

**Astana Water Action (AWA)
Actions by SWITZERLAND**

Country: Switzerland

Expert:

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Title of the action :

Promoting the concept of integrated water management

Overview of progress made

(a) *Has the action been implemented?*

Yes , in progress

The code of practice of integrated management of water at basin in Switzerland basin management provides the methods and the tools to implement the 2011 guiding principles for watershed management. Rather than uniform standard solutions, it provides options for implementation illustrated by case studies through methods, tools and implementation models which have been proven in practice. It is addressed first to the cantonal services, the specialized services of cities and of the federal State in charge of water management.

The present guide will only be available on the internet to allow for an on-going updating in function of new knowledge and new practices.

The individual steps of the management process cycle, from the initiation of the exercise, strategic planning through implementation to the evaluation of effectiveness are described. In addition, further sections are foreseen on the prerequisites for the management process, in particular process steering, participation, funding and monitoring.

It is completed by a present set of check lists in the format of tables, such as the checklist of sectors related to water management with a view to identify their interests, uses and needs, such as those of water supply, to those of soil protection. Another checklist of tasks and relevant instruments for planning water management includes hazard maps, spatial plans and renaturation planning. There is also an analysis grid to identify the needs for cross-sectoral cooperation.

http://www.bafu.admin.ch/wasser/01444/08981/index.html?lang=en#sprungmarke3_27 : only in German and French:

<http://www.bafu.admin.ch/wasser/index.html?lang=en>: English General website on IWRM

<http://www.bafu.admin.ch/wasser/01444/08981/index.html?lang=en>: in English, watershed management

(b) *What challenges were encountered during the implementation of the action?
What lessons were learned?*

IWRM is not a panacea for all sorts of water related problems, nor is it a goal in itself. The increased efforts that come along with the implementation of IWRM-principles in concrete projects are only justified in situations with considerable need of coordination (between sectors and political-administrative borders). It is often not

a straight-forward choice to assess the correct level of coordination.

This differentiated perspective makes it difficult to bridge the gap between general and abstract guiding principles and codes of practice to the actual level of action, i.e. the concrete watershed with its peculiarities. The abundance of “paperwork” on IWRM does often not meet the needs at the “level-of-action”.

(c) What future steps, if any, are planned in relation to the action implementation/follow up?

The present guide will only be available on the internet to allow for an on-going updating in function of new knowledge and new practices.

In addition, further sections are foreseen on the prerequisites for the management process, in particular process steering, participation, funding and monitoring. Publication is planned for end 2013.

Usefulness of the Astana Water Action

Please indicate how strongly you agree or disagree with the following statements and provide an explanation, as appropriate.

(a) The Astana Water Action was useful to strengthen political support related to sustainable water management issues:

somewhat disagree

This activity was already planned at the national level, but the Astana Water Action gives the opportunity to Switzerland to spread information at the international level among other countries. This could give rise to focused exchanges between countries

(b) The Astana Water Action has helped my country to comply with its international obligations:

strongly agree

This is fully in line with the implementation of the Helsinki Water Convention.

(c) Would your country be interested in continuing to submit and monitor new actions within the AWA framework in the future?

Yes

The exchange on national experiences can be very useful. Therefore, there is a need to follow on these activities, as long as countries are interested to participate and report or even register new actions. It would also be useful to see how these activities can be on a joint information platform between EFE and the Water convention. For the time being, AWA is only in the convention program of work on this one-time reporting. A discussion pertaining to its future could be initiated in the convention at the September meeting of the IWRM group of the convention. It could provide proposals to the CEP meeting of October. The convention is also considering reporting on the convention. Such reports on actions could be part of the reporting as fagships/good

practices/examples.

Title of the action

Water quality: Mitigating micropollutants from point and diffuse sources

Overview of progress made

(a) *Has the action been implemented?*

Yes, in progress

The Federal Office for the Environment launched the “Micropoll Strategy” project in 2006 with the aim of developing a strategy to tackle micropollutants in municipal wastewater. Various studies over recent years showed that treated municipal wastewater contributes significantly to reducing pollution from micropollutants in water supply and to the ecosystems. This contamination can be minimized by upgrading current wastewater treatment plants to include an additional treatment step. In the ‘Micropoll Strategy’ project complementary treatment steps have been evaluated. This report shows that water quality can be significantly improved using processes such as powdered activated carbon adsorption or ozonation.

<http://www.bafu.admin.ch/publikationen/publikation/01661/index.html?lang=en>: English

Around a hundred Swiss wastewater treatment plants (WWTP) need to be upgraded so that they can apply these processes and thereby halve the levels of micropollutants entering waters via treated wastewater. The Federal Council has proposed special funding to cover 75 per cent of the start-up costs: all Swiss WWTPs will pay a levy based on the number of customers they have. The necessary legal basis will be created by an amendment to the Water Protection Act (GSchG). The consultation process on this proposed amendment to the law finished at the end of August 2012 (see also section 3.6). The Federal Council has agreed on the proposal. It is now in the Parliament that will examine it in the second half of 2013, beginning 2014.

At the same time, the detection of micropollutants in drinking water has led the federal authorities to publish a guide for use on assessing these unregulated substances. This assessment of substances that have recently been identified and whose toxicity is not known is based on the “Threshold of toxicological concern. This concept takes account of the precautionary principle and sets a maximum threshold for potentially genotoxic substances (around 0.1 µg/litre) and another threshold for all other substances (100 µg/litre).

In the framework of its “Status report 2010-2102 on the implementation of the protocol on water and health in Switzerland (art. 7)”, Switzerland also proposes a new target for its reporting: “The Water Protection Ordinance is amended to include micropollutants. The treatment capacity of wastewater treatment plants for micropollutants is to be more than doubled”.

(b) *What challenges were encountered during the implementation of the action?
What lessons were learned?*

(c) *What future steps, if any, are planned in relation to the action implementation/follow up?*

The Federal Office for the Environment is currently engaged in a long-term project aimed at reducing and preventing the discharge of micropollutants into waters from diffuse sources. It is investigating the following issues:

Situational analysis: production of a survey of diffuse sources and substance groups entering surface waters from these sources, and an initial assessment of the relevance of various combinations of sources and substance groups.

Survey and assessment method: establishing the principles to be used to survey and assess

micropollutants in surface waters from diffuse sources.

Scientific principles: research projects are to be carried out to plug gaps in knowledge that are relevant to the project.

Usefulness of the Astana Water Action

Please indicate how strongly you agree or disagree with the following statements and provide an explanation, as appropriate.

(a) *The Astana Water Action was useful to strengthen political support related to sustainable water management issues:*

somewhat disagree

See first action

(b) *The Astana Water Action has helped my country to comply with its international obligations:*

Strongly agree

This is fully in line with the implementation of the Helsinki Water Convention and the Protocol on Water and Health.

(c) *Would your country be interested in continuing to submit and monitor new actions within the AWA framework in the future?*

Yes

See first action

Title of the action:

Remediation of hydromorphological alterations: Strategic planning by the cantons

Overview of progress made

(a) *Has the action been implemented?*

Yes and in progress

To respond to the hydromorphological pressures due to river corrections, flood control measures and hydropower production, an amendment of the Swiss Water Protection Act (including, in support, a financing scheme of the Confederation) has entered into force in 2011. Until 2014, the cantons must develop their strategic planning of rehabilitation activities for rivers and of mitigation measures with regard to hydropower production. Strategic planning of restoration

activities for lakes must be finalized by 2018.

The Federal Office for the Environment offers technical aid and communication tools through its website and has drafted guidance to help cantons in their planning on renaturation of rivers and lakes, flood plains, restoration of fish migration and bedload sediment regime, sluicing water sanitation and coordination of water management. It is also publishing a regular newsletter (in German and French: <http://www.bafu.admin.ch/umsetzungshilfe-renaturierung/11367/index.html?lang=fr>).

The cantons have until 31st December 2013 to send their intermediate plans of measures pertaining to the restoration of bedload sediment regimes, especially in those areas where it damages flora and fauna, their biotopes, groundwater regime or flood protection. This should also include the list of potential ecological values of damaged river sections, including a list of all hydropower plants that are either damaged or damaging for the rivers. Some have already done so as in early 2013. In 2011 and 2012, a dozen of renaturation projects already took place in 8 cantons for a total of US\$ 12.5 million.

Most of the intermediate strategic plans for fish migration were received on time. They are now being discussed with cantons in case amendments need to be made.

*(b) What challenges were encountered during the implementation of the action?
What lessons were learned?*

To get the necessary space required for proper revitalisation is difficult. Conflicts on the necessary space in particular with agriculture and in urbanized areas.

(c) What future steps, if any, are planned in relation to the action implementation/follow up?

Until 2015, the cantons must develop their strategic planning of rehabilitation activities for rivers and of mitigation measures with regard to hydropower production. Strategic planning of restoration activities for lakes must be finalized by 2018.

Title of the action:

Climate change adaptation: Adaptation strategy for Water Management

Overview of progress made

(a) Has the action been implemented?

Yes, in progress

Under the project «Climate Change and Hydrology in Switzerland» (CCHydro) run by the Federal Office for the Environment (FOEN), the effects of climate change on the water balance in Switzerland by the year 2100 were studied. Globally, the water resources will only change slightly by then. However, as a result of the rise in the snow line associated with increasing air temperature, the volumes of snow and ice stored in the Alps will be greatly reduced. This will combine with a seasonal redistribution of the precipitation (drier in summer, wetter in winter) to cause a seasonal flow redistribution. High and (particularly) low water flow events will probably occur more frequently – mainly in sensitive regions such as the Swiss Plateau, Valais and Ticino.

The first part of the strategy of adaptation to climate change in Switzerland was adopted in 2012 defining the objectives, the challenges and the fields of action. On this basis, an action plan with concrete measures is now being elaborated for the end of 2013. The main focuses of the strategy are water management, agriculture, forestry, natural hazard management energy, tourism and biodiversity, health and spatial development.

(<http://www.bafu.admin.ch/publikationen/publikation/01673/index.html?lang=en>): in English

A report of the Federal Council was issued in December 2012 on the “management of local water scarcity in Switzerland”. The situation is very different from one region to another. There was no need for a new law or setting priorities for water use at the country level. It was concluded that regions at risk need to be identified while their cantons would have to elaborate water management plans using the basin approach. More specific measures are detailed for agriculture, energy and navigation. The Confederation must facilitate the tasks of cantons by assisting them, including through practical guidance.

In March 2013, Switzerland launched a pilot program on adaptation to climate change to support model projects to reduce risks of climate change and increase adaptation capacities in cantons, regions and communes of Switzerland. The first projects will be selected in the second half of 2013. It is piloted by the Federal Office for the Environment, in close cooperation with many other federal offices.

In the field of flood prevention two projects will be implemented. One on “bed load management” and one on “securing space for flood protection corridor”

To support these projects, a report of “MeteoSuisse” of on Climatic scenarios Switzerland - a regional overview” has been published in 2013.

(<http://www.news.admin.ch/NSBSubscriber/message/attachments/30300.pdf>)(French)

Several cantons (Zurich, Uri, Basel, Schaffhausen, Berne and Graubünden) have established either reports or strategies on climate change which all have a chapter on water..

The Project on adaptation to climate change in Swiss cities (2011-2012) encouraged the exchange of experience between Swiss cities to raise their awareness to the necessity of adapting to climate change towards solution, among others, in water management

*(b) What challenges were encountered during the implementation of the action?
What lessons were learned?*

Uncertainties at local and regional level are still high when it comes to predicting the hydrological issues relevant for water management. Therefore decision making at the local level entailing significant investments remains difficult.

(c) What future steps, if any, are planned in relation to the action implementation/follow up?

See above

Title of the action:

Integrated Flood Prevention

Overview of progress made

(a) *Has the action been implemented?*

Yes, in progress

Apart from health and environmental concerns, infrastructures of protection against flood are essential for the functioning of the economy and therefore must be preserved and reinforced. The quality of such an infrastructure is expensive but guarantees the attractiveness of the economic place. Many production sites would not exist without them. The protection against floods is worth annually some US\$ 400 million in Switzerland.

- Analyzing the 2005 major floods, it showed the necessity of holding a dialogue on "**Distribution of tasks between insurances and public authorities in relation to natural hazards**", which would contribute to discussing floods, among others. Between 2011-2012, it involved all actors from insurance companies, buildings owners, architects, builders, industry, research, banking, etc. Not only public authorities have tasks and responsibilities, so has the private sector. Infrastructures, spatial planning, maps, directives, must be at hand and actualized and further, insurances have to take on board residual risks. Nine measures were discussed from a process to define project objectives in function of risks, promotion and publicity on the dialogue on natural hazards, capacity building, platform of coordination between public authorities and insurances, directives for urban development, etc. This dialogue will continue for the next 4 years.
- **Projects Alpenrhein and Rhone:** The major flood prevention projects for the lower part of the Alpenrhein and the Rhone have to deal with many different interest groups. Therefore an intensive participative process is underway to address the various stakeholder concerns in the implementation of the project.
- **Lake level control regulations:** Several measures have been underway to optimize the control of the lake level by regulating the outflow taking into account flood forecast.
- **OWARNA (Optimizing Warning and Alert of Natural Hazards):**
National level: improvement of the flood forecast
Local level: Training of local natural hazard experts.
- In the context of the implementation of the **EU Floods Directive**, Switzerland works closely together with its neighboring countries.

The renaturation projects and the climate change adaptation actions under the other Astana Water Action also contribute to the integrated flood prevention

(b) *What challenges were encountered during the implementation of the action? What lessons were learned?*

It is difficult in a small country to acquire space to build the flood protection infrastructures.

(c) What future steps, if any, are planned in relation to the action implementation/follow up?

The above mentioned measures are ongoing over the coming next years.