What fire ants know...

A participatory monitoring & planning tool for adaptation to climate and environmental change





Acknowledgments

This manual is talking about a tool, which is a product of an intense process of Action Research (AR) which was a collaboration with different stakeholders. Therefore Protos wants to acknowledge the contribution of all stakeholders who were involved in the development of this tool: JESE, Broederlijk Delen, Kamwenge District, Albert Water Management Zone, TSU 6, Mountains of the Moon University, Mpan'game Club, Hewasa, NRDI, Water for People, KRC, TBG, IDP and the members of the Belgian synergy group on Climate Change.

As you will soon discover in this manual, the tool is actually a 'katogo' or mix of some carefully selected, already existing methods, that has been spiced up with some extra ingredients. Although the whole combination makes a fresh and new method, we cannot go without acknowledging the value of the different ingredients we have used: Theory of Change, Mpan'game, the pictures of Troubled Waters and RAAIS and our main sources: the publication of "peilen naar de impact van sociaal-culturele praktijken" and the SEACHANGE articles.

A special thanks goes to the communities and local government from Kayinja, Karambi and Nyanza for allowing us and participating in the test of the tool in their respective areas. To both Janina Löwe and Karin Felzmann for their valuable and voluntary support in the documentation of the process. To the proofreaders and to the colleagues of Jese and Protos who have been the engine behind the development, testing, reflection and execution of this tool.

Foreword

This monitoring and planning tool was developed through a participatory process of Action Research, as part of the Protos Program in Uganda.

Protos aimed at developing a monitoring tool that could show in which way Protos' interventions on integrated water recourses management (IWRM) at household level actually contribute towards climate change adaptation capacities. During the Action Research process, and thus the development of the tool, the aim was further fine- tuned as we realised that it would be more correct to broaden our scope towards environmental change and not only focus on monitoring, but combine it with planning. This is how we finally came up with a "participatory monitoring and planning tool for adaptation to climate and environmental change".

Since the tool is made out of different steps, They can be taken up separately as well. This manual is one of the results of this participatory processes so far and is mainly meant for NGO's and (local) government workers. We wish to inspire and give some hands-on ideas to set up a similar process.



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When a city floods, humans stack sandbags and braise levees. When a fire ant colony floods, the ants link up to form a literal life raft, such as the one pictured. [...] They'll gather up all the eggs in the colony and will make their way up through the underground network of tunnels, and when the flood waters rise above the ground, they'll link up together in these massive rafts. [...] In less than two minutes the ants have linked "hands" to form a floating structure that keeps all the insects safe. Even the ants down below can survive this way, thanks to tiny hairs on the ants' bodies that trap a thin layer of air. » (Kaufman, 2011)

You might wonder why you read about fire ants in a manual about a tool to plan and monitor adaptation to climate and environmental change. Yet the ingenious adaptation strategy of the fire ants towards a changing environment is a good reminder for all of us: if we want to adapt towards a changing environment we need to work together, as a community. We need to keep a finger on the pulse regarding our changing environment and keep track of, learn from and plan for sustainable strategies that tend to improve our livelihoods in new contexts.

This tool will guide you along with the people you are working with or plan to work with and for, in the process of planning and monitoring the adaptation to climate and environmental change.

By going through the different steps of the tool the most pressing challenges in a well defined area and possible interventions to tackle them are identified by relevant stakeholders in a participatory way. Moreover the tool allows you to compare these results with what you are doing or plan to do in that area and forces the stakeholders to come up with action plans.

In what follows you'll find for every step:

- A short interpretation of what the step is all about and why it is being done.
- A step by step explanation of how the tool works
- Some practicalities (materials you need, who should be involved,...)
- Points of attention
- Illustrations (pictures, examples and references to movie sections) of the case of Karambi wetland, where the implementation of the tool took place



II. Step by step in 8 DAYS

A "Implementing partners develop a Theory of Change"

Implementing partners visualise the thinking behind the program. By the end of this participatory exercise it should be **clear for all concerned staff why certain activities are done or planned for and how they contribute to the higher objective of the program.**

The different thematic areas the program is working on should be easy to identify in the **outcomes chain**.

Preparation

 Identify a facilitator for the process + the person who will digitilise the outcomes chain

Materials needed

- Post-its
- Markers
- A big wall
- Masking tape
- Photo-camera
- Laptop with software (for example Edraw Max)

Who is involved?

- Mix of staff of implementing partners (including field staff and management)
- Facilitator (can be implementing partner)

Points of attention?

- Make sure all relevant parties are present
- Take time to find a good software to digitilise the outcome chains
- Use the theory of change pragmatic, no narrative needed
- Start building the outcomes chain from up, it makes it easier



Creating TOC outcomes chain

Step by step DAY 1

- 1. Create first outcomes chain:
 - final outcome on top
 - work your way down by identifying for each outcome the preconditions
 - ideally: not more than 5 levels and not more than 6 preconditions per outcome
- 2. Digitalise outcomes chain

DAY 2

- 1. Review digitalised outcomes chain
- 2. Make final changes on the digitalised chain





Example of digitalised outcomes chain

Creation of the first outcomes chain



B "Stakeholders explore most pressing issues"

In order to be on the same line during the discussion on the following days and to have a **bigger assurance that what will be discussed is relevant** we foresee this phase both for the expert and for the concerned stakeholders.

- The expert has a better understanding of the concerned area and does a short analysis of the most pressing challenges.
- Concerned stakeholders have a better understanding of 1) what it means to be part of a catchment and 2) different causes of changing conditions (climate change / human activities)

Preparation

- Identify, contact and brief expert
- In case you are not implementing in Mpanga Catchment, you could try to find an alternative for the Mpan'game to discuss the aspect of a catchment

Materials needed

- Mpan'game / alternative
- Pictures about Climate Change
- Flipchart
- Markers
- Brief about how to come to a shared definition

Who is involved?

- Expert
- Concerned stakeholders (community, local government,...)
- Facilitator (can be implementing partner)

Points of attention?

- Make sure the participants of this day are the same participants of the next day, so once you've created the groups for day 5 you know who should take part in day 4
- Make sure the expert and the facilitators of the Man'game are well informed about the objective
- Make sure expert/facilitator speaks local language!



Expert visits site

Step by step DAY 3

1. Expert visits site to get to know the area and to get an idea of the most pressing challenges on the ground

DAY 4 - Organise activities with stakeholders in order to give them a better understanding about the theme, in the case of Karambi we did the following activities:

- 1. Play Mpan'game
 - Make sure participants understand the idea of being part of a catchment
 - Make sure participants understand that bad practices by people have an effect on the environment and can cause environmental change (next to climate change) and we can do something about that!
- 2. Talking pictures
 - Spread pictures on a central place (table/wall/floor)
 - Let all participants pick a picture that explains (for them) what climate change means
 - All participants explain their chosen picture in front, while 1 person takes note of key elements during the presentations
- 3. Feedback expert
 - Expert summarises key-elements and message from Mpan'game + what has been said during the 'talking pictures' and links it with the local situation of the area (which elements are relevant for this spot?) -> See B1 for details
- **4.** Shared definition/description/summary of what has been said stays visible in the area (also for the coming days). This will remind participants about the topic.

B1 "reaching a common understanding of causes of changing environments"

This reading should guide facilitators in the last stage of DAY 4, where a conclusion is made on what is understood by a **changing environment** and the **different causes** for it:

- Climate change
- Human activities in the catchment

Method

- Make summary visible in the venue.
- Refer to examples that were given by participants throughout the day (during the game, during the presentations of the pictures,...)
- Use the local language!
- Ask if participants agree with this « summary » of the day and clarify/correct where needed



Participant explaining a talking picture

- 1. What do we remember from all the explanations ("talking pictures" that were given on CC? What is common? How can we now define CC?
 - Let participants first answer
 - Rephrase some of the good descriptions that were given and high-light the difference between causes, effects and impact from CC
 - Propose a common definition: For example: "Climate change is a longterm shift in weather conditions identified by changes in temperature, precipitation (rain or snow), humidity, wind and seasons. Moreover, climate change is a global phenomenon."

2. What have we learnt from playing the Mpan'game?

- Let participants first answer
- Rephrase some of the examples you remember that show clearly:
 - The reality of being part of a catchment (everyone is dependent on each other)
 - Bad practices can cause effects environmentally, that can be felt in the whole catchment
- 3. Describe what you (as an expert) have found relevant/most pressing in the area you are talking about + link it with what came out of the previous exercises.
- **4. Conclude:** Even though environmental change is caused by a **global** (natural) climate change, the effects on the ground can be worsened by bad practices of people to the land or atmosphere and the way how to best adapt to this changing environment is something that has to be ad-dressed **locally**. (climate change = global, climate change adaptation = local)

B1 BACKGROUND The changing environment and the different causes for it

What is climate change? Climate change is a long-term shift in weather conditions identified by changes in temperature, precipitation (rain or snow), humidity, wind and seasons. Climate change can involve both changes in average conditions and changes in variability, including, rising sea levels; melting snow and ice, more extreme heat events, fires and

drought; and more extreme storms, rainfall and floods.

Human activities Vs.CC Due to increasing human population and high vulnerability of the population combined with a high dependency on ecosystems and weak governance of the natural resources in our communities there has been changes in the environment.

Much as we talk of climate change locally we people are to blame for our actions. There is environment change happening in ecosystems due to loss of biodiversity, changes in hydrological systems and the supplies of freshwater, land degradation, urbanization, and stresses on food-producing systems.

For example: cutting down and burning forests leads to soil erosion leaving the land bare and not fertile hence affecting crop yields. The impact it causes is felt more at community level than it would be felt at global level.

Link between human activities and the catchment area It has been observed that there are major threats within the catchment due to local actions towards the environment. At the same time there is increasing human population and high vulnerability of the population combined with a high dependency on ecosystems; poor and unsustainable land use practices (deforestation, overgrazing, agriculture) and overall ecosystem degradation; river bank, lakeshore and wetland degradation to mention a few.

Because of interconnected ecosystems within the catchment, a change in the environment can affect many related aspects, such as where and how people, plants and animals live, food production, availability and use of water, and health risks. For example, a change in the usual timing of rains or temperatures can affect when plants flower and bear fruit, when insects hatch or when streams are there all the time. This can affect pollination of crops (agriculture), food for migrating birds, reproduction of fish, water supplies for drinking and irrigation, forest, economy, and quality of life.

Conclusion

The environment we live in is rapidly changing and has more disruptive impacts than what it used to have in the past. At the same time the past is no longer a reliable predictor of the future.

What can we do as individuals/community/government?



Agriculture

Adjustment of planting dates and crop variety; crop rotation; improved land management, e.g. erosion control and soil protection through tree planting, application of organic manure (kitchen and human waste).



Water

Increase water retention and water infiltration. Practice rainwater harvesting; water storage and conservation techniques; water re-use; purification; water-use and irrigation efficiency.



Health

Make health action plans; emergency medical services; improved climate-sensitive disease surveillance and control; safe water and improved sanitation.



Infrastructure/settlement

Protection of existing natural resources as wetlands, forest reserves, rivers etc and avoid settling and constructing in them.



Diversification of income/Tourism

New climatic conditions can also be favorable for new activities and businesses, the area may have be-come more attractive for tourists.



Energy

Strengthening of overhead transmission and distribution infrastructure; underground cabling for utilities; energy efficiency; use of renewable sources; reduced dependence on single sources of energy, use of energy saving stoves.



Transport

Readjusting design standards and planning for roads, rail and other infrastructure to cope with warming and drainage, use of bicycles, walk to school, work and church.

C "stakeholders identify most suitable interventions for most pressing challenges"

To make this phase as interesting as possible a large variety of stakeholders should be involved.

By the end of this phase you will have:

- A list of pressing challenges
- 5 priority challenges, each of them with a bunch of intervention strategies
- Monitoring teams identified, all appointed to a certain cluster or theme

Preparation

- Prepare all needed templates, adjust templates where needed
- Make sure you have identified the main clusters in your Theory of Change
- Compose and contact diverse group of stakeholders, relevant to the context you
 are working in.

Materials needed

- Post-its in different colours
- Templates C1, C2 and C3
- Markers (permanent + for whiteboard)
- A big wall
- Masking tape
- Voting stickers
- Photo camera
- Outcomes chain Theory of Change, with clusters

Who is involved?

- Max. 30 participants from different groups of stakeholders (each group: max. 6)
- Expert
- Facilitators

Points of attention?

- Make sure all relevant parties are present
- Define criteria for your groups
- Make pictures of every step
- Make sure the break is organised well (Task implementing partner + expert)
- Organise rehearsal day with facilitators



Participants writing individually their priorities

Step by step DAY 5 (based on RAAIS)

- Form 4 or 5 homogeneous groups with each max. 6 people (see template C1) → For Karambi we chose to work with 4 groups: women, local government, animal keepers and crop farmers
- 2. Each participant writes down 5 most pressing challenges
- **3.** Each group identifies, through discussion the 5 most pressing challenges
- **4.** Each group does a first analysis on these 5 challenges (see template C2)
- 5. Take pictures of the completed forms
- **6.** All groups come together and select, out of all the most pressing challenges, the ultimate top 5. This can be done by:
 - Searching for overlap
 - Eliminating the least important
 - Exclusion by the expert/IP (not relevant/in scope/timeframe/affordable)
 - Discussion voting
- Make 5 new groups around each of the 5 top challenge
 —> the new groups are
 mixed, which means representatives of all stakeholders groups are represented
 in each group)



Participants analyse the 5 most important challenges for their own group



C1

Stakeholdersgroup

- 1. Farmer / producer representatives
- 2. Woman

C

- 3. Private sector representatives
- 4. Government representatives
- 5. Representatives from research and training institutes

4	-	-	ì
l	6	4	

5 priority challenges per stakeholdersgroup

		[Group]					
Top 5 priority challenges	Position cause of challenge	Environmental 3	Technological?	Socio-cultural?	Economical 2	Institutional?	Political?
[challenge]	climatehuman change activities						
[challenge]	climatehuman change activities						
[challenge]	climatehuman change activities						
[challenge]	climatehuman change activities						
[challenge]	climatehuman change activities						

С3

Exploring interventions

					[challer	nge]				
	describe ntervention / adaptation	explain how the intervention will tackle the challenge	Present or planned for this site	Who is implementing?	Current coverage?	Falls within scope?	In line with existing laws?	Appropriate technology?	Within the timeframe?	Affordable and cost efficient?
	0		O=no, 1=yes			O=no, 1=yes	O=no, 1=yes	O=no, 1=yes	0=no, 1=yes	0=no, 1=yes
a.	[intervention]									
b.	[intervention]									
c.	[intervention]									
d.	[intervention]									
e.	[intervention]									
f.	[intervention]									
g.	[intervention]									
h.	[intervention]									

Step by step DAY 5 (based on RAAIS) continued

- 8. Each new group completes the « green headed columns » (see template C3) → write interventions (on post-its) that can tackle the challenge. Explain how this will work, mention whether the intervention is already present or planned for in the area (yes = 1, no = 0), if yes: mention who is implementing and how often it has been seen (coverage)
- 9. Participants take a break, while facilitators (IP + expert) complete the remaining columns -> Within scope? Within existing laws? Appropriate technology? Within time-frame? Affordable & cost-efficient? (yes = 1, no = 0)
- **10.** Facilitators take everyone through all the templates: → especially where there is a « 0 »: this is being explained, discussed and if needed changed
- 11. Take pictures of the completed forms
- **12.** All the interventions which have a « 0 » in at least one of the exclusion columns (brown in colour) are not taken into consideration for further monitoring, but are noted down for discussion in step E
- **13.** Take all the remaining interventions (the approved ones) and cluster them, according to the clusters from your TOC (put those interventions that do not fall under any of the clusters separately)
- 14. Appoint for each cluster + each intervention that doesn't fall under a cluster 2 monitoring agents → make sure your monitoring agents are able to read and write + are available on DAY 6
- **15.** Take the contacts of all the monitoring agents and make clear arrangements for DAY 6
- 16. Remind all participants to be present on DAY 7

Interventions for priority challenges in heterogeneous groups



D "monitoring teams collect in depth data"

Monitoring teams collect in depth information on the current situation and aspirations on each cluster and those interventions that do not fall in a cluster.

At the end of this phase each monitoring team should have made a poster with the most important findings, ready to be presented on DAY 7



Monitoring teams make poster to present results

Preparation

• Make sure monitoring teams (which you have appointed by the end of step C) know where and when to meet.

Materials needed

- Enough manila papers for each monitoring team
- Photo-camera's for each monitoring team
- Guiding questions for each monitoring team
- Post-its
- Markers
- A big wall
- Masking tape

Who is involved?

- Monitoring team
- Visited community
- (Expert)
- Facilitator

Points of attention?

- Make sure you document very well which households/places were visited, this will be important if the exercise is going to be repeated in the future
- Make sure the participants know how to read and write

Step by step DAY 6

- 1. Brief the monitoring teams on role, explain monitoring forms, agree on a time to return
- 2. Monitoring teams go and collect information/proof on their appointed cluster/topic
 - Pictures
 - Descriptions
 - Appreciation
 - Aspirations (mention which timeframe!)
- **3.** Monitoring team and facilitator meet again for postermaking of their fin-dings, the teams are given the following instructions:
 - analyse the monitoring forms by using colour codes —> for example: red stickers for challenges, green stickers for good experiences and orange stickers for other important and remarkable things you want to share
 - write the key-findings on post-its (concentrate on those elements that were given a colour)
 - put the post-its in such a way on a poster that you are able to tell a comprehensive story
 - add some drawings and/or fun so that it's interesting for the audience to listen to your story
- **4.** Monitoring teams do a test presentation to peers (in preparation for DAY 7) and get feedback on what can be improved on the poster
- 5. Monitoring teams make adjustments to their posters, based on comments
- 6. Make sure you collect all monitoring forms, you'll need them later



FLTR: participants creating poster to present, idem, participants doing test-presentation for peers



"stakeholders discuss shared findings"

In this phase the findings of the monitoring agents are shared and cross-checked with a bigger audience in order to create a **bigger support**.

Also discussed is the so called « non-overlap » between the TOC and what came up in DAY 5 by the community.

By the end of this phase an **action plan** for the stakeholders and a monitoring plan should be in place.

Preparation

- DAY 5 and DAY 6 have to have taken place as a preparation
- Posters should be ready
- IP prepares non-overlap issues to be discussed → this means IP compares the interventions that came up at the end of step C with the TOC and takes note of 1) interventions that are part of TOC, but didn't come out of the exercise with the community and 2) is-sues that were raised by the community but are not part of TOC → you want to discuss these issues to understand the reason why there is this non-overlap

Materials needed

- Posters, developed by the monitoring teams on day 6
- Masking tape
- A big wall
- (Projector + speakers (if pictures or audio is going to be showed))
- Laptop/notebook (to take notes)
- Photo-camera
- Flipchart
- Markers

Who is involved?

- Monitoring teams
- Stakeholders
- (expert)
- Facilitator
- Implementing partners

Points of attention?

 Documenting this day is of great importance, make sure you have enough human resources and (media--) equipment to capture what participants discuss and decide

Step by step DAY 7

- 1. Monitoring agents present their findings with the help of the story they've prepared on their posters
- 2. Take pictures of all posters and/or record presentations of posters
- 3. Stakeholders react (while facilitators make note of what is being said) about: - Which part of the 'story' is recognisable? What do they agree with? (to see whether the findings are unique or shared) - Are there things they do not agree with, which surprises them? (to understand the bigger picture) - What are the actions that come out of the presentations? (will later be used for the action planning) - Is there indeed a link with a better adaptation towards climate and environmental change? (to cross-check whether we are still on track with our objective)
- **4.** Non-overlap is discussed issues that are not yet part of the programme issues that were not raised, but are part of the program
- Make action plans per stakeholder group. Make use of the notes which were made before. Action plans are made for both: - engagements of different stakeholders - future monitoring (per clusters/...)
- 6. Take pictures of action plans

7. Know Genil to come an another and train forwars D chailead burning S. Field Shatestermare worth) & famile * Methods of farming - Practice over Sensitization to the Community. 3 the spices on sign mont-orphin to Plake family groups- helping larvocar their night water rehourses mot COMMUNIT e Involvement of local Councile PINTES/DES ola LOCAL GUT he program activities - Furtow UTY OTHER SEL × nomtinne top wetland degilitation-- hush burning - Cultivation his lower platforms Ter environment protection at community level to annousements/ DS mentions in Saul Protection

"implementing partners compile marketable report"

This phase is the conclusion of the whole exercise. All collected information throughout the whole process is put together in a marketable report.

Preparation

• Make sure you have all the information that was collected (different media)

Materials needed

- All collected information
- Office equipment (to make report)

Who is involved?

• Mix of staff of implementing partners (including field staff and management)

Facilitator

- Points of attention?
- Make sure the report is 'marketable'
- This exercise might take more than 1 day and needs a lot of effort
- (a short version of) the report should definitely reach back to the community as well!

Step by step DAY 8

- **1.** IP compiles report with 'contribution stories', making use of all the community based, collected info
- 2. IP shares report with relevant stakeholders (including community) for purposes of advocacy





Staff compiling information into marketable report

Appendices

C1	Stakeholdersgroup	
	1. Farmer / producer representatives	
	2. Woman	
	3. Private sector representatives	
	4. Government representatives	
	5. Representatives from research and training institutes	

				1				_
[challenge]	[challenge]	[challenge]	[challenge]	[challenge]	challenges	Top 5 priority		
dimate human change activities	climate human change activities	climate human change activities	climate human change activities	climate human change activities	Position cause of challenge			
					0=no, 1=yes	Environmental?		5 priorit
					0=no,1=yes	Technological?		y challenge
					0=no, 1=yes	Socio-cultural?	Group]	s per stakeh
					0=no, 1=yes	Economical?		oldersgroup
					0=no,1=yes	Institutional?		
	·	·	·		0=no,1=yes	Political?		

СЗ		άσ	. *	ē	è	ū	è	ā]			
	[intervention]		describe interven- tion / adaptation									
										explain how the intervention will tackle the challenge		
									O=no,1=yes	Present or planned for this site	[challeng	Exploring inter
										Who is implement- ing?	ej	ventio
										Current coverage?		SU
									0=no,1=yes	Falls within scope?		
									0=no, 1=yes	In line with existing laws?		
									0=no, 1=yes	Appropriate technol- ogy?		
									0=no, 1=yes	Within the timeframe?		
20									0=no,1=yes	Affordable and cost efficient?		

1. Intervention to be investigated:

2. About the data collectors

Name: Contact:

3. Fits within which cluster?							
	Improved ecosystem services						
	Hygiene and sanitation						
	Water resources management						
	Sustainable land use						
	Other:						

4. Abo	ut the data collectors									
Date:			nned the	~	ige?				ame?	
Location	Name:		or pla ssite bout	o is Iementing	rent covera	hin scope?	ine with sting laws?	evant? propriate hnology)	hin time fr	e an
	Contact:		in thi ne:. A a coll							ordab t- cient
	Village:		Pre Nan dat	ų ji	Ē	wit	in li exis	ted ted	wit	affe effi
	Parish:									

5. About the intervention				
5.1 How does it tackle the challenge?				
5.2 How does it tackle climate and environmental change?				
5.3 Describe how it works:				
5.4 Describe which good experiences people have with it:				
5.5 Describe which challenges and difficulties people have with it:				
5.6 How could it be improved?				
5.7 Describe why (not) it is being copied by others:				
5.8 How often is it implemented nowadays?	nowhere to be seen	seen at some places, but still the minority	seen at many places, but not yet everywhere	seen everywhere

Notes











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