

Abstract of the Riskilience Innovation Camp – Bologna 4-5th December 2019

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Introduction

The Po River Basin District Authority (AdbPo) is the public body in charge of planning functions on the territory corresponding to the Po district (Dir. 2000/60 CE). It is a collegiate body headed by the Italian Ministry for the Environment and Territory in which national and regional authorities are represented.

The main challenge of our Innovation Camp is extremely relevant considering the enormous impact that Climate Change could be having on river basins and their populations. We proposed an Innovation Camp focusing on how to make communities more resilient to natural disasters as the area of the Po River Basin is strongly affected by climate adversities and there is a strong need to increase the awareness, preparedness and ability of communities to develop resilient evidence-based strategies that may have scalable effects at the national and European level.

The territory of the district involves about 3350 municipalities and nine regions: Piemonte, Valle d'Aosta, Lombardia, Veneto, Liguria, Emilia-Romagna, Toscana, Marche and Provincia of Trento. The population that lives in the basin is about 21 million inhabitants.

The basin district is the largest water catchment area in Italy. Its surface covers about 86,000 square kilometres, of which about 83,000 are located in Italy, a quarter of the entire national territory. The rest is located mostly in Switzerland, a small part in France and in Repubblica San Marino. Considering the density of the territory, the established productive activities, the infrastructures and the degree of utilization of the water resource, the Po basin represents an exceptionally diverse reality, a focal point of the national economy. In this area, in fact, 51% of the national gross domestic product is formed; 37 % of the national industry, which supports 46% of jobs; 35% of agricultural production. Electricity consumption is 48 % of national consumption.

The main responsibility of the AdbPo is drafting and implementing the Po River Basin Plan, focusing on land and water resources conservation, planning and management, assessment and mapping of flood and geological risks and identification of optimal risk-mitigation policies.

More recently AdbPo has been appointed as competent Authority for development of river basin management plan under Directive 2000/60/CE (Water Framework Directive) and flood risk management plan under Directive 2007/60/CE (Flood Directive). AdbPo personnel is formed mainly by experts in different disciplines (hydrologists, engineers, geologists, biologists, environmentalists, economists, etc.) and has a strong background in EU Flood Directive implementation. AdbPo has prepared during the years:

- plan on hydrogeological risk management and risk reduction;
- plan to reduce Adriatic Sea eutrophication;
- Po river sediments management plan;
- Po river basin Management Plan, responding to Dir. 2000/60/CE;
- Po river basin Flood Risk Management Plan, responding to Dir. 2007/60/CE.

AdbPo has a great governance challenge and can potentially have enormous scalable impacts through the organisation of an Innovation Camp related to Natural risk management in the thematic area of Sustainable Development.

The Innovation Camp methodology was chosen for the originality of the approach and the method and to involve directly the quadruple helix stakeholders in addressing the challenges of the Riskilience programme. The topic of the project was chosen for the impact of district-level policies and because it affects the Authority's planning activity with respect to natural disasters and expected floods.

The main focus of the Innovation Camp is reducing the gap and communication barriers between quadruple helix stakeholders on the issue of flood risk management, increase peoples trust in science and bringing people closer to science, increasing local communities' awareness on flood risks and enhancing their resilience to flood events.

The various levels of governance involved and the complexity of the issues at stake when dealing with natural disasters has not been addressed in an integrated way. While there are some excellent examples and practices the solutions relating to raising awareness and resilience of the communities are still dealt in many cases in a fragmented and uneven way. The Riskilience Innovation Camp aimed to look for innovative solutions in overcoming these challenges and in finding new scalable and integrated models to increase the awareness and resilience of communities.

The 4 challenges of Innovation camp were:

1. Managing and communicating uncertainty with stakeholders
2. Innovating and reusing the communication of risk – towards a scalable european repository
3. Memory of the present and future of natural events
4. How to improve the governance of risk.

The topics addressed by the Innovation camp can have strong policy impact at the level of the River basin (the main Italian river, including most of northern Italian Regions), at the national and European level as it can strongly improve the communication methodologies and attitudes of quadruple helix stakeholder and really engage the decision makers in the process. The impact has been guaranteed by involving all levels of policy making in the camp and in the ownership of the challenges so as to have a strong follow-up support and implementation.

The Innovation Camp has promoted the event through the main communication channels, digital as well as conventional ones by the Emilia-Romagna Region, the other Regions of the Po Basin through a close collaboration with local authorities and mass media regional system. In particular we involved in the promotion the most influential people that are very active in the community online activities.

The 3 main elements for the success of initiative were:

- The proportioned involvement of the quadruple helix stakeholders in each challenge
- Great interest of the topic and its relevance
- The scalability and feasibility of innovative proposals

The key three challenges of the Innovation Camp were:

- Balancing the equilibrium between the different quadruple helix stakeholders (it was done)
- Ensuring the participation of key decision makers over two days (it was done)
- Involving the policy makers during the Innovation Camp (Policy makers were involved while politicians gave support before and after but could not attend due to the election period in Regione Emilia-Romagna that obliges them not to participate in the period before the elections).

The involvement of new stakeholders and the formation of working groups in a balanced number of stakeholders belonging to the quadruple helix favored the analysis of the themes and the comparison from different points of view and the identification of innovative proposals.

The event was performed on the 5-6th of December 2019 and generated many prototypes that are having strategic impacts at inter-regional and national levels. This has mainly been due to a strong and commitment of the Challenge Owners that have been involved in inviting and selecting the quadruple helix stakeholders that could respond to their challenges and have taken a strong ownership of the process and its outcomes. More specifically there have been three follow-up meetings among the challenge owners and the main convenor ADBPO that are nurturing the following integrated solutions with really important policy implications:

- o “New operational guidelines for the organisational and functional management of the alert system for hydrogeological and hydraulic risk for the civil protection (updating of the DPCM 27/2/2004, the DPCM being the Decree of the National Presidency of the Council of Ministers)
- o The design of the new Flood risk management plans (P.G.R.A Piano di Gestione del Rischio Alluvioni) of the Autorità di Bacino del Fiume Po (ADBPO).
- o The REMO prototype called REMO for a Risk Engagement Management Organisation at the Po Basin level

Once the above more strategic actions are launched by the challenge owners there are, as one will see in the report that is being completed, about 12 prototypes that have emerged from the four challenges that will be part of further follow-up integration and prototyping with the guidance of the Challenge Owners.

Recommendations emerging from the Riskilience Challenges

For all the four challenges the following key stakeholders have been identified:

- Institutions
- business, associations and communicators.
- Training experts and in the expression of art, narrative, acting, information technology experts
- Forecasters, intermediaries, decision makers and active citizens
- Universities, research centres, the school system

Challenge 1 – Risk and resilience

PURPOSE. Support the decision-making process of the mayors and the behavior of the decision-making intermediaries and citizens to avoid loss of life and limit damage to people and infrastructure. Spread the culture of risk, risk management and uncertainty through training, communication and operational guidelines for the management of the alert systems of hydrogeological and hydraulic risk for civil protection purposes. Preliminarily it is necessary to consider the following: a) uncertainty must be communicated and cannot be eliminated, uncertainty is the basis of the cost - damage analysis; b) decisions must be the result of a concerted and shared process.

DESCRIPTION. With regard to the management of uncertainty, three proposals have been developed:

- 1) A training laboratory to improve awareness on uncertainty: QUAL - Quality Uncertainty Awareness Lab;
- 2) How to communicate uncertainty: PR - Probably Risk;
- 3) Tools to support decision makers (administrator and citizen): RRSS - Risk & Resilience Support System.

PROPOSALS.

1. Organization of the training process (laboratory within the laboratory)

- Citizen training: drills and pilot exercises that prepare for the **prevention phase** (how to structure the alert and manage the uncertainty), defining a training course on prevention (WHO HOW WHEN)
- Organization of initiatives and workshops with citizens aimed at simulating the entire decision-making chain. Training for those who perform the alert and experts in uncertainty management in various sectors.
- Identification of schools as a preferred catchment area for training (from kindergartens to high schools to workshops in universities).
- Awareness and engagement of the different skills, competences and disciplines: meetings and training initiatives to discuss and raise awareness on the respective skills and competences between the experts and technicians from different backgrounds and civil society. The training courses must be long-lasting and continuous, effective and widespread.

2. Means of communicating uncertainty

- Risk communication in probabilistic terms
- Construction of Ex ante methodologies to monitor the avoided damage.

3. Tools to support decision makers

- Cost/damage analysis, taking into account that uncertainty is an attribute of the information.
- Civil protection plans updated and discussed with the citizen
- Decisions supported by a concerted and shared process

CHALLENGE 2 – Risk and communication

PURPOSE. Make the planning and management of risk communication - and its uncertainty - an integral part of the operational guidelines for the management of the hydrogeological and hydraulic risk alert system for civil protection purposes. This is in order to support the decision-making process of the Mayors and the behavior of decision-making intermediaries and citizens to avoid loss of life and limit damage to people and infrastructure.

DESCRIPTION. The project envisages the organization and standardization of information and communication actions relating to hydrogeological and hydraulic risk and related events, before, during and after the occurrence of the events themselves. These actions also include the use of innovative tools, techniques and communication channels (campaigns on Facebook Ads and Google Ads platforms; It Alert) and focus on decision makers (Mayors, corporate safety managers, hospitals, School principals...) and citizens. Communication is effective if decision-makers, communities at local level and citizens are prepared, sensitive and involved in the topics covered, that is, aware and able to activate self-protection skills.

PROPOSALS. Organization and standardization of risk communication from decision makers to citizens through the following:

- production and certification of effective communication tools with "reusability seal";
- multichannel training / self-training with the use of serial visual information and storytelling;
- gamified apps based on game-challenges and constructive competition, with a rewarding logic;
- Ads Facebook Ads and Google Ads campaigns.

CHALLENGE 3 – Risk and memory

PURPOSE. Historical memory is a tool for predicting and preventing damaging effects of floods and landslides. These often have cyclical activations / reactivations, affecting territories that have already been historically affected.

DESCRIPTION. The tools to value the objectives of the challenge are represented by the multiple documentary resources available (historical archives, written testimonies, flood plaques, memorial stones, etc.) which must be made available and widely disseminated to support the decision makers of the territory, but also to make individual citizens aware and prepared.

PROPOSALS. The emerging proposals and prototypes are based on the need to project the knowledge of the past into the future also with communication tools that belong to the artistic sphere (theatre and art), but above all to constitute a prototype "POrtale of memory" for the river Po basin involving the territorial bodies in charge of decision making and governance.

The theme of memory must be lived and co-created as a heritage of civil society, the community must play the role of depository of memory. In order to reach-out in a capillary way, games (eg table games or digital multimedia ones) should be created for every age level, in order to generate the right mindset of potential risk among individuals and society.

The information emerging from the memory of risk has often been contested or discarded by local administrators as it was perceived as penalising.

CHALLENGE 4 – Risk and governance

PURPOSE. The purpose includes the following: knowledge of the "river contract" instrument/method; dissemination of the river contract instrument/method in the regions by training of specialized experts, through the creation of documentation to support the construction and performance of the River Contracts and through the identification of indicators relating to the monitoring of the effectiveness and impact of the tool.

DESCRIPTION. Regarding **Risk and Governance**, three proposals were drawn up:

1. An information campaign for the knowledge of the river and the "River contract" instrument
2. Creation of new professional expertise to support the activation of river contracts
3. The definition of indicators for the effectiveness and monitoring of the river contracts instrument

PROPOSALS.

1. Information campaign

- Information of citizens of the "river contract" instrument in order to raise awareness of the river system and the phenomena connected to it so as to increase capacity understanding of critical issues and opportunities, as well as increasing awareness of one's responsibility and contribution. These targeted information campaigns could include broadcasted awareness campaigns (such as the "pubblicità progresso" advertising in Italy) or other information channels such as - commercials - documentary cycle - advertising pages - social media.
- Dissemination of river culture, its risks and potentials.
- The information campaign must be organized and promoted by the Ministries of communications, with the technical and scientific support of the national observatory of the River contracts, the Ministries of the environment as well as the JRC and ISPRA.
- Creation of content for the various information channels - commercials - documentary cycle - advertising pages - social media.

2. Creation of specialised professional expertise

- Training of professional experts through the participation in some existing and functioning River Contracts.
- The professional figure must be a support (at the level of the scientific technical unit of the river contract) for the activation of the river contracts in the regions, liaising between bottom up requirements from the territory and initiatives directly by the scientific technical unit of the river contract.
- The goal is to have widespread governance in the area - through a "chain" training of trainers and to optimize existing resources, without imposing "pre-packaged" solutions.
- The professional figure must be able to evaluate the specificity of the territory and propose tailor-made actions.

3. Indicators of effectiveness and monitoring of the river contract instrument.

Shared definition of criteria for selecting interventions (projects and priorities)