

PARTICIPATION OF SOCIETY IN CIVIL PROTECTION OPERATIONS: REVIEW OF A 10 YEARS EUROPEAN EXPERIENCE

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Review article

Abstract: There are still deficiencies and future possibilities for improvement in the civil protection operations. There is also other side to the incident command system. In recent years it is more and more clear that a participatory and inclusive approaches are needed to the efficiencing of the current system to ensure acceptable level of safety. It is all the more important if the approach from institutional responsibility is being put in contrast to the individual responsibility. This article aims to review current approaches and trends in the participatory field in the civil protection operations. It focus mainly on the possibilities and implications of volunteer work within this framework. Volunteers has different status and possibilities to participate and thus enhance their role in the civil society in the different countries in the EU. Their role differs in two states. One is their solely presence for technical activities and help and second is their participation in decision-making, defining a political action. This is a matter for further investigation and also for improvement.

Keywords: Volunteers, Civil protection, Risk communication, Participation.

Introduction

Citizens' involvement in civil protection operations has been developed at European scale over the last decade, through a large reflection in many local territories with high major industrial or natural risks.

It is from the subject of sustainable development of territories affected by SEVESO classified industrial sites that the participation of local people to the protection of population and environment had started to be considered. (Ferone et al., 2004)

In this manner the risk communication activities follows the same path. There is a clear shift from one directional and paternalistic communication in the 80s and from educational and persuasive approaches in the late 90s to the participatory and biderctional communication nowadays. (Renn, 2008; Sjoberg, 2003)

One of the first European projects concerning this topic was MIRIAD 21 project (Major Industrial Risks Integration in Agendas and Development 21), aiming to define and implement Agenda 21-type processes in cities at threat to industrial disaster.

This required at first a network of European actors, grouping in a complementary way local collectivities, State administration in charge of risk

prevention, resident associations, groups and union of economic and industrial actors, and a group of European citizens involved in local consultation processes.

MIRIAD 21 started from the fact that zones with industrial or natural risks actually require series of regulatory measures in terms of controlling and managing development activities, decision processes and intervention resources: land use planning including measures of exclusion for territory protection, building standards, safeguarding procedures and intervention of protection assistance.

A detailed observation within territories of MIRIAD 21 partners has shown that these elements could create unforeseen and sometimes paradoxical situations, some of which may constitute issues of sustainable development policies. For instance, SEVESO (Directive, 2012) regulation leads industrial sites to organize consultation processes, exclusion measures create forbidden territories, from what natural zones and endemic species could emerge, technological aspects of the risk lead people to be trained, association movements for environmental protection make inhabitants to meet and share their knowledge. (EPA, 2001)

The very local scale of this approach resulted Agenda 21 being considered as the appropriate

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tool to comply with principles approved at the Rio Conference in a context of major risks. In particular, one of the fundamental aspects linking sustainable development and civil protection lies in citizens' involvement in prevention, safeguard and rebuilding procedures. (UNCED, 1992)

MINI MIRIAD 21

Základní škola na ulici Gen. Janka v Ostravě-Mariánských Horách byla přihlášena do projektu Mini Miriad 21.

Účelem projektu je seznámit školní mládež, která je velice citlivou částí veřejnosti s průmyslem, který nás obklopuje.

Do tohoto programu je zapojeno 15 tříd z šesti evropských států. V České republice je kromě Mariánských Hor zapojen ještě Tíneček.

Z hlediska vývoje každého dítěte je výchovným cílem učít děti být samostatné a zodpovědné. Náš přístup se nesusoustraní jen na průmyslová rizika, ale i na zážitky a pocity dětí - „obyvatel zítřka“. Použité metody jim umožňují zapojit se osobně, rozvíjet svou samostatnost, zvykat si na práci v kolektivu a nést určitou zodpovědnost nejen za sebe, ale i za ostatní.

Byla vybrána třída 5.C, což jsou žáci ve věku 11 let s jejich učitelem PaedDr. Willy Fialou a společně byl vytvořen plán aktivit pro první polovinu roku 2004. Obsahuje celkem dvanáct činností, které budou zaznamenávány ve speciálním časopise a v dokumentárním filmu. První dva úkoly již třída splnila. Proběhl test, který měl ukázat na úroveň znalostí dětí před zahájením celého projektu. Děti dále navštívili chemickou továrnu BorsodChem MCHZ ve své čtvrti a seznámili se s výrobou a především s různými formami ochrany před následky průmyslových rizik. Tato témata rovněž zpracovávají výtvarně a slohově.

S dalšími výsledky vás, obyvatele Mariánských Hor a Hulváka, seznámím v budoucnu.

PaedDr. W. Fiala



Fig. 1 Mini Miriad operation: major risk information developed by children at school

To work on this issue, a second project VADEME (Volunteers and Democracy in EMERGENCY) - has been set up to develop, from various European experiences, a method to create volunteers groups dedicated to the protection of people exposed to major risks. (EC, 2006)

Materials and methods

At first, this project has begun by characterizing the concept of voluntary work in civil protection in Europe, based on two complementary studies. The first study was conducted using a quantitative approach with 25 Agencies for civil security, to draw up a European-scale inventory of volunteers' involvement in local civil protection measures, particularly concerning their method of operation and their status. A second qualitative study aimed to precisely describe 6 European and extra-European

organizations of civil protection volunteers that had been identified at the end of the MIRIAD 21 project and during the documentary research prior to the project writing: GIPS (*Gruppo Informazione e Promozione per la Sicurezza in Marghera, Venice, Italy*), which groups together volunteers who specialise in creating awareness of industrial risks; the Municipal Forest Fire Committees [CCFF] (France), volunteer groups set up in towns in Southern France, which specialise in forest fire risk prevention; Voluntary fire fighters (Slovakia & Czech Republic), representatives of voluntary work in the Fire Brigade, which are present in small towns; the Associations of Civil Protection Volunteers (Catalonia), municipal volunteer groups responsible for preventing the risks of major disasters; Technisches Hilfswerk [THW] Federal agency (Germany), one of the main organizations of civil protection volunteers in Europe; volunteers from the Neighborhood Disaster Support Project [NDSP] (Turkey), set up after the earthquakes in 1999 in the Marmara Sea area, based on local action on the neighborhood scale.

Results

Qualitative study shows that Voluntary civil protection work is an activity that is very widely practised in Europe, which is generally defined as unpaid work during free time, in the service of others, to protect people and property in emergency situations.

The general framework of voluntary civil protection work, which is defined by regulations in virtually all the Member States, has similar features in general (Hadzi-Miceva, 2007). However, there is a certain flexibility as regards the meaning of the term “volunteer”, which can differ from one country to another, and sometimes within one same country. Therefore there is no uniform status for volunteers in Europe, which results in great disparity of features and great difficulty in defining the concept of voluntary work.

A first difference is observed in remuneration. Volunteers appear to be defined, in comparison with professionals, by the fact that they are not paid full-time to carry out emergency and rescue tasks. For example, there are volunteers who are paid for their work, who are sometimes considered - as in Belgium - as part-time civil protection personnel, which implies that they receive payment. However, most civil protection volunteers work totally without payment, although they are reimbursed any expenses that they incur and any wages that they lose in carrying out their voluntary work.

A second difficulty is found in defining volunteers as regards their obligation to take part in emergency and rescue operations. Some volunteers, particularly if they are part of the official civil protection system, may be subject to obligations that require them to take part on the order of the authorities in cases of serious disaster. Other volunteers, such as those organised on the municipal level or as part of an association, are not subject to such obligations, and they can choose to either take part or refuse to take part in emergency and rescue operations.

There are also differences between civil protection volunteers in Europe as regards the concept of proximity. Most volunteers act on a local level, which is the case for municipal groups, and they take part, due to the personal involvement of citizens, in activities related to the area in which they live. But they may also work in national or international areas as part of humanitarian aid. Therefore the scale of action of civil protection volunteers has no defined limit, and it depends on the type of mission carried out by the groups to which they belong. (Hadzi-Miceva, 2007)

Voluntary civil protection work, recognised by the official systems, is therefore an activity of prime importance for the Member States, because of its strategic features. For this reason, it is found that all countries make use of voluntary work, but that this may take very different forms, according to the local needs and culture in terms of security and safety.

Form of organisation of volunteers and participation in crisis management

The disparities concerning the specific features of voluntary work in European States are also found in the forms of organisation of volunteer groups. These groups may be characterized by very different types of organisation, involving a relationship with hierarchy that can vary greatly between a “top-down” decision-making structure and a “bottom-up” process. (O’Neil, 2004; Renn et al., 1993)

A first form of organization concerns volunteers who belong to the Fire Brigade or to similar groups such as the federal emergency and rescue technical agency (in Germany). These groups correspond to hierarchical systems of volunteers that act under the direct authority of the Ministry of the Interior, on the order of the authorities (civil administration bodies, Fire Brigade or Police). In this type of model, the volunteers have a culture oriented towards compliance with regulations, in which the hierarchy determines the actions and decisions to be taken (Helsloot and Ruitenbergh, 2004). The directors of

these groups are named by the civil administration authorities, without consulting the volunteers.

Municipal volunteer groups are characterized by consultation and participation in decision-making, although their management is subject to the municipal authority. This type of group - such as the GIPS in Venice - makes use of consultation within the organization to decide their functioning, their work and their fields of activity. The representatives of these groups represent them with respect to their governing authority, and they are elected by the volunteers without having a hierarchical relationship with them. (Gudowsky and Bechtold, 2012)

In addition, the word “volunteer” may be used to describe people who are from outside the civil protection system, and who are characterised by their militant actions, and who are representative of a protest campaign on the subject of health, environmental or social risks. They include voluntary activists who mow down GMO crops, as well as the Robins des Bois (“Robin Hoods”: members of the French electricity supply company’s personnel who take militant action against the disconnection of electricity to the poorest people). The very nature of this form of action is opposed to any organisation recognized by the civil protection authorities, and it does not allow hierarchical levels between volunteers.



Fig. 2 Civil security exercise involving the local community in Marghera - Nov. 4th, 2006

Lastly, the field of voluntary work in Europe also encompasses non-organised people who arrive of their own accord on the scene of an environmental disaster such as an oil slick to help the local population and the emergency and rescue services. The oil slick caused by the shipwreck of the “Prestige” created a movement of citizens in Spain who volunteered to clean the beaches affected by the oil slicks in Galicia. The same type of movement took place as a result of the oil slick caused by the

shipwreck of the “Erika” off the coast of Brittany. This type of voluntary work does not include an organisation as such, because it is based on people’s personal reactions to crises.

Participation in the decision-making process in risk management

From one country to another, volunteers do not take part in the same way in emergency planning and in decisions concerning their area. The volunteers’ involvement in the decision-making process raises the question of power and power-sharing (Irvin and Stansbury, 2007). Note that civil security organisations give priority to the role of experts in decision-making concerning risk management - particularly emergency planning - although the authorities consider that the participation of volunteers in this area is necessary. (Renn, 2008)

For the feedback from recent disasters has stressed the efficiency of action by civil society, and particularly local people, in terms of prevention (Thévenaz and Resodiharjo, 2010). When the experts control the stages of the disaster, there is a difficult situation if a very large-scale event occurs, such as the earthquakes in 1999 in Turkey or the industrial accidents in Marghera. These situations appear to be partly due to the lack of a link between the population and the emergency and rescue services, which can then not count on the local people - not even for the simplest protective measures. (Helsloot and Ruitenbergh, 2004)

By setting up local volunteer groups, which are active with both decision-makers and citizens, the missing link has been created. In this framework, volunteer groups such as GIPS can organise information meetings with the population, during which the citizens may express their expectations and concerns, which shall be reported to the municipal civil protection authorities, and which may result in new activities for the group.

By extension, neighbourhood volunteers, such as those set up in Turkey as part of NDSP, are a notable example on this subject: thanks to their special relationships with the administrative players involved, the volunteers take part in carrying out projects corresponding to the people’s aspirations, working for representative civil protection in daily touch with changes in the area in social, environmental and industrial terms.

Note that the personnel of public institutions are concerned by the volunteers’ activities, which is a factor in favour of their work in the eyes of the decision-makers. Furthermore, the volunteers take part in public political meetings.

Therefore, with regard to their own respective local areas, volunteers in Europe are characterized by marked duality between (a) their simple presence for technical activities and (b) their participation in decision-making, defining a political action.

The volunteers’ field of action

In general, all civil protection volunteers are involved in the context of major natural risks. Industrial risks are covered very little, compared to the number of areas concerned by this type of risk. However, the work of civil protection volunteers in Europe varies from one country to another, ranging from prevention to crisis management and to post-disaster activities.

Most countries point out that the volunteers act together with the official rapid deployment forces during a disaster, and much less before and after the disaster. This type of mission corresponds to technical assistance, such as fire-fighting, searching for disappeared people, rescuing local people during floods or earthquakes - with particularly large-scale action to help people in difficulty during a disaster - or eliminating pollution from contaminated areas. The large scale of such events, which require humans and material resources that cannot be put in place and maintained on a daily basis, involves the volunteers as a reserve force.

The intervention missions are carried out in priority by official organisations, and they require specialist knowledge according to the degree of danger and the specific use of certain equipment. Due to the urgent nature of this type of situation, volunteers are involved in missions that are not very different to those of professionals. The volunteers act under the orders of those in charge of the official emergency and rescue services, and therefore they are subjected to the same hierarchical constraints.

Among these intervention missions, there are different types of preventive activities: some civil protection volunteers, particularly volunteers organised on a local level, may take part (sometimes specifically) in preventive measures or in risk mitigation, such as observation of the area, preventive information, preparation of the local people, or action in schools. These activities are complementary to the professionals’ missions, and they take place over a longer time-scale.

In addition, in its observation activities, local voluntary work applies knowledge that is intrinsic to the citizens. This presence enables volunteers to observe the environment and people whom they know and with whom they mix, which may possibly lead them to establish links between the symptoms

and their causes. In this respect, voluntary work may be part of a prevention strategy. (Helsloot and Ruitenber, 2004)

Lastly, post-disaster activities concern restoring the damaged areas, and providing medical, social and material care for the victims. They may also include feedback following the disaster. Civil protection volunteers may handle this type of mission, but it is usually when they intervene abroad as part of humanitarian aid.

The volunteers' action is limited by the field of action of the Fire Brigade, the Police and veterinary services. They are not trained to fight fires, and the general framework of their action does not allow them to take risks.

The volunteers' social role is particularly in the elimination of illiteracy, and is complementary to training that leads to qualifications, which is an important benefit of their involvement. In addition, volunteer groups may take action with organisations concerning people who are in difficulty during a disaster, such as handicapped or disabled people, the elderly, or children. Some volunteer groups may particularly develop partnerships with associations of handicapped people, which have thus a place within civil protection, not only as advisers, but also as factors of social integration. (Thévenaz and Resodiharjo, 2010)



Fig. 3 Example of technical rescue operation - THW

However, it is found that civil protection activities concern men more than women. Volunteer groups devote very little work to the integration of women in the groups or to equality between men and women.

However, the volunteer groups that are characterised by their local dimension (municipal district or neighbourhood) include a higher proportion of women. In addition, their actions sometimes specifically concern women, particularly regarding preventive information. Also, THW organises an annual day for informing women of technical lines of work.

The volunteers' expertise

Some countries wish to open training courses to new topics such as the environment, sustainable development, and intercultural exchange, but civil security organisations give a lot of importance to classic training in first aid, crisis management and logistics.

Classic training corresponds to technical topics related to the use of specialised equipment and the techniques for directly tackling and containing the disaster, which the volunteers need when they intervene during a disaster. These training courses are not only intended to provide an immediate response in addition to the official emergency and rescue services: they also train volunteers to protect themselves when they intervene on the front line. Note that this type of training may go up to a virtually professional level, and it may lead to a diploma.

There is another type of training, based more on an educational and cultural approach to risk, which consists in training volunteers in general subjects and their environment, but which is necessary for disaster analysis as a means of prevention. These are less specialised training courses, which leave room for the volunteers' personal knowledge of their area (social knowledge, and knowledge of history). This type of training is directly related to the field of prevention, during assignments to inform citizens and create public awareness. It also meets the volunteers' expectations regarding training courses that will allow them to analyse emergency situations as part of feedback, to take preventive measures, and therefore to be involved in decision-making with experts.

Volunteer groups may enlist professionals to provide training courses. However, a considerable part of people's knowledge may also be derived from the sharing of experience between volunteers. The example of GIPS in Marghera is remarkable in this respect, as certain official training courses are provided by the volunteers themselves, after proposing their subject to the management of the civil protection agency.

The volunteers' active participation in training courses applies particularly to municipal groups, and it would appear to be difficult to envisage in the case of professionalised volunteers.

Training courses are one of the main reasons why volunteers become involved. In the cases of professionalised training courses, they lead to a training certificate, and therefore to a qualification which is recognized on the job market.

Another aspect of the benefit provided by training concerns the fact the citizens wish to be trained in order to be positioned on a level comparable to that of the experts, and to be able to understand and speak their language.

In all cases, whatever the type of organisation of groups, volunteer training courses result in better integration of people within their own respective areas.

Development and implementation of VADEME methodology

A methodology for setting up local volunteer groups has been developed from VADEME project, after validation by citizens, taking into account local conditions in terms of culture and risk nature. This methodology has been applied in Fos-sur-Mer, a town located at about 40 km from Marseille. In this territory, one of the largest industrial zones has been built 50 years ago, situated in the middle of large nature areas where some people used to spend their free time.

This area today is characterized by the interrelatedness of issues that create conflicting situations:

- A weak environment damaged by multiple and intensive pollutions from different sources (industries, waste treatment, road traffic, agriculture ...).
- A worldwide economic development.
- A social demand for more health protection.

Local decision makers (elected representatives, government services...) face increasing and contradictory expectations, based on a necessary industrial development and a citizen demand for better living conditions.

In the early 2000s new industrial sites were created, which led to local communities becoming aware of environmental and health risks generated by this industrial area. In order to improve understanding of pollution and its environmental and health impacts, local authorities have established a science policy aiming at providing validated data on these issues from research stakeholders. A program of scientific actions was thus established and entrusted to a Scientific.

Council made up of researchers, scholars and physicians, led by a local center for studies of pollutions and their health impacts: Institut Ecocitoyen pour la Connaissance des Pollutions (IECP). To create a strong link between this expert body and neighbouring populations, this approach requires a direct and voluntary participation of the local population in this process of knowledge

advancement while benefiting from theoretical and technical scientific training, allowing them to better understand their territory.

It is the subject of VOCE project (Volunteers for the Citizen's Observation of the Environment), which has been implemented from the VADEME methodology, within cities located next to the industrial area. VOCE has been supported by the Exchange Program for Research Policy (REPERE), French Ministry of Ecology and Sustainable Development.

VOCE project aimed at opening a new participative space for populations, remaining away from protests and tensions. The aim is to form a group at the interface of the territory, decisions makers and scientific community, which will, on the one hand, ensure the efficient transmission of information to local populations and, on the other hand, involve the inhabitants in a participative role regarding major issues relating to environmental health.

Conclusion

The Institut Ecocitoyen pour la Connaissance des Pollutions, as VOCE coordinator, is an interface between the territory and the world of Science and Research. Driving at the same time scientific studies on the effects of pollution (air, soil, water, organic impregnation human and environmental) and a permanent dialogue with all actors of the territory (politicians, industrialists, associations ...) to align the research studies with the needs expressed, IECP coordinates the project benefiting from this both scientific and citizenship approach. The research component was provided by Aix Marseille University, usually implementing many study programs within the territory.

Finally, the background of a citizen voice and the preparation of public debate was provided by the Centre for Applied Studies in Social Sciences (CESSA), which has a long experience in the field of consultation on environmental issues.

Nowadays, a group of nearly 50 volunteers exists from VOCE project, and is entirely part of the IECP structure. This citizen integration to a scientific organization allows to carry out instrumental measures using cutting-edge technologies (for air composition, state of marine environment and soil pollutions), completed by observations of bio-indicators, made by volunteers during their recreational activities. The knowledge developed by this double approach put together a scientific network, methodology and equipment in one hand, and in the other hand a secular knowledge, the local culture and a continued presence.



Fig. 4 VOCE volunteers during their first plenary meeting at Fos-sur-Mer - Oct. 16th, 2013

Therefore, citizens participate to the development of knowledge concerning environmental risks in this territory, in order to help decision makers to make the best choices in terms of economic and land use planning. (Gudowsky and Bechtold, 2012)

Participatory and inclusive decision-making is an imperative for the democratic societies. Volunteering and other participatory activities are only natural in order to continuously improve our civil protection systems. Risk communication and risk perception could be a vital fields to be more incorporated. Although there are still new data

to be apprehended the general trend is to establish partnership rather than tutorial approach. Citizens are not only vital part of the objects yet to be rescued but also the subjects of the civil protection systems. Acceptation of this new shift and implementing it to the national systems and processes would improve level of safety. (Frewer, 2004)

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References

- DIRECTIVE (2012). Directive 2012/18/EU of the European Parliament and of the Council of 4 July 2012 on the control of major-accident hazards involving dangerous substances, amending and subsequently repealing Council Directive 96/82/EC.
- EC (2006). VADEME Project description (http://ec.europa.eu/echo/files/civil_protection/civil/act_prog_rep/vademe.pdf).
- EPA (2001). Stakeholder Involvement & Public Participation at the U.S. EPA. 2001.
- FERONE, Geneviève, DEBAS, Dominique, GENIN, Anne-Sophie (2004). Gestion intégrée de l'environnement - Orientations concernant la stratégie thématique pour l'environnement urbain. Editions d'Organisation, Paris, (http://ec.europa.eu/environment/urban/pdf/iem_fr.pdf).
- FREWER, Lynn (2004). The public and effective risk communication. *Toxicology Letters* 149, pp. 391-397.
- GUDOWSKY, Niklas, BECHTOLD, Ulrike (2012). The role of information in public participation. *Journal of Public Deliberation*.
- HADZI-MICEVA, Katerina (2007). Comparative analysis of the European legal systems and practices regarding volunteering. *The International Journal of Not-for-Profit Law* 9, pp. 37-58.
- HELSLOOT, Ira, RUITENBERG, Arnout (2004). Citizen response to disasters: a survey of literature and some practical implications. *Journal of Contingencies and Crisis Management* 12, pp. 98-111.
- IRVIN, Renee-Anne, STANSBURY, John (2007). *Citizen Participation in Decision-Making: Is it Worth the Effort?* University of Nebraska.
- OECD (2009). *Focus on citizens public engagement for better policy and services*. OECD. Paris.
- O'NEILL, Peter (2004). *Developing a risk communication model to encourage community safety from natural hazards*. State Emergency Services.

- RENN, Ortwin (2008). Risk governance coping with uncertainty in a complex world. Earthscan, London; Sterling, VA.
- RENN, Ortwin, WEBLER, Thomas, RAKEL, Horst, DIENEL, Peter, JOHNSON, Branden (1993) Public participation in decision making: A three-step procedure 3, pp. 189-214.
- SJOBORG, Britt-Marie (2003). Current Trends in Risk Communication. Directorate for Civil Defence and Emergency planning Norway.
- THÉVENAZ, Céline, RESODIHARDJO, Sandra (2010). All the best laid plans... conditions impeding proper emergency response. International Journal of Production Economics 126, pp. 7-1.
- UNCED (1992). UN Report of the United Nations conference on environment and development: Agenda 21. Brazil, Rio de Janeiro.