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Tagung der Alpenkonferenz
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Sessione della Conferenza delle Alpi
Zasedanje Alpske konference

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ANNEX

6 Activity Report of the Natural Hazards Working Group (PLANALP) for the period 2023-2024

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ACTIVITY REPORT OF THE
Natural Hazard Working Group (PLANALP)
FOR THE PERIOD 2023-2024
(BETWEEN THE XVII AND XVIII MEETINGS OF THE ALPINE CONFERENCE)

1. Overview of the mandate given by the XVII Alpine Conference

Summary of the objectives according to the 2023-2024 mandate
• Collection of best practices on successful risk communication tools/strategies • 5 partnerships between the member countries to transfer and implement the selected example • First draft of the basic criteria to assess the success of the knowledge transfer and implementation

2. Meetings

Summary of the meetings held (date, place, main topics and milestones)

• 16 March 2023, virtual meeting:
  ○ Main topics: Collection of best practices on risk communication tools/strategies & Building partnerships
  ○ Milestones: Discussion of the examples as well as the format and layout of the collection; possible partnerships, presentation of the activities of the countries
• 10 – 11 October 2023, Bled (Slovenia):
  ○ Main topics: Partnerships of the transfer of communication tools & flood event in August 2023 in Slovenia
  ○ Milestones: Presentation of the status, adjustments of the examples and challenges of the partnerships, finalisation of the collection & discussion, reprocessing and consequences of the flood event in August 2023 in Slovenia
• 1 – 2 July 2024, virtual meeting:
  ○ Main topics: criteria to assess the success of the communication tool transfer & new mandate 2025-2026
  ○ Milestones: Update regarding the partnerships, discussion of the first draft of the criteria for assessment & discussion of the first draft of the new mandate 2025-2026
• 2 – 3 October 2024, Raumberg/Öblarn (Austria):
  ○ Main topics: Outputs of the mandate 2023-2024, new mandate 2025-2026, assessment criteria, hand-over of chair
  ○ Milestones: Presentation of the outputs of the mandate 2023-2024, timetable and activities of the new mandate 2025-2026, further development of the assessment criteria,

official hand-over from Austria to the new chair Bavaria, exchange on past events and their effects with a focus on climate change impact

3. Activities carried out

Activities carried out with their outputs and results, highlighting their contributions to the relevant priorities of the Multi-Annual Work Programme 2023-2030
• Workshop of best practices examples for risk communication • Collection of best risk communication tools/strategies • Discussion on the assessment including first draft • Knowledge transfer and exchange of developments and activities as well as a discussion of current natural hazard events was carried out at all meetings of PLANALP

4. Cooperation

Cooperation developed with other Alpine Convention bodies and further relevant partners and processes, and resulting benefits
• EUSALP AG8, profit from the experience and knowledge

5. Communication

Communication measures and outreach activities carried out, specifying their respective target groups
• The mandate is focused on collecting, selecting and transferring successful risk communication examples from different countries. The first step of transferring and implementing are done. • Supporting the Permanent Secretariat of the Alpine Convention for the dissemination of information through websites and social media channels

6. Attachments

List of the documents attached to this report, such as papers proposed for approval by the XVIII Alpine Conference (thematic reports, guidelines, statements etc.) and supporting documents (workshop proceedings, survey reports, communication materials etc.).
• *Communication tools collection* • *List of partnerships*

COMMUNICATION TOOLS

of the natural hazard management

Copyright: Martin Huber

Natural Hazard Working Group of the Alpine Convention (PLANALP)

Mandate 2023-2024

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This report is a result of the Natural Hazards Working Group under the Slovenian Presidency 2023-2024. The members of the Working Group are:

Chair: Florian Rudolf-Miklau (Bundesministerium für Land- und Forstwirtschaft, Regionen und Wasserwirtschaft – Austrian Federal Ministry of Agriculture, Forestry, Regions and Water Management)

National delegates:

- **Austria:** Katharina Rieder (Bundesministerium für Land- und Forstwirtschaft, Regionen und Wasserwirtschaft – Austrian Federal Ministry of Agriculture, Forestry, Regions and Water Management), Stefan Walder (Amt der Tiroler Landesregierung – Tyrolean Regional Government)
- **France:** Catherine Calmet, Ariane Stephan, Isabelle Paillet (Ministère de l'Ecologie – Ministry of Ecology), Alison Evans (Office National des Forêts – National Forestry Office)
- **Germany:** Jan Ulrich Job, Lena Großmann (Bayerisches Landesamt für Umwelt – Bavarian Environment Agency), Wolfgang Rieger, Andreas Lindenmaier, Christian Wanger (Bayerisches Staatsministerium für Umwelt und Verbraucherschutz – Bavarian State Ministry of the Environment and Consumer Protection), Christian Ernstberger (Bundesministerium für Umwelt, Naturschutz, nukleare Sicherheit und Verbraucherschutz – Federal Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection)
- **Italy:** Tommaso Bastiani (Eurac Research), Jean-Pierre Fosson, Luca Mondardini (Fondazione Montagna sicura; Regione Autonoma Valle d'Aosta, Assessorato opere publiche, territorio e edilizia residenziale pubblica − Safe Mountain Foundation, Aosta Valley Autonomous Region, Department for Public works, territory and public residential constructions), Willigis Gallmetzer (Centro funzionale provinciale dell'Agenzia per la Protezione Civile, Provincia Autonoma di Bolzano − Landeswarnzentrum der Agentur für Bevölkerungsschutz, Autonome Provinz Bozen − Provincial warning centre of the Civil Protection Agency, Autonomous Province of Bolzano/Bozen), Rolando Pozzani (Associazione ALTALMA)
- **Liechtenstein:** Stephan Wohlwend (Amt für Bevölkerungsschutz − Office for Civil Protection)
- **Monaco:** Astrid Claudel-Rusin (Gouvernement Princier de Monaco – Office of Monaco Government)
- **Slovenia:** Milena Dobnik Jeraj, Slavko Šipec (Uprava Republike Slovenije za zaščito in reševanje − Administration of the Republic of Slovenia for Civil Protection and Disaster Relief), Jože Papež (Hidrotehnik d.o.o., − Hidrotehnik, Water Management Organisation)
- **Switzerland:** Josef Eberli, Carolin Schärpf (Bundesamt für Umwelt – Switzerland Federal Office for the Environment)

Observers:

- Andrea Bianchini (European Commission)
- Daniel Bieri, Veronika Schulz (Club Arc Alpin)
- Massimo Pecci, Christian Rohr (ISCAR - International Scientific Committee on Alpine Research)
- Alexis Truchet (Alpine Space Programme)
- Ann-Kristin Winkler (WWF Austria)

Permanent Secretariat of the Alpine Convention:

Stefano Chelo (Permanent Secretariat of the Alpine Convention)

FOREWORD

In recent years, the number and extent of natural disasters are increasing. The effects of climate change and land consumption are leading to a higher risk of loss and damage from natural hazards. Especially the fragile and densely populated Alpine region is severely affected. Through technical, structural or planning measures, the human living areas are protected from natural hazards or at least their effects are mitigated. However, nature cannot be controlled, managed or optimised. An ultimate protection against natural hazards does not exist and it is important to realise that there are technical and economic limits to protection systems.

Therefore a successful risk management not only requires protection measures but also the involvement of all parties concerned. The basic prerequisite is the public awareness and knowledge about natural hazards. Risk communication is an important tool for that and must be constantly adapted to changing communication habits.

The Natural Hazard Working Group (PLANALP) decided to address this important topic during the mandate period 2023-2024 of the Alpine Convention. The overall goal is to improve the risk communication in all Alpine countries through learning from each other through best practices and jointly improving the strategies used.

In this report, PLANALP has collected best practice examples for successful risk communication from all Alpine countries addressing people living in areas affected by natural hazards. Special consideration was also given to ensuring that the examples include different target groups (for example schools, adults, general public) and types of communication (e.g. online campaign, printed material or physical models). The collection is setting an important benchmark for international and cross-border exchange on the use and applicability of communication instruments in the fields of natural hazards. In addition, it is considered a living document, which can adapted at any time.

1 TABLE OF CONTENT

2 LIST OF FIGURES

3 CIVIL PROTECTION AND SCHOOL

Civil protection and school is a project of cooperation between the regional civil protection authority and schools in the Autonomous Province of Bolzano-South Tyrol/Italy and aims to establish a continuous risk dialogue.

Figure 1: Participants of the final event © Autonomous Province of Bolzano

- **Project title**: civil protection and school
- **Target Groups**: teacher, schools
- **Type of tool**: educational tool
- **Time**: construction, operation, frequency of implementation
- **Costs**: EUR XXX (planning, construction, operation, maintenance)
- **Funding programme**: regional
- **Further information**: https://afbs.provinz.bz.it/
- **Contact**: Civil Protection Agency of the Autonomous Province of Bolzano -South Tyrol / Italy, +39 0471 41 60 00, bevoelkerungsschutz@provinz.bz.it

3.1 Framework

The potential of risk communication as an essential part of integrated risk management to increase the resilience of a society has not yet been fully exploited. The culture of civil protection should become part of the teaching program in the long term through the cooperation between the authorities and the schools and establish a long-term dialogue between these two actors. The children and young people as future adults should not only be informed, but also educated to become responsible, resilient, mindful, and active citizens.

Raising public awareness of natural hazards is one of the tasks of the Civil Protection Agency of the Autonomous Province of Bolzano-South Tyrol/Italy. Analogous to the protocol of agreement of the national civil protection department with the Italian ministries for schools to spread the culture of civil protection in schools, the Civil protection agency of Bolzano has started a cooperation with the 3 school authorities at regional level.

3.2 Description

A training program for teachers from elementary, middle and high schools gave them as pedagogical specialists an initial insight into the topics of civil protection. In advance, the participants were provided with information material (web links, videos, brochures, etc.) for preparation. The project started in autumn 2022 with four half-day training units:

1. Introduction lectures and visits to the operations centers (weather forecast center, warning center, traffic information center, emergency call center, response coordination center)
2. Training course via video conference with lectures natural hazards management, hazard zone planning, flood forecasts
3. Training course with a visit to the regional fire brigade school and a visit to a rockfall protection dam and a hydrometric station
4. Closing event with feedback round (feedback was already obtained beforehand via a Google Forms survey), discussion of further steps and awarding of diplomas to the participants by the responsible regional councilors (see Figure 1).

A further development of the cooperation between regional civil protection and schools is now being discussed in order to maintain and improve the dialogue and the cooperation.

4 FOREST AND VEGETATION FIRE PREVENTION

For the first time, the link between a simple daily gesture and forest fire was shown and illustrated by a picture of a person identified by a first name (Soraya/cigarette butt, Hervé/sparks, Luc/BBQ). The communication campaign was disseminated via posters (roadsides, campings, bars, restaurants), radio, digital media with redirection to a website.

Figure 2: Examples of visuals used on the web, on bar tables or on posters © SDIS 21

- **Project title:** Forest and vegetation fire prevention
- **Target Groups**: all the people and tourists
- **Type of tool:** posters (roadsides, campings, bars, restaurants), radio, digital with redirection to the website, influencers.
- **Time:** from 15th June to end of August 2022;
- **Costs:** EUR 1,400,000 (including survey before and after the communication campaign);
- **Funding programme:** national programme.
- **Further information:** https://www.ecologie.gouv.fr/feux-foret-et-vegetation
- **Contact:** Clarisse.DURAND@developpement-durable.gouv.fr

4.1 Explanation of communication tool

The campaign was updated following a qualitative listening study of 4 population panels (from: one area with little or no fire exposure, Ile-de-France, one area exposed to fire but not confronted to it, one area exposed and facing fire). This study led to communication focused on :

- **daily gestures that cause fires to start**: cigarette butts thrown in the open, works that generate sparks, barbecues/campfires in the open.
- The **spread of fire** which is not integrated, including in exposed populations,
- Increase awareness of the population that the issues at **stake near fire starts, are threatened by these fires**.
- anchoring the fact that it is **men/women who start fires, in 9 cases out of 10**.

Three behaviors were therefore associated with three characters, in a situation: Soraya/roadside/farm; Hervé/work/camping; Luc/barbecue-marshmallow/forest.

4.1.1 A wider deployment of the campaign than previously

Several dissemination methods were used for different purposes:

For direct dissemination of good behaviors:

1. Posters (46% of the budget): large posters at the entrance/exit of towns and in the town centers, placemats in restaurants, around the Mediterranean and on a few sites in New Aquitaine including Bordeaux.
2. Partnership with Tik-Tok (7% of the budget) to reach a young audience (15-34 years old) with the mobilization of the Explore Media platform and 3 influencers. On August 2nd, people who connected directly, viewed the Explore Media video, and this operation generated a very significant peak in traffic on the Ministry's website.
3. Digital + video (complement in August): Facebook, YouTube...
4. Vinci Autoroute -107.7 radio spot (3% of the budget): the spot had a very good cost/promotion ratio, especially as it was only broadcasted on one radio station and only at weekends.

To generate traffic to the campaign page on the MTECT website: digital broadcasting in various formats, platforms and media including mobile phones.

4.2 Outlook

In 2023, there will be two communication campaigns. The first will be in the spring to promote the legal obligations to clear brushwood from March to the end of May and the second from mid-May to the end of August to prevent fires from starting.

As **the obligations to clear brushwood** are the subject of a specific communication campaign, communication on the specific act of clearing brushwood will be part of this campaign and no longer in the summer campaign, which is more consistent with the timing of this practice.

5 ILLUSTRATED CHILDREN'S BOOKS

Four illustrated books help children to learn more about water use and water hazards. The books were developed in the course of the initiative "Flood.Info.Bavaria". The aim of the initiative is to sensitise various stakeholder groups to floods, to increase acceptance for state measures and to create awareness for personal precautionary measures. The initiative comprises multiple target group oriented components such as the children's books.

Figure 3: Series of illustrated children's books © Bavarian State Ministry of the Environment and Consumer Protection

- **Project title**: Illustrated Children's Books – Out and about with the river pirates
- **Target Groups**: children
- **Type of tool**: print brochure (also available online)
- **Time**: approx. 12 months (including planning, allocation, printing, etc.)
- **Costs**: 20.000€ incl. texts, illustrations, rights and printing (proportional for Bavaria, costs were divided with two other partners)
- **Funding programme**: regional (Bavarian State Ministry of Environment and Consumer Protection, Emscher Cooperative / Lippe Association, WBW Educational Association for Water Development)
- **Further information**
  https://www.hochwasserinfo.bayern.de/hintergrundwissen/kinderseiten/index.htm
- **Contact**: Bavarian State Ministry of the Environment and Consumer Protection, Bavarian Environment Agency (poststelle@lfu.bayern.de)

5.1 Illustrated stories for risk communication

The books tell the story of three curious children living along a river, aka the “river pirates”. The reader can join the friends on different expeditions and gain insights into various topics, e.g. river floods and flood protection, water cycle and use of rainwater, benefits of water for biodiversity and quality of life within cities, or historical developments along rivers. There is a page for colouring or a little exercise at the end of each book. Storytelling represents a suitable way of knowledge transfer for younger age groups. However, the books also reach the families of the young readers, especially in case of preschool kids who need siblings, parents or grandparents as readers. The books can be acquired free of charge within Bavaria. Water Management Authorities, kindergartens or schools distribute them for instance during events and action days.

5.2 Exhibition – Out and about with the river pirates

The original paintings of the artist were put on easels to create a travelling exhibition. Water Management Authorities, kindergartens, educational centers, municipalities and other interested parties can lend the exhibition and thereby increase the distribution of the children’s books. The exhibition can also be combined with other activities and events.

5.3 Impressions of books and exhibition

Figure 4: Extracts from the books and exhibition © Bavarian State Ministry of the Environment and Consumer Protection, Bavarian Environment Agency

6 INNOVATIVE FLOOD RISK WORKSHOPS IN PRIMARY SCHOOLS

As part of the cross-border project "Slovenian-Croatian flood risk mitigation with non-construction measures" (FRISCO1), was developed innovative and successful multisensory concept of flood awareness raising workshops for elementary school's youth, which have objectives to empowering them for proper self-protection's measures before, during and after natural disasters, especially floods. The target group was students of the last triad in primary schools in six transboundary watersheds.

Figure 5: Flood risk awareness rising events was separately adapted and executed for pupils in elementary schools (right 2 photos) and general public (left photo) © FRISCO1

- **Project title**: How we can protect us from floods also by ourselves (Awareness raising workshops about floods in river basins of Dragonja, Kolpa, Bregana, Sotla, Drava and Mura)
- **Target Groups**: locals, schools, general public
- **Type of tool**: presentation, videos, brochures, physical floor risk models, educational tools
- **Time**: 3 months
- **Costs**: EUR 50.000,00 (total costs)
- **Funding programme**: national, international (co-financed by the ERDF/Cohesion Fund)
- **Further information**: https://frisco-project.eu/en/
- **Contact**: joze.papez@hidrotehnik.si, joze.papez@gmail.com

6.1 Explanation of communication tool

In planning of the workshops, experience of and advice from the colleagues from the Administration of the Republic Slovenia for Civil Protection and Disaster Relief and the Ministry of Natural Resources and Spatial Planning were taken into account. The plan was jointly made by a contractor, a water expert and a professional moderator, a public relations expert. The two then also conducted workshops together.

Workshops were held in classrooms, in two parts. In one school hour, which always started with the flood siren, the students were introduced to the types of floods (four short video presentations of floods of lowland rivers, torrential floods, floods in the Karst fields and along the Slovenian coast). This way the students can identify the characteristics of the water regime of the environment in which they live, including the positive role of water and the preservation of the environment. In the end, they are getting key tips for dealing with floods (before, during and after). Using video materials about past flood events, the concept of the power of water was presented to them, explaining various facts in more detail. The workshops were designed in an interactive way, with a strong emphasis on stimulating discussion or dialogue with students who actively participated and also shared their experiences if they had already experienced the floods.

After the introductory part, the students split into groups. The practical part of the workshops followed, where a water expert moderated the work with four different models. The students were invited to practice and through questions in the manner "have you heard, know, know what is right and wrong", etc., encouraged to think and actively participate. For each model, students were also able to physically participate and simulate heavy and prolonged rainfall, observing the difference in runoff from forest or non-forest lands, why where and how landslides are triggered (see **Fehler! Verweisquelle konnte nicht gefunden werden.**), what torrential flows, how they work and what restrictions have floodplain reservoirs, how do they work and what restrictions do flooding dams have.

The models were, as an added value, specially developed and constructed for the implementation of these workshops by a water expert who conducted the workshops. They are basically made of Styrofoam. For a landslides and dam failure part a baby sand is used. In addition, it is a prerequisite to have enough water in suitable canisters and sprinklers. A number of Lego figurines were also added to the models for additional fun and attractiveness. Each model can be reinstated for new workshop in five minutes.

At the end of the workshop in the classroom, the students, together with the workshop provider and guests, made their way to the nearby watercourse, where they themselves screwed up a warning sign indicating the height of the waters in the public area during the last major flood in their area.

6.2 Main messages

Throughout the workshop, five safety recommendations were repeatedly communicated to students: Follow instructions from parents, teachers, rescuers! Flood water isn‘t a playground; stay away from flood! Protect (first!) yourself before and during floods! If you need help, if you are in stress: use 112. When flood water is withdrawn, the threats aren‘t over. These messages were repeated several times during the event.

6.3 Results

The success of the workshop was verified through interviews with participating students and teachers in attendance, and a follow-up internet questionnaire. The true success of such workshops is difficult to measure, but it is the fact the knowledge and satisfaction of children, also the students enthusiasm on the end of the workshops was uniform. It turned out that the models and interactive work with them were the most attractive for students. With the help of models, we have achieved a high level of student focus, but we also believe that the experience of working with interesting models has provided a memory anchor for our five key recommendations for precautionary behaviour before, during and after floods.

6.4 Conclusion

Based on very positive response from all participant, with help of such an interactive physical natural hazards models we could significant rising efficiency of our descriptions of natural hazards, flood risk, flood system response (and it's limits) and delivering key flood self-preventive messages to young and even adult population.

6.5 Video impressions of the workshops

- Video 1 (school Podčetrtek (Sotla)): https://www.youtube.com/watch?v=aj6CCxl0Yjs
- Video 2 (school Fara (Kolpa)): https://www.youtube.com/watch?v=Q905ecT2NXU
- Video 3 (school Markovci (Drava)): https://www.youtube.com/watch?v=nengWAiuiio
- Video 4 (school V. Dolina (Bregana)): https://www.youtube.com/watch?v=9cm66c3_guY
- Video 5 (school Razkrižje (Mura)): https://www.youtube.com/watch?v=4c84ZmVn2Ig
- Video 6 (school Sečovlje (Dragonja)): https://www.youtube.com/watch?v=nq26fD7kOnc
- Video 7 (join overview of 12 events): https://www.youtube.com/watch?v=ObzyMZbF3bc
- Video 8 ("Living with Floods"): https://www.youtube.com/watch?v=zdwQ1oC124o&t=1s
- Coloring book (floods): Jaka-in-Zofka-na-misiji_SI_pobarvanka.pdf (frisco-project.eu)
- Broshure (floods): Kako-se-zascitimo-pred-poplavami_WEB.pdf (frisco-project.eu)

7 LOCAL NATURAL HAZARD ADVISOR

Local knowledge of natural hazards, is essential and for that, the concept of local natural hazard advisors (LNHA) was implemented. The main task of the advisor is to provide local expertise/experience on natural hazards to the emergency services and to support the local civil staff. LNHA are local people and are part of the contingency planning team.

Figure 6: Rudolf Ast, a trained carpenter, works in a sawmill as his main job, but as a sideline he works for the Simmental municipality as a natural hazard advisor. As a fire officer of many years' standing and a trained mountain specialist in the Swiss army, he has the best qualifications for this task. © Ephraim Bieri/BAFU

- **Project title**: Local Natural Hazard Advisor
- **Target Groups**: Specialists in emergency management bodies at municipal level
- **Type of tool**: Training of local natural hazard advisors who can advise their management body on issues of gravitational natural hazards
- **Time**: Started in 2011, today (2023) 433 active local natural hazard advisors are trained
- **Costs**: 550'000 CHF
- **Funding programme**: Financed by the Federal Office for the Environment FOEN
- **Further information**: link (FOEN web page available in German and French)
- **Contact**: Manuel Häberli, Federal Office for the Environment, manuel.haeberli@bafu.admin.ch

7.1 Background

Civil protection play an important role in the integrated risk management IRM. It contributes to preventing, reducing and managing damage. In Switzerland, responsibility for civil protection in connection with natural hazards lies with the cantons. Among other things, the Confederation supports the cantons with expertise in dealing with natural hazards.

New developments for forecasting exceptional natural events enable interventions even before an event occurs. The timely triggering of intervention measures requires, in addition to comprehensive preparations, appropriate expertise on site in order to be able to assess the forecasts, measurement data and observations and interpret them in the local context.

As an example, Figure 7 shows beaver hoses, which must be set up before a river overflows. Consequently, the relevant emergency forces are dependent on reliable forecasts and their interpretation in the local context (on-site assessment) so that they can implement the planned mobile intervention measures in a timely manner.

Figure 7: Beaver tubes as a mobile measure of intervention in the quarter of the “Matte” in the city of Berne © Professional fire brigade of the city of Berne, 2007

To build up and maintain this expertise on the ground, it was decided to introduce and train local natural hazard advisors, who are trained according to the "cascade principle" and integrated into the respective civilian command bodies.

"In preparation and during events, local expert advice for the emergency forces is the key to success"[1]

- Forecasts, measurement data and observations need to be interpreted in the local context
- Emergency forces are dependent on reliable forecasts and their interpretation in the local context (on-site assessment) that mobile intervention measures can be implemented in a timely manner

1 Markus Müller, FOEN

7.2 Concept of the local natural hazard advisor

Local natural hazard advisors provide expertise on the ground. Management bodies and intervention forces can draw on this to make a comprehensive assessment of the situation and take the right decisions. For this purpose, contact persons are trained in the communes or regions who can obtain information and contribute expertise to the local management bodies. They help to evaluate the bases (hazard maps, protection measures, forecasts, warnings) developed by the national and cantonal agencies together with observations and experiences on site as well as with the inclusion of further information and to interpret them in the local context.

For the training of local natural hazard advisors, the Confederation has - in analogy to civil protection and avalanche warning – prepared training material and documentation for the cantons to apply for the trainings and developed a strategy for the implementation of the trainings.

7.3 Tasks of local natural hazard advisors

Local natural hazard advisors work at the communal or regional level and are integrated into the local or regional emergency management. Their main tasks are:

During the event:

- to correlate information on the current development of the situation with observations on site and local experience
- warn the authorities in good time and apply for appropriate measures

In precautionary planning

- advise/support the civilian leadership and the emergency services in emergency planning.

Based on available information (e.g. from the Common Information Platform on Natural Hazards GIN) in conjunction with local observations and experience, the natural hazard advisors monitor the current situation and assess possible developments in the situation.

Based on their assessment, the command and intervention forces can be warned in a timely manner and appropriate measures can be requested before, during and after events. They also support and advise the civilian leadership and the emergency forces in the preparation or revision of precautionary emergency planning.

7.4 Training concept

In order for local natural hazard advisors to be able to perform their task optimally, knowledge of local or regional specifics in the area of natural hazards is necessary. They can incorporate this knowledge and their own experience, for example with regard to the weak points of hydraulic systems, into the advice they give. They also obtain data provided by the Confederation and the cantons, analyse them in relation to their local or regional needs and process them into decision-making bases, which they provide to the civilian command bodies and the emergency forces for the preparation of event management, for the operation as well as for the evaluation of the event and its management. Since the natural hazards advisor is basically not trained as a technical expert, special importance is attached to the establishment of an appropriate network in the field of natural hazards. In all situations, the natural hazard advisor can turn to the relevant cantonal authorities for personal expert advice. The communes or regions ensure

that the trained natural hazard advisors are integrated into the civilian management bodies and become familiar with the local administrative and organizational peculiarities.

7.5 Content of the trainings

Training block 1 deals with the basic knowledge of natural processes and includes the following training modules:

- Hazardous weather conditions: what and how they are characterised by.
- Slope instabilities: when rain and snowmelt cause slopes to slide
- Runoff formation: how precipitation gives rise to floods
- Floods: do not consist of water alone

Training block 2 is dedicated to the basic knowledge of flood protection and consists of the module: Hazard processes and protective measures:

- permanent and temporary protective measures and their effect
- potential problem areas and overload situations

Training block 3 consists of a module on the basic knowledge of hazard fundamentals:

- hazard maps: how they are produced and what they show

Training block 4 deals with preparedness tasks:

- Emergency planning: what is important when protective structures are no longer sufficient

Training block 5 shows the tasks involved in assessing the current hazard situation:

- Forecasts and observations: where they come from and how to process the information obtained

Training block 6 deals with the basics of staff work:

- Deployment and incident management: how staffs and their members work

Training block 7 consists of three modules on safety and post-event management

- Initial risk assessment after an incident: basics for establishing appropriate minimum safety levels
- Event documentation: securing evidence for event analysis
- Occupational safety in the field: what one is allowed to do or what one should refrain from doing during an event

7.6 Conclusion

Coping with natural hazards in the emergency case is a task, which has to be faced on site. In such situations, civil staff units and intervention forces have to rely – amongst other – on local expertise on natural hazards. Such expertise is necessary for a comprehensive assessment of the local hazards situation, its further evolution and to take the right decisions.

A training programme for local natural hazard advisors who are familiar with local conditions was developed to train as many advisors as possible that they can provide specialist support for civil staff units and intervention forces at the local or regional level.

The training documentation is available and could be adjusted to other regions of the Alpine Area.

7.7 Impressions

Figure 8:With the help of fixed points, the natural hazard advisor can recognise changes in the terrain at risk of slipping. Among other things, he places flags and wooden slats in the terrain as reference points. © Ephraim Bieri/BAFU

Figure 9: training of local natural hazard advisors. © Manuel Häberli, BAFU

8 NATURAL HAZARD MODEL

Physical models of natural hazards represent valuable risk communication tools within the Alps. In the course of a study on existing models and games, best designs and methodological approaches were identified to develop a new prototype. The new interactive model allows simulation of various natural hazards as well as countermeasures. Visitors are invited to explore risk management topics in a playful, vivid and haptic way. The goal is to sensitise, inform and to motivate for more personal initiative.

Figure 10: Natural Hazard Model in operation © Bavarian Environment Agency

- **Project title**: Natural Hazard Model – Flood | Heavy Rain | Torrent
- **Target Groups**: general public
- **Type of tool**: physical model, educational tool
- **Time**: planning 6 months, development and construction of prototype (University of the German Armed Forces Munich) 6 months
- **Costs**: planning and construction approx. 34.000€ (including materials, working hours and trailer)
- **Funding programme**: international (EUSALP – AlpGovII)
- **Further information**: https://www.alpine-region.eu/Study-physical-natural-hazard-models-Finalreport (incl. study of physical natural hazard models in German and English)
- **Contact**: Bavarian State Ministry of the Environment and Consumer Protection (poststelle@stmuv.bayern.de), Bavarian Environment Agency (poststelle@lfu.bayern.de), Water Management Authority Rosenheim (poststelle@wwa-ro.bayern.de)

8.1 General operation and functionalities

The natural hazard model shows a fictitious populated pre-Alpine landscape with a river course and a torrent stream. Houses and infrastructure were constructed with Lego© to enable easy modification and extension. With the help of a water container, a pump and valves, different water streams can be activated. In this way, river floods, heavy rain, a landslide and torrent processes are simulated. All used water flows back via an outlet and a sieve into the water container. Not only hazard processes but also the effect of protective and precautionary measures are visualised. Protective walls and dikes, torrent control structures, sand bags or protective forests (sponges) can be for instance inserted into the landscape. Furthermore, the model offers some electronic features. A display at the back shows information on the different notification levels of flood warning. Depending on the activated level, the Lego©-stations of the alerted emergency forces light up. Some houses have a lighted basement. A water sensor in the basement is activated as soon as water flows in and the light switches off. Visitors can thereby track basement flooding of the settlements.

8.2 Applications and experiences

The Bavarian Water Management Authorities as well as international partners have already applied the hazard model intensively. Possible events include action days, children's days, school events, fairs or exhibitions. The hazard model has proven to be a visitor magnet that invites all target and age groups to participate. All event organisers confirmed its great value for risk communication.

Thanks to the numerous functionalities and the mobility of the elements, a wide range of risk management topics can be communicated. Next to natural hazard processes or technical protection, visitors can also learn about personal measures, behavioural and building precautions or disaster response. Presentations of the model can be adjusted to the respective event, visitor group and available time. A simple demonstration with a lecture is possible, but the moderator can also work out the topics in an interactive way (e.g. joint insertion of measures with the group). Including visitors and their personal stories and experiences turned out to be very enriching during model presentation. The hazard model can be combined with other elements and materials. Photos of local events and measures or hazard maps of the respective area support visitors to connect the issues to their daily life.

8.3 Organisational matters

The entire model landscape is held by a steel frame structure. A trailer was modified to store the model. For outdoor events, the model can stay within the trailer as folding sides allow weatherproofed access. For indoor events, it can be extracted from the trailer and stand free on spindle legs. In that way, the model is easy to transport, but also very flexible for different locations. There are only few requirements for the application, which include a levelled surface, power (no high voltage necessary) and water access (for filling the container). A manual with illustrated instructions and ideas for presentations enable self-preparation and independent implementation without an introduction.

The model is a communication tool for the Bavarian Water Management and can only be lend by their offices. The Water Management Authority of Rosenheim is responsible for further support, maintenance and lending. Lending is free of charge, but the borrowing office needs to take care of transport. Detailed documentation of the construction allows duplication and modification within the Alpine region.

8.4 Impressions of the natural hazard model

Figure 11: Model landscape of the natural hazard model: simulation of floods along the river course with a water pump, simulation of heavy rain and surface discharge with water nozzles, activation of a slide with a water hose and a loose plate, and release of a torrent with a water hose causing a debris jam © Bavarian Environment Agency

Figure 12: Insertable protective measures: protective walls and dikes, torrent control structures, sand bags, and protective forest © Bavarian Environment Agency

9 OCTOBER – THE MONTH OF FIRE SAFETY

The Administration of the Republic of Slovenia for Civil Protection and Disaster Relief has promoted the month of October as the Month of Fire Safety on an annual basis since 2005. Each year different specific and interesting issues connected to fire hazard/safety are addressed and various activities are organized. The promotion is conducted in cooperation with the Firefighting Association of Slovenia, the Slovenian Professional Firefighters Association and the Slovenian Fire Protection Association.

Figure 14: Fire is not a toy © Poster, 2010

Figure 13: Protect nature from fire © Poster, 2008.

- **Project title:** October – the Month of Fire Safety
- **Target Groups:** The general population including children, young people, people with disabilities and the elderly; Civil Protection experts; first responders and rescuers; field experts; local authorities
- **Type of tool:** Various tools, adapted to specific target groups – print brochures [PB], online publications [OP], media campaigns [MC], exhibitions [E], educational tools [ET], educational videos [EV], serious games [SG], expert discussion [ED].
- **Time:** Operation: one month; frequency of implementation: annually
- **Costs:** EUR 85,000.00 (personnel costs are not included)
- **Funding programme:** National
- **Further information**: www.gov.si/drzavni-organi/organi-v-sestavi/uprava-za-zascito-in-resevanje/
- **Contact:** Administration of the Republic of Slovenia for Civil Protection and Disaster Relief, Vojkova cesta 61, SI-1000 Ljubljana | +386 1 471 33 22 | urszr@urszr.si

9.1 Description

The goal of the campaign 'October – the Month of Fire Safety' is to emphasize the significance of fire safety for the population. The campaign runs annually for the whole month of October.

Materials (leaflets, posters, texts with instructions, television and radio spots, educational films, educational games for children and contributions in different magazines) are published on the website www.gov.si. In October, they are accessible via digital online advertising (banner), and are advertised on public buses and in traditional and social media. The materials are also adapted for disabled people (e.g. larger print for the visually impaired, Slovenian sign language for the deaf). Consultations are organized for the professional public.

Summary of issues addressed

Year	Title of the action	Addressed issue	Tools
2005	Help! Fire!	Residential fire, wildfire	
2006	A fire extinguisher in every household and every car	Placement and use of fire extinguishers	
2007	When fire hits, get out!	Fire evacuation	
2008	Protect nature from fire, matches are not a toy	Wildfire	PB/OP; MC;
2009	Fire safety in 3rd phase of life	Fire safety and the elderly	PB/OP; ED
2010	Fire is not a toy	Fire safety and children	PB/OP; MC; EV; SG: puppet show
2011	Have you done everything you can for a safe home?	Fire hazards in the household	PB/OP; EV; ET
2012	Fires can start after an earthquake	Fire safety and an earthquake	PB/OP; MC: press conference; EV; ED and field exercise
2013	You can extinguish a fire in the early stages yourself	Self-protection and use of fire extinguishers in a household and a car	PB/OP; EV; ED and field visits
2014	When fire hits, the need for help splits!	Fire safety for people with disabilities	PB/OP; MC; EV; ED and field visits
2015	When fire hits, get out!	Fire evacuation	PB/OP; EV; MC: public transport, radio; ED and field exercise; SG
2016	Act preventively	Preventive measures and protection against natural and other disasters	PB/OP, booklet; MC: public transport, radio; EV; E; ED; SG
2017	When an accident occurs, keep the road clear!	Paths and areas for intervention vehicles	PB/OP; EV; MC: media, public transport, radio; ED and field exercise
2018	Emergency number 112	Emergency calls	PB/OP guidelines; MC; EV
2019	Everyone is responsible for fire safety in apartment blocks	Fire safety in multi-apartment buildings	PB/OP, recommendations; MC: public transport, radio; EV
2020	Remember fire safety so you can have a worry-free holiday	Fire safety on vacation and in free time	PB/OP; MC: media, public transport, radio; EV; SG; E
2021	Fires can start after an earthquake	Post-earthquake fire	PB/OP; EV; MC: radio, public transport; ED and field exercise SG
2022	Batteries can also catch fire	Fire hazards of batteries and accumulators	PB/OP; EV: movie, TV ad; MC: press conference, public transport, radio; ED

9.2 Communication tool used in the campaigns

Figure 15: Tools for citizens 2019

Figure 16: Educational movie 2022

Figure 17: Children game about evacuation; 2015

Figure 18: Schedule, 2007

Figure 19: 112 call instructions, 2018

Figure 20: Safe house app, 2011

10 PROTECTIVE FOREST NATURE TRAIL

The protective forest nature Trail is located in the municipality of Steinbach am Attersee (Upper Austria) and is an important measure to raise awareness. A special focus is also placed on children with animated and playfull content. At several locations, there are boards with information about the protective forest and natural hazards, both in general and on what can be seen in the area.

Figure 21: The nature trail with an old board (will be renewed); © WLV

- **Project title**: Protective forest nature trail Schoberstein
- **Target Groups**: locals, children, general public and international guests
- **Type of tool**: exhibition, educational tool
- **Time**: planning 9 months, construction 3 months, operation permanently
- **Costs**: approx. 20.000€
- **Funding programme**: national (federal government)
- **Further information**: https://www.protective-forest.at/protectiveforesthub/projects/nature-trail-schoberstein.html (after the opening of the trail in May 2023)
- **Contact**: schutzwald@bml.gv.at

10.1 Nature Trail

The nature Trail Schoberstein is located in the municipality of Steinbach am Attersee (district of Weißenbach) and leads along the "Nikoloweg" through the protective forest. In the area, different hazards from natural hazard processes are present, with the danger of falling rocks dominating. The existing protective forest nature trail on the Nikoloweg will be renewed and brought up to current standards. The boards will contain information about the protective forest and natural hazards, both in general and on what can be seen in the area. The Nature Trail will be finished and opened in May 2023.

10.1.1 Educational Boards

Along the trail, there will be 16 educational boards (plus overview boards) with different topics related to protective forest and natural hazards. Five Boards have a "window to the forest" (safety glass) which serve as an active observation on the subject content of the location. To broaden the focus, the outline of the object to be observed is printed on the glass.

The individual topics of the boards are:

1. Welcome to the protective forest (with rules how to behave)
2. Our water (information about the Attersee)
3. Wildlife in the forest
4. Working with nature (job description of the forester and the torrent and avalanche control engineer)
5. Natural hazards in Austria
6. Management in the protective forest (based on current examples in the field)
7. Danger and risks in protective forests
8. The debris flow "Jaga-Woferl-Graben"
9. Protective effect of the forest
10. Ideal protective forest
11. The rockslide event in 2021
12. The technical forestry system
13. Rejuvenation in the protective forest
14. Project for protection against natural hazards
15. Forest fires
16. The Austrian Service for Torrent and Avalanche Control

In order to get children in particular interested in the nature trail, the natural hazard specialist "Biber Berti", a cartoon character from the WLV, together with the mascot of the Attersee region – the "owl Gustl" - will animate them and playfully explain the content in simple terms.

Due to the space available, the boards on site will be in German, an English version of every board is available via QR-Code.

10.2 Construction & Cooperation

The boards (alucobond composite panel/ safety glass) will be framed in a larch wood construction. The design is made by a local graphic designer (kopfsache), the construction and installation will be done by the torrent and avalanche control.

10.3 Examples of educational boards

Figure 22: Preliminary design of the boards; © kopfsache

Figure 23: On site examples of the topics that will be explained on the boards © WLV

11 RISK DIALOGUE TOOLBOX

A central role in the communication of natural hazards and risks is played by the information work of the municipalities, which are in direct contact with specialised agencies and those affected. The "Risk Dialogue Toolbox" provides tools for planning and implementing information on natural hazards.

Figure 24: Risk Dialogue Tool Box © PLANAT

Various practical tools and tips are available for download and use under:

- Risikodialog: Nationale Plattform Naturgefahren PLANAT (Deutsch)
- Boîte à outils Dialogue risques: Plate-forme nationale «Dangers naturels» (planat.ch) (Français)
- Cartella pratica «Dialogo sui rischi dei pericoli naturali»: Piattaforma nazionale «Pericoli naturali» (planat.ch) (Italiano)

- **Project title**: Risk Dialogue Toolbox
- **Target Groups**: The toolbox is primarily targeted at authorities in communes and cantons as well as natural hazard experts and information officers in the public sector and in private companies who are faced with an information task in connection with natural hazards.
- **Type of tool**: Print brochure in the form of a toolbox
- **Time**: Published in 2012 by PLANAT, implemented since then. Feedback shows that the toolbox is appreciated and widely used.
- **Further information**: Risikodialog: National Platform for Natural Hazards (planat.ch)
- **Contact**: Helen Gosteli, Managing Director of the National Platform for Natural Hazards PLANAT: helen.gosteli@bafu.admin.ch

11.1 Explanation

The practical Risk Dialogue Toolbox is primarily aimed at authorities in municipalities and cantons as well as natural hazard experts and information officers in the public sector and in private companies who are faced with an information task in connection with natural hazards.

The "risk dialogue on natural hazards" addresses two central task areas:

1. To ensure ongoing information, exchange and documentation among those agencies that are politically, planningly and operationally involved in providing sound protection against natural hazards. This may be in the ongoing efforts to reduce risks and avoid damage (prevention) or during and after an event (intervention and reconstruction).
2. Informing the population about:
    - how each individual could be affected by natural hazards
    - what each individual can do to protect themselves
    - what the public authorities are doing to ensure the safety of the population.

The public is increasingly concerned about natural hazards. For those responsible at communes and cantons, the impression can arise that the "risk dialogue on natural hazards" is a boundless task. It is important to use those moments when good information work can have a high impact. What are these moments? Practice shows that they can be narrowed down to seven focal points:

1. Hazard maps
2. Risk strategy (opportunities and threats)
3. Spatial planning instruments and land use
4. Protective structures (usually of the public sector)
5. Private and public construction projects
6. Existing buildings and infrastructure
7. Incident management

The most important communication tasks in these subject areas are listed below (without claiming to be exhaustive).

The focus is:

- at the community level and
- on prevention (in everyday language also: prevention).

The technical tasks in the area of natural hazards are not included.

The listed tools as well as references to further tools and information can be all found in the https://www.planat.ch/en/risikodialog.

This document deliberately takes all natural hazards into account and does not distinguish between gravitational and meteorological natural hazards or earthquakes. This is because the "Risk Dialogue on Natural Hazards" is intended to increase awareness and self-responsibility with regard to all natural hazards. The "Risk dialogue on natural hazards" takes place in personal discussions, at meetings and information events. Websites, brochures, slide presentations, information letters and posters can provide support. The same information measures do not make sense everywhere. It is important to provide information on an ongoing basis and to involve the right offices and people. The Risk Dialogue with Natural Hazards practical kit provides tips on how to do this.

11.2 Examples of the risk dialogue

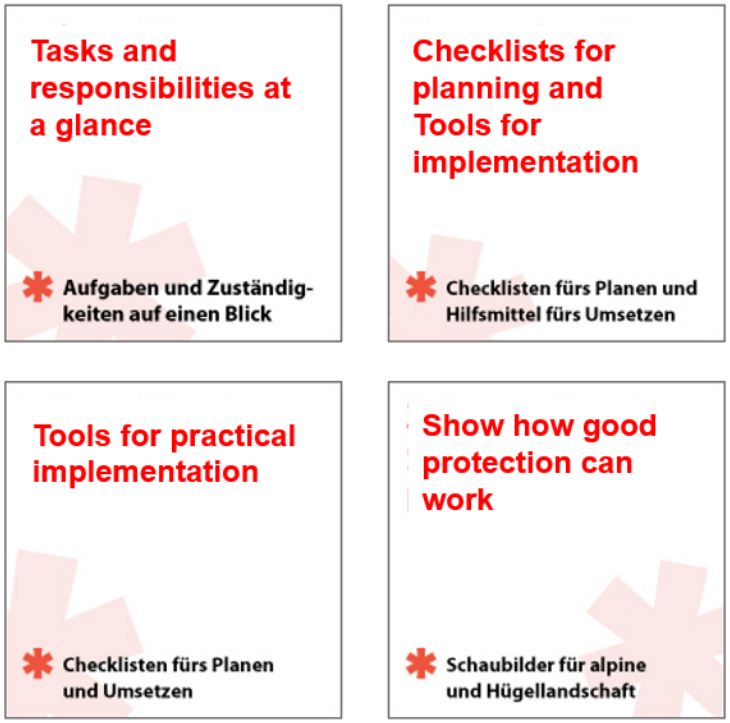

Figure 25: divisions of the tool box © PLANAT

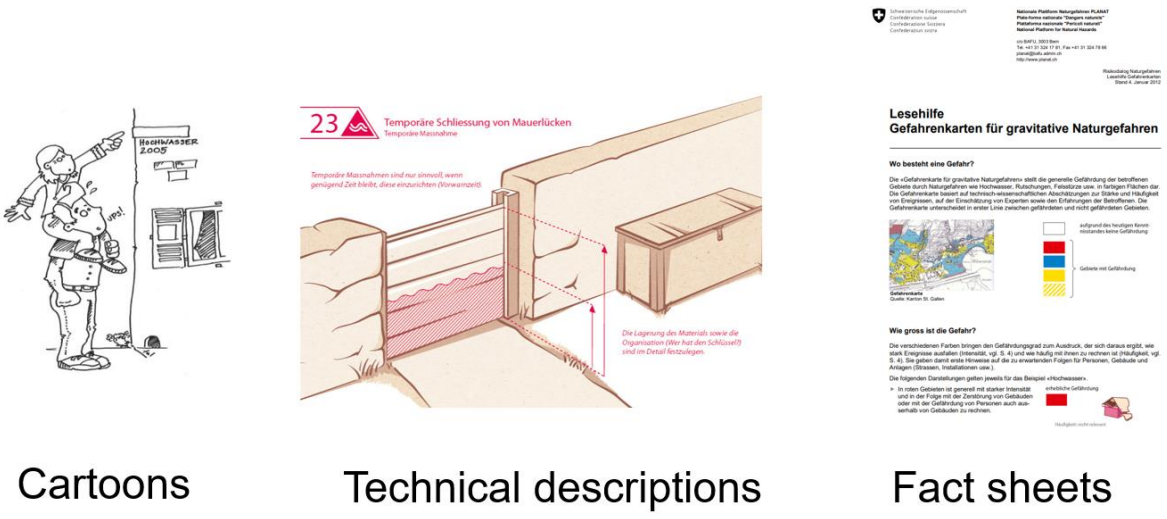

Figure 26: Example of Checklist in the Risk Dialogue Tool Box © PLANAT

12 RIVER BASIN BROCHURES

A total of ten regional river basin brochures give valuable insights into flood protection in Bavaria. They focus on different catchment areas within the state, and illustrate for instance hazard potential and management options within the respective area. The goal is to provide region-oriented information materials to increase knowledge and to reduce risk of river and flash floods. Readers shall learn that potential loss and damages can be reduced if all stakeholders collaborate and take action.

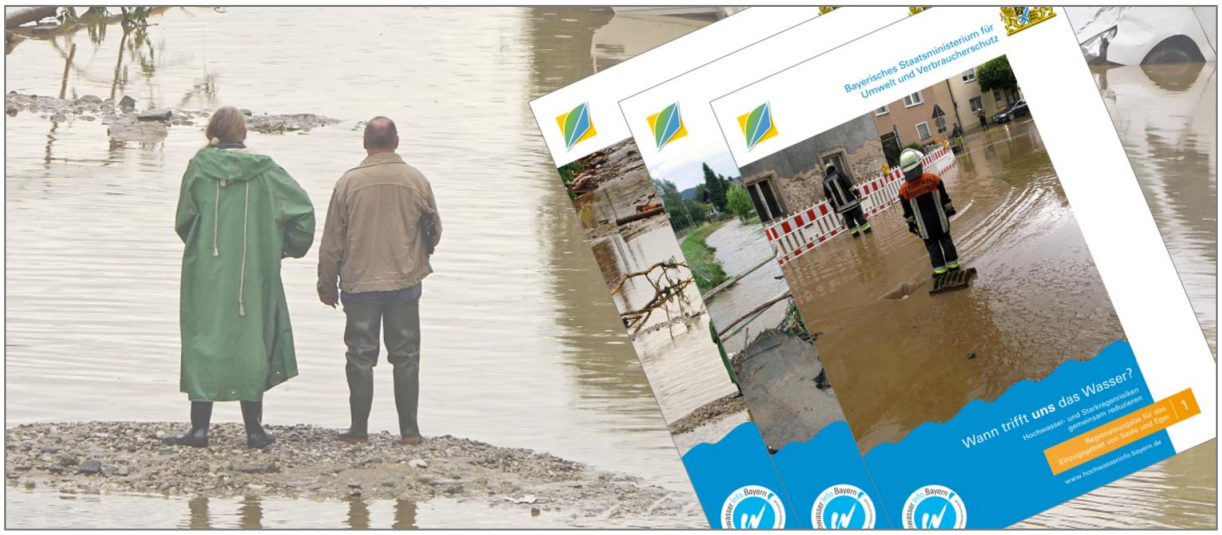

Figure 27: Series of brochures on flood protection © Bavarian State Ministry of the Environment and Consumer Protection

- **Project title:** Regional River Basin Brochures on the topic of flood protection in Bavaria
- **Target Groups:** general public, administration, policy makers, private sector, practitioners
- **Type of tool:** print brochure (also available online)
- **Time:** approx. 12 months (including development, allocation, printing, etc.)
- **Costs:** 200.000€ incl. concept, texts, figures, interviews excl. printing (external office was contracted, Bavarian Environment Agency and Water Authorities contributed inputs)
- **Funding programme:** regional (Bavarian State Ministry of the Environment and Consumer Protection)
- **Further information**: https://www.hochwasserinfo.bayern.de/hintergrundwissen/wann_trifft_uns_das_wasser/index.htm
- **Contact:** Bavarian State Ministry of the Environment and Consumer Protection (poststelle@stmuv.bayern.de), Bavarian Environment Agency (poststelle@lfu.bayern.de)

12.1 Contents

Each brochure has an extent of 43 pages and is structured in six chapters: collaborative reduction of flood risks, trauma of flooding, spatial and temporal risk potential, hazard risk management, distribution of responsibilities and tasks, and further information. Flood impacts, historic events and experienced loss and damages within the respective region are illustrated. Exemplary hazard maps demonstrate hazard potentials. Next to technical protection or contingency planning, a special focus is also given to possibilities of self-protection (e.g. measures for own building). Vivid illustrations of a village demonstrate the responsibilities and tasks within flood management for different stakeholders. A distinction was made between state and municipalities, citizens and homeowners, economy and infrastructure, agriculture and forestry, and planners and construction sector. Bavarian Water Management Authorities use the brochures for all forms of public outreach and risk communication.

12.2 Testimonials and local connection

The brochures were made for ten catchment areas in Bavaria. Next to region-oriented information, interviews with stakeholders from the respective area were conducted to integrate local and personal stories throughout the brochures. The regional editions and the personal testimonials support the reader with connecting the information to their daily lives and strengthen risk communication.

12.3 Impressions of the brochures

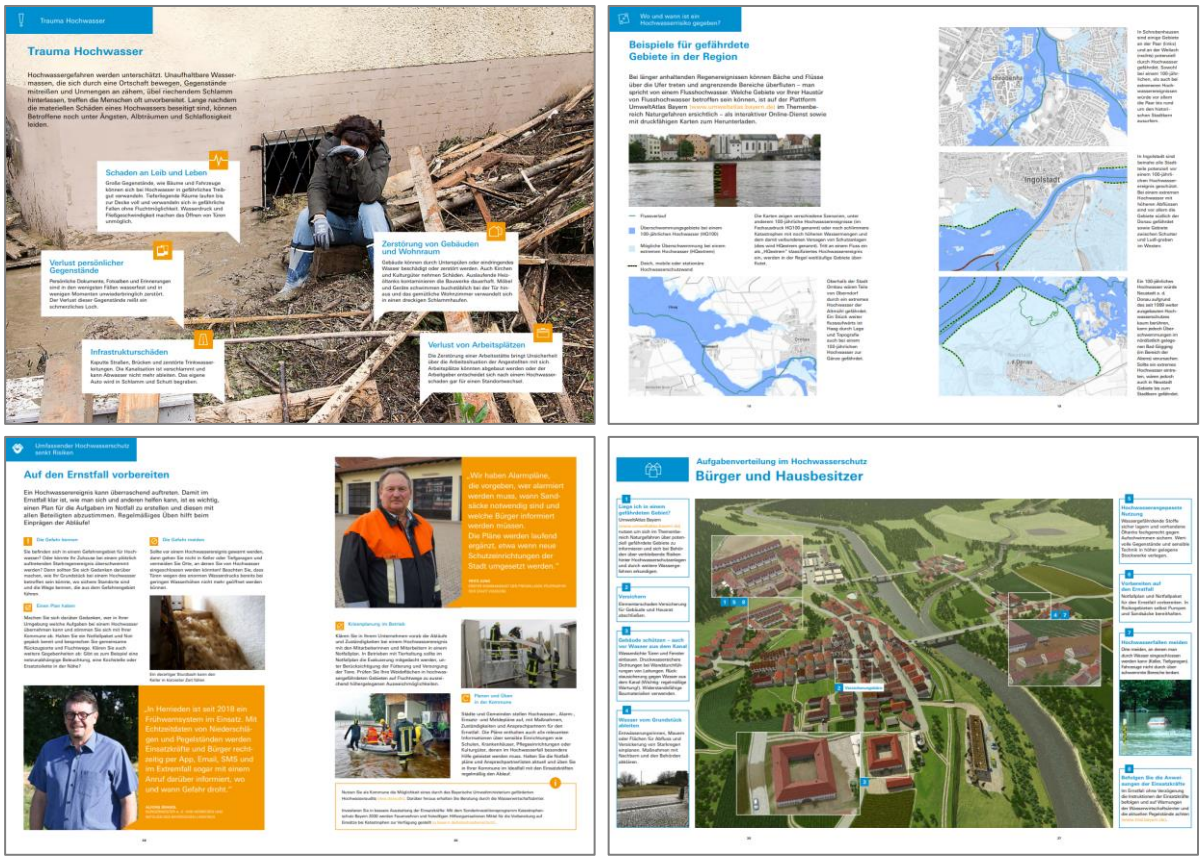

Figure 28: Extracts from the brochures © Bavarian State Ministry of the Environment and Consumer Protection

13 VR TOOL FOR AVALANCE RESCUE TRAINING

The VR AVALANCHE allows the user to experience a virtual simulation of an avalanche accident with self-rescue. Through a 360º simulated environment the user has to put into practice the self-rescue procedure to save his companion.

Figure 29: VR experience at Fondazione Montagna sicura ©Moreno Vignolini

- **Project title**: VR AVALANCHE
- **Target Groups**: locals, schools, general public
- **Type of tool**: VR application, educational tool
- **Time**: VR development 1.5 years, frequency of implementation: once par year, operation still ongoing
- **Costs**: circa 90.000 € (VR tool development, hardware, conferences and dissemination activities)
- **Funding programme**: international: Interreg Alcotra 2014-2020 FESR (Fondo Europeo di Sviluppo Regionale) - PITEM RISK FOR and ACT
- **Further information**: https://www.pitem-risk.eu/progetti/risk-for/prodotti/avalanche-vr
- **Contact**: dfranco@fondms.org

13.1 Explanation of communication tool

By using an Oculus Quest 2 headset connected to a computer, the user is projected into a realistic context that reconstructs a day of skiing during which a serious unforeseen event occurs. At that point the user has to conduct a rescue effort, actively interacting with the surrounding environment, to save his companion. Through the use of a beacon (ARTVA), shovel and probe, the user can learn the basics of how the avalanche safety equipment works and how to conduct a search for an avalanche victim. The experience ends with the intervention of mountain rescue and doctors who impart knowledge of mountain medicine related to accidents, hypothermia and trauma.

This tool is available for free download at: https://www.fondazionemontagnasicura.org/avalanche-vr

13.2 Functions

In high mountain environments, during winter outings (skiing, snowshoeing, etc.) it is crucial to have a good knowledge on how to use the safety equipment, which is recommended to always carry in the backpack. As a matter of fact, if un unforeseen avalanche event occurs, the survival curve for buried people drastically drops after 15 minutes from the burial and, except in rare cases, a professional mountain rescue team cannot get to the site quick enough. This tool aims at giving fundamentals basic knowledge on how to react in case of such an event by bringing to a broad audience (classrooms, conferences, etc.) rescue techniques that usually can only be learn while into a mountain environment accompanied by mountain guides.

30 training sessions in 17 Schools and 13 touristic locations (with around 500 participants in total) have been held as part of this project.

13.3 Cooperation

All the elements that make up the experience have been evaluated by the Aosta Valley Mountain Guides Association, who collaborated on the project by reporting, point by point, the precise actions to undertake while organising a mountain outing and the useful actions to be put into practice during the event of an avalanche rescue.

AVALANCHE VR has been created in the framework of the PITEM RISK FOR project, the Integrated Thematic Plan on Risk Prevention and Management, which involves the cross-border regions of the ALCOTRA territory between France and Italy.

13.4 Hardware requirements

- Windows 10 or later
- Oculus Quest 2 headset/ Oculus RIFT
- Required disk space: 7 GB HD
- Recommended CPU: Intel i5-4590 or higher
- Recommended GPU: NVIDIA GTX 1070 or higher

13.5 Impressions of the VR tool

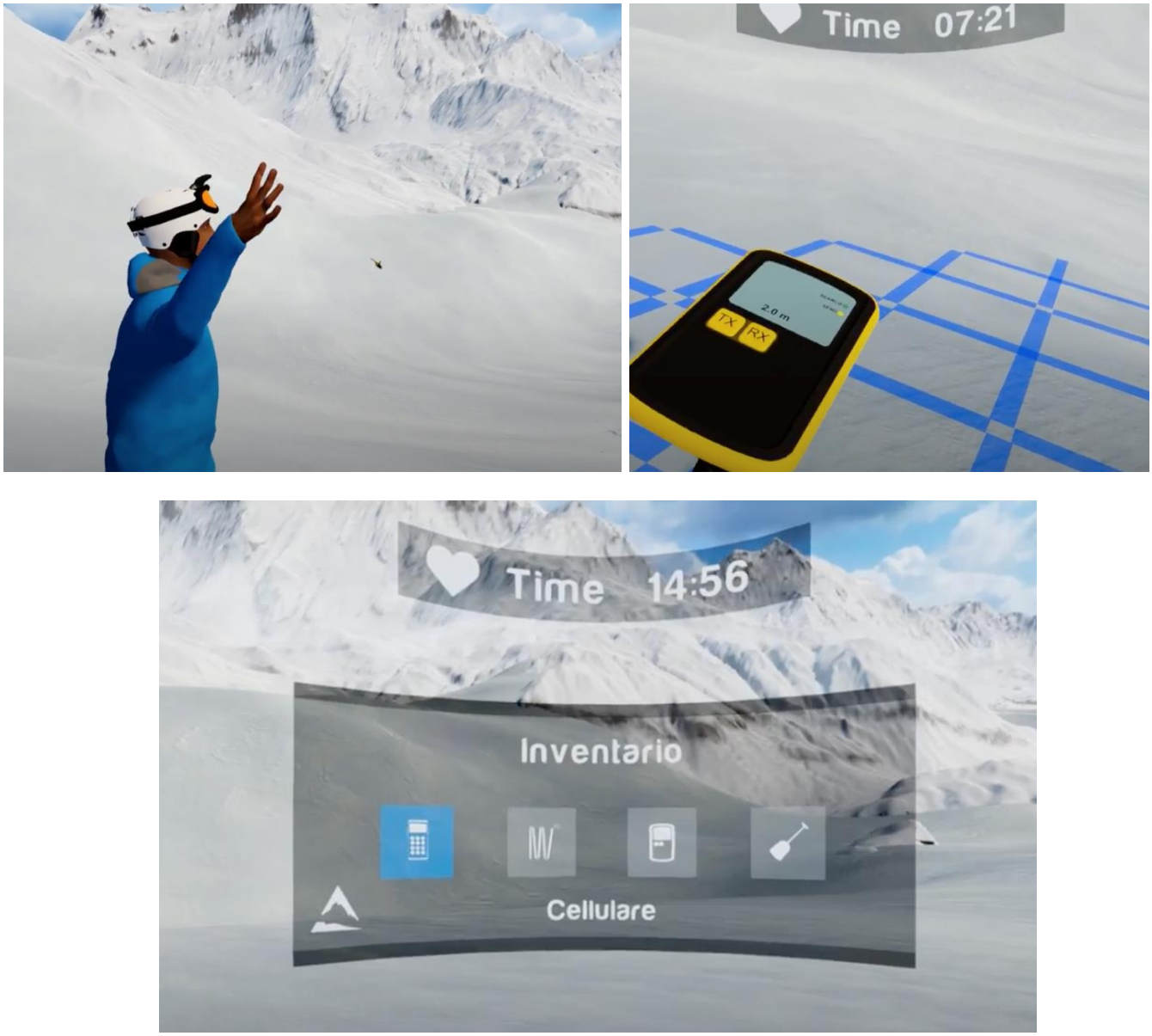

Figure 30: World of the VR Avalanche tool

14WATER EXPERIENCE ÖBLARN

The "Wassererlebnis Öblarn" (Water Experience) sets new standards in raising awareness of natural hazards! The demonstration model Water Experience Öblarn enables a unique awareness building for the function of the forest and the possibilities of protection against natural hazards for all age groups. For this purpose, a hydrological model reproduces the catchment area of the Walchenbach, the village of Öblarn and the retention areas at the Enns.

Figure 31: Öblarn Water experience; © Martin Huber

- **Project title**: Water protection Öblarn
- **Target Groups**: locals, schools, general public
- **Type of tool**: physical model, educational tool
- **Time**: planning 3 years, construction 1 year, operation still ongoing
- **Costs**: EUR 1.025.260,00 (total costs)
- **Funding programme**: international, national: LE 14-20, L6-2020-A10, 7.6.4 Inter-company measures for the forest and protection against natural hazards sectors
- **Further information**: http://www.wassererlebnis-öblarn.at/wassererlebnis.html
- **Contact**: nadine.schrempf@oeblarn.gv.at; n.prueggler@mmenergies.at

14.1 Demonstration model

The core of the Öblarn Water Experience is a hydrological model that enables the demonstration of different natural hazard scenarios (flooding, debris flows or blockages). The model was built with an extension of about 40x70 metres (around 2770 m2), on an open-air area in the Öblarn Walchen valley. The catchment area of the Walchenbach including recently built protective measures against torrent hazards, the centre of Öblarn as well as the estuary area at the river Enns with flood plains were recreated on a scale of 1:25. The model structures can also be compared 1:1 with the real structures on site.

14.2 Functions

Disaster events that have occurred in the past (such as in the summer of 2017 in the centre of Öblarn) can be realistically recreated in model. Visitors can also help to design the model themselves and, for example, regulate the water supply, add stones and sand true to scale or even wooden trunks and roots to the model. An increase in awareness and sensitisation to natural hazards is guaranteed. What danger zones mean, what retention areas are good for, the important role of the forest or protective structures are demonstrated in and around the model in a practical way.

How one can protect oneself in the event of a flood is also made tangible at "test spots" for different age groups (from kindergarten children to senior citizens). For example, under supervision, one can also practise how to properly fill sandbags.

14.3 Cooperation

Together with experts from the Austrian service for torrent and avalanche control, forestry, flood risk management and disaster control departments as well as the construction district management of the Province of Styria, information boards and teaching materials are prepared for schools and kindergartens. In addition, a "Citizen Science Concept", in which the local population is involved, as well as the establishment of a "themed hiking trail" (planned for completion at the end of 2022) in the centre of Öblarn round off the showcase project.

14.4 mpressions of Water Experience Öblarn

Figure 32: Pictures of Water Experience; © Martin Huber

The Alpine Convention is a pioneer of its kind as the first international treaty dedicated to the protection and sustainable development of an entire mountain range – the Alps. The Convention was signed by the eight Alpine countries (Austria, France, Germany, Italy, Liechtenstein, Monaco, Slovenia and Switzerland) and the European Union, and came into effect in 1995.

The foundations of the Alpine Convention are the Framework Convention and the implementing Protocols and Declarations, which establish guiding principles and a framework for transnational cooperation in key areas of Alpine environments, societies, and economies. Based on these foundations, the Convention works to build partnerships and establish cross-sectoral approaches to address the most pressing challenges in the Alps.

Work is carried out in different formats by the Alpine Convention's various bodies: the biennial Alpine Conference, the work of the Contracting Parties, the Permanent Committee, the Compliance Committee, numerous Thematic Working Bodies, and the Permanent Secretariat. Several Observer organisations also contribute to the implementation of the Convention.

The Alpine Convention is leading the way for sustainable life in the Alps, working to safeguard their unique natural and cultural heritages – now and for the future.

Permanent Secretariat of the Alpine Convention
Herzog-Friedrich-Straße 15
A-6020 Innsbruck
Austria

Branch office
Viale Druso/Drususallee 1
I-39100 Bolzano/Bozen
Italy

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FB: @AlpineConvention

PLANALP Communication tools – Partnerships

Project/s	Origin Country	Origin Country	Receiving country
Natural hazard model	Bavaria		Austria
Combination of Protective forest nature trail & Flood information website	Austria	Bavaria	South Tyrol
Forest and vegetation fire prevention	France		Austria
Innovative flood risk workshops in schools/ Civil protection and school	Slovenia	South Tyrol	Bavaria
Civil protection and schools	South Tyrol		Slovenia

Possible partnership between France and A'Osta Valley on glacial/periglacial risks