



SWITZERLAND'S POSITION¹ ON THE POST-2015 FRAMEWORK FOR DISASTER RISK REDUCTION



This paper proposes four key elements that Switzerland considers important to be promoted. First, it is paramount to develop a comprehensive understanding of the disaster risk landscape. Second, investors – be they public or private – must avoid building-up new disaster risks. Third, existing risks should be further reduced based on a clear prioritization of risks. Finally, governments are encouraged to create an enabling environment conducive to strengthening governance and accountability in disaster risk management.

Although this proposal focuses on the post 2015 DRR framework, the different simultaneous multilateral processes such as the post-2015 development agenda, the climate change negotiations and the World Humanitarian Summit provide a unique opportunity to ensure linkages with DRR. These frameworks should complement and reinforce each other and not be dealt in isolation. It is important to consider the HFA2 also as a relevant implementing tool for the other frameworks.

In this paper, disaster risk reduction focuses on risks arising from sudden and slow onset disasters (such as earthquakes, floods, hurricanes and drought, environmental degradation, or desertification) and from environmental emergencies (such as the release of hazardous and noxious substances from a factory after an earthquake).

The terminology on DRR used in this paper is largely based on the UNISDR's Terminology².

- **Disaster** is a serious disruption of the functioning of a community or a society involving widespread human, material, economic or environmental losses and impacts, which exceeds the ability of the affected community or society to cope using its own resources. Disasters are often described as a result of the combination of: the exposure to a hazard; the conditions of vulnerability that are present; and insufficient capacity or measures to reduce or cope with the potential negative consequences.
- **Hazard** is a dangerous phenomenon, substance, human activity or condition that may cause loss of life, injury or other health impacts, property damage, loss of livelihoods and services, social and economic disruption, or environmental damage. It is defined based on its **probability of occurrence and its intensity**.
- **Vulnerability** depends on the **characteristics and circumstances** of a community, system or asset that make it **susceptible** to the **damaging effects of a hazard**. There are many aspects of vulnerability, arising from various physical, social, economic, and environmental **factors**.
- **Risk** is defined as the combination of the probability of an event and its negative consequences; the consequences refer to the **exposure to the hazard** and the **vulnerability**.
- **Environmental emergencies** are sudden-onset disasters or accidents resulting from natural, technological or human-induced factors, or a combination of these, that cause or threaten to cause severe environmental damage as well as loss of human lives and property³.

1 The position paper was developed by the Swiss HFA2 working group composed of representatives from the Swiss Agency for Development and Cooperation (SDC), the Federal Office of Environment, the Federal Office of Civil Protection, PLANAT, the Swiss NGO Platform DRR, Cantons and SDC DRR network. The position paper is not a full description of all DRR dimensions that are required for a comprehensive approach.

2 <http://www.unisdr.org/we/inform/terminology>

3 UNEP/GC.22/INF/5, 13 November 2002

1. Know Your Risk

- Bear in mind intensive and extensive⁴ risks while identifying and analysing all types of risks
- Know all your risks and make information on risk available to all
- Consider that hazards, exposure and vulnerabilities are changing

A society can only deal effectively with shocks and stresses if it has an in-depth **overview of all prevailing risks and their complex interconnectedness**. The risks have to be evaluated, prioritised in each country at all administrative levels in order to decide which risks need to be focused on. These efforts are based on comprehensive and broad analyses of all type of risks a society is facing (related to natural, political, technical, economic and other hazards and threats) and of all different scales of risks – both intensive or extensive. The quantification of risks is an important premise in the risk management process.

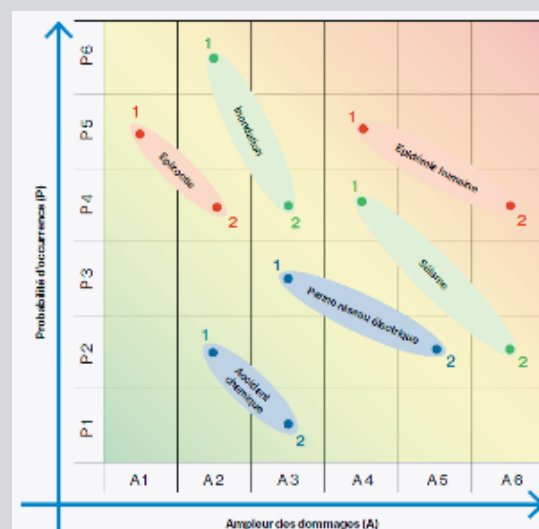
Even though **recurrent smaller scale disasters** (extensive) are usually not included in risk inventories and do not make media headlines, they often cause most of the losses of the most vulnerable groups, limit development opportunities and undermine state and household budgets. Extensive (small scale) risks can often be reduced in a cost-efficient way through adequate prevention and preparedness measures and deserve greater attention.

All stakeholders/decision-makers need to have access to the relevant data and information. **Information about prevailing risks** is a key for awareness of particular stakeholders and the population at large. Access to information at local level, i.e. policies and regulations, early warning, risk data and investment plans has to be enhanced and **local knowledge and information have to be collected and incorporated** into national plans.

Risks are influenced by the exposure of people and assets to the hazard and by the vulnerability of people and systems. All these factors have changing patterns in time and therefore need constant monitoring. Currently the focus is still on the changing pattern of the hazards expected to increase in frequency and in intensity due to climate change or environmental degradation. **Too little attention is paid to the changes in vulnerability and exposure**. Weak understanding of the risks, inappropriate land use planning, poor construction quality, increased disparity and the lack of enforcement of the rule of law are by far the main causes of the increase in negative impacts.

Swiss experience Kataplan

In order to obtain a systematic overview of the hazard potential of possible disasters and emergencies, Switzerland performs a comprehensive disaster risk analysis at the national and cantonal level. This involves identifying the spectrum of possible hazards and threats, developing specific scenarios, analysing their impacts in a systematic manner, and assessing the likelihood of occurrence for the scenarios described. With the National and Cantonal Disaster Risk Analyses, Switzerland develops a detailed basis for preparedness planning in disaster management at the two levels of government. This analysis is also applicable at the municipal level. In addition, for the local (municipal) level in particular, hazard maps serve as a basis for risk-informed town planning, including prevention and mitigation of natural disasters and preparedness for emergencies (see also box 3).



Generic risk matrix at the cantonal level: consequences * probability of occurrence for a number of hazards in Switzerland

4 **Intensive risk**: the risk associated with the exposure of large concentrations of people and economic activities to intense hazard events, which can lead to potentially catastrophic disaster impacts involving high mortality and asset loss.

Extensive risk: the widespread risk associated with the exposure of dispersed populations to repeated or persistent hazard conditions of low or moderate intensity, often of a highly localized nature, which can lead to debilitating cumulative disaster impacts.

2. Prevent the Build-up of New Risks: Towards Risk-Informed Sustainable Development

- Consider disaster risk reduction as a cost effective and cross cutting aspect of sustainable development
- Systematically consider risks and risk reduction in all relevant sectors (mainstreaming) and integrate them in policy, strategies, programmes and project design.
- Reduce the root causes of vulnerability and build resilience in long-term development planning

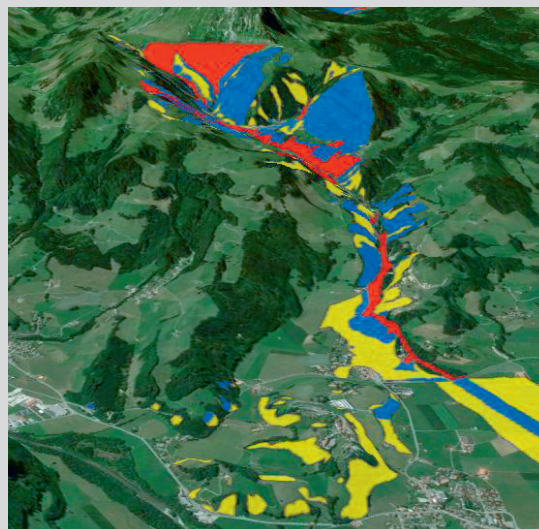
Despite major achievements in DRR in the past years, the drivers of risk have not yet been adequately tackled. Risk-blind investments that lead to an over-exploitation of resources are factors that put people even further at risk. Development cannot be sustainable without ensuring that its economic, social and environmental aspects are protected from disasters which often threaten human life, people's health, livelihood and security and destroy development gains. Embedding the principles of **DRR in development planning is a crucial and cost-effective tool to contribute to eradicating poverty and building resilient societies.**

There have been calls for further investment in **safe development across all sectors and more resilient livelihoods.** Nevertheless, the use of detailed risk assessment in development planning and design or cost-effectiveness considerations for risk reduction measures are still widely missing. But prevention pays off: investing in increased safety and security of development endeavours (risk-informed planning and design) will prevent future losses; preventing these future losses is the first and most cost-effective measure in an integrated risk management approach.

Poor individuals, households or communities are often disproportionately affected by disasters and invest significant financial means to recover from them. High vulnerability (e.g. as a result of poverty, poor governance, discrimination, inequality and inadequate access to resources and livelihoods) results in low resilience against shocks and stresses and in the risk of falling into the poverty trap. **Reducing the root causes of vulnerability is clearly beyond a humanitarian approach and should be well anchored in development agendas.**

Swiss experience Hazard maps as tools for land-use planning and development at the local level

About 93 % of Swiss communes have developed natural hazard maps for floods, rockfalls, landslides and snow avalanches. Most of the maps are available online. The hazard maps serve as a baseline for developing/adapting land use plans or zoning. These zones determine the possible/legal utilisation of the particular area (the high hazard zones – in red – are generally prohibited zones: no further development is possible; development in the moderate hazard zones – in blue – is possible with certain restrictions, e.g. local proofing; for the low hazard zone – in yellow – indications are provided about prevailing hazards and possible threats, however, no binding restrictions apply to private land owners; such hazards have to be considered only for the lifeline infrastructure). Furthermore, easy public access and full coverage should encourage individuals to assume greater responsibility for taking appropriate measures in case they are located in a hazard-prone zone.



Extract of the multi-hazard map of Canton Fribourg. Knowing the hazards is one step towards knowing the risks.

3. Reduce Existing Risks

- Consider the characteristic of the risks to plan for adequate reduction measures
- Advocate avoidance or reduction of exposure
- Strengthen preparedness at all levels in keeping with a multi-risk approach
- Promote the use of financial risk transfer tools
- Create incentives together with risk reduction measures

Once you know your risks, **the characteristic of the risks** have to be considered in order to select the most appropriate mix of measures. Some parts of the risks can be avoided; others mitigated, or managed by preparing to respond to and recover from the effects of an event. There will always be a residual risk which has to be accepted and tolerated as a potential loss.

The permanent or temporal reduction of exposure is a cost-effective and efficient measure to avoid losses, in particular human losses, through people-centred early warning systems and adapted land-use regulations, especially in urban settings.

Strengthen preparedness for better response:

The capacities needed to respond (e.g. emergency units, fire brigade) are often the same for different disasters. Training programmes should take into account multiple threats (e.g. floods, earthquakes, chemical accidents). Additionally, ordinary people and communities **are often first responders** to disaster; they have to be trained and adequately equipped to be able to cope with such events.

Importance of giving risk a price and transferring risks:

While cost-efficient prevention measures are available in different locations, no individual, business and public institution can afford to prevent losses from every conceivable risk event. This is especially true for events that are unlikely to occur or that can only be avoided at an enormous cost, as it is the case for large scale disasters. In these cases, insurance can play an important role in helping individuals, communities and businesses to recover from the devastation wreaked by severe natural hazards. Insurance and other financial protection tools add to the resilience of households, communities and societies, providing them financial resources to recover swiftly from the effects of disasters. Important, however, is that risk prevention and risk transfer are mutually reinforcing. While insurance is a useful aspect when dealing with disaster risks, keeping insurance prices in check by minimizing residual risks through prevention measures is equally important. Close cooperation between public and private sectors is essential when introducing financial protection mechanisms.

Vulnerable and poor households and communities often do not consider increased safety and security as a high priority as these aspects are only tangible when a disaster strikes. Therefore it is important to implement DRR measures that at the same time also **improve access to services and offer opportunities to improve the livelihood of individuals and communities over the long term.**

Swiss experience Local hazard experts



Training of local experts

Since the 1960s local snow avalanche experts have been trained in the mountainous regions of Switzerland to deal with avalanche situations on site. They are trained to communicate national and regional warnings at a local level, to evaluate hazard/risk situations on-site and to provide their experience to the local risk and emergency management authority (e.g. for temporal closure of roads, artificial avalanche release and general risk management support). These local avalanche experts were such a success that following the major flooding in 2005 it was decided to extend the “local experts” approach to other natural hazards, especially floods. Since then, local natural hazard experts have been trained by the cantons to serve the municipal authorities or communities. In case of an event, they are able to interpret hazard and risk information in the local context. All receive the same basic training which is then adapted to the local conditions.

4. Enabling Environment: Governance and Accountability

- **Develop a legal framework towards comprehensive DRR**
- **Define clear roles and responsibilities of all relevant stakeholders at all levels that are followed by suitable capacities and budget**
- **Apply an integrated disaster risk management approach**
- **Strengthen and give a voice to communities**
- **Involve the private sector**
- **Measure progress in DRR and hold those responsible accountable**

A **legal framework**, which considers disaster risk issues at all levels and in all relevant sectors, is a fundamental requirement for successful disaster risk reduction. It has to guarantee and grant access to data and information about risks and risk reduction approaches.

The **definition of clear roles and responsibilities** at all relevant administrative levels (national, district, municipal) and for all stakeholders (state authorities, private sector institutions, academic sector, international and non-governmental organisations and civil society) is necessary to effectively address the prevailing risks and respond to disasters. Joint planning of DRR activities by all actors – governmental and non-governmental bodies – creates synergies and reduces duplication. Decision making should be transparent and based on a participative approach. Considering that natural and other hazards impact first and foremost local communities, the reduction and management of the risks of such events needs to be well anchored at the district and municipal level. Responsibilities and rights have to be delegated as far down to ensure that local knowledge is valued, ownership guaranteed and individual responsibility strengthened considering the limit of each level's capacity. In order to ensure that each individual and organisation responsible can play its respective role it is essential that **suitable resources are allocated accordingly**, such as capable human resources, financial means and decision making power including participatory and transparent budgeting processes.

An **integrated disaster risk management approach** is based on sound knowledge of the characteristics of all prevailing risks. It sees mitigation, preparedness, response and recovery as complementary mechanisms which need to be combined in the appropriate way to achieve a level of safety and security that is sustainable, i.e. economically viable, socially acceptable and environment friendly.

Another crucial element for successful DRR is an overall awareness and technical capacity for DRR issues at all administrative levels and among the population. **Participatory multi-stakeholders** partnerships at local level including the active participation of **communities** are key to strengthen resilience of communities in a fast-changing, complex and uncertain risk environment.

The private sector has to be fully included in DRR efforts. A large part of worldwide investments are of private nature. Natural hazards mostly affect the private persons and businesses. Private businesses have to protect their assets, their workforce, and their supply and distribution chains in order to keep functioning. The private sector's expertise should also be acknowledged and fully used to identify risks and develop reduction measures.

The **progress in DRR should be regularly monitored**, milestones defined and published within a shared **accountability framework**. The overall political responsibility lies at the national level and should be accountable to the local level. The reporting system should offer pertinent performance indicators and accommodate specific needs, be fully adaptable to changes and should support the steering process and be consistent with the targets and indicators of the SDGs.



Swiss experience

Clarification of the roles and responsibilities between various stakeholders

In the context of the reorganisation of the financial mechanism between the Confederation and the cantons, the clarification of the roles and responsibilities between the Confederation and the cantons in the field of disaster risk reduction has been intensively discussed with all stakeholders and consequently reorganised. All public actors know what their role is, allowing them to work and react in an adequate and timely way.

Insurers are an important private sector partner for DRR. Insurers and the public sector agreed on ten key working areas with corresponding joint projects, ranging from the geographical information systems (GIS) Hazard platform to risk based design level for protective works. The cooperation between private and public sectors can contribute to filling critical gaps and to substantially reducing risk.



Watershed management using reforestation and slope stabilization (gabion)

Why does disaster risk reduction matter?

Disasters often threaten human life, people's health, livelihood and safety. Moreover, they can impact heavily on the environment, put communities further at risk, and destroy development achievements. The exposure and vulnerability due to on-going population growth, unplanned urbanisation, environmental degradation and increasing poverty are expected to increase in the future if not addressed properly. On top of that, the effects of climate change, in particular through increased frequency (and to a lesser extent the higher magnitude) of large-scale hazardous events (e.g. storms, floods, prolonged droughts, pests, etc.), put another burden on those who are already vulnerable. These trends highlight the need for strong concerted action regarding implementing an integrated risk management (IRM) approach and enhanced capacity building at local and national levels.

Despite escalating economic losses due to disasters, the international aid community continues to focus on responding to disasters and their aftermath with more than 95% of humanitarian finance spent on these phases of the risk cycle, and less than 5% spent on reducing the underlying risk factors, i.e. prevention and preparedness. However, there is clear evidence that the benefits of prevention and preparedness measures are substantial in terms of tangible savings: prevention and preparedness pay off! Without a significant increase in prevention investments, the spending on relief and reconstruction is likely to become even more unsustainable than it is today.

What is the added value of disaster risk reduction for other sectors?

Disaster risk reduction is a tool to increase safety and security (reduced risks and reduced subsequent losses) and requires concerted action from all relevant stakeholders – it's everybody's business! Nowadays, the concept of resilience might bridge the gap between different but related sectors such climate change adaptation, livelihood improvement, food security or natural resources management. In this context, the interlinkages among disaster risk reduction, recovery and long-term development planning needs further strengthening.

New ways are required to shift from failing development endeavours (due to stress or shocks from natural hazards) to sustainable risk-informed development planning and implementation. Urban planners, agronomists, health or water specialists and civil engineers are important partners for DRR. They require adequate training to incorporate DRR in their daily work. Knowledge transfer and experience sharing at the various technical levels is crucial.