



## Report

### **LEARNING EVENT: DRR and water - from local infrastructure to the watershed level 25 October; 9:00 – 17:00, Helvetas office, Bern**

#### **Frame**

Water and disaster risk reduction (DRR) are closely linked and relevant across a wide range of sub-sectors and domains, such as infrastructure, access to water, natural resource management, water governance, sanitation & hygiene risk management. Water related disasters such as floods, storms and droughts are intensified by the effects of climate change and tend to hit particularly the most vulnerable. Furthermore, inadequate, degraded or damaged WASH (water, sanitation and hygiene) infrastructure and inappropriate health and hygiene practices can also trigger disasters, such as contamination or water-related diseases. It is therefore crucial to consider DRR when developing WASH services and infrastructure. The resilience of WASH services to natural disasters needs to be increased by knowing the risks and managing them through preventive and preparedness measures. Nevertheless, there are interesting opportunities to respond to the risks through water management strategies and eco-DRR measures at the broader scale, such as a watershed.

Since 2014 the Swiss NGO DRR Platform organized and contributed to a series of events related to DRR and water/WASH (Aguasan, Face-Face-Workshop etc.), where tools and approaches were developed and presented.

#### **Learning event**

The event is addressed to non-DRR experts interested in the topic, particularly NGOs practitioners and staffs of SDC involved in projects and programmes related to water infrastructure, health & hygiene, natural resource management, water governance etc. The event covers following two aspects:

- 1) DRR & WASH: Focus on the protection of people and infrastructure from water-related disasters.
- 2) DRR at watershed level: Focus on watersheds as source of water-related disasters but also Eco-DRR at watershed level as measures against disasters.

The event is free of charge and open to anyone interested.

#### **Objective**

Enhance the thematic capacities and exchange of participants through:

- i) an overview of tools and guiding concepts (which were partially presented in earlier Platform events),
- ii) practical case study illustrations,
- iii) thematic discussions and exchange amongst practitioners

in order to understand and systematically analyse potential risks in their portfolio and to get an overview of possible tools and risk reduction measures.

Contact: [eveline.studer@helvetas.org](mailto:eveline.studer@helvetas.org).

## Programme

Time	Content
9.10	<i>Introduction: Welcome, Programme</i> Expectations & background of participants
9.40	Introduction: DRR & water (IWRM/WASH) (Agnes Montangero/AM, Eveline Studer/ES)
10.30	Participants' challenges and experience: DRR in water projects Plenary discussion
11.00	<i>Break</i>
11.40	<b>Case studies related to WASH projects:</b> 1) Early warning system in Nepal (World vision, Thomas Kalytta) 2) WASH and DRR in an emergency flood response in Madagascar (Medair, Cyril Eicher) Q&A
12.30	Lessons from WASH in emergency and integration of DRR (AM) Plenary discussion
13.00	<i>Sandwich lunch</i>
14.00	<b>Case study and tool related to IWRM projects:</b> 3) watershed management & DRR in Guatemala (Vivamos mejor, Monika Hess) 4) Water User Master Plan (WUMP) (Helvetas, AM) Q&A
15.00	<b>Tools for DRR (in WASH/IWRM):</b> Overview HVCA, DRR tools, WASH/IRWM tools (AM, ES)
15.30	<i>Break</i>
15.45	Participants' discussion: Entry doors and opportunities to include DRR in WASH/IRWM projects
16.15	Plenary feedback, evaluation and conclusion

## Summary of the Learning Event (\*see separate powerpoint presentations)

### ➤ Introduction / presentation participants:

- The participants were roughly 50% DRR and 50% WASH/water experts.
- Most participants are working on development projects for NGOs.
- The expectations were equally distributed referring to conceptual inputs, practical case studies and networking/general experience sharing.

### ➤ Introduction: DRR & water/WASH\*

Key elements:

- Introduction of the basic concepts of DRR in the context of the water sector.
- Part 1: The problem side:
- What are we talking about -Why DRR?
  - Rationale and DRR basics, water related hazards, disaster impacts in the water sector
- Part 2: The solution side:
- How to do DRR?
  - Concepts of DRR measures, examples of DRR measures in the water sector

### ➤ Participants' challenges and experience related to DRR in water projects.

The main element of the plenary discussion is summarized in the table below.

Entry points and experience	Gaps and challenges
<ul style="list-style-type: none"> <li>• Potential to use climate finance for DRR projects?</li> <li>• Relevance of eco DRR!</li> <li>• Co-benefits of DRR measures should be better capitalized including immaterial co-benefits (emergency committee, emancipation, participation)</li> </ul>	<ul style="list-style-type: none"> <li>• Few tools for multi – hazard risk assessment</li> <li>• Eco DRR – requires more space which a limiting factor can be</li> </ul>

<ul style="list-style-type: none"> <li>• Recommendations: Do no harm, consider potential negative impact of DRR measures</li> <li>• Risk assessments should be integrated into local development plans</li> <li>• Focus on strengthening DRR in times of normality</li> <li>• Building sustainable emergency response committees (incl. DRR/prevention measures at mid-term)</li> <li>• Watershed Committee as mechanism for DRR, which is locally imbedded and active beyond a project</li> <li>• Several tools for Risk assessment / DRR introduction exist</li> </ul>	<ul style="list-style-type: none"> <li>• Potential trade-offs when balancing different risks</li> <li>• Funding is often emergency related and short term</li> <li>• There is a gap of scientific evidence on climate change, especially at the local level</li> </ul>
--	--

### **Lessons from WASH-interventions in emergency and integration of DRR\***

Key elements: An assessment of WASH interventions in emergency contexts with a focus on LRRD (linking rehabilitation reconstruction with development). The analysis and recommendations indicate that DRR (DRR elements in WASH projects) can help to embed WASH emergency interventions in the local structures/institutions, supporting the results' sustainability. Awareness raising, and risk assessments were identified as crucial entry points. In a nutshell DRR components can act as nexus/LRRD element.

#### **Case study 1) Floods early warning system in Nepal\*** (World vision, Thomas Kalytta)

Key elements: web-based floods early warning system as core element of a DRR project, alert dissemination and preparation, legal basis as important entry point, capacity building of local committees.

3 factors of success: Ownership by the local Government, integration into the existing National Flood EWS, community empowerment.

#### **Case study 2) WASH and DRR in an emergency flood response in Madagascar\*** (Medair, Cyril Eicher)

Key elements: Emergency context leading to contamination and epidemics. Interventions: rehabilitation of waterpoints, working with local community-based organisations, capacity building, support to humanitarian coordination, linkages to governmental partners

3 factors of success: Community participation, ownership, institutional awareness

#### **Case study 3) DRR/CCA with a watershed approach in Guatemala\*** (Vivamos mejor, Monika Hess)

Key elements: watershed approach to increase the effectiveness of DRR measures, integrated view on risks, Hazards-Vulnerability-Risk assessment, GIS-maps, watershed committees, action plan for upper and lower watershed, eco-DRR measures, training civil protection.

3 key learnings: 1) Watershed approach to increase the effectiveness of DRR measures 2) Measures at the upper watershed benefit the lower part 3) added value for other DRR and WASH projects to implement measures based on the watershed action plan in coordination with the Watershed Committees.

#### **Tool for DRR in IWRM projects 4) Water User Master Plan (WUMP)\*** (Helvetas, Agnes Montangero)

Key elements: Participatory tool for water resource planning and management, analysis of water sources/availability and needs of resources, consideration of floods/drought factors influencing the availability and user's needs. IWRM tool adjusted with DRR/CCA aspects in Pakistan and Nepal.

#### ➤ **Tools for DRR (in WASH/IWRM) – a tentative overview\***

Key elements: many tools were developed, the one fits-all tool does not exist.

Tools can mainly be classified into

- 1) Risk assessments for Project planning (CEDRIG etc)
- 2) Community based-planning (HVCA, Cristal, PACR etc.)
- 3) DRR aspects in WASH sector (some interesting examples from Peru, Nicaragua and the humanitarian sector)
- 4) DRR aspects in for IWRM (WUMP, blue diamond).

> see separate presentation and sources in the reference list below.

Conclusions and recommendations: it's about results AND the process, helps to ask right questions and identify gaps of scientific data / local data, recognize limitation of tools.

## Recommendations for entry points to include DRR in Water projects

(Participants' discussion)

DRR in Watershed management projects	DRR in WASH projects
<ul style="list-style-type: none"><li>• <b>Risk Assessment as key starting point</b></li><li>• <b>Link watershed management to land use management</b></li><li>• <b>Create synergies so that watershed management can benefit WASH projects</b></li><li>• Watershed management is already a DRR measure</li><li>• Multi Seasonal/hazard Assessment are crucial</li><li>• Start Small but with good quality</li><li>• Identify key actors in watershed</li><li>• Consider gender perspective</li></ul>	<ul style="list-style-type: none"><li>• Know the stakeholders</li><li>• Learn from their disaster risk perceptions</li><li>• Combine with current scientific knowledge</li><li>• Priorities the efficient and effective solutions</li><li>• Appropriate budget and viable financial solutions</li><li>• Capacity building and local empowerment</li></ul>

### Reference List:

#### Tools:

- [Mitigacion en agua y saneamiento rural Peru \(2011\)](https://www.shareweb.ch/site/DRR/Documents/To%20sort/Guidance_Mitigation_Water_Rural_Sanitation_WASH_SANBASUR_Spanish.pdf)  
[https://www.shareweb.ch/site/DRR/Documents/To%20sort/Guidance\\_Mitigation\\_Water\\_Rural\\_Sanitation\\_WASH\\_SANBASUR\\_Spanish.pdf](https://www.shareweb.ch/site/DRR/Documents/To%20sort/Guidance_Mitigation_Water_Rural_Sanitation_WASH_SANBASUR_Spanish.pdf)
- Reduction of vulnerability in WASH systems: Conceptual framework and Instruments Central America  
[https://www.shareweb.ch/site/DRR/Documents/Resources/Manual\\_Central\\_America\\_DRR\\_WASH\\_SDC\\_Spanish.pdf](https://www.shareweb.ch/site/DRR/Documents/Resources/Manual_Central_America_DRR_WASH_SDC_Spanish.pdf)  
[https://www.shareweb.ch/site/DRR/Documents/To%20sort/Experience%20shared%20by%20members/Manual\\_Central\\_America\\_DRR\\_WASH\\_SDC.pdf](https://www.shareweb.ch/site/DRR/Documents/To%20sort/Experience%20shared%20by%20members/Manual_Central_America_DRR_WASH_SDC.pdf)
- [Water use masterplan \(WUMP\): Facilitators manual Nepal \(2015\)](https://www.shareweb.ch/site/DRR/Documents/About%20Us/Publication_Nepal-WaterUseMasterplan_FacilitatorsManual_Helvetas_2015.pdf)  
[https://www.shareweb.ch/site/DRR/Documents/About%20Us/Publication\\_Nepal-WaterUseMasterplan\\_FacilitatorsManual\\_Helvetas\\_2015.pdf](https://www.shareweb.ch/site/DRR/Documents/About%20Us/Publication_Nepal-WaterUseMasterplan_FacilitatorsManual_Helvetas_2015.pdf)  
[https://www.helvetas.org/Publications-PDFs/13\\_waterusemasterplan\\_wump\\_blaue\\_final\\_engl\\_a4\\_portrait.pdf](https://www.helvetas.org/Publications-PDFs/13_waterusemasterplan_wump_blaue_final_engl_a4_portrait.pdf)
- DRR and water, sanitation and hygiene; comprehensive guidance  
[https://www.preventionweb.net/files/25105\\_disasterriskreductionandwashcompreh.pdf](https://www.preventionweb.net/files/25105_disasterriskreductionandwashcompreh.pdf)
- Guía orientativa de incorporación de la Reducción del Riesgo de Desastres (RRD) y la Adaptación al Cambio Climático (ACC) en Planes de Desarrollo Municipales y Departamentales  
[http://www.rrd.com.bo/wp-content/uploads/2015/publi\\_fases/fase\\_03/24guia\\_orientativah1.pdf](http://www.rrd.com.bo/wp-content/uploads/2015/publi_fases/fase_03/24guia_orientativah1.pdf)
- Where the land is safer: compendium of DRR practices  
<https://drrplatform.org/publications.html>
- CEDRIG (Climate, Environment and Disaster Risk Reduction Integration Guidance)  
<https://www.cedrig.org/>
- CRiSTAL (**C**ommunity-based **R**isk **S**creening **T**ool – **A**daptation and **L**ivelihoods)  
<https://www.iisd.org/cristaltool/>
- PACDR (Participatory Assessment of Climate and Disaster Risks)
- [https://brotfueralle.ch/content/uploads/2014/04/PACDR\\_E\\_Ver7-April-2017.pdf](https://brotfueralle.ch/content/uploads/2014/04/PACDR_E_Ver7-April-2017.pdf)
- VCA (Vulnerability and Capacity Assessment: <https://www.ifrc.org/vca>)

#### Background documents

- [AGUASAN Briefing note DRR and Water Supply-Sanitation-Hygiene \(WASH\)](https://www.shareweb.ch/site/DRR/Documents/About%20Us/AGUASAN_BriefingNoteDRR-WASH-2015.pdf)  
[https://www.shareweb.ch/site/DRR/Documents/About%20Us/AGUASAN\\_BriefingNoteDRR-WASH-2015.pdf](https://www.shareweb.ch/site/DRR/Documents/About%20Us/AGUASAN_BriefingNoteDRR-WASH-2015.pdf)
- F2F 2015: Integrated Flood Management: Acting locally, linking beyond  
<https://drrplatform.org/images/DocPub/F2F-2015-Report-EST-010216.pdf>

#### Contributions from LE participants:

- SDC Regional Seminar on DRR, water management and climate change in Central Asia and the South Caucasus <https://www.shareweb.ch/site/DRR/Pages/Content/Event-Detail.aspx?ItemID=359>
- UNEP, River Partners – Applying Ecosystem-based Disaster Risk Reduction (Eco-DRR) in Integrated Water Resource Management (IWRM) in the Lukaya Basin, Democratic Republic of the Congo  
<https://www.unenvironment.org/es/node/920>  
[https://postconflict.unep.ch/publications/DRCongo/DR\\_Congo\\_Eco\\_DRR\\_case\\_study\\_2016.pdf](https://postconflict.unep.ch/publications/DRCongo/DR_Congo_Eco_DRR_case_study_2016.pdf)

**Participants List:** Klicken Sie hier, um Text einzugeben.

	First Name	Name	Email	Organisation	Position	role
1	Ana	Rodriguez Seco	arodriguez@daraint.org	Daraint	Researcher	Participant
2	Samuel	Awuku	akassattuah@gmail.com		Deputy Environmental Manager	Participant
3	Stephan	Dona	donastephan@yahoo.fr	Plan	Program Unit Manager	Participant
4	Olaf	Schoensee	o.schoensee@worldvision.ch	Worldvision	Länderverantwortlicher	Participant
5	Lionel	Grosperrin	lg@swissfreshwater.ch	swissFreshwater	Responsable technique	Participant
6	Daniele	Polini	d.polini@swissaid.ch	SwissAif	Programme Manager	Participant
7	Andreas	Thiess	athuess@gmx.ch	SDC/SHA	Member Construction Group	Participant
8	Marina	Cracco	marina.cracco@epfl.ch	EPFL	Scientist	Participant
9	Alexia	Knezovic	alexia.knezovic@bruecke-lepont.ch	Bruecke Le pont	Program Manager Africa	Participant
10	Mirjam	Nufer	mirjam@nufer.me			Participant
11	Jacqueline	Schmid	sjc@eda.admin.ch	SDC/HA	SDC / DRR Policy Advisor	Participant
12	Juerg	Staudenmann	juerg.staudenmann@alliancesud.ch	Alliance Sud	Climate & Environment Policy Advisor	Participant
13	Hossein	Sarem Kalali	hsaremkalali@yahoo.com	BfA		Participant
14	Piotr	Bednarz	piotr.bdz@gmail.com			Participant
15	Yan	Weber	weber@vivamosmejor.ch	Vivamos Mejor	Project manager	Participant
16	Renaud	de Watteville	rw@accesstowaterfoundation.org	Access To Water Foundation	President	Participant
17	Lysann	Seifert	lysann.seifert@heks.ch	Heks	Admin. Assistant Humanitarian Aid	Participant
18	Sophie	Brown	sophie.brown@un.org	UN Environment	Programme Advisor, Project Coordinator, Rapid Environmental Assistance	Participant
19	Ernst	Schaltegger	schaltegger@innovabridge.org	Innovabridge	Environment and Sustainable Livelihoods	Participant
20	Monika	Hess	hess@vivamosmejor.ch	Vivamos Mejor	Projetleiter	Case study presenter
21	Thomas	Kalytta	t.kalytta@worldvision.ch	Worldvision	Country PM Nepal Focal Person, DRR& CC & Environment	Case study presenter
22	Cyril	Eicher	eval-mdg@medair.org	Medair	DRR Advisor / M&E Officer	Case study presenter
23	Montangero	Agnes	Agnes.Montangero@helvetas.org	Helvetas	Teamleader Water & Infrastructure	organizer
24	Eveline	Studer	eveline.studer@helvetas.org	Helvetas	Advisor DRM	organizer