attending participants and list of participants;
  - Place, time and date of the meeting;
  - Agenda of the meeting;
  - Minutes of the meeting;
  - Performance results and conclusions;
  - Plan for next meetings.

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## Training/Mediation/Coaching

The initiating organization establishes local WG's at the first stakeholder meeting. After this meeting these groups will go through certain stages of development into a team. This process of development of a group of individuals into a true team needs outside support, especially in the case that people are not very experienced or skilled in teamwork, open communication and internal management issues. This is a task that can be performed by the initiating organization directly or by external facilitators who can supervise and streamline the internal processes. It is important to emphasize that facilitators should keep a neutral, facilitative role where group dynamic, active and open participation of all interested parties should be obtained.

At the same time, the local WG's will need to carry out their job (see above: analysis of the situation, trends, threats and opportunities, etc.). This job may be something they are not experienced in. When the group is formed it is not necessary to require people to have certain knowledge or skills, inner drive and motivation as well as time is much more relevant. After all, this is not a project in which only experts are welcomed. Nevertheless, the groups may need certain support in order to be able to carry out their tasks as planned and desired. This support can be provided by an expert on a certain issue or through training.

In our experience workshops on public participation, Climate Change and strategic planning were useful for the working groups and helped put the project and the specific steps to be taken into a certain perspective.

In addition, provide workshops for project proposal writing to help turn ideas for pilot actions into project proposals that can be presented to certain founders in the country and international donors.

## PHASE 2 – SCOPING THE CURRENT

### SITUATION

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At this phase of the process development the WGs are being formed, assembled of community members, and their regular meetings are being organized. All meetings shall be public and open, and if possible, the community should be informed about the time and place of the meeting and its topic. This will allow involvement of more citizens who can give their personal contribution where they think they have the knowledge and the potential for it.

At the WG meetings issues related to the identified community values are being in discussed in detail, including discussions on the functions of the values, their tendencies, effects, problems, etc. All data resulting from these analyzes will be used in writing the strategy document, i.e. the Green Agenda on climate change.

The purpose of this phase is to collect detailed information about the value of interest, to process and analyze them in order to create a clear picture of the current state and trends of defined values in the community that the WG is working on. This analysis will be the basis for defining the vision and development goals of the Green Agenda.

At this phase numerous activities will be accomplished as: preparing and conducting workshops to present the interim results to the broader group, collecting feedback and additional information; consultations with experts, etc.

## Step 3 - Analyse the Functions of the Values (within WG)

### Objective:

To define the main functions of the values of the community that are important for sustainable development of the community, based on stakeholder opinion and perceptions, particularly those of sensitive social groups.

### Description:

Sustainable development is about striking a balance between environmental, social and economic dimensions, dealing with compromise, avoiding unacceptable change and finding win-win opportunities.

To do so, specific values should be defined for the three dimensions of functions (environmental, social and economic) that are critical for sustainable development of the community.

### Activities/tasks:

- Identify and prioritize the functions of the values;
- Create a short description for each function;
- Select at most three functions that are most important for the value;
- Identify and map the inputs of the function (inputs are the elements needed for the function to be achieved, e.g., roads, water, energy, food, equipment, or a building);

### Outcomes:

- *Priority functions are selected*
- *Inputs are mapped for each function*

### Outputs:

- List of most important functions with associated description
- Map of inputs for each function

### 3.1. Identification of the Functions of each Value in the Community

- In each working group, list all possible functions of the values that are in one or another way important for stakeholders, and that can be found in the community. Make a long-list. Try to give answer on following questions:
  - What function has the selected value in the community?
  - What is the main use of the selected value in the community?
  - Why are these functions important to the community?
  - Is the community dependent from the function of the value?
  - What will happen in future if these functions are endangered?

- Set priorities, by asking yourself which of these functions is most important. Make a short-list of the most important environmental functions. Set priorities by asking participants in WG which environmental functions (values) they recognize and which they find most important. Select three most important functions of the certain value.
- Make a brief description of each priority function, including: current quality, major geographical variation within the area (preferably with maps). Describe unique ecosystems, plant and animal species (being rare, endangered or highly valued). At this stage you may decide to make separate analyses for distinct geographical units within the community (e.g. rural lowlands, rural highlands, urban etc.).

### CATEGORIES OF FUNCTIONS

- Primary production functions. These are products directly derived from the environment, without human intervention, e.g. food, fibers, energy, fresh water, fodder, minerals, construction materials, etc.
- Secondary production functions. These are products that require human management, e.g. agricultural crops, livestock fodder, irrigated crops, etc.
- Regulation functions. This is nature's capacity to provide security and stability, and withstand external shocks, e.g. purification of air and water, protection against floods and droughts, dispersal of seeds, provision of micro-climate, regeneration of soil fertility, etc.
- Enrichment/cultural functions. These are non-material values, that can create bonds among people experiencing or valuing them, e.g. spiritual values, landscape values, historical sites, cultural traditions, including the diversity of species, habitats and landscapes, with mainly indirect values for human well-being etc.

#### IMPORTANT:

- Each certain value should have own function in the community. If this is not a case than we cannot speak about a value.
- Some values can have only one function (for example only one primary, secondary etc.), but in other cases some values may have more primary, more secondary, regulatory or and more enrichment values, or combined 2-3 primary, 1-2 secondary, 3-4 regulatory, 1 enrichment value. It is up to the awareness and acknowledgement of the group to identify the functions of the value.
- It is important to identify as many functions to each value. This makes it easier to determine the importance of the value.

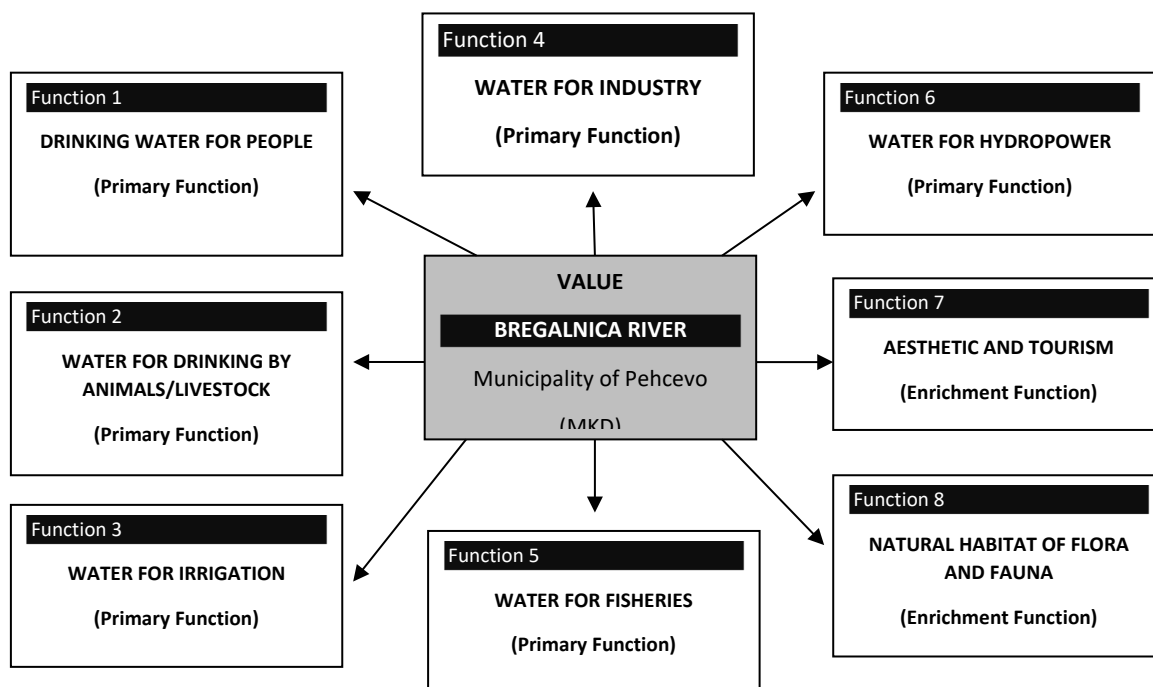


Figure NN. Example of identification on Function on certain Value in Municipality of Pehcevo

Value	Function	Description of the function of the value
<i>Pehchevo Municipality</i> Bregalnitsa river and its tributaries, The river Bregalnitsa flows 16 km through Pehchevo municipality, leaving it at Machevo village. In fact, the very source of the river is within the municipality area, in the Maleshevo mountains. The source area is highly developed,	<b>PRIMARY FUNCTIONS</b>	
	Drinking water for people	The river Bregalnitsa together with its tributaries is used as drinking water of good quality. An indicator of this is the build water supply system at its tributary Zh'tachka River, which is rich in quality drinking water. At the moment the capacity of drinking water is not satisfactory. Over the past years, the drought periods during summer last more than 30 days, and lead to temporary water restrictions in Pehchevo and it's rural settlements. This leads to a lack of basic living conditions.
	Drinking water for livestock and animals	This is another of the primary functions of the river and its tributaries Bregalnitsa on the territory of Pehchevo Municipality. According to the data from the census of agriculture in 2007, the Municipality of Pehchevo has recorded a number of 2,000 cattle, about 10,000 sheep, 150 goats, 35 horses, 50 mules and donkeys, 900 pigs and 600 poultry.
	Water for irrigation, fishing, industry etc.	Having in mind the size of agriculture population in the municipality of Pehchevo, and knowing that the best fertile land is just beside the river, it is conceivable to use the water for irrigation. Pehchevo Municipality has 13,876 ha total available surface out of which, only a small part is under water. More than half of these areas, 7,961 ha (57.4%) are in individual ownership, while the rest is owned by private or public companies. Almost half of the used agricultural land, 46.7% falls under

and as the main source is considered the one under Chengino Kale, at elevation 1720m.		the category of pastures, most of it is owned by public companies with almost equal representation in the category of arable land, gardens and home gardens with 22.5% and the category of orchards with 20.5%, while the meadows are represented with 10.3% of the total area.
	<b>ENRICHMENT FUNCTION</b>	
	Aesthetic and tourist values (beauty of the landscape and nature)	As the river Bregalnitsa passes through the Pehchevo Municipality, it has a special aesthetic value for the settlements adorning the landscape of the area. Part of the river Bregalnitsa springs are located under Dzami Tepe peak up to the right tributary of Crni Dol. It is particularly interesting and picturesque terrain. At this spot the valley is cliffy, with very steep sides, and longitudinal decline of the river is high. Therefore appear a number of interesting rapids and several waterfalls as high as 10 m. There are even more waterfalls in this area on the tributaries of Bregalnitsa before their confluence into the main river. One of the major tributaries of the river Bregalnitsa is the river Pisa (Pehchevska River) which passes directly through the city Pehchevo and presents a special aesthetic and landscape entity.

*Table NN. Example of Description of the Identified Functions on certain Value*

## LIST OF SUGGESTED FUNCTIONS

### I. Primary production functions

- Oxygen by vegetation;
- Vegetative food and nutrition for people (directly edible);
- Fodder and nutrition for livestock (directly edible);
- Wildlife products and fisheries;
- Biochemical substances and nutrients (for agricultural production mainly);
- Drinking water for people (safe drinking water, thus with a high quality);
- Water for drinking by animals/livestock (lower quality acceptable);
- Water for irrigation, fisheries, industries, cleaning, etc.;
- Water as a transport medium;
- Genetic resources (for agro-biodiversity mainly - both flora and fauna);
- Medicinal products (flora and fauna);
- Fuel and other energy resources (e.g. petrol and wood, water etc.);
- Raw materials for construction, clothing, handicrafts, etc.

### II. Secondary production functions

- Livestock production and meat industry;
- Agricultural production and crops;
- Construction materials;
- Forest industry;
- Energy sector (electricity production; fuel production)
- Other industrial activities;

### III. Regulation (protection) functions

- Regulation of run-off waters and erosion by vegetation;
- Regulation of flooding by river floodplains, marshes, etc.;
- Water catchments and groundwater recharge;
- Protection against flooding by dunes, mangrove and forest fringes;
- Water retention capacity of soils;
- Purification functions of waters and soils;
- Storage and break down (decomposition) of wastes;
- Biological control mechanisms, e.g. for crop protection;
- Forming of topsoil;
- Regeneration and maintenance of soil fertility;
- Reproduction and growth of animals and plants;

- Maintenance of biological and genetic diversity (among species and habitats);
- Micro-climate function of forests;
- Forests as carbon-sinks in terms of global warming effect.

IV. Enrichment or cultural functions

- Aesthetic and tourist values (the beauty of landscapes and nature);
- Spiritual and religious values (e.g. holy trees, sacred forests, churches and mosques, religious places);
- Intrinsic values of all biodiversity - the natural habitat of flora and fauna ('the right to be there');
- Historical, cultural, scientific, health, social and educational values.

### 3.2. Mapping Inputs and Outputs of Functions

Next is to identify the inputs and enabling conditions necessary to achieve the function of the community value that has been selected. Climate change will affect development through its impacts on specific inputs, not an entire sector.

Identifying those inputs enables understanding of the causal relationships between a specific stressor and a key input, and then addressing that stressor through development initiatives. For example, the idea that “climate change affects agriculture” is not actionable. However, the idea that “a shortened rainy season will affect a particular variety of maize” indicates that the key issues are water availability and a specific crop variety.

In response, you might try to address the need for water early in the growing season, or look for a shorter-season maize variety. Specific cause-and-effect relationships are easier to address than general associations. These specific relationships will be further explored in the next step of the process.

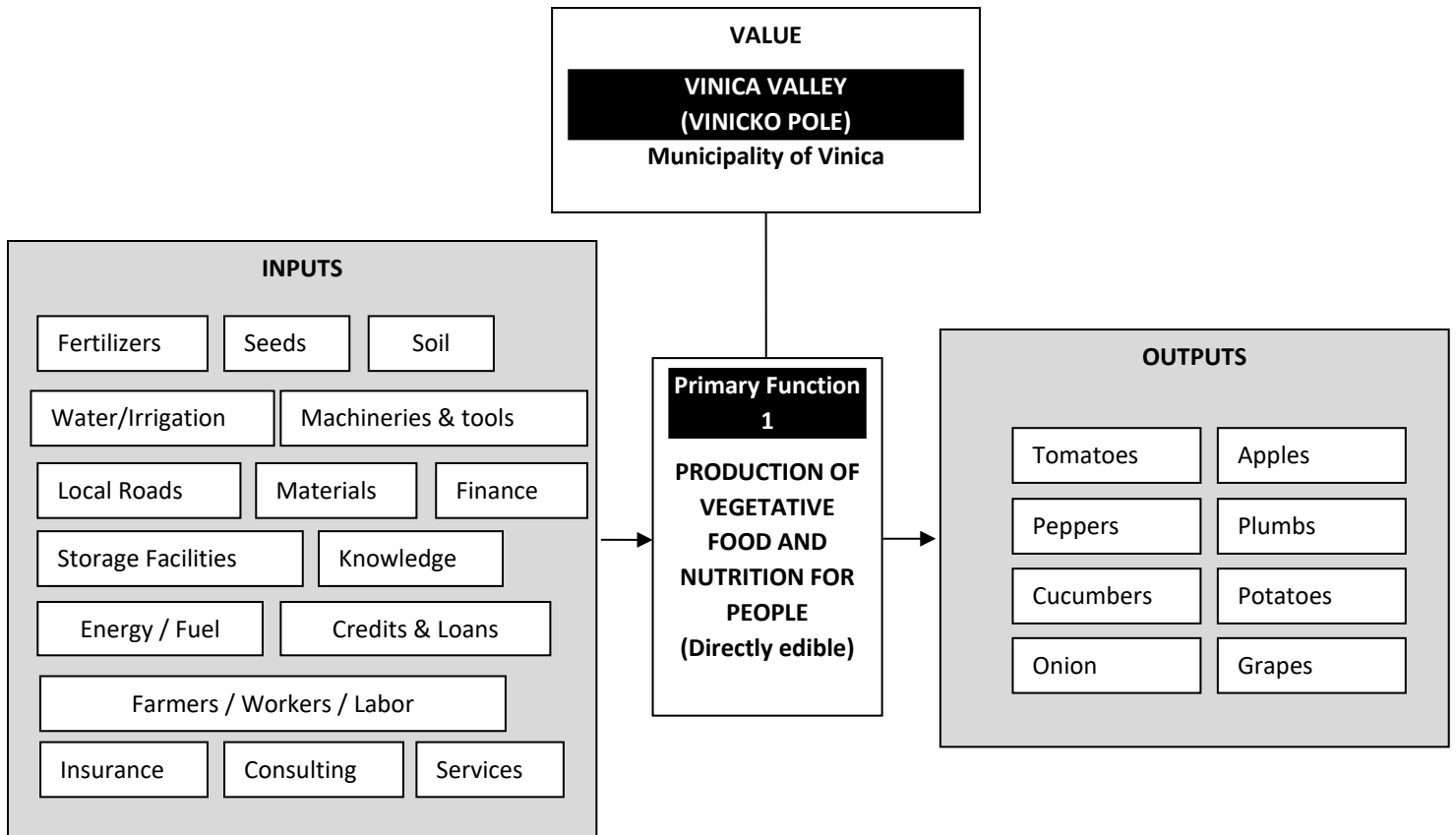
Inputs may include physical inputs such as roads, natural inputs such as water, social inputs such as institutions, human inputs such as labor, and economic inputs such as financial resources. The purpose of identifying inputs is to determine what is needed to achieve development goals in order to later determine if and how those inputs could be affected by climate (and non-climate) stressors.

Physical inputs	Environmental inputs	Economic inputs	Social inputs	Political inputs	Cultural inputs
<ul style="list-style-type: none"> <li>• infrastructure</li> <li>• roads</li> <li>• buildings (private and public facilities, residences, schools)</li> <li>• raw materials</li> </ul>	<ul style="list-style-type: none"> <li>• soil</li> <li>• water</li> <li>• flora</li> <li>• fauna</li> <li>• natural resources</li> </ul>	<ul style="list-style-type: none"> <li>• capital</li> <li>• finance</li> <li>• employments</li> <li>• savings</li> <li>• credits and loans</li> <li>• consultant services</li> </ul>	<ul style="list-style-type: none"> <li>• workforce</li> <li>• education</li> <li>• health</li> <li>• administration</li> </ul>	<ul style="list-style-type: none"> <li>• governmental institutions and agencies</li> <li>• non-governmental societies and associations</li> <li>• international organizations</li> </ul>	<ul style="list-style-type: none"> <li>• cultural goods</li> <li>• cultural heritage</li> <li>• sacred places</li> <li>• cultural events</li> </ul>

- machines and equipment
- services
- energy etc.

and associations

*Table NN. Suggested Inputs*



VALUE	Vinica Valley (Vinicko Pole)	
FUNCTION 1	INPUTS	Fertilizers
PRODUCTION OF VEGETATIVE FOOD AND NUTRITION FOR PEOPLE (Directly edible)		Seeds
		Soil
		Water / Irrigation infrastructure
		Machineries & tools
		Local Roads and access infrastructure
		Materials
		Storage Facilities
		Finance
		Knowledge
		Credits & Loans
		Farmers / Workers / Labor
	Insurance	

	Consulting
	Services
	Energy / Fuel
OUTPUTS	Tomatoes production
	Peppers production
	Apples production
	Cucumbers production
	Onion production
	Plumbs production
	Potatoes production
	Grapes production

*Table NN. Example of Description of the Identified Input and Outputs on certain Function*

## Step 4 - Determine Trends and Develop Scenarios (within WG)

### Objective:

Define and determine the climate change trends and the relations between the trends and the function of the value in order to determine the changes which occur with the function of the values in the community.

### Background:

While in previous step we looked at a static situation, there is also a need to understand the underlying dynamics. How have functions changed in the past, and what are changes that can be expected in the near future, taking in mind climate change factors?

To do so, you should make use of indicators and observations by stakeholders. It is important to remember that there is a difference between what people feel or believe and facts. Therefore it is important to check and clarify all the “beliefs”. An interesting case for solving urgent problems comes from Pehcevo Municipality where one of the recognized trends was increased number and frequency of forest fires around the springs where drinking water is deranged, resulting in water pollution. After an urgent action (changing the water filter) implemented, the further analysis proved that water quality got improved.

### Activities/tasks:

- Determine climate and non-climate stressors on inputs and outputs
- Identify whether each input and output is exposed to each climate stressor and non-climate (typically yes or no answer) and record answer in matrix
- Summarize historical trends of climate stressors (precipitation/temperature), non-climate stressors (climate/pollution), emissions (GHG inventory), and important inputs (water usage/food production) to determine trends
- Select most significant trends
- Develop future scenarios (~2025) for the most significant trends

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- Determine an urgent action to counteract the trends and provide a justification for how it is related to climate change (must be under a certain \$ amount, implementable in short-term, visible, public good, etc.)
    - Choose and explain one urgent action to be implemented

Outcomes:

- *A summary of important historical trends and future scenarios are developed for climate stressors, non-climate stressors, emissions, and inputs & outputs*
- *An urgent action is selected*

Outputs:

- List of climate and non-climate stressors on inputs and outputs
- Description of the historical trends of climate stressors, non-climate stressors, emissions, and inputs
- Description of future scenarios (2025) for most significant trends
- Explanation of urgent action and justification for each working group
- When possible quantitative data should be used – including charts, tables, maps, statistics, etc.

#### 4.1. Determine climate and non-climate stressors on inputs and outputs

The first task in this step is to identify exposure on climate and non-climate stressors that might affect the operation of the function on the value. Stressors directly and indirectly affect the inputs and outputs identified in the previous step.

Climate stressors could include changes in sea level, precipitation, temperature, or extreme events, while non-climate stressors could include corruption, pollution, deforestation, and other existing development challenges. Climate stressors include climate variability (e.g., some years are marked by higher temperatures or longer dry periods than other years) as well as climate change (e.g., average temperatures are anticipated to increase overtime). Thus, climate stressors can include differences in drought conditions that are experienced from year to year, as well as changes in longer-term trends of drought frequency or severity. Extensive information is available to identify climate stressors, including data and information on historical climate variability, recent trends, and climate projections and anticipated impacts. Other important sources of information include national weather services, agricultural extension services, international scientific associations, peer-reviewed publications, global climate modeling archives, local knowledge and observations, and more.

Non-climate stressors are typical men-related activities and those are critical to consider because they directly affect the success of operation of the function – in some cases dwarfing the impact of climate stressors. Addressing only one set of stressors may be insufficient for achieving your overall objectives. Because most development practitioners have extensive experience in assessing the impacts of non-climate stressors, we do not provide comprehensive guidance here.

However, climate and non-climate stressors may interact to create very serious challenges, potentially magnifying the negative impacts of either type of stressor alone. For example, a city might face increasingly intense rainfall, leading to more flooding, but it may also have storm sewers blocked with trash. The best way to address the flooding problem quickly may be to address the non-climate stressor: poorly maintained sewers. Yet increased rainfall intensity due to climate change may mean that even well-maintained storm sewers are too small to manage current or anticipated flooding events.

Climate	Non-climate
<ul style="list-style-type: none"> <li>• Change of quantity and period of rains</li> <li>• Changes of temperature</li> <li>• Extreme weather events</li> <li>• Floods</li> <li>• Droughts</li> <li>• Storms</li> <li>• Wind</li> <li>• Heat waves</li> </ul>	<ul style="list-style-type: none"> <li>• Economic: inflation, devaluation, increase of prices</li> <li>• Social-demographic: increase of the number of residents, migration, urbanization</li> <li>• Physical: dilapidation of infrastructure,</li> <li>• Political: bad governance, corruption, non-implementation of regulations</li> <li>• Environmental: overuse use of resources, pollutions,</li> </ul>

**Table NN.** Suggested list of Climate and Non-Climate Stressors

**Exposure** is the extent to which something is subject to a stressor. For example, flooding is a climate stressor that can affect infrastructure. Infrastructure built in a floodplain is exposed to this stressor, but infrastructure built at higher elevations is not exposed to flooding.

In following table there is example of analyzing the exposure of the certain input or output on specific climate or non-climate stressor. The exposure is evaluated with yes(Y) or no(N).



	Grapes production													
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## Assessing Exposure

- Determine the extent to which inputs and enabling conditions are subject to range of relevant climate stressors
- Exposure assessment involves considering whether a particular input is located in the same place and time as a particular stressor
- Key considerations:
  - Are the inputs exposed to climate stressors that could result in adverse effects?
  - To what extent should the assessment rely on historical vs. future climate information

Consider these questions:

- *What climate stressors are factors in the system?*
- *What timeframe of climate information is needed?*
- *What are existing sources of historical climate data? When is their use appropriate?*
- *What are existing sources of future climate projections? When is their use appropriate?*
- *What are key considerations regarding water-related stressors?*
- *Where can climate data and information on climate-related stressors be found?*
- *How certain is climate information?*

What climate factors have affected the inputs in the past? It is helpful to create a list of these and document in detail the nature of the past impacts. This information can be obtained from desk reviews of prior analyses and consultations with stakeholders, managers, and sectoral experts. Are there additional climate stressors that are projected to change in the future that could expose the inputs?

**Historical Information.** For assessments concerned with the next 5-10 years, analysis of historical trends may provide more useful information than using climate change projections. However, when using records of past climate information, it is important to consider that future climate stresses could be more severe or frequent than those that have been experienced historically .

**Future Information.** If the assessment is concerned with the next 10-20 years or beyond, then historical climate information can be helpful in understanding vulnerability to past climate variations. In addition, climate model projections and other sources of information about future environmental conditions (e.g., sea-level rise and storm surge scenarios) are needed for these assessments, because the future climate may be considerably different than the present. At longer term time scales, where the influence of climate change is more significant and may capture non-linearities, climate change projections will have greater value.

**Approach for assessing exposure**

- Exposure can be assessed through a different types of methods:
- *Desk review* – prior analyses can be useful for quickly and inexpensively understanding the extent to which inputs have been exposed to climate variability or change in the past or potentially affected in the future
- *Consultations with stakeholders and experts* – can be valuable even in cases where prior quantitative exposure analyses have been conducted in order to ground-truth those analyses (e.g., co-development of maps)
- *Mapping* – Quantitative exposure mapping combines map-based locations of inputs and expected hazards

## 4.2. Determine trends on climate and non-climate stressors on inputs and outputs

The second task in this step is to identify the trends of the climate and non-climate stressors over inputs and outputs on certain function. This task needs to be worked out in detail and from the previous experience it is recommended that you hold at least two meetings of the WG's for this step in order to determine the functions of the values, their trends and the effects of the trends.

Your activities should be directed towards identification of the main changes and the past trends in terms of availability of the value for the community, as well as of the important qualitative changes (tendencies) of the value that you are working on in your community. Thereby you should use all relevant historical data which may be available to you in order to assess these trends. In the implementation of these analyses it will be beneficial to prepare a list of indicators for determination of the trends.

The best indicators of change of the condition of values' functions are the statistical quantitative indicators, which can be counted i.e. measured. Time diagram of trends can be made for such data, shown in figure which provides visual observation of the changes, but also to determine the tendency of the value function. The analysis should also identify the exceptions from the general trends, both negative and positive, especially if they can justify the negative trends. These exceptions can be relevant points for new innovative solutions in the overcoming of the negative trends and the consequences that arise from them.

Climate profile prepared in the preparatory phase of the process should be used as source of information for trends of climate and non-climate stressors, but information can also be obtained from the Hydro-meteorological Service. An important source of information, especially for the future climate characteristics, are climate scenarios which are also a part of the climate profile or can be found in the national reports and national strategies on climate change. On the other hand, it is best to look for information about non-climate stressors in the official statistical publications of the Statistical Biros, but also in other official reports of the National Bank of and other relevant institutions.

### Guidelines:

- Determine the trends of each input and output separately.
- Ask yourself the questions: Did something change with our value for a specific period? Do we expect something to change in future? Is that an increasing (positive) change or a decreasing (negative) change? What changes? How much, where, when, who? “
- Define indicators according to which you will measure the tendencies, specific indicators may be per capita, number of users, quantity of

resources, demographic characteristics, consumption, technology level etc.

- For each trend, describe the time span that it covers, the location, the scope and the intensity of changes.
- Provide statistical data which will help you to determine the condition before 5, 10, 15, 20, 30 or more years.
- Discuss about the condition at the moment when the green agenda process was started and what would be the future demands/expectations with the value function;
- After you will do the statistical analysis, you can make a conclusion whether the trend is positive, negative or constant (unmodified);

**IMPORTANT:**

Try to provide as objective tendencies as possible, using measurable indicators and data. Avoid giving subjective and unverified estimations, because you may find yourself in an inconvenient situation, claiming something and then someone else shows up, who disposes of relevant data which may be contrary to your conclusions. Make a diagram for each trend in particular.

VALUE	Vinica Valley (Vinicko Pole)		Trends	Exception
FUNCTION 1  PRODUCTION OF VEGETATIVE FOOD AND NUTRITION FOR PEOPLE (Directly edible)	INPUTS	Fertilizers	The usage of Fertilizers increase in last 10 years	↗
		Seeds	Introduction of new seeds increased in last 10 years	↗
		Soil	The quality of soil degrades in last 10 year	↘
		Water / Irrigation infrastructure	Water consumption increased,	↗
		Machineries & tools		
		Local Roads and access infrastructure		
		Materials		
		Storage Facilities		
		Finance		
		Knowledge		
		Credits & Loans		
		Farmers / Workers / Labor		
		Insurance		
		Consulting Services		
Energy / Fuel				

OUTPUTS	Tomatoes production
	Peppers production
	Apples production
	Cucumbers production
	Onion production
	Plumbs production
	Potatoes production
	Grapes production

### 4.3. Develop scenarios

At this stage we need to look the existing and relevant data about climate stressor versus trends of the inputs and outputs. Doing something about the trends requires investments, efforts and knowledge. What would happen if some trends continue in next 10, 20 or 30 years? What if something happens and changes the trend? At this point, we are discussion about expectations and exploring the future.

- ❑ Past climate
  - *Ground-based instruments*- provide ground-based measurements of weather, sea level, stream flow, and other fact
  - *Remote sensing* - involves observations of the atmosphere and land surface conditions made from satellites and airplanes
  - *Local, information knowledge* - include observations of local conditions using informal techniques and proxies
- ❑ Future climate
  - *Climate models* - Climate models produce estimates of future (or past) climatic conditions using computer-based tools that account for a wide range of factors affecting weather and climate, including changes in concentrations of greenhouse gases

#### Tips for Using Climate Model Output for Future climate scenarios

*Use information from multiple climate models.* Since every climate model is different, a more complete understanding of the potential range of change may be obtained by using multiple models (versus a single model).

*Use multiple emissions scenarios.* The largest source of uncertainty for climate change by mid-century and beyond is the world's future development path, which affects greenhouse gas emissions. Therefore, when assessing vulnerabilities beyond 2040, it is important to consider climate model simulations (replace or define) driven by a range of plausible emissions scenarios.

*Use decadal spans of years.* If you are interested in a particular year in the future (e.g., 2030), use data from the surrounding decade (e.g., 2026 – 2035) to account for year-to-year variability.

#### 4.4. Urgent Actions

During this stage the method includes a parallel process for urgent actions which helps participants and stakeholders to see immediate, tangible results and act as incentives for municipalities' participation. Such urgent actions may include building support walls to prevent landslides or soil erosion, building river-bed regulation facilities to better drain water and prevent flooding during torrential rains, or converting public buildings using green technologies. Other urgent actions might include improving soil quality and halting erosion, both projected to increase under climate change, by introducing better land management techniques; restoring wetlands and re-introducing indigenous vegetation to absorb water; and replanting high slopes to prevent mudslides.

In order for these strategies and urgent actions to be both relevant and sustainable, it is necessary that they are generated by stakeholders in conjunction with input from the implementers, municipal authorities, and local environmental experts.

In this stage, a detailed procedure plan for implementation of the urgent actions should be prepared. The working groups will identify the needs for an urgent action and with a support of the local partner CSO and a trainer will prepare an action plan with responsibilities, so that they are effective and consider all risks associated with the urgent action implementation. It will also include Environmental Impact Assessment (EIA) study if needed; and all permits and administrative procedures on local and national level. After the urgent action is identified and developed the program team will select the urgent actions that are to be implemented.

## PHASE 3 – DETAILED ASSESSMENT OF THE CHALLENGES AND POSSIBLE SOLUTIONS (VULNERABILITY ASSESSMENT)

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By this phase, the Green Agenda process was focusses on assessment and analysis of the current situation, past and potential future scenarios. The next steps in this phase will focus more on answering the identified challenges and finding best possible solutions in order to decrease or minimize the negative effects of the climate change. The following steps will focus on finding measures for adjustment (adaptation) and mitigation (alleviation) to climate change, which should lead to achieving the development goals set out in the previous phase of the process, i.e. of the community values identified by the WGs.

In this context, the Green Agenda methodology is supplemented by some parts of the so called Climate Change Adaptive Management tool, developed by the USAID. This tool enables simple vulnerability assessment and identifies priority adaptation measures. In fact, in the process of developing climate change strategies using the Green Agenda approach, only the first two phases of the USAID tool will be applied, i.e. diagnosis or assessment of vulnerability and the design or selection of adaptation measures. In the assessment stage, you will develop a deeper understanding of the conditions that contribute to the vulnerability of key inputs identified in the scoping stage as well as the broader system of concern. Vulnerability is the degree to which something or someone can be harmed by or cope with a stressor. The vulnerability of a system or resource is comprised of three elements: sensitivity to a stressor, the impact of the stressor and adaptive capacity to respond to that stressor.

## Step 5 - Assess Climate Impacts (within WG)

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### Objective:

To assess the expected environmental (natural), social and economic impacts of stressors over inputs and outputs, in order to justify why it is important to take an action.

### Background:

In recent decades, changes in climate have caused impacts on natural and human systems on all continents and across the world. Evidence of climate-change impacts is strongest and most comprehensive for natural systems. Some impacts on human systems have also been attributed to climate change, with a major or minor contribution of climate change distinguishable from other influences.

The potential occurrence of a natural or human-induced physical event or trend or physical impact that may cause loss of life, injury, or other health impacts, as well as damage and loss to property, infrastructure, livelihoods, service provision, ecosystems, and environmental resources. In this process, the term hazard usually refers to climate-related physical events or trends or their physical impacts.

In this process, the term “impact” is used primarily to refer to the effects on natural and human systems of extreme weather and climate events and of climate change. Impacts generally refer to effects on lives, livelihoods, health, ecosystems, economies, societies, cultures, services, and infrastructure due to the interaction of climate changes or hazardous climate events occurring within a specific time period and the vulnerability of an exposed society or system. The impacts of climate change on geophysical systems, including floods, droughts, and sea increasing temperature, changing the amount and period of precipitation, are a subset of impacts called physical impacts.

### Activities/tasks:

- Determine which inputs and climate stressors will be included in the impact assessment using information from the previous step.
- Assess whether each inputs is sensitive to each climate stressor (typically high, medium, or low) and record answer in matrix
- Summarize the impacts that climate stressors will have on the inputs (e.g., extreme precipitation will cause flooding of fields, which will result in damage and destruction of tomato crops)
  - Consider how non-climate stressors will interact with or further impact inputs

### Outcomes:

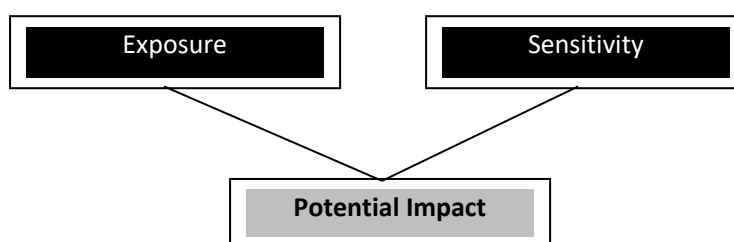
- *The most significant climate impacts will be identified and summarized for each input*

### Outputs:

- Matrix of climate impacts including assessment of exposure and sensitivity by input for each climate-stressors
- Description of impacts on inputs (may include interaction between climate and non-climate stressors)

Once we analyzed the exposure of inputs and outputs on specific climate stressor in the step 4, in order to characterize vulnerability, it is important to analyse how current and future stressors have and

will impact inputs and outputs. To analyse the impact it is necessary to evaluate the sensitivity of the exposed inputs and outputs on specific climate stressor.



**Sensitivity** is the extent to which something will change if it is exposed to a stressor. For example, agricultural crops are sensitive to increased night-time temperatures. However, some plants will fail at lower temperatures and are thus more sensitive to this climate stressor than others. Crop choice can reduce an individual farmer’s sensitivity to increased temperatures. Considering the example of infrastructure in a floodplain, two buildings in the floodplain may both be exposed, but one built on stilts or designed to allow water to flow through would be less sensitive.

### Assessing SENSITIVITY

- ❑ Analyze whether and how exposed inputs/enabling conditions will be affected by climate if no adaptation is undertaken
- ❑ Key Considerations:
  - How are/have the inputs to the development initiative affected/been affected by historical and current climate variability and change?
  - Will the inputs be affected by future climate variability or change?
  - What factors influence the sensitivity of the inputs to climate variability and change?
  - Are there differences in the sensitivity of inputs and development initiatives in particular sectors of interest? Geographic areas? Populations?

#### Identify Factors that Influence Sensitivity

- ❑ How have the inputs been affected by climate or weather-related stressors in the past?
- ❑ How do climate and non-climate stressors combine to affect the inputs?
- ❑ Is there information about the sensitivity of similar inputs in other regions?
- ❑ Are people unaccustomed to new stressors?
- ❑ Are there thresholds or tipping points beyond which the system could become highly affected by stressors?

Past events can serve as a useful indicator of future sensitivity. By knowing how inputs were impacted in the past, one can better understand how inputs may respond to future climate stressors. Consider how impacts may differ for different types of inputs, such as impacts to ecosystems, the built environment, or directly to humans.

Inputs that are stressed by existing non-climate stressors are more likely to have a greater sensitivity to future climate stressors. This is because particular inputs may be weakened by the non-climate stressors. For example, pollution and human interference often weaken coral reefs. Coral reefs already stressed by these factors will have a more difficult time coping with

higher temperatures and increased dissolved CO<sub>2</sub> levels since their tolerance for stress is lower.

It can be difficult to understand how inputs will react to changes in climate, particularly if there is no historical precedent in the location being studied. Therefore, it can be useful to consider the sensitivity of similar inputs that currently experience the conditions expected in the future. For example, information about the sensitivity of an energy system to higher temperatures could be approximated by examining the robustness of similar systems located in regions that are currently warmer. Such analogs need to be considered with caution since the underlying conditions in two different locations are never the same.

Climate change may introduce new stressors to inputs. If an input has not encountered these stressors in the past, it may be more difficult for the input to respond. For example, if a new disease vector such as malaria is introduced into a region, the effect can be devastating relative to areas where immunity has been built up over time.

Thresholds can limit an input's ability to withstand impacts. Once thresholds are surpassed, systems may fail catastrophically. For example, a storm surge that is higher than a sea wall can have devastating consequences for the communities the wall was designed to protect.

#### Select an Approach for Assessing Sensitivity

Approaches for assessing sensitivity build upon methods used to identify exposed assets:

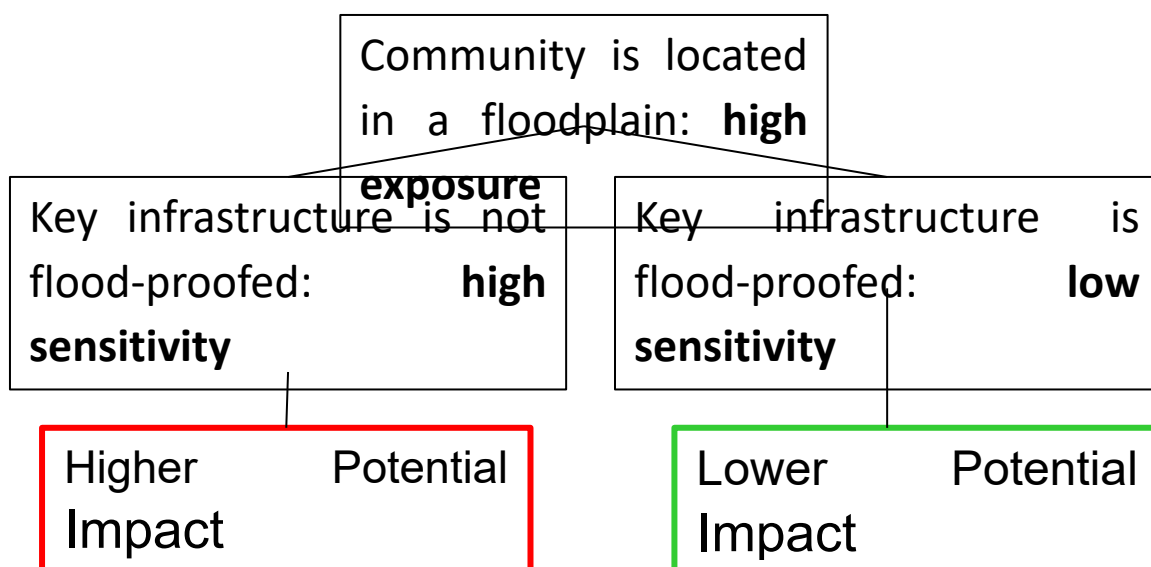
- Desk reviews* – including climate impacts literature, damage reports, or disaster risk reports can help to characterize sensitivity
- Consultations with experts* – provide valuable information about how inputs responded to historical climate stressors, as well as the current stressors they face
- Design and engineering standards* – give an indication of thresholds
- Computer simulations* – simulate how certain inputs respond to a specific event or chain of events under a given scenario

#### Sector-specific Sensitivity

Sector	Illustrative of Questions to Understand Sector-Specific Sensitivity
Agriculture	<ul style="list-style-type: none"> <li>• Is projected climate change expected to pass crop temperature or water thresholds?</li> <li>• Are lands degraded such that they cannot retain moisture as well?</li> </ul>
Water	<ul style="list-style-type: none"> <li>• Is a water source covered/protected or is it an open bore hole?</li> <li>• Can dams withstand the pressure from higher water levels during floods?</li> <li>• Is water for irrigation dependent on annual or seasonal rainfall?</li> </ul>
Health	<ul style="list-style-type: none"> <li>• Are communities or sub-sectors of the population malnourished, making them more sensitive to climate-related stressors such as drought?</li> <li>• Will the exposed population be affected by an increase in the number of days of extreme heat?</li> </ul>
Infrastructure	<ul style="list-style-type: none"> <li>• Can energy systems withstand higher temperatures and more intense storms?</li> <li>• Are precipitation projections likely to surpass drainage capacity?</li> <li>• Do building design codes sufficiently account for climate variability and change? Are they enforced?</li> </ul>
Ecosystems	<ul style="list-style-type: none"> <li>• Are watersheds vegetated and able to slow runoff from heavy rains?</li> <li>• Will projected sea level rise inundate coastal wetlands?</li> <li>• Are higher temperatures already affecting the incidence of pests?</li> </ul>



The combination of exposure and sensitivity dictates potential impact. It is important to consider non-climate stressors as they can exacerbate potential impact.



**Table NN.** Analyzing the Impact of Climate Stressors the identified high sensitive Inputs and Outputs

FUNCTION	HIGH SENSITIVE INPUT OR OUTPUT	CERTAIN CLIMATE STRESSORS	POTENTIAL IMPACT
PRODUCTION OF VEGETATIVE FOOD AND NUTRITION FOR PEOPLE (Directly edible)	Local Roads and access infrastructure	Floods	
	Water / Irrigation infrastructure	Floods	

## Step 6 - Analyse Vulnerability on Climate Change (within WG)

### Objective:

To assess the expected environmental, social and economic impacts of climate and non-climate stressors over inputs and outputs, in order to assess the current capacity to react on the changing situation on local level and to justify why it is important to take action in future.

### Background:

Throughout history, people and societies have adjusted to and coped with climate, climate variability, and extremes, with varying degrees of success. This section focuses on adaptive human responses to observed and projected climate-change impacts, which can also address broader risk-reduction and development objectives.

Adaptive capacity is the combination of the strengths, attributes, and resources available to an individual, community, society, or organization that can be used to prepare for and undertake actions to reduce adverse impacts, moderate harm, or exploit beneficial opportunities.

Adaptive capacity is fundamental ability of an affected system to change in response to climate stressors. This could be about the capacity of an ecosystem to adapt to warmer temperatures, but it is more often understood in terms of people, businesses, and their communities. In particular, highly networked and wealthier communities often have more adaptive capacity than isolated and poorer communities.

### Activities/tasks:

- Assess the adaptive capacity of each input (typically done by high, medium, low) and record answers in the matrix
- Provide examples of the adaptive capacity associated with each input and identify what climate stressors are relevant (this information will be used for future steps) – e.g., what policies, processes, institutions, or capital has helped to avoid or mitigate impacts in the past or could help to prevent impacts in the future

### Outcomes:

The adaptive capacity for will be assessed and summarized for each input

### Outputs:

- Matrix of adaptive capacity including assessment of adaptive capacity for each input and example of adaptive capacities

In this step we are analyzing the current adaptive capacity on the impacts caused by climate stressors. It is primarily determined by the available resources and the ability to use the advantages of the possibilities and to undertake actions to cope with stressors.

Adaptive capacity is largely determined by available resources and the ability to take advantage of opportunities and to take action to cope with stressors. It is comprised of a number of dimensions, including information, social capital, financial capital, institutional capital, and ecological resilience. Systems that have a high adaptive capacity are better able to deal with or accommodate climate stressors with minimum disruptions or additional cost. Note that some dimensions of adaptive capacity are generic, while others are specific to particular climate change impacts. The generic dimensions include factors such as education, income and health, while dimensions that are specific for certain impact, such as drought or floods, may refer to institutions, information and technology.

Social	Human	Financial	Institutional	Environmental	Structural
access to: • social networks • information • relations, and • support systems	access to: • education • health services, and • social programs	access to: • savings • loans • insurance, and • liquid money	• institutional capacity • flexibility • effective power	• ability to migrate • protective measures • adaptations	• backup response systems • replacements • excess

**Social capital.** Social capital is another ingredient that can help society deal effectively with stressors such as climate change. Social capital includes things such as networks, agreements, relationships, and support systems. Those with greater social capital have access to larger networks, and in turn more resources (e.g., information, food, shelter, or economic support). For example, in the event that a house is flooded, those with social capital can rely on neighbors, family, or friends to provide them with shelter to sleep, food to eat, capital to build a new home, health care, or even communication services to contact others for help. Those that lack social capital are often left to fend for themselves. Social capital allows individuals to use relationships for their own good, as well as the collective good (e.g., materials goods, as well as emotional and social benefits).

**Human capital.** Human capital can also influence adaptive capacity. Human capital can include things such as access to education, health services, and other resources, including risk management tools. Those who are more educated are better equipped to wisely use information and financial resources, and are generally better able to respond to climate and non-climate stressors. Systems that have access to risk management tools, such as insurance, are better able to rebuild in the wake of climate-related disasters. Human capital also includes the ability to make decisions to improve the ability to cope with climate stressors. In general, systems that have more decision-making options are better able to respond to stressors.

**Financial capital.** Financial capital is another factor that enables systems to adapt. The more financial capital the more options people or systems have to respond to climate stressors. Financial capital can be used to purchase information, food, shelter, water, or other necessities. It can be used to transport systems or people from harm's way or to rebuild damaged infrastructure. For example, in the event of a food shortage the cost of food increases. Those with greater financial capital can afford to purchase food at higher costs, while those with less will not be able to feed themselves or will be forced to give up other necessities, such as shelter or health care.

**Institutional capacity.** This is another element that determines how systems respond to stressors. Institutional capacity is particularly important when it relates to disasters, as those systems with high institutional capacity have the ability to effectively prepare for, respond to, and rebuild after climate-related impacts have occurred. The flexibility of institutions is also important to consider, as it may be important for institutions to change policies, practices, or processes acting as barriers. For example, health systems that are mobile and prepared to deal with disease outbreaks will have a greater ability to respond to changes in the location and distribution of malaria zones.

### Assessing ADAPTING CAPACITY

- ❑ Analyze the capacity of individuals, organizations, and/or systems to adjust to potential climate impacts, to cope with consequences, or to take advantage of opportunities

- ❑ Key Considerations:
  - Are existing systematic structures or processes in place that help to safeguard inputs against climate or non-climate stressors or impacts?
  - Do adequate resources exist so that inputs can respond to climate or non-climate stressors or impacts?
  - How flexible are the inputs and their relevant institutions to changing circumstances?
  - Will climate stressors affect the inputs faster than they can respond or adapt?

### Select an Approach for Assessing Adaptive Capacity

Approaches for analyzing adaptive capacity can include:

- ❑ *Desk review* – disaster risk reports and historical records
- ❑ *Stakeholders and experts* – provide valuable information about how systems have responded in the past
- ❑ *Local knowledge* – targeted household surveys, participatory rural appraisals, focus groups, interviews
- ❑ *Design standards* – help to identify backup systems or redundancy
- ❑ *Policy, institutional, and program assessments* – contain qualitative information to help characterize adaptive capacity

### Sector-specific Adaptive Capacity

Sector	Adaptive Capacity
Agriculture	<ul style="list-style-type: none"> <li>• Are any alternatives to rain-fed agriculture feasible?</li> <li>• Are climate forecasts available and understandable by farmers?</li> <li>• Will farmers be able to buy seeds and fertilizer after loss years?</li> </ul>
Water	<ul style="list-style-type: none"> <li>• Are alternative/backup water sources available to deal with scarcity?</li> <li>• Do stakeholders implement water conservation practices?</li> </ul>
Health	<ul style="list-style-type: none"> <li>• Can people afford and access adequate healthcare?</li> <li>• Is information available to warn people of health hazards?</li> <li>• Are monitoring/information systems in place to address shifts in disease?</li> </ul>
Infrastructure	<ul style="list-style-type: none"> <li>• Is back-up power available for key institutions such as clinics/hospitals?</li> <li>• Are alternative routes and forms of transit available during a disaster?</li> <li>• Are retrofits or improved standards possible?</li> </ul>
Ecosystems	<ul style="list-style-type: none"> <li>• Are mangroves along the coast in a healthy condition or are they fragmented and degraded?</li> <li>• Are intact forests available to provide erosion and flood control?</li> </ul>

**Table NN.** Analyzing the current adaptive capacity on Climate Stressors of the identified high sensitive Inputs and Outputs

FUNCTION	INPUT OR OUTPUT	CLIMATE STRESSORS	ADAPTIVE CAPACITY					JUSTIFICATION	
			SOCIAL	HUMAN	FINANCIAL	INSTITUTIONAL	ENVIRONMENTAL		STRUCTURAL
PRODUCTION OF VEGETATIVE FOOD AND NUTRITION FOR PEOPLE (Directly edible)	Local Roads and access infrastructure	Floods and erosion							Local Agriculture producers are not able to reconstruct demolished local roads
	Water / Irrigation infrastructure	Floods and erosion							Local Agriculture producers are not able to reconstruct demolished irrigation infrastructure

## Step 7 - Determine Climate-Related Problems and Risks (within WG) (Climate Change Vulnerability Assessment)

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### Objective:

To assess the existing and expected challenges and risks related to climate stressors and their impact on sustainable development of the community.

### Background:

This step deals with challenges and risks identification (for each value) that will be used for the creating the solution strategy. It also assesses the risks for society (if the problem would not be solved successfully). You should define the main challenges where trends lead to unacceptable risks, surpass bottom-line standards or are expected to do so in future (if a trend persists). For each challenge, indicate the stakeholders benefiting from trends and those suffering from trends. For each challenge, you might also indicate the risks for the society should the challenge would not be solved. Describe each challenge using the following criteria: location, responsible actors, urgency, basic trends, current impacts and expected risks for society.

### Activities/tasks:

- Review the results of the climate impact assessment together with the analysis of adaptive capacities to determine the most significant climate vulnerabilities or “challenges” – e.g., what inputs had the most significant climate impacts and the lowest adaptive capacities, what stressors caused the most significant impacts across inputs, what inputs do you anticipate being impacted the most from changes in climate in the future – and “causes” – e.g., why are the inputs the most vulnerable (are they exposed to many stressors, are they very sensitive to a particular stressors, do they lack adaptive capacity)
- Use the information from Step 4 – Trends and Scenarios to determine the inputs that produce the most GHG emissions –e.g., what input contribute the most GHG emission in the community – and “causes” – e.g., why does this input contribute so many emissions?
- Summarize the causes of these challenges by identifying why they are a challenge and specifying the drivers of the challenge.
- Identify the most significant challenges – including both the most vulnerable inputs and the largest emitting inputs
- Scale the risk of the challenge for the society.

### Outcomes:

- The biggest climate-related challenges and their root causes will be identified and described using information from previous steps

### Outputs:

- A list of the most significant climate-related challenges and description of the causes – includes both the most vulnerable and highest emitting inputs

The final step in a vulnerability assessment is to merge the findings from the previous steps – specifically, the information on exposure, sensitivity, and adaptive capacity – to determine a system’s vulnerability to climate variability and change. The method used to develop an integrated view of vulnerability will depend on the purpose of the assessment, the desired format for presenting information, and the availability of resources and information. For example, a different method should be used for comparing regional or sectoral vulnerabilities than for understanding the vulnerability of a specific water resource project.

The vulnerability is a function of three main components: exposure, sensitivity and adaptive capacity. Exposure is the extent to which something is a subject to climate stressor, while sensitivity is the extent to which something will be affected or damaged by the climate stressor that it is exposed to. The adaptive capacity is the ability or the potential of something, to predict, to prepare and to respond to the effect of climate change. Exposure and sensitivity result into Potential of impact. Namely, high extent of exposure, in interaction with a high sensitivity rate, results into great potential impact on climate change, which in interaction with low adaptive capacity will result into high vulnerability rate.

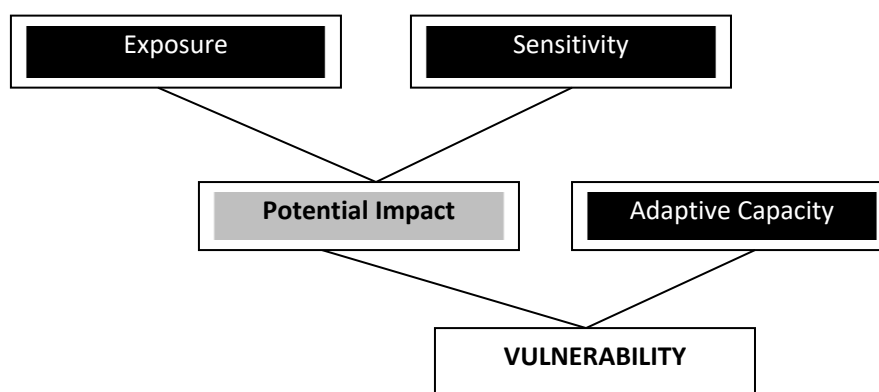
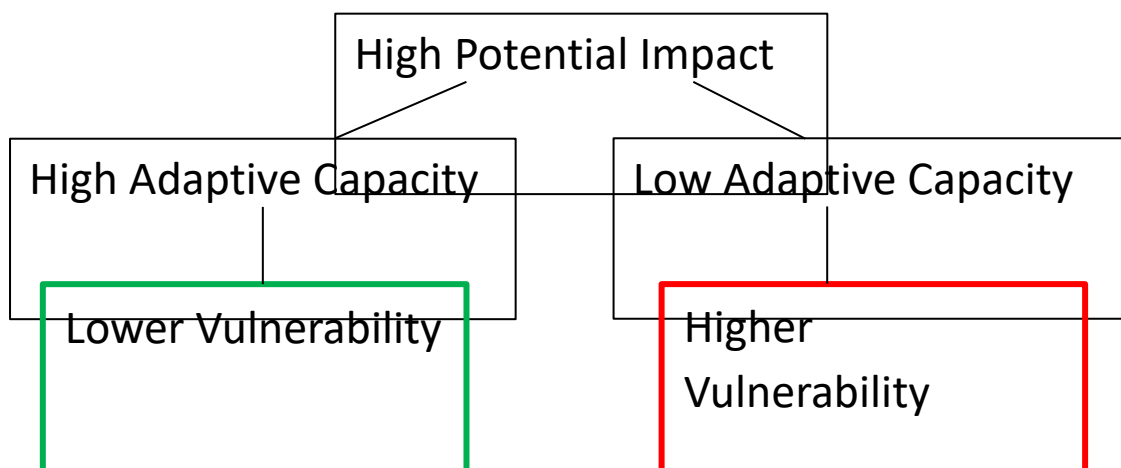


Figure 1 functions of vulnerability

Vulnerability is determined by integrating the results of the climate impact analysis and the adaptive capacity analysis. Vulnerability to climate change is a function of exposure and sensitivity to climate stimuli and the capacity to adapt to adverse effects



**Table NN.** Analyzing the Climate-related problems and Risks

FUNCTION	HIGH SENSITIVE INPUT OR OUTPUT	CERTAIN CLIMATE STRESSORS	IMPACTS	ADAPTIVE CAPACITY	TRENDS and SCENARIOS	PROBLEMS and CAUSES	VULNERABILITY
PRODUCTION OF VEGETATIVE FOOD AND NUTRITION FOR PEOPLE (Directly edible)	Local Roads and access infrastructure	Floods and erosion					
	Water / Irrigation infrastructure	Floods and erosion					
	Seeds	Floods and erosion					

**Table NN.** Risk assessment management scale of the identified problems

1 MINIMAL	2 MINOR	3 MODERATE	4 SIGNIFICANT	5 MAJOR
An event that, if it occurs, will have little or no impact on achieving desired function, to the extent that one or more of its stated outcome objectives will fall below goals but well above minimum acceptable levels	An event that, if it occurs, will have minor impact on achieving desired function, to the extent that one or more of its stated outcome objectives will fall below goals but well above minimum acceptable levels	An event that, if it occurs, will have moderate impact on achieving desired function, to the extent that one or more of its stated outcome objectives will fall below goals but above minimum acceptable levels	An event that, if it occurs, will have significant impact on achieving desired function, to the extent that one or more of its stated outcome objectives will fall below acceptable levels	An event that, if it occurs, will have severe impact on achieving desired function, to the extent that one or more of its critical outcome objectives will be not achieved
No impact of the function	Performance bellow goal, but no changes required	Performance bellow goal, moderate changes required	Performance unacceptable - Significant changes required	Performance unacceptable

## Step 8 - Set the Community Vision (all WGs)

### Objective:

To define the community vision, ideally shared by all stakeholders and to determine the development goals which will lead to fulfillment of the community vision for each group/value.

### Description:

After you develop the list of challenges then you continue to realize the second part of the step, create the vision of the community. Vision is a mental image of how the residents see their community after 5, 15 or 25 years from now.

Envisioning is a useful tool that should focus the hopes and aspirations of the community and provide a framework for defining priorities. The vision shows where the involved parties would like their community to be after a specific time period, it shows the desired future of the community members.

The vision must contain the common identified values of the communities which will be their guide in the preparation of the vision. It is an expression of the possibilities and an ideal future which the residents wish to have accomplished. The entire community must share a common development vision and people should feel it as their own.

The vision provides a basis from which the participants in the process will determine priorities for the community. They will set development goals through which they will strive to fulfill the vision. Only after “clear” VISION is set, one can start to resolve “difficult challenges” in the community.

### Activities/tasks:

- Have all working groups gather to discuss the results of the Steps 4-7 – each working group may give a presentation summarizing the biggest challenges and their causes
- Set the community vision using the information from each of the working groups (this will likely focus on ensuring a climate-resilient and low emissions community)
- Set goals for the vision by identifying the biggest challenges that need to be addressed – e.g., if water was determined to be extremely vulnerable to future climate conditions then ensuring climate-resilience of water supply may be a goal; alternatively if emissions from energy was the most significant source of emissions then reducing emissions to energy may be a goal

### Outcomes:

*A Community Vision and a list of high priority goals are stated*

### Outputs:

- Presentation from each of the working groups (optional)
- Community Vision Statement
- List of more specific goals to support the vision

### TIPS FOR DESIGNING COMMUNITY VISION

- Each WG should prepare a short presentation of the past work, whereby the tendencies and the data collected during the work will be emphasized.

- Ask the participants to imagine an image of the near and distant future of your community? Agree on the period that is considered near future and the period that is considered distant future (example 10 – 25 years)
- Ask yourself the following questions:
  - How does our community look like?
  - What has changed?
  - How do people live?
  - How are the values of the community being used?
  - What is being produced in your municipality?
  - How is land used?
  - How are the public areas arranged?
  - How decisions are made in the community?
  - What words do your grandchildren use when they describe the community where they live?
  - What is unique and special about your community – that the other communities do not have?
- Give everyone a sheet in order to write their vision of the community in the context of his/her WG and in the context of climate change;
- Then all members in a group should discuss their sentences together;
- Ask them to compose one common sentence which will reflect the group's vision;
- In the end, one representative of the WG should read their vision;
- Finally, common vision of all participants in the process should be composed

#### IMPORTANT:

The structure of the text of the vision must be clear, easily understandable so that every member of the community can understand it. The text of the vision must be built on the basis of consensus and it should reflect different members and participants in the Green Agenda process. Basic elements of the vision include:

- Positive, motivating and written in present;
- Focused on preservation of values and sustainable development
- Qualities that foster a sense of uniqueness of the community in the reader of the vision;
- Set minimal standards;

Refers to longer time period;

#### Examples for Community vision

*...Our community is modern and urbanized with parks and green areas, recreation paths, walkways, regulated riverbeds, decent place to live with happy and healthy citizens...*

\* \* \*

*...Our community has quality public services in terms of public hygiene, clean drinking water, clean and arranged city, with established waste management network in all settlements. A system for collection, drainage and treatment of wastewater and rain water is in place and fully functional in all the settlements...*

## PHASE 4 – PLANNING AND SYNTHESIS

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Once determined the measures of adaption and mitigation to climate change, at this phase the WGs set up an action plan for climate change, as well as the plan for monitoring the implementation of the strategy. Thereby, the operation of the WGs is completed and the working team in coordination with WGs' coordinators will start outlining (synthesis) the draft document "Green Agenda on Climate Change";

Over the following period the WGs will be involved in the implementation of priority activities and will work on strengthening the capacity of the group. During this phase, the WGs' priority is the implementation of the so-called "urgent actions" in the community that serve to obtain quick and visible solutions. The implementation of emergency actions will increase the motivation of the WGs to continue their work, but also they it will incite their satisfaction of the visible results from their previous work.

## Step 9 - Identify Mitigation and Adaptation Measures

### Objective:

To identify possible options and measures to overcome the impacts, challenges and risks caused by climate stressors over inputs and outputs and to strengthen their adaptive capacity and improve community resilience.

### Description:

Thinking broadly about adaptation and mitigation, this approach can facilitate the identification of creative options that might otherwise never be considered. Climate impacts pose a range of risks, and not all of these risks can be managed in the same way. On the other hand the GHG emissions is a non-climate stressor, and all measures and activities should be focused on decreasing the amount of emissions.

The best options are the ones that most effectively and efficiently address the risk. In some cases, you may need to build the capacity of key actors to access and use information. In others, there may be policy obstacles that need to be removed before effective action can be taken.

In others, a high-value asset must be protected at all cost, requiring an intervention such as a wall to protect a city from river-flood. Elsewhere, ecosystem restoration might be the most effective option. Generally speaking, however, it is important to consider a combination of options.

### Activities/tasks:

- Develop a list of measures that will support the goals and the vision from Step 8 that are relevant to your value (within WG)
  - Identify measures that support mitigation – e.g., increasing energy efficiency of buildings
  - Identify measures that reduce vulnerability or increase resilience – these include measures that reduce exposure and sensitivity and enhance adaptive capacity
  - Be sure to include diverse types of measures – e.g., policy, good practices, capacity building, and infrastructure
- Prepare a presentation that summarizes the measures by goal
- Have all working groups gather to present and discuss the measures that they identified (all WG)
  - The discussion among the working groups should focus on identifying synergies, conflicts, overlaps, missing measures, new measures, etc.
  - Agreement should be made about which measures should be included in each working group

### Outcomes:

- ☞ *A comprehensive list of mitigation and adaptation measures developed for each value*
- ☞ *Working groups come together to discuss synergies and conflicts between measures*

### Outputs:

- Preliminary list of mitigation and adaptation measures for each WG value (based on goals and vision)
- Presentation by each WG on their preliminary list of mitigation and adaptation measures
- Final list of mitigation and adaptation measures for each working group (after larger meeting)

## 9.1 Identification of Adaptation and Mitigation Measures/Actions

The identification of adaptive measures for climate change should be focused on the inputs and outputs which in the previous analysis of vulnerability have been ranked with high to medium vulnerability level. When identifying the adaptive measures, the WGs should also take into consideration the non-climate stressors, because sometimes they can contribute much more for the reduction of the negative effects and impacts on climate change.

In addition, the WGs should take into consideration that there are different categories of interventions, starting from measures in the field of infrastructure, to measures in the field of policies and strategies, construction of the local capacities, good practices etc. Also, there are different approaches to adaptation, such as: bearable loss, coping (for example, the early warning systems help the communities to prepare for the extreme events (hail, flood, heat wave) that cannot be avoided), sharing of loss (for example, insurance of crops in order to reduce the impact of climate change), transfer, adaptation (for example, promotion of water conservation, as a form of reduction of the impact of droughts), reduction of the impact, defense (for example, protective embankments as defense from floods), research etc.

A number of approaches may be used to identify adaptation options, including consulting stakeholders, engaging informed experts, and drawing on the experience of other organizations or communities that have faced similar problems. Stakeholders are a good source of options, and may have already identified needs and opportunities during the scoping stage that can be expanded upon. Stakeholders can also contribute knowledge about which options are locally appropriate, and provide insight into which options they would prefer and champion. Experts are another common source of options. They often have extensive experience working in and across specific environments, geographies, or jurisdictions that give them insight into how to address specific vulnerabilities. Best practices and lessons learned by other organizations can be identified through a literature review, a survey of targeted communities, or interviews with knowledgeable individuals.

A range of hard (i.e., physical) and soft (i.e., institutional) actions can be used across these categories, and each type has its pros and cons. Hard approaches carry higher risk because they can be costly both upfront and through operations and maintenance requirements, technically complex, damaging to the natural environment, and hard to reverse. On the positive side, however, they can be very effective if designed properly, and are highly visible, which is often favored by locals and donors.

Another concern with hard approaches, like a levee, is that they can result in development in areas that are highly exposed when an extreme event eventually results in conditions that exceed the structure's threshold. Soft approaches like reforming existing policies and regulations, and building capacity for improved information, resource management, and planning can be challenging because they take time and commitment to see through, may be subject to ineffective political processes, and depend on individuals in government who may not remain in their positions long

enough to have an impact. On the positive side, soft approaches can be more sustainable and flexible, can have a wide impact, and may be less costly than hard approaches.

#### ADAPTATION APPROACHES

**Sustain losses:** Take no adaptation action. Sustaining losses may be appropriate when the existing system is capable of dealing with climate impacts, when inputs likely to be affected are not worth sustaining, or when costs of protection are prohibitive. Even if immediate action is not deemed necessary, continued monitoring of climate and other factors affecting vulnerability can help to ensure that adaptation actions are taken if and when needed.

**Cope:** Better management of climate stressors that cannot be avoided. Examples include improving early warning systems and disaster preparedness.

**Share losses:** Reduce vulnerability by reducing sensitivity or increasing adaptive capacity through, for instance, water sharing or insurance programs.

**Adjust:** Modify behavior or practices in response to climate stressors. Examples include incentivizing rainwater harvesting and water conservation or switching to flood-, drought-, or saline-resistant crop varieties.

**Reduce the impact:** Reduce exposure to a climate stressor. For instance, diverting rainwater that can cause floods can help to decrease the potential impact of heavy rains.

**Defend, armor, and protect:** Modify an input. Examples include constructing flood channels, embankments, and seawalls to defend coastal areas from inundation due to sea level rise or elevating houses to decrease the impact of floods.

**Relocate:** Move inputs such as settlements, infrastructure, or crop and grazing lands. This approach take a longer-term view to adaptation and the feasibility of this option can vary dramatically based on geographical, political, financial, technological, and social constraints.

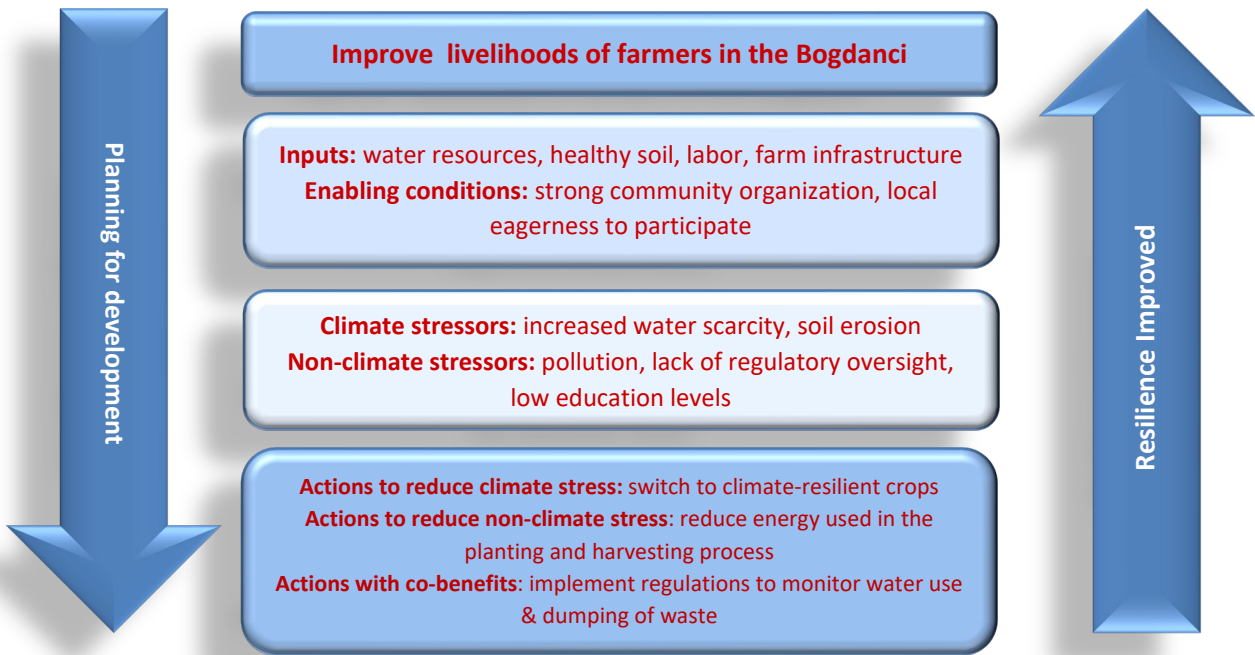
**Research:** Develop new strategies and technologies, such as water reuse or desalination technologies. In most cases, a combination of adaptation approaches will be needed. In the example of coastal agriculture under threat from sea level rise and storms, implementing a set of adaptation options might involve sharing losses through crop insurance, adjusting by diversifying livelihood activities into less climate-sensitive sectors, defending through sea walls, and conducting research to identify and/or develop saline-tolerant crops. This set of approaches will likely reduce vulnerability better than any individual approach.

#### Resources for Identifying Adaptation Options

- Stakeholders and their local knowledge can be valuable sources of adaptation options.
- Experts can provide sector-specific or geography-specific suggestions based on extensive experience.

- ❑ Literature reviews can provide lessons learned best practices, or other guidance material for identifying adaptation options.
- ❑ Other National and municipal action plans and strategic document for climate change

Type of Adaptation	Pros	Cons
Infrastructure (hard)	<ul style="list-style-type: none"> <li>• Potentially highly effective</li> <li>• Visible</li> </ul>	<ul style="list-style-type: none"> <li>• Can be inflexible</li> <li>• Costly</li> <li>• May interfere with natural environment</li> <li>• Impact limited to single site</li> </ul>
Capacity Building (soft)	<ul style="list-style-type: none"> <li>• Can help to obtain support</li> <li>• Can promote sustainability</li> <li>• Flexible</li> <li>• Lower-cost</li> </ul>	<ul style="list-style-type: none"> <li>• Can require a longer-term investment</li> <li>• Difficult to measure impacts</li> <li>• May need to train many people</li> </ul>
Policy and Governance (soft)	<ul style="list-style-type: none"> <li>• Can be flexible and adaptive</li> <li>• Potential for large-scale impact through mainstreaming</li> </ul>	<ul style="list-style-type: none"> <li>• Complex</li> <li>• Slow to design and implement</li> <li>• Depends on enforcement</li> <li>• May require legislation</li> </ul>
Good Management (soft)	<ul style="list-style-type: none"> <li>• Leverages indigenous knowledge</li> <li>• Can be participatory and stakeholder-driven</li> </ul>	<ul style="list-style-type: none"> <li>• Transfer of technology and skills can be difficult</li> <li>• Takes a long time</li> </ul>



Action	How does it address non-climate stressors?	How does it address climate stressors?
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Implement water- and fertilizer-efficient agricultural techniques	Reduces pollution from fertilizers	Reduces the impact of water scarcity on crop production
Conduct awareness campaigns on pollution and climate impacts	Improves knowledge of the local community	Encourages sustainable resource consumption in the community
Implement and enforce regulations to monitor water use and dumping of agricultural waste.	Improves regulatory oversight of the soil, reduces pollution	Reduces the impact of water scarcity on livelihoods by encouraging water conservation

Table 1 assessment example of Table for Adaptation Measures

Value:	Local agricultural products (Fruits)	
Function 2: Development goal 2:	Vegetative food and nutrition for people (directly edible); Improvement of cultivation of orchards and vineyards in Bogdanci	
Input and Enabling conditions	Inputs: <ul style="list-style-type: none"> <li>• Orchards</li> <li>• Vineyards</li> <li>• Irrigation system</li> <li>• Workforce</li> <li>• Professional staff</li> <li>• Road infrastructure</li> </ul>	Enabling conditions: <ul style="list-style-type: none"> <li>• Ministry of agriculture, forestry and water economy</li> </ul>
Stressors	Climate <ul style="list-style-type: none"> <li>• Ice</li> <li>• Hail</li> <li>• Drought</li> <li>• Flood</li> <li>• Wind</li> <li>• UV radiation</li> <li>• Heat waves</li> <li>• Temperature differences</li> <li>• Change of quantities and period of rains</li> </ul>	Non-climate <ul style="list-style-type: none"> <li>• Dilapidation of infrastructure</li> <li>• Migration</li> <li>• Outdated methods in irrigation</li> <li>• Outdated methods in cultivation of orchards and vineyards</li> </ul>
Potential impact of climate stressors (exposure * sensitivity)	<ul style="list-style-type: none"> <li>• Reduced yield</li> <li>• Damages of crops in the phase of a flower</li> <li>• Damages of the foliage</li> <li>• Reduction of the process of photosynthesis</li> <li>• Increased water consumption</li> <li>• Reduction of the work ability</li> <li>• Damaging of the road infrastructure</li> <li>• Damaging of the irrigation network</li> </ul>	
Adaptive capacity	<ul style="list-style-type: none"> <li>• Use of water from water supply network</li> <li>• Use of water from the hydro system “Spas” of Lake Dojran</li> <li>• Network repair</li> <li>• Repair of the road infrastructure</li> </ul>	
Measures for adaptation to climate change	Measure 2.1: campaign for application of a drip irrigation system to save water Measure 2.2: separate tariff for charging water for the users of the drip irrigation system Measure 2.3: debates on use of UV nets for UV and hail protection Measure 2.4: application of new manners of pruning of vineyards and orchards	

Measure 2.5: debates on informing farmers about the use of assets from the IPARD funds

Measure 2.6: laboratory for soil examination

Measure 2.7: laboratory for examination of coil pads

Measure 2.8: system for utilization of waste from orchards and vineyards for production of pellets

## Step 10 - Evaluate and Select Adaptation and Mitigation Measures (within WG)

### Objective:

To select priority options/measures that will increase resilience on climate change and decrease the GHG emission in your community.

### Description:

The process of identifying adaptation and mitigation measures is likely to yield many more options than a development practitioner can possibly implement. It is important to analyze options according to a set of agreed criteria that reflect the key considerations relevant to your decision-making context, and apply these criteria to inform choices in a systematic and strategic way.

### Activities/tasks:

- Analyse the identified adaptation and mitigation measures under the previous step
  - Make a list of assessment criteria which will be used for each identified measure
  - Be sure to include some of the main criteria like: effectiveness, feasibility, cost, unintended consequences, etc.
- Depending of the importance of the criteria, each criteria should have appointed weight.
- Evaluate each measure according to each criteria
- Make a final scoring table

### Outcomes:

- ☞ *An evaluation of the mitigation and adaptation measures is conducted and priority measures are selected*
- ☞ *An action plan is developed for each of the selected measures that guides implementation*

### Outputs:

- Evaluation of mitigation and adaptation measures (including criteria, methodology, and results)
- List of selected mitigation and adaptation measures that support vision and goals
- Action plan for each measure (including specific implementation activities, cost, timeline, M&E plan)

Once the possible adaptation and mitigation measures change have been identified, in the previous step 9, it is necessary to analyze them, in order to get to the prime priorities, which will be part of the community climate change strategy. In order to make an analysis of the proposed measures, it is necessary to determine assessment criteria. The number of criteria should not be too low, since the objectivity of assessment is reduced, but it should not be too high, because in this case the assessment will become more complex, with a possibility to get contradictory results, particularly if several participants participate in the work. Depending on the priorities of those weighing the options, or to help select among options of similar effectiveness, feasibility, and cost.

This list of criteria is suggestive, not comprehensive:

**Effectiveness** – How well does the option reduce the specific climate risks of concern and generate the primary benefit sought (e.g., damages reduced, costs avoided, lives saved) over an appropriate time horizon? How well does it address the applicable climate-related vulnerabilities (e.g., reduce exposure and/or sensitivity, and/or increase adaptive capacity)? Does the option align with and promote overall development goals?

**Feasibility** – Is there sufficient technical and financial capacity, political support, and cultural acceptance to implement the option? Is the option relatively straightforward to implement and maintain from a technical perspective (e.g., Is an infrastructure solution relatively easy to build and operate)? Will key institutional actors and stakeholders support the action (e.g., Will necessary zoning regulations be enacted and enforced)? Is this an activity that can be funded with resources available for development assistance?

**Cost** – What are the costs to implement the option, when considering both initial costs and longer-term costs of operation and maintenance?

**Unintended consequences** – To what extent are there costs and other unintended negative consequences associated with the option, beyond the direct expense of its implementation? For example, construction of a seawall to protect communities against sea level rise may adversely impact the near-shore coastal ecosystem or harm local fisheries.

**Additional benefits** – To what extent might an option provide significant co-benefits, in addition to reducing the specific climate-related risk of concern? For example, building a dam and associated reservoir may be an option to enhance water supply reliability for a key urban or agricultural region, given the increased variability of rainfall and increased risk of prolonged drought. However, the dam may also provide other benefits, such as the potential to generate hydropower, improve downstream flood protection, or develop lake-based tourism and recreational sectors.

**Implementation timing** – How long will it take to develop and implement the option? Can the option be implemented within relevant planning/funding/political timelines? Will the option yield benefits within the implementation timeframe?

**Flexibility** – How easily can adjustments be made in response to evolving conditions and/or information? Are there incremental steps that can be taken (e.g., Would a dam be designed and constructed such that its height can be increased cost-effectively in the future, if and when changing climate conditions indicate more water storage or flood protection is needed)? Note that a flexible option may sacrifice optimality to some degree. Flexibility may be an especially important consideration for options that are intended to be long-lived, are relatively costly, and/or have irreversible consequences.

Robustness – Does the option perform well under a wide range of possible climate futures? It may be relatively costly to select an option that is more robust, so the incremental cost of additional robustness may need to be taken into consideration.

Possible Selection Criteria:

- Price – investments and recurring costs,
- Technical feasibility – ease of implementation and monitoring; limiting capacities (skills, staff),
- The effectiveness in the meeting of the objectives/problems resolution
- Physical, biological, economic and social impacts
- Co-benefits for mitigation of climate change
- Gender equality, emancipation of women, benefits for the marginalized groups

After identifying specific criteria, they should be used to evaluate adaptation and mitigation options. Such an evaluation can be qualitative or quantitative. Each criterion can be evaluated in a descriptive textual format or scored based on a systematic or quantitative method such as green, yellow, or red; high, medium, or low; or ranking scores from 1 to 5. Scoring can be conducted as part of a participatory exercise with stakeholders or as an expert driven evaluation.

However, you present criteria and scores to stakeholders, it is important to be transparent about which factors will drive a decision among options. Application of criteria can be carried out as a quick analysis of options based on inputs from experts and stakeholders or as a more detailed analysis such as cost-benefit analysis, quantitative risk assessment, or a feasibility study. The level of effort devoted to the analysis of options should be consistent with the scale of the decision, the size of the investment, and time and resource constraints, among other factors.

On the basis of group discussion within the WG, each of the proposed adaptive measures will be qualitatively assessed and on the basis of such assessment, prioritization of the adaptive measures can be conducted, which will be included in the strategy. However, since such evaluation is made on the basis of the subjective beliefs of the group members, without technical analysis, it is desirable to make the final selection of adaptive measures on the basis of comparative analysis, which will be quantified.

In order to avoid a situation in which all the proposed measures should be quantified (if their number is really high), primarily selection of five (5) adaptive measures is performed, for each development goal (optimal number according to the past experience).

Then, on the basis of the qualitative analysis, each member of the WG, separately, ranks all five adaptive measures, and then the process continues with collective analysis. The objective of double ranking is to eliminate subjectivity which is usually present when individual ranking is performed.

Before making the final ranking of the five proposed measures of adaptation to climate change, it is necessary to establish a scoring system for each criterion. Primarily, in order to simplify the calculations, at every qualitative level of impact of criteria, specific value is assigned, for example: **high** – 60 points, **medium** – 30 points, **low** – 15 points. Then the importance of each criterion is determined, expressed as a percentage (make sure that the sum of percentages for the five criteria is 100%). For example: criterion A – 20%, criterion B – 25%, criterion C – 10%, criterion D – 30% and criterion E – 15%.

The final score for each measure is obtained by summing the scores for each criterion, which are obtained by multiplying the value at the level of the criterion with its percentage. The highest score means that the identified measure has the highest priority

Development goal:						
Adaptive measures	Criterion A 20 %	Criterion B 25%	Criterion C 10%	Criterion D 30%	Criterion E 15%	TOTAL
Measure 1	High = 60	Medium = 30	Low = 10	High = 60	High = 60	48
Measure 2	Medium = 30	Medium = 30	High = 60	Medium = 30	Low = 10	31
Measure 3	Medium = 30	High = 60	High = 60	Low = 10	High = 60	40,5
Measure 4	High = 60	Low = 10	Medium = 30	High = 60	Medium = 30	40
Measure 5	Low = 10	High = 60	Medium = 30	Medium = 30	High = 60	39

Table 2 assesing actions

Value	Water sources in Boganci						
Primary function	Drinking water						
Goal	Sustainable management with water supply system in Bogdanci						
Criteria	Technical feasibility 15%	Urgency 25%	Effectiveness 30%	Economic liability 20%	Affordability 10%	TOTAL	Rank
Measures							
Measure 1.1. Building new water-supply reservoir (tank)	9	15	18	12	1	55	1
Measure 1.5 Reconstruction of existing water pipe-line network	9	15	9	12	1	46	2
Measure 1.3 Installment of renewable sources of energy on the water-pumps (solar panels or wind turbines)	4.5	7.5	18	12	1	43	3
Measure 1.4. Raising awareness campaign – saving water	9	7.5	3	12	6	37.5	4
Measure 1.6. Feasibility study for usage of ground waters and storm waters.	4.5	7.5	9	2	1	24	5

Example of Evaluation Adaptation Measures in Bogdanci

## Step 11 – Compose Strategic Plan

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### Objectives:

To develop an action plan, based on the insights into the main problems, potentials, opportunities and solutions as gained in the previous steps.

### Description:

Defining a strategy is not an easy task. It requires a good overview of the entire process in order to design strategy and define priorities that have a long-term and large-scale validity.

A good vision is one elements of the strategic plan. The strategy is there to bridge the gap between the present and the vision, and is based on the insights from previous steps.

The vision and strategy provide direction and a framework for concrete actions to be identified ‘along the way’. As part of the ‘learning-by-doing’ approach, with new insights and monitoring results as inputs to operational planning.

### Activities/tasks:

- Convene a wide plenary session including the members of the of all WGs and also ensuring a wide participation of other stakeholders
- WGs present all adaptation and development actions
- Select criteria for the actions consisting the action plan, including human resources, funding and timing
- Draft the action plan
- Prepare the monitoring and evaluation plan

### Outcomes:

☞ *Draft Action and Monitoring plans developed*

### Outputs:

- Action Plan
- Monitoring Plan

### 11.1. Action Plan – Plan of activities

In this step of the process, the WGs should make an action plan for realization of the proposed priority measures for adaptation and mitigation to climate change.

The plan should determine the period of implementation of each of the proposed measures, as well as the entities which will be included in the implementation of each measure separately.

Of course such planning requires consideration of the interests of many stakeholders, and it is particularly important in the determination of the action plan to consult the municipal authorities. These consultations are important, not only for the purpose of adjustment of the

time schedule for implementation of the proposed priority measures, with possible other action plans of some of the stakeholders, but also because of the financial aspect.

Probably all suggested measures will have certain bigger and smaller financial needs, and these funds should be provided from the budgets of the stakeholders, primarily from the municipal budget, and of course efforts can and should be made for attracting donor's assistance in the implementation of the measures of the action plan on climate change. In order to present the results of your action plan, you may use different tools, including graphs, pies, tables etc.

Elements of Action Plan	
Activity/tasks-	that will lead to successful implementation of priority measure
Timeframe -	that will describe the start and the end of the specific action. Some activities are short-term, but some of them are more time consuming.
Budget/resources -	all activities are consuming resources for implementation. Mainly the finance inputs are considered as a main resource, but other resources are also taken into account, such as human resources, materials etc.

Value:		Water resources								required budget (den.)	Funding
Function :		Drinking water									
Goal:		Sustainable management of the water supply system									
Measure /	Activities	Time framework									
		2014	2015	2016	2017	2018	2019	2020			
Building new water supply reservoir (tank)	activity 1.1.1 feasibility study	X								30.750,00	donor funds
	activity 1.1.2 project documentation	X								123.000,00	donor funds
	activity 1.1.3 tender documentation	X	X							6.150,00	donor funds, PE communal hygiene
	activity 1.1.4 EIA (Environmental Impact Assessment) Study			X						61.500,00	donor funds
	activity 1.1.5 Implementation			X						4.612.500,00	donor funds, PE communal hygiene

Example of action plan for one measure in Bogdanci

## 11.2. Defining Monitoring Plan

There is a need to monitor progress of the implementation of the strategic plan and the operational plans and activities derived from that. This can be done through a well-

designed monitoring plan that addresses both performance of the strategy and performance of the responsible institutions, groups involved, etc. Monitoring is an essential part of any management system (of a strategy, plan or project), to find out whether interventions and activities are effective, to foresee possible obstacles as well as benefits from opportunities.

The monitoring plan provides a concise set of indicators that can be used to monitor progress of implementation of the strategic plan and its activities. It is important to say that the monitoring system does not need to be complicated. Having carried out the previous steps, much data and information required, will already have been obtained along the process. This step would first of all require permanent active involvement of the local working groups and process initiators.

Tips for defining monitoring plan
Define monitoring objectives (WHY monitoring environmental qualities and process continuation?)
Determine the indicators and the reference situation (WHAT to monitor?)
Define the information flow (HOW to monitor the indicators being identified?)
Define responsibilities, required means and costs (WHO will monitor the indicators?)
Analyze the data, evaluation and public presentation (WHAT TO DO with the results?)

MONITORING INDICATORS	
<p>Water quantity and quality</p> <ul style="list-style-type: none"> <li>• River flow</li> <li>• River floods</li> <li>• Droughts</li> <li>• Aquatic ecosystems and water quality</li> <li>• Phenology of plants and fungi</li> <li>• Phenology of animals</li> <li>• Dissemination of plant species</li> <li>• Dissemination of animal species</li> </ul> <p>Soil</p> <ul style="list-style-type: none"> <li>• Erosion of soils</li> </ul> <p>Agriculture</p> <ul style="list-style-type: none"> <li>• Season of growth for crops</li> <li>• Agro phenology</li> <li>• Productivity of crops (yield)</li> <li>• Irrigation needs</li> </ul>	<p>Forests and forestry</p> <ul style="list-style-type: none"> <li>• Growth of forests</li> <li>• Wildfires</li> </ul> <p>Energy</p> <ul style="list-style-type: none"> <li>• Need of energy</li> </ul> <p>Transport</p> <ul style="list-style-type: none"> <li>• Intensity of transport</li> </ul> <p>Tourism</p> <ul style="list-style-type: none"> <li>• Touristic-climate index</li> </ul> <p>Health</p> <ul style="list-style-type: none"> <li>• Floods and health</li> <li>• Extreme temperatures and health</li> <li>• Air pollution with ozone</li> <li>• Vector – transmissible diseases</li> <li>• Diseases transmissible through food and water</li> </ul>

## Step 12 – Adopt the Community Climate Change Strategy

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### Objective:

Compose the Community Climate Change Strategy by combining information from previous steps including the community profile, vision, goals, measures, and action plan for measures

### Description:

The Green Agenda for Climate Change document lays down the results of the months of work by the local groups. It presents the total analysis of the local situation, existing advantages and disadvantages in nature and environment, trends, analysis of deeper causes of problems, threats and opportunities, proposed solutions, operational plan for implementation of solutions, appendices, etc.

### Activities/tasks:

- Make a draft of the Green Agenda Document – Community Climate Change Strategy
- Hire a qualified consultant to prepare the required Strategic Environmental Assessment (SEA) to be reviewed and approved by the Ministry of Environment or the responsible authority
- Prepare and conduct the second stakeholder meeting where draft Community Climate Change Strategy is presented
- Seek and incorporate stakeholder comments on the Community Climate Change Strategy
- Ask a local expert for final review and editing
- Identify approach to put the strategy on the next council meeting agenda (mayor, council member, or group of citizens)
- Submit strategy to the Municipal Council for Final Approval (Adoption)
- Participate in council meeting to explain your strategy

### Outcomes:

- ☞ *Community Climate Change Strategy is developed*
- ☞ *Community Climate Change Strategy is presented during second stakeholder meeting and comments incorporated*
- ☞ *Community Climate Change Strategy is adopted by the municipal council*

### Outputs:

- Strategic Environmental Assessment prepared and approved by Ministry of Environment or the responsible authority
- Presentation of Draft Community Climate Change Strategy for second stakeholder meeting
- Collection of comments from community review and comment
- Final version of Community Climate Change Strategy with community comments incorporated
- Signed decision from council for adoption of Community Climate Change Strategy

This is a huge task to accomplish and it usually takes more than one draft to get all ideas included and presented correctly. In our experience at least two drafts were publicly presented and

discussed before reaching a final version, ready to be adopted by the mayor and the council. In some cases even three drafts were prepared and discussed.

Bearing in mind local commitment, time and energy, it is recommendable that the initiating organization takes this task upon itself. This means that the working groups deliver the information regarding the content, perhaps some draft pieces of text, as well as pictures, whereas the initiator or a contracted writer brings all this together in a draft comprehensive document.

The draft can then be discussed either in a bigger gathering or in separate working group sessions, and comments, suggestions and adjustments can be collected for further inclusion into the document. In some cases, local working groups chose to present a first draft to a wider audience that was not involved before, and this naturally led to more new input than can be expected if the document is just presented to the people who actually helped create it. However, it turned out to be a good way to increase local commitment to the end result and to improve the overall quality of the document.

Beside this, according Macedonian Environmental Law a report for Strategic Environmental Assessment (SEA) should be prepared and submitted to Ministry of Environment and physical planning for approval. This report certifies that the Strategy complies with necessary environmental regulation. Only expert authorized and licensed by Ministry of Environment and physical planning can perform such assessment and prepare a report.

### Elements of Good Strategic Document

Description of current situation: insight in the current situation and its context, the qualities, trends, expectations, causing factors, opportunities, interrelations, actors and institutions involved;

- The vision: a powerful image of a desirable future situation providing direction and motivation;
- The Strategy or strategic orientations: paths to bridge the gap between the current situation and the desirable future, characterized by targets, actions based on opportunities and indicators. A strategic orientation can be set in motion any time;
- Actions or small projects creating visible, concrete and attractive results, based on opportunities;
- Operational principles: this will include social and environmental principles or bottom-line standards to be respected during implementation of the strategy;
- Institutional strengthening needs: organizational and institutional requirements to realize the strategy. It includes a good monitoring and learning mechanism.

### Framework of the Strategic Document

#### Chapter 1: Introduction

This chapter gives description of the aim of the document, main objectives, and results of the strategy. Also includes description about the process of development of the strategy, target groups, beneficiaries etc.

#### Chapter 2: Community Profile

This chapter includes municipal information provided in form of table with information about the location of the Municipality, the area, main demographic information, main economic activities of the local population, main natural resources, GHGs Inventory etc.

#### Chapter 4: Community Vision

The Community Vision developed by the members of working groups and main developing goals with objectives are described in this chapter.

#### Chapter 5: The Green Agenda Process in the community

In this chapter the implementation of Green Agenda Process is described. With the first phase of GA by identification of stakeholders and local policies, mapping the values of the community and organizing the first stakeholder meeting.

#### Chapter 6: Analyses of key issues

This chapter includes the outputs from steps 3 to step 8 from GA process. This includes identification of the key community values, function of the values, trends with the functions of the values, impacts by the trends, main challenges, main causers and development goals for improving or protecting the values.

#### Chapter 7: Climate Change Vulnerability Assessment

In this chapter steps 8-9 are described and presented. This chapter is consisted of elements from the GA methodology and USAID vulnerability assessment tool. This chapter analyses the Development Goals and identifies necessary inputs and enabling conditions for reaching the goals. After the inputs and enabling conditions are identified, their exposure on climate stressors is described. The impact of the exposure is defined and adaptive capacity is evaluated. Measures for improving the adaptive capacity and decreasing exposure are identified (climate change adaptation measures).

#### Chapter 9: Climate Change Action Plan

The Climate Change Action Plan is organized in two sub-chapters, as climate change adaptation actions and climate change mitigation actions. The Action Plans are organized based on the following elements: Community Value, Development Goal, and Development Objective. For each objective, a package of measures and activities are proposed, including time frame, budget and sources of funding.

#### Chapter 10: Monitoring Plan

A monitoring plan for each proposed activity is developed and presented in this chapter. The monitoring plan is framed in table including information on indicators, sources of verification, controlling period, responsible person.

#### Annexes

This part of the strategy includes list of other relevant information, such as lists of participants, tables, analyses etc.

## PHASE 5 – IMPLEMENTATION & EVALUATION

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During the last phase of the process, the monitoring system for assessment of the progress of the Green agenda on climate change is being developed. At this point the status of the WGs should be considered, upon completion of all phases of the process. It is advisable to transform them into any new forms which can be directed towards the realization of all priorities of the Green Agenda and full implementation of the document.

In some of the municipalities in which the Green Agenda was implemented, the WGs transformed into associations of citizens who continued to work on the implementation of projects from the documents in their communities. This way largely contributed to strengthening the civil society in the community, and enabled the extension of the Green Agenda as a cyclical process that brings good and positive results for the community.

At this phase of the process starts the procedure for adoption of the Green Agenda draft document on climate change. This process will include a public hearing, as part of the strategic assessment of its impact on the environment, and based on that assessment, the final version of the document will be submitted for adoption by the Council of the Municipality. This way enfolds the Green Agenda process on climate change. But it actually does not end, because after the adoption of the document, its implementation begins, first with the so-called pilot projects.

## Step 13 – Implement Pilot Project

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### Objective:

Develop pilot project from the adopted measures and action plan in the Community climate change strategy.

### Description:

Once the planning process is finished and the Green Agenda document prepared and adopted by the Municipal or City Assembly, work on the Green Agenda is not completed.

In order to keep the Green Agenda alive it is necessary to conduct projects that are feeding into the aims mentioned in the Green Agenda document. Pilot projects are small or not so small activities that can be initiated even during the process implementation to show the possibilities of the Green Agenda and Green Agenda process.

### Activities/tasks:

- The working group members in coordination with the local coordinator, select a pilot project from the measures identified in the strategy to implement
- Selected pilot project should be one which can be implemented in a short timescale, produce visible results for the community, and demonstrate the value of the strategy.
- Municipality, or CSO implements pilot project
- CSO prepares communications and outreach materials to publicize pilot project (press release, news segments, outreach materials)

### Outcomes:

☞ *Pilot project is implemented in the municipality*

### Outputs:

- Selected pilot project and municipal plan for implementation
- Communications and outreach materials
- Press release
- News segment
- Outreach materials

### Trainings:

Project Cycle Management

Project Proposal Writing

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After the strategy becomes an official municipal document the implementation body will further develop the strategies' first priorities. They will develop the identified projects in a project concept format and then a municipal task force will be established to implement the selected priority.

It is important to prepare a list of possible pilot projects that will visualize the solving of problems mentioned and analyzed during the process. A fundraising activity should be initiated so that when the document will be ready and adopted, work can begin and can show people what they were working for. It can be very useful to run such small projects with concrete, visible and attractive results already during the previous steps, on the basis of ideas and with help from the working groups.

One of the most important risks of long planning processes is dissatisfaction of the participants at the end of the process if they perceive they were just talking and preparing a document and that in reality nothing will change in their community.

This disappointment should be avoided at almost all costs, because it will harm the credibility of all organizations involved and will make people less open to cooperation in future. This means that it is important to focus not only on the discussions and the development of a document (which is needed as a basis for future actions) but also on the actions to follow from there. For this, concrete ideas have to be developed and elaborated and fundraising has to be done. Fundraising has to start at an early stage, as it is usually a time-consuming activity.

In some cases, the municipality have assigned a budget line to Green Agenda from which pilot projects can be financed. But you can also start fundraising towards other funds.

## Step 14 – Monitor, Evaluate and Adjust

### Objective:

To develop and operate monitoring systems to assess the implementation of the Green Agenda plans and strategies. During the monitoring, ideas for follow up work should continuously be fed into the community

### Description:

During the entire process implementation, a monitoring system has to be in place in order to monitor and collect data on the process implementation, in order to be able to evaluate the process during and after finishing. This is also important to assess the success of the process implementation in the particular community and to make adjustments for the later implementation.

In order to be effective in this step it is necessary to develop a detailed monitoring and evaluation plan at the very beginning of the process and have a systematic data collection system.

The monitoring should be done in two different levels, on a level of process implementation and also on the level of strategy implementation after the process is finished.

### Activities/tasks:

- Develop monitoring and evaluation plan, including indicators and timeframe for data collection
- If possible, hire a specialist on monitoring and evaluation that will conduct regular field data collection and surveys.
- Establish a local monitoring body, mandated by the Council of the Municipality or by local CSO;
- Develop annual implementation plans and monitor their implementation .
- Develop follow up activities that may support successful implementation and further development of the Green Agenda;

### Outcomes:

- ☞ *Process is successfully implemented*
- ☞ *The Strategy is successfully implemented*

### Outputs:

- Monitoring and evaluation plan
- Field surveys and data collection
- Monitoring reports
- Local monitoring group

Monitoring and evaluation of performance should be an on-going, collaborative process with the participation of the project implementer, local partner CSO, and other stakeholders. Therefore, the design and implementation of a Monitoring and Evaluation Plan should be one of the first activities before the process has started. This plan should include information on how should process be implemented, what indicators they will use to measure those results, how they will collect the data for these indicators, and under what timeframe these results will be achieved.

After the process is implemented and document adopted by the municipal council as an official municipal strategy, the Municipal council should pass on decision on an implementation mechanism for the Climate change strategy. This mechanism usually includes a strategy implementation focal point within the municipal administration and a citizen's monitoring board that will closely monitor the implementation and will ensure periodical review of the progress of implementation.

Evaluation focuses on assessing the results of strategy, program, or project implementation to improve performance, ensure accountability, and promote learning.

Generally, evaluation should not be done very differently than in a conventional development approach. The framework presented in this document can be used to produce the elements of a logical framework; each step or layer in the logical framework can be used to develop indicators and targets. There should be direct feedback to the implementation stage to improve outputs and outcomes of any particular action, an also possibly to the design stage.

Climate change poses some additional challenges for evaluation. Specifically, evaluation should consider the performance of a strategy, program, or project under changing climate conditions, e.g., assessing whether observed climate change, variability, or extreme events have affected the performance and fulfillment of goals.

Critically distinguishing between the different reasons for poor performance – such as a design flaw, substandard project implementation, an unpredictable climate surprise, or poor projections of climate stressors – could yield very different potential adjustments for improving project performance. A more proactive monitoring program may be required to gather the kinds of information needed to manage adaptively as suggested above. Uncertainties about how climate will change and the need for adaptive management make it particularly important to give special consideration to implementation and evaluation upfront.

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