WOCAT - World Overview of Conservation Approaches and Technologies and Swiss NGO DRR Platform

Additional DRR information to Questionnaire on Sustainable Land Management (SLM) Technologies

Version: DRR addition to QT

Additional DRR information to Questionnaire on SLM Technology (DRR addition to QT)

Content

1. General information 1
1.1 Name of the SLM Technology (hereafter referred to as the Technology) 1
1.2 Contact details of resource persons 1
1.3 Country/ region/ locations where the Technology has been applied 1
2. Risk profile 2
2.1 Hazard Profile 2
2.2 Vulnerability, Exposure 4
2.3 Risk perception 5
2.4 Damage and Losses situation 5
2.5 Duration since last disaster 6
3. Specification of Disaster Risk Reduction measures 6
3.1 Protection goal of Technology 6
3.2 Type/level of DRR measures 7
4. Impact 8
4.1 Additional benefits of the Technology after implementation of the Technology 8

1. General information

In order to capture the Disaster Risk Reduction aspects of SLM and land-related DRR practices better, allow identification of good practices and enhance their scaling out, the Swiss NGO DRR Platform has elaborated an additional short questionnaire to cover a broader range of risk reduction aspects, some of them not only related to sustainable land use and management, but rather to more "classical" prevention, mitigation and preparedness aspects. The focus of WOCAT is on land and its management, the attention of the Swiss NGO DRR Platform is in risk reduction of people and their asset. Clearly, WOCAT has limitations and non-land related practices like housing insurances, shelter, contingency planning at institutional level, building search and rescue groups and similar DRR practices are not covered with the WOACT Questionnaires on SLM Technologies and Approaches.

This additional short questionnaire follows the risk equitation R= HxV. It defines in section 2 "risk profile" the hazard profile, then the vulnerability-capacity continuum including exposure and looks at the experienced losses and damages. This profile is an ex-ante description of the situation, thus before a Technology or Approach was implemented. In section 3 the compiler is asked to define the protection goal of the practice and to reformulate and complement (if necessary) the description of the Technology (Question 2.2 in QT.). In question 3.2 the compiler will classify measures applied and describe in section 4 the on- and off-site DRR-impact of the Technology as a complementation to Question 8.1/8.2 in QT.

The Questionnaire addition to QT is related to sites as defined in QT Question 2.5. If a Technology is reported together with an Approach the compiler fills in first the Questionnaire "DRR addition to QA" and in "DRR addition to QT" only section 4 (Question 4.1). If only a Technology is reported, then you fill in the whole questionnaire "DRR addition to QT".

1.1 Name of the SLM Technology (hereafter referred to as the Technology)

Repetition of QT – Question 1.1 and 1.2

Name of Technology: .....

Locally used name: .....

1.2 Contact details of resource persons and institutions involved in the assessment and documentation of the Technology

Compiler

The person who conducted the interviews, compiled the information, and filled in the questionnaire.

Last name: ..... First name(s): ..... ☐ female ☐ male

Name of institution: ..... Contact address:.....

1.3 Country/ region/ locations where the Technology has been applied

Refers to QT Question 2.5.

Indicate the number of persons living in the sites mentioned in QT Question 2.5 or depending on the sites (if numbers are not available, provide an estimation based on your professional judgement):.....

of which .....% are men
of which .....% are women
of which .....% are not mobile enough and depend on aid for rescuing (elderly, small children, disabled, chronical ill, etc.)
of which .....% are minorities (ethnic, language)

2. Risk profile

2.1 Hazard Profile

First tick the hazards relevant to the technology site (tick in column yes). Then, for each selected hazard, tick the cell for the recurrence of the hazard on that site.

			yes	ongoing/ gradual	recurrence < 2years	10 -30 years	30-100 years	recurrence >100 years
Natural Hazards	Geophysical	Earthquake/Tsunami						
		Mass movement						
		Volcanic activity						
	Hydrological	Flood						
		Landslide						
		Wave Action						
	Meteorological	Convective storm (Tornado, Hailstorm,…)						
		Extra tropical storm						
		Extreme Temperature (Heat/Frost)						
		Fog						
		Tropical cyclone (Hurricane, Taifun)						
		Dust clouds						
	Climatological	Drought						
		Glacier lack outburst						
		Wildfire						
Biological Hazards	Biological Hazards	Epidemics (Humans)						
		Epizootics (animals)						
		Pest (vegetation)						
		Insect infestation						
		Animal / rodents incidents						
		Invasive plants						

			yes	ongoing/ gradual	recurrence < 2years	10 -30 years	30-100 years	recurrence >100 years
Man Made Hazards	Technological Hazards	Industrial disaster						
		Structural collapse						
		Fire						
		Explosion						
		Mine disaster						
	Chemical / radiological hazards	Chemical spill						
		Oil Spill						
		Radiation contamination						
		Pollution						
unknown	Others	…….						
		…….						
		…….						
		…….						

2.2 Vulnerability, Exposure

Vulnerability *is determined by physical, social, economic and environmental factors or processes, which increase the susceptibility of people to the impact of hazards. High vulnerabilities therefore increase the likelihood of a disaster. Vulnerability is not uniform within a community but often differential among and between groups.*

Exposure *indicates people, property and other assets or systems that are physically exposed to hazards (UNISDR 2015 adapted by Swiss NGO DRR Platform).*

First, tick relevant factor (tick boxes on the left). Then, for each selected vulnerability-capacity tick the extent and specify/quantify if possible.

Vulnerability – Capacity Profile of the site before the Technology was applied		**very high /strong**	**high**	**average**	**low/weak**	**Very low/not existing**		**Comments**
Exposure								
☐ of people	high	☐	☐	☐	☐	☐	low	.....
☐ of private assets	high	☐	☐	☐	☐	☐	low	.....
☐ of community land	high	☐	☐	☐	☐	☐	low	.....
☐ of community infrastructure	high	☐	☐	☐	☐	☐	low	.....
Economic factors – is/are the								
☐ Access to markets	high	☐	☐	☐	☐	☐	low	.....
☐ Income	high	☐	☐	☐	☐	☐	low	.....
☐ Diversification of income	high	☐	☐	☐	☐	☐	low	.....
☐ Savings/stocks	high	☐	☐	☐	☐	☐	low	.....
☐ Bank savings/remittances	high	☐	☐	☐	☐	☐	low	.....
☐ Degree insurance coverage	high	☐	☐	☐	☐	☐	low	.....
Social factors – is/are the								
☐ Literacy rate	high	☐	☐	☐	☐	☐	low	.....
☐ Government support	high	☐	☐	☐	☐	☐	low	.....
☐ Family support	high	☐	☐	☐	☐	☐	low	.....
☐ Community support	high	☐	☐	☐	☐	☐	low	.....
☐ Access to public services	high	☐	☐	☐	☐	☐	low	.....
Physical factors – is/are the								
☐ Robustness of houses	high	☐	☐	☐	☐	☐	low	.....
☐ Robustness of infrastructure	high	☐	☐	☐	☐	☐	low	.....
☐ other (specify):	high	☐	☐	☐	☐	☐	low	.....
Other vulnerability factors								
☐ other (specify):	high	☐	☐	☐	☐	☐	low	.....
☐ other (specify):	high	☐	☐	☐	☐	☐	low	.....
☐ other (specify):	high	☐	☐	☐	☐	☐	low	.....

2.3 Risk perception

What type of events is affecting your wellbeing/life more:

☐ Small scale highly recurrent events (extensive risk)
☐ Large scale events (intensive risk)

Note that small scale events are often not reported in national media. Large scale events are covered by national, sometimes international media.

2.4 Damage and Losses situation

Specify what happened at the Technology sites with relation to losses and damage in the past 10 years:
☐ Substantial increase in losses
☐ Some increase in losses
☐ No change
☐ Small reduction in losses
☐ Substantial reduction in losses

Please provide the best estimate based on the information you receive from several key resource persons. If key resource persons are not able to answer the question, consult with other members of the community.

Please circle the answer in the table	**Over the last 5 years**			**Over the last 15 years**		
How many people in the site(s) described (QT 2.5) have been **KILLED/MISSED** by disasters?	0 1	2-5 6-10	11-50 + 50	0 1	2-5 6-10	11-50 + 50
How many people in the site(s) described (QT 2.5) have been directly **AFFECTED** by disasters?	0 1-10 11-50	51-100 101-200	201-500 + 500	0 1-10 11-50	51-100 101-200	201-500 + 500
How manyWhat is the % **of land** in the site(s) described (QT 2.5) that have been **DESTROYED** by disasters ?	No damage	<20% <50%	>50% >80%	No damage	<20% <50%	>50% >80%
How manyWhat is the **% of land** in the site(s) described (QT 2.5) that have been **AFFECTED** by disasters ?	No damage	<20% <50%	>50% >80%	No damage	<20% 50%	>50% >80%
Provide a monetary estimate (in USD) **on damage to critical infrastructure** that has occured due to disasters in the site(s) described (QT 2.5)? (in USD)	0 <1’000 <5’000	<10’000 <50’000	<250’000 >250’ 000	0 <1’000 <5’000	<10’000 <50’000	<250’000 >250’ 000

The terminology used above is based on the UNISDR Terminology 2015/SFDRR Indicator:.

People directly affected *is the sum of people who are:*

- *Injured or ill : The number of people suffering from physical injuries, trauma or cases of disease requiring immediate medical assistance as a direct result of a hazardous event*
- *Evacuated: The number of people who temporarily moved from where they were (including their places of residence, work places, schools, and hospitals) to safer locations in order to ensure their safety. People who, for different reasons or circumstances because of risk conditions or disaster, move temporarily to safer places before, during or after the occurrence of a hazardous event.*
- *Relocated: People who, for different reasons or circumstances because of risk or disaster, have moved permanently from their places of residence to new sites.*
- *People, whose houses (housing units) are damaged or destroyed. All the inhabitants of these houses (housing units) are assumed to be affected being in their dwelling or by direct consequence of the destruction/damage to their housings (housing units). An average number of inhabitants per house (housing unit) in the country can be used to estimate the value.*

Land affected*: yield reduced substantially i.e. a minimum 20% of the land related assets (average yield, trees, soils) is lost due to a hazardous event (see 5. Hazard profile)*
Land destroyed*: Damage to land related assets (average yield, trees, soils) is between 80% to 100%.*

Critical infrastructure: *The physical structures, facilities, networks and other assets that support services that are socially, economically or operationally essential to the functioning of a society or community (UNISDR 2015).*

2.5 Duration since last disaster

Indicate the duration since last the disaster has affected the site(s), beyond recovery capacity of the land user/technology owner.

☐ < 3 month
☐ < 6 month
☐ < 1 year
☐ < 2 years
☐ < 5 years
☐ < 10 years
☐ > 10 years

3. Specification of Disaster Risk Reduction measures

3.1 Protection goal of Technology

*Please reflect the primary **protection goal** of the Technology. Whom and/or what is supposed to be protected from which hazardous event? Also describe against which size and recurrence of hazardous event the technology is designed and which seize of event will go beyond the absorbtion or adaptation capacity of the Technology. Define what is allowed to happen and which repair/maintance works can be borne by the land user/Technology owner, and which damage would go beyond the capacity of the land user/Technology owner. Based on this reflection, please review the question 2.2 of QT and adjust it accordingly.*

Formulate the proteciton goal in one sentence (max 250 characters)

.....

.....

.....

.....

.....

.....

Submit, if you have, additional photos illustrating the hazards affecting the Technology sites (or photos before and after implementaiton)

Filename of photo	*Caption, explanation of photo*	*Date and location*	*Name of photographer*

Submit, if you have, additional videos illustrating the hazards affecting the Technolgy (or photos before and after implementaiton)

Link or filename of video	*Comments, short description*	*Date and location*	*Name of videographer*

3.2 Type/level of DRR measures

To reduce disaster risk in an integrated manner, different types of measures can be implemented. The following typology is based on the Swiss NGO DRR Platform definitions of the different steps of an integrated risk management, building on UNISDR terminology:

- ***Risk Prevention:*** *Regulation and practices that avoid and reduce the creation of new "unacceptable" risks, for example by regulation of harmful emissions, ending the use of toxic substances (for example harmful fertilizers creating off-farm risks), environmental checks for private sector investment, avoidance of aquifer depletion, etc. Risk prevention of "new" risks are mainly directed to man-made (technological, biological, environmental) or mixed man-made/natural hazards.*
- ***Disaster Prevention:*** *Agronomic, vegetative, structural and management measures to avoid materialization of potential "existing" hazards, vulnerability factors and/or exposure through action taken in advance of a hazardous event. Agronomic, vegetative and structural measures encompass for example to increased vegetation cover to reverse or fully stop erosion, drip irrigation to stop salinizaion of soils or terracing to avoid landslides, reforestation to stop desertification. Management measures encompass for example settlement plans that do not permit any housing in risk zones.*
- ***Disaster Mitigation:*** *Agronomic, vegetative, structural and management measures that reduce the adverse impacts of already materialized hazards, vulnerability factors or existing exposure. Mitigation measures encompass often structural (vegetative, engineering) techniques resulting in reinforced built infrastructure. Measures encompass earthquake and storm-resistant construction, flood dams or river bank protection, avalanche protection, elevated houses and similar. It should be noted that in climate change policy, "mitigation" is defined differently, being the term used for the reduction of greenhouse gas emissions that are the source of climate change.*
- ***Preparedness:*** *The knowledge and capacities to effectively anticipate, respond to, and recover from, the impacts of likely, imminent or current disasters. Preparedness action is carried out within the context of DRM and aims to build the capacities needed to efficiently manage all types of emergencies and achieve orderly transitions from response through to sustained recovery. Preparedness is based on a sound analysis of disaster risks and good linkages with early warning systems (such as flood level measuring points), and includes such activities as contingency planning, stockpiling of equipment and supplies (food packages, seed storages), the development of arrangements for coordination, evacuation and public information, and associated training and field exercises. It may as well be directed to increase life saving capacities such as first aid training, swimming courses etc.*
- ***Risk Transfer:*** *The process of formally or informally shifting the financial consequences of particular risks from one party to another whereby a household, community, enterprise or state authority will obtain resources from the other party after a disaster occurs, in exchange for ongoing or compensatory social or financial benefits provided to that other party. Insurance is a well-known form of risk transfer. Another form of risk transfer are solidarity mechanisms at community level that help people to share and bear impacts of a disaster in form of community saving groups, including seed banks to replenish stocks. Remittances, which are generated after a disaster at higher rates, are another example of risk transfer people benefit from.*

To which DRR measure does the Technology belong and at which level does it unfold its DRR effects?

If you select more than one, explain why.

For each selected measure select at which level it unfolds its DRR effects. Several ticks are possible. Specify below the tick box if possible.

	Household level (single site)	Communal level	Sub-national level	National level
☐ Risk prevention	☐ …… …… ……	☐ …… …… ……	☐ …… …… ……	☐ …… …… ……
☐ Disaster Prevention	☐ …… …… ……	☐ …… …… ……	☐ …… …… ……	☐ …… ……
☐ Disaster Mitigation	☐ …… …… ……	☐ …… …… ……	☐ …… …… ……	☐ …… ……
☐ Preparedness	☐ …… ……	☐ …… ….	☐ ……	☐ …… ……
☐ Risk Sharing	☐…… …… ……	☐…… …… ……	☐…… …… ……	☐ …… ……

4. Impact

4.1 Additional benefits of the Technology (ex post - after implementation of the Technology)

Note: *The answers below are complementing the answers given in QT Question 8.1 and 8.2*

First, tick relevant impacts (tick boxes on the left). Then, for each selected impact, tick the extent and specify/quantify if possible.		**Very negative (- 50-100%)**	**Negative (- 20-50%)**	**Slightly negative (- 5-20%)**	**Negligible impact**	**Slightly positive (+5-20%)**	**Positive (+20-50%)**	**Very positive (+50-100%)**		**If possible, quantify before SLM**	**after SLM**	**Comments/ specify**
On-site												
Safety												
☐ safety of people	decreased	☐	☐	☐	☐	☐	☐	☐	increased	.....	.....	.....
☐ evacuation and shelter	decreased	☐	☐	☐	☐	☐	☐	☐	increased	.....	.....	.....
☐ safety of esp. vulnerable	decreased	☐	☐	☐	☐	☐	☐	☐	increased	.....	.....	.....
☐ early warning	decreased	☐	☐	☐	☐	☐	☐	☐	increased	.....	.....	.....
☐ safety of key documents	decreased	☐	☐	☐	☐	☐	☐	☐	increased	.....	.....	.....
Economic goods												
☐ safety of individual housing	decreased	☐	☐	☐	☐	☐	☐	☐	increased	.....	.....	.....
☐ safety of water stocks	decreased	☐	☐	☐	☐	☐	☐	☐	increased	.....	.....	.....
☐ safety of seed/animal stocks	decreased	☐	☐	☐	☐	☐	☐	☐	increased	.....	.....	.....
☐ safety of land assets	decreased	☐	☐	☐	☐	☐	☐	☐	increased	.....	.....	.....
☐ safety of communal assets	decreased	☐	☐	☐	☐	☐	☐	☐	increased	.....	.....	.....
Other impacts												
☐ other (specify):	……..	☐	☐	☐	☐	☐	☐	☐	……	.....	.....	.....
☐ other (specify):	……..	☐	☐	☐	☐	☐	☐	☐	……	.....	.....	.....
☐ other (specify):	……..	☐	☐	☐	☐	☐	☐	☐	……	.....	.....	.....
Off -site												
Other impacts												
☐ other (specify):	……..	☐	☐	☐	☐	☐	☐	☐	……	.....	.....	.....
☐ other (specify):	……..	☐	☐	☐	☐	☐	☐	☐	……	.....	.....	.....
☐ other (specify):	……..	☐	☐	☐	☐	☐	☐	☐	……	.....	.....	.....