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## Building an effective collaboration between civil protection decision-makers and scientists for DRR: the Italian experience

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## Introduction







## Introduction

DRR related to civil protection risks is based on two fundamental pillars:

- technical decision-makers
- scientists

Above them:

 political decision-makers → represent the political willingness / support DRR activities according to the electoral mandate.

#### Technical decision-makers → manage

the <u>entire risk cycle</u>. **The scientific community** → provides data, products, models, scientific information and advice as a <u>qualified</u> <u>support</u> for sound decision-making.



Importance and role  $\rightarrow$  reciprocally acknowledged. But how to implement the interplay between them to achieve effective DRR is another matter.

## **Examples of relationship** science – decision-making in civil protection

- Many EU Countries: committees and expert groups appointed by the national civil protection authorities.
- Countries also outside EU: advisory councils, advisory committees, national academies and chief scientific advisors. Role also played by the National Platforms for DRR.
- United States: formal agreement for cooperation and coordination between FEMA and USGS.
- New Zealand: relationship openly acknowledged (e.g., Guide to the National Civil Defence Emergency Management Plan).
- Spain: collaboration behind the writing of governmental documents, as with Spain's National Civil Protection Strategy.

<u>Chile</u>  $\rightarrow$  also support for the training of civil protection operators (e.g., Civil Protection Academy created by ONEMI).









### **A European perspective**

DECISION 1313/2013/EU, art. 13, provided that "The Commission shall, within the Union Mechanism [...], set up and manage a <u>training network</u> open to training centres for civil protection and emergency management personnel as well as other relevant actors and institutions on prevention of, preparedness for and response to disasters. [...]".

DECISION (EU) 420/2019 introduced the <u>Union Civil Protection Knowledge</u> <u>Network</u>, which is "a **network** of relevant civil protection and disaster management actors and institutions, **including centres of excellence**, **universities and researchers** [...], together with the Commission".

REGULATION (EU) 2021/836 further strengthens KN.

Europe is making huge efforts to build this Knowledge Network, involving all the different stakeholders.



#### The civil protection system Forter dela Protection Civil Diartimento della Protection Civil

The Italian National Civil Protection Service (NCPS) is:

- <u>multilevel</u>, with responsibilities in a wide range of fields of the risk cycle;
- <u>coordinated by the Civil Protection Department;</u>
- currently ruled by the Civil Protection Code (L.D. 1/2018).

#### **Subjects** that make up the system $\rightarrow$



Components: State, Regions and Autonomous

Provinces, local Authorities;



Operational Structures: i.e., Firefighters, Volunteers, etc.;

Contributing Subjects: professional orders, public and private companies, etc. Citizens too may contribute to the civil protection.

The scientific community is part of the Operational Structures.





## **Risks of civil protection**

in Italy (Legislative Decree 1/2018, art. 16)

Body in charge	Risk	
Types of risks for which the Italian <u>civil protection</u> <u>system</u> takes action.	seismic volcanic from tsunamis hydraulic hydrogeological from adverse weather phe from water deficit forest fires	enomena
Types of risks for which the <u>responsible bodies</u> are <u>identified by specific laws</u> . However, the action of the civil protection system can also be carried out for these ones.	chemical nuclear radiological technological industrial transport environmental health	<image/>

uncontrolled re-entry of objects and space debris



# Science-Civil Protection relationship in Italy

Science-Civil Protection relationship in Italy

## A relationship issued by law

**Collaboration** dating back to 1976 (aftermath of Friuli eq.)

#### Formal relationship in the Law 225/1992:

- scientific bodies and research institutions included among the operational structures of the NCPS;
- Major Risks Commission established for the first time.

#### Current Civil Protection Code (L.D. 1/2018):

- several articles dedicated to the scientific community;
- recognition of the important role the scientific community plays in civil protection activities;
- need to better regulate this role → question of responsibilities increasingly emerging, over the years and at both international and national level.

#### **Role played by the law** → not only formal:

• it shapes practically the collaboration between scientists and CP decision-

makers.





# Activities of the scientific community in the NCPS

- a) routine and operational activities [...] which include, inter alia, <u>monitoring and surveillance</u> of events, development of <u>databases</u> and any other activity useful for <u>emergency management and risk</u> <u>forecast and prevention</u> which provides products of in mediate use;
- b) experimental activities preparatory to the activities referred to repoint a), as well as the production of scientific contributions and the synthesis of existing research useful to this end;
- c) targeted research preparatory to the development of products useful for risk management [...] and the study of the related scenarios;
- d) collaboration in the preparation of technical regulations of interest.



According to the Code, "research bodies and institutes, consortia and university structures that own and make available knowledge and provide products resulting from research and innovation activities, which can be integrated in civil protection activities, can be identified as Competence Centres".

Emphasis is placed on the possibility of establishing **networks** of Competence Centres for the development of specific topics on integrated themes and in a multi-risk perspective (e.g., CI3R).



Since 2004, the **Competence Centres** are "those entities that provide services, information, data, processing and technical-scientific contributions in specific fields".





## Including hybrid experts in a PA



#### **Hybrid experts** $\rightarrow$ civil servants who:

- have a solid <u>expertise in both</u> research and public administration;
- can understand and use the <u>language of the two</u> <u>fields;</u>
- see their <u>expertise recognised by both</u> the scientific and the decision-making communities;
- are called upon to <u>play an interface role</u>, being able to link the demands, expectations and (often short) timescales of decision-makers and the data, information, uncertainties and (longer) timescales of scientists.

In the Italian civil protection, there is a long tradition of hybrid experts who facilitate the interaction between decision-makers (political and technical) and national and international scientific institutions for the definition of civil protection policies and decisions.



## Hybrid experts in the ICPD

Governmental level	Full Professor (with scientific expertise) serving as Minister or Undersecretary for the Coordination of Civil Protection		
	Full Professor (with scientific expertise) serving as Head of the ICPD		
	Full Professor (with scientific expertise) serving as Deputy Head of the ICPD		
	Full Professor (with scientific expertise) serving as Director General of the ICPD		
	Research Manager (with scientific expertise) serving as Director General of the ICPD		
	Civil Protection Department Civil Servant (with scientific expertise) representing the ICPD in the relationships with Competence Centres		
Major Risks Commission	High level Decision-Maker (with Public Administration expertise) serving as Deputy Head of the Major Risks Commission		
Technical scientific committees	High level Decision-Maker (with technical and public administration expertise) serving as Coordinator of a Technical Scientific Committee		
International level	Civil Protection Department Directors and Civil Servants (with scientific expertise) representing the ICPD in the relationships with EU (working groups, etc.)		
	Civil Protection Department Directors and Civil Servants (with scientific expertise) representing the ICPD in the relationships with International bodies, such as UN, WMO, etc. (working groups, etc.)		
	Civil Protection Department Directors and Civil Servants (with scientific expertise) representing the ICPD in EU research projects (Horizon 2020, etc.)		
WHITE B	Civil Protection Department Directors and Civil Servants (with scientific expertise) managing research units in EU projects		



## Discussion and Conclusions

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### Discussion

#### **Applicability of the Italian model in other countries**

Every Country has its own <u>uniqueness</u> in the field of civil protection (specific institutional organization and regulatory framework, socio-cultural environment, risks to be managed):

#### $\rightarrow$ no civil protection model valid for all Countries

→ some ideas and solutions adopted in Italy possible good input for other Countries / European / International bodies working on DRR





### Conclusion

#### **Good practices**

1. <u>Scientific participation</u> and the contribution of the scientific community to the civil protection system and activities <u>regulated by</u> <u>law</u>  $\rightarrow$  roles and responsibilities clear.

2. Scientific community **formally part** of the civil protection system.

3. <u>**Cross-fertilization</u>** between STEM (Science, Technology, Engineering and Mathematics) disciplines and social sciences, in particular behavioural sciences.</u>

4. Presence of hybrid experts in the civil protection system.





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