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Executive Summary

This report corresponds to Task 81.3 of Work Package 81 of the EDEN project, devoted to the analysis of the Ethical implications of the recovery phase, and constitutes Deliverable 81.1, entitled “Report on Ethical Issues of the Recovery Phase” of the Eden project. It is the third of a series of reports on ethical issues involved in CBRNE major crisis management. It complements a first report devoted to the ethics of the prevention, preparedness and mitigation phases and a second report dedicated to the ethics of the response phase, which are already available. It has been mainly elaborated by the Inter-University Chair in Law and the Human Genome expert team, composed by Carlos María Romeo Casabona, Iñigo de Miguel Beriain and Emilio Armaza, who were the authors of Chapters 1-5, with a significant contribution from other EDEN partners, including Public Health England, who helped the team to gather valuable information and completed a the language revision.

This report reviews the literature concerning ethical issues of responding to a major CBRNE incident. There is a focus on public and private funding, the role of the mass media and research ethics, all of which often have good intentions but on an ethical level can create additional problems in their attempt to respond to disasters. Indeed, it is acknowledged that addressing these issues in preparation for the next major CBRNE will help to mitigate and even avoid the ethical issues that arise from the actions of both private and public organisations.

The report also highlights the ethical issues that arise from public and private funding such as lack of engagement with local communities and ineffective use of funding. For example, private companies can end up competing against each other for funds and therefore push the boundaries in the use of distressing images. The former action is shown to result in a failure to restart the local economy whilst the latter fails to respect the wishes of the local community. For public institutions, a moral obligation lies with the international community.

Mass media, too, face ethical issues in their attempt to publicise the tragedy of a large-scale disaster. It is shown that although mass media can attract the attention of the international community and private funders to the situation, it can result in a distortion of the truth, unfairly representing one disaster over another, and betray the dignity and identity of those affected. However, it is made clear that mass media and social networks play a vital role in the recovery phase of a CBRNE disaster.

Finally, the report addresses the ethical issues of research following a CBRNE incident that could result in a lack of effective informed consent, the use of children as participants without consent and the potential exploitation of victims for the benefits of

research. Participants also may not be properly screened for possible mental health impacts of the disaster. The report provides some conclusions that suggest the best solutions to mitigate the ethical issues that arise in the recovery phase of a major CBRNE incident.

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1 INTRODUCTION

1.1. General description of the report

CBRNE major crisis situations constitute terrible events that can cause thousands of victims, as the Chernobyl, Fukushima or Bhopal tragedies demonstrated. As terrible as these incidents were, they are not the worst examples of what a CBRNE situation may involve¹. The emergence of a pandemic similar to the 1918 Pandemic Flu, which killed between 50-100 million people, is one of the most threatening scenarios that humankind will probably have to deal with in the not too distant future. The relevance of these data should make us aware of the real need to do as much as possible to adequately address these situations. This involves the obligation to take all the necessary measures so as to deal with them in the best possible manner. Giving an appropriate response to the ethical issues that would be raised in such dreadful circumstances in advance constitutes one of these measures and not at all the least important one.

The objective of this report is to expose the ethical issues involved in the recovery phase of a CBRNE major crisis situation, especially if it could be considered to be the source of a disaster². It corresponds to Task 81.3 of Work Package 81 of the EDEN project, devoted to the analysis of the Ethical implications of the recovery phase, and constitutes Deliverable 81.1, entitled “Report on Ethical Issues of the Recovery Phase” of the Eden project. It is the third of a series of reports on ethical issues involved in CBRNE major crisis management. It complements a first report devoted to the ethics of the prevention, preparedness and mitigation phases and a second report dedicated to the ethics of the response phase, which

¹ Graphically, the ESRI Report stated: “*While the impact of a CBRN incident on society can vary dramatically, it is in any case likely to be immense. Prevention is crucial and should receive particular attention by equipping intelligence agencies and policy makers with better information analysis tools. Consequence management to overcome CBRN attacks and hoaxes is also of extreme importance. This requires development of more effective and reliable detection and identification capabilities, including detection networks, data fusion, distribution of signal output and decision support tools (...)*Although Europe has developed good standards for laboratory safety, the advent of dual-use technologies and the proliferation of know-how for the malicious use of biological agents have increased the need for socially-grounded approaches to biosecurity. Moreover, the continuing threat of global pandemics –with its potentially devastating impact on the health, social and economic stability of European society – sharpens these security concerns” (See: EUROPEAN SECURITY, RESEARCH AND INNOVATION FORUM, ESRI, Final Report, December 2009, p. 24, available at: http://ec.europa.eu/enterprise/policies/security/files/esrif_final_report_en.pdf. Last accessed: 29 October 2014).

² In the EU context, “disaster” means “*any situation which has or may have a severe impact on people, the environment, or property, including cultural heritage*” (See: Council Decision No 1313/2013/EU of the European Parliament and of the Council of 17 December 2013 on a Union Civil Protection Mechanism, art. 4.1).

are already available. It has been mainly elaborated by the Inter-University Chair in Law and the Human Genome expert team, composed by Carlos María Romeo Casabona, Iñigo de Miguel Beriain and Emilio Armaza, who were the authors of Chapters 1-5, with a significant contribution from other EDEN partners, and Public Health England, who helped the team to gather valuable information and completed a the language revision.

1.2. Scope of the report

Disaster recovery holds, in general, three different meanings. Firstly, it is a goal that involves the restoration of normal community activities that were disrupted by disaster impact. Secondly, it is a process by which the community achieves the goal of returning to normal routines. Finally, it could be defined as a phase in the emergency management cycle that begins with the stabilization of the disaster conditions (the end of the emergency response phase) and ends when the community has returned to its normal routines³. We would like to place special emphasis on this third definition, as far as our report will be focused in the *recovery phase* of a CBRNE incident.

The phases involved in a CBRNE or a general disaster are usually considered to be five: prevention, preparedness, mitigation, response and recovery phase. The recovery phase is the ‘fuzziest’ one, as it often overlaps with the response and the prevention phases⁴. Indeed, sometimes it is very difficult to trace clear boundaries between response and recovery. In theory, response has to do with the measures adopted in the aftermath of a CBRNE disaster. Thus, it is time-limited, characterized by a chaotic situation when human lives are still in danger and no recovery plan can be designed⁵. Instead, the recovery phase

³ See. LINDELL Michael K., “Recovery and reconstruction after disaster”, BOBROWSKY, P. T. (Ed.), *Encyclopedia of Natural Hazards*, Springer, 2013, p.812- 824 (812).

⁴ As Malcolm E. Baird has written: “critical activities frequently cover more than one phase, and the boundaries between phases are seldom precise. Most sources also emphasize that important interrelationships exist among all the phases. For example, “mitigating” flood damage by restricting development in a flood plain will reduce the problems in “responding” to flooding. These interrelationships are discussed more in a subsequent section” (See: BAIRD, Malcolm E. “The “Phases” of Emergency Management”, Background Paper Prepared for the Intermodal Freight Transportation Institute (IFTI), University of Memphis, January 2010, p. 2, at: http://www.memphis.edu/ifti/pdfs/cait_phases_of_emergency_mngt.pdf. Last accessed: 29 October 2014

⁵ In fact, Kathleen TIERNEY, former director of Homeland Security in the USA, described disasters as “Many people trying to do quickly what they do not ordinarily do, in an environment with which they are not familiar” (See: AUF DER HEIDE, Erik, *Disaster response: principles of preparation and coordination*, Mosby, Incorporated, 1989, p. 4). That is why the planning work “needs to be done before disasters strike. In the heat of the battle, there won’t be time to raise community awareness or think through the ethical implications of each answer. That can put caregivers into impossible situations with extraordinary potential repercussions” (See:

is specially focused on restoration of the infrastructures and services destroyed by the disaster, but also on the long-term physical and psychological recuperation of the victims⁶. Thus, whilst response and recovery might even coincide in time, their aims are quite different. However, some kind of activities, such as research in the disaster area, are sometimes considered part of the response phase and sometimes included in the recovery phase. We will address this issue Chapter 5 of this report.

A similar issue appears when dealing with the boundaries between the recovery and prevention phase, that is, *“those activities taken to prevent a natural phenomenon or potential hazard from having harmful effects on either people or economic assets”*⁷. In order to make a difference, we should keep in mind a very interesting quote by Colten, Kates and Laska⁸. As they stated, *“recovery can be divided into three periods. Before the emergency response period is over, a restoration period ensues where the essentials of urban life that are repairable are restored. And before it is over, a period of reconstruction begins to replace the destroyed infrastructure, housing, and jobs to re-accommodate the pre-disaster population. This is often followed by or overlaps with a period devoted to commemorative or betterment reconstruction, usually major projects of memorial and/or civic improvement”*. In our opinion, it is the second period of these three – that is, the reconstruction part – which is

STROUD, Clare, et als., *Crisis Standards of Care: Summary of a Workshop Series*, Forum on Medical and Public Health Preparedness for Catastrophic Events; Institute of Medicine, 2010, p. 52, available at: <http://www.nap.edu/catalog/12787.html>. Last accessed: 29 October 2014).

⁶ As Colten, Kates and Laska remarked, *“Disaster recovery addressing the long term needs of disaster victims and community is both physical and social”* (See: COLTEN, Craig E., Robert W. KATES, and Shirley B. LASKA, Three Years. Lessons for Community Resilience, Environment: Science and Policy for Sustainable development, vol. 50 (5), 2007, p.36-47 (39)).

⁷ LELISA, Sena, KIFLE W/Michael, *Disaster Prevention and Preparedness. Lecture notes For health science students*, 2006, at:

http://www.cartercenter.org/resources/pdfs/health/ephti/library/lecture_notes/health_extension_trainees/Disaster_PreventionPreparedness.pdf. Last accessed: 29 October 2014. In the EU context, prevention means *“any action aimed at reducing risks or mitigating adverse consequences of a disaster for people, the environment and property, including cultural heritage”* (See: Council Decision No 1313/2013/EU of the European Parliament and of the Council of 17 December 2013 on a Union Civil Protection Mechanism, art. 4.4). Indeed, one might even think about a possible overlap between the recovery and the mitigation phases. As stated by Bruce Lindsay, *“While conceptually useful for targeting efforts and resources, the phases of emergency management are not distinct—activities in each phase often overlap. For example, recovery projects often include elements of mitigation (for example, rebuilding structures using current building codes) and response often includes recovery measures (immediate debris removal). The phases are also cyclical in nature—lessons learned from an incident might be applied in preparedness efforts for future emergencies and major disasters”* (See: LINDSAY, Bruce R. (Coord.), *Federal Emergency Management: A Brief Introduction*, Congressional Research Service 7-5700, November 30, 2012, at: <https://www.fas.org/sgp/crs/homsec/R42845.pdf>. Last accessed: 29 October 2014).

⁸ COLTEN, Craig E., Robert W. KATES, and Shirley B. LASKA, Three Years. Lessons for Community Resilience, Environment: Science and Policy for Sustainable development, vol. 50 (5), 2007, p.36-47 (44)

directly linked to prevention, as far as prevention should start making considerations on where and how to start building. However, we consider that it makes sense to include in this report a short section on the ethics of reconstruction, as far as it usually involves funding gathered during the recovery phase, not to mention its direct linkage with the allocation of homeless victims. Thus, the last part of our analysis will be devoted to this issue.

Nevertheless, in this report we will especially focus on the first of these three parts, that is, the restoration period, as far as it is quite a critical phase which involves a number of substantive ethical dilemmas⁹. Chapter 2 will be dedicated to the analysis of issues involved in post-disaster aid and the way to gather funding. Chapter 3 will deal with an ethical analysis of mass media intervention in CBRNE crisis. Chapter 4 will be dedicated to expose our moral obligation to learn from disasters so as to avoid repeating the same mistakes. Chapter five will complement chapter 4, focusing on ethical issues of research in the post-disaster phase.

Finally, we would like to remark that we have not found significant differences in the ethics of recovery for crises of different origin. Chemical, biological, radiological, nuclear and explosive crises have different characteristics, although these differences are not so relevant in ethical terms. For example, we suggest that secrecy is a moral obligation when addressing sensitive information and this statement will have different implications, depending on which of these five fields we are addressing. But this is only relevant in terms of what concrete means are adopted to preserve an ethical goal. Similarly, considerations on the safety of reconstruction in a disaster will be different if the disaster originated as a nuclear incident or an explosive one, as far as the risk factor involved differs. However, these differences do not make any specific difference from the perspective of the ethical analysis. Thus, in general, we will only introduce explicit distinctions when strong reasons justify it.

⁹ We have found no original substantive ethical dilemmas related to commemorations, memorial or civic improvement.

2 ISSUES ABOUT THE FUNDING: PUBLIC AND PRIVATE IMPLICATION.

2.1.- Public and private funding: common issues

The gathering and use of resources during the recovery phase involves a number of substantive ethical issues which need to be analysed in depth. Some of these issues are directly related to the origin of funding. Public and private funding follow different patterns. Public funding depends on the will of the governments and/or international institutions, whereas private funding needs to be obtained from people directly. Sometimes a number of Non-Governmental Organizations have to compete between themselves to take the largest portion of an always too small cake. However, they also share some ethical concerns related to situations which have nothing to do with the origin of the funds but with their application¹⁰.

The most prominent ethical issue has to do with the relationship with the local communities affected by a CBRNE incident. It is quite often that those holding the resources undervalue the importance of the local communities in the recovery phase, even though the idea that only local communities can guarantee their own recovery in the long term is quite a commonly shared mantra¹¹. Indeed, experience shows that empowering the survivors of disasters is the most effective way to optimize the application of funding. Nobody knows better the type of needs relevant for the victims than the victims themselves and usually

¹⁰ Afterwards, we will discuss how the origin of the funds might involve some ethically significant differences at the moment of their application, but we will not focus on this issue right now.

¹¹ As Joel R. Charny wrote, *“The fundamental irony in responding to disasters is that while the affected community may be devastated, it is the only long-term source of resources for its own recovery. Humanitarian agencies have for too long responded by transferring immense amounts of assistance to the affected population, using resources gained from fund-raising appeals which play on the loss and helplessness of the survivors, the victims. More effective disaster assistance builds from an inventory of the needs and capacities of the affected population and responds to the needs in ways which build capacity”* (See: UNDP/DHA, *Disaster Management Ethics*, Module Edited by Evan Jenson, 1997, p. 53 accessible at: <http://www.disaster-info.net/lideres/spanish/mexico/biblio/eng/doc13980.pdf>. Last accessed: 29 October 2014). In the same sense, Alexander wrote: *“This curiously anomalous situation demonstrates that the key to disaster risk reduction is local self-sufficiency. If necessary it can be achieved by setting up twinning arrangements between relief organizations abroad and in the affected local communities and by transferring technology and expertise to where they are needed. Insofar as the global relief system is based on the principle of immediate international intervention, it is manifestly insufficient”* (See: ALEXANDER, David, *Globalization of Disasters: Trends, problems and dilemmas*, *Journal of International Affairs*, Spring/Summer 2006, vol. 59 p. 12. See also: JAGO, E., *“Flood Disaster Experience: A six-months perspective”*, *Australian Social Work*, 44(4), 1991, 43-52).

nobody can offer a better response than the local community¹². Moreover, it might happen that a disaster becomes an excellent opportunity for communities to improve the prior situation, reducing their vulnerability to the sort of incident which caused the harm. However, they could only be able to work in that way if they were empowered to decide what is to be done at any time¹³.

The only exception to this general rule is connected with vulnerable groups – women, children, the elderly, disabled people, etc- who are usually unfairly discriminated against due to cultural factors. In these cases, external actors should try to do their best to improve the situation of these people, empowering them to improve their circumstances in the community¹⁴. While adopting these policies, we would be planting the seeds of an

¹² As Jerry Aaker wrote, “Whenever possible, the best human resources to confront these needs are found locally among volunteers, professionals, doctors, pastors, elders and respected leaders in the community” (See: UNDP/DHA, *Disaster Management Ethics*, Module Edited by Evan Jenson, 1997, p. 52, accessible at: <http://www.disaster-info.net/lideres/spanish/mexico/biblio/eng/doc13980.pdf>)

¹³ However, we should be quite sceptical on the use of the concept of community. Indeed, “There are three major challenges. The first involves criticisms of the idea that communities are a uniform, homogenous entity lacking internal conflicts and divisions. The second concerns power systems at the local level and focuses on the idea of ‘elite capture’. The third argues that because of internal divisions and power relations, participation is almost always likely to be distorted in favour of some people or groups” (See: INTERNATIONAL FEDERATION OF RED CROSS AND RED CRESCENT SOCIETIES, “The myth of community?”, *World Disasters Report 2014*, Chapter 4, International Red Cross, at: <http://www.ifrc.org/publications-and-reports/world-disasters-report/world-disasters-report-2014/world-disasters-report-2014--chapter-4/>. Last accessed: 29 October 2014).

¹⁴ The World Disasters Report 2005 includes an excellent example on this purpose: “During Zimbabwe’s food shortages in 2003, Save the Children (UK) set up feedback committees through which children could express their views and influence aid distribution. The transparency this created proved vital in building trust between the agency and affected people (...) In 2003, Save the Children UK (SCF) began distributing emergency food aid. When evaluating their work, SCF found that many in the community, including children, felt marginalized by the way the programme had been implemented. Recipients had not been adequately informed about their rights and responsibilities. Villagers were reluctant to dispute undeserving cases during community meetings, for fear of being victimized. Children complained that distribution points were too far away, the loads were too heavy and distributions took place during school hours. So, in September 2003, SCF set up children’s feedback committees to channel complaints. Children were chosen to lead information collection and dissemination because they were principal beneficiaries and they could identify issues that adults were unwilling or unable to see. Over eight months, 70 children collected invaluable feedback from their peers. Foster children said their guardians denied them rations or forced them to work long hours for a share of the aid. They complained of guardians selling off food to buy beer. The committees called for vigorous promotion of children’s rights within the community. According to Jessica, “Our community now knows a lot more about abuse and I believe awareness is now higher about the rights of children. I have not heard of ill treatment of foster children in Mutorashanga since the child feedback committees were established” (See: INTERNATIONAL FEDERATION OF RED CROSS AND RED CRESCENT SOCIETIES, *World Disasters Report 2005*, chapter 1, accessible at: <http://www.ifrc.org/en/publications-and-reports/world-disasters-report/wdr2005/wdr-2005---chapter-1-data-or-dialogue-the-role-of-information-in-disasters/>. Last accessed: 29 October 2014). See also: SOLIMAN, Hussein H. and Mary E. ROGGE, “Ethical Considerations in Disaster Services: A Social Work Perspective”, *Electronic Journal of Social Work*, Vol.1 No.1, Issue of February 15, 2002, p. 1-23 (10)); FOTHERGILL, A., MAESTAS,

improved situation in the long term, even if it might cause severe conflicts in the short term¹⁵. In doing so, external actors should always try to identify the local leaders who might better defend the interests of the whole community and, especially, those of vulnerable people. Of course, this might involve a lot of hard work, as far as a deep knowledge of the cultural and political factors which are embedded in the local social structure, but it is a necessary task to be addressed if we are to make sure of the long-term results of the action. On this purpose, Vulnerability and Capacity Assessments (VCA) should always constitute a fundamental basis that must be kept present¹⁶.

Unfortunately, public or private organizations usually forget about these key recommendations¹⁷. Sometimes they bring personnel who do not understand the culture and

E.G .M ., DARLINGTON, J.D.. “Race, ethnicity and disasters in the United States: A review of the literature”, *Disasters*, 23(2), 1999, p. 156-173

¹⁵ As Kenlynn Shroeder stated, “*Certain ethnic or cultural traditions tend to keep some disaster survivors out of the formal aid network. Disenfranchised groups may be routinely denied access to vital information and resources that others take for granted. The policies and standards that guide organizations must be reexamined to eliminate social inequities in aid access including the exclusion of minorities, women and the poor. Institutional neglect and resistance to providing information is likely to be greater for groups such as women and minorities who have low income and poor housing, education and health (...) Because vulnerable populations are more burdened in recovery, decision-makers must actively advocate for the effective implementation of human rights for all. This advocacy is key to disaster relief and rehabilitation. Without these safeguards, disaster survivors cannot recover either emotionally or physically*” (See: UNDP/DHA, *Disaster Management Ethics*, Module Edited by Evan Jenson, 1997,p. 58, accessible at: <http://www.disaster-info.net/lideres/spanish/mexico/biblio/eng/doc13980.pdf>. Last accessed: 29 October 2014).

¹⁶ According to the World Disasters Report 2014, “*VCA are intended to both collect information and engage local people, but what is often missing is any questioning of why people are poor and vulnerable in the first place. There is a contradiction when a ‘community-based’ DRR and CCA project is trying to make part of the solution the powerful individuals and institutions who are actually part of the problem. In most projects the powerful are approached either to give ‘permission’ for a project or become participants. Over the past 40 years or so, there has been a major shift in much development work from ‘top-down’ policies towards a much greater focus on ‘grass-roots’ and participatory activities. A parallel change took place in the Red Cross Red Crescent, as shown in the adoption of local activities that use the VCA approach and support community-based activities (CBA)*” ((See: INTERNATIONAL FEDERATION OF RED CROSS AND RED CRESCENT SOCIETIES, *World Disasters Report 2014*, chapter 4, accessible at: <http://www.ifrc.org/publications-and-reports/world-disasters-report/world-disasters-report-2014/world-disasters-report-2014--chapter-4/>. Last accessed: 29 October 2014).

¹⁷ In William Easterly’s very much talented words, they often play the role of “planners”, instead of “searchers”, and this difference is fundamental. As he states, “*In foreign aid, Planners announce good intentions but don't motivate anyone to carry them out; Searchers find things that work and get some reward. Planners raise expectations but take no responsibility for meeting them; Searchers accept responsibility for their actions. Planners determine what to supply; Searchers find out what is in demand. Planners apply global blueprints; Searchers adapt to local conditions. Planners at the top lack knowledge of the bottom; Searchers find out what the reality is at the bottom. Planners never hear whether the planned got what it needed; Searchers find out if the customer is satisfied (...)A Planner thinks he already knows the answers; he thinks of poverty as a technical engineering problem that his answers will solve. A Searcher admits he doesn't know the answers in advance; he believes that poverty is a complicated tangle of political, social, historical, institutional, and technological factors. A Searcher hopes to find answers to individual problems only by trial and error*

needs of the victims, creating serious problems in the scenario of the disaster¹⁸. Sometimes they just rely on corrupted local leaders, or politicians who support a culture based on the discrimination of vulnerable groups¹⁹. In other examples, they adopt a paternalistic approach which might lead to better results in the short term but will underperform in the medium and long term²⁰. This dynamic is often caused as a result of the pressure placed on these organizations, and sometimes it is to do with deficiencies in their own structures²¹, or with the “official” protocols and practices regarding disaster relief and recovery²². Sometimes, donors have to use resources that are more expensive and less effective due to political reasons²³.

experimentation. A Planner believes outsiders know enough to impose solutions. A Searcher believes only insiders have enough knowledge to find solutions, and that most solutions must be home-grown” (See: EASTERLY, William, *The White Man's Burden. Why the West's Efforts to Aid the Rest have Done so Much Ill and so Little Good*, Penguin Press, 2006, p. 5 and 6).

¹⁸ As Joel R. Charny highlighted, *“Many relief workers lack even the most rudimentary knowledge of the languages, cultures, and politics of the countries they are working in; they are profoundly outsiders, prescribing solutions precisely when the devastated population is most vulnerable. Too many relief workers ignore the ethical problem posed by the power they can wield through relief assistance”* (See: UNDP/DHA, *Disaster Management Ethics*, Module Edited by Evan Jenson, 1997,p. 53 accessible at: <http://www.disaster-info.net/lideres/spanish/mexico/biblio/eng/doc13980.pdf>. Last accessed: 29 October 2014).

¹⁹ As Kenlynn Shroeder stated, *“Frequently, personnel from national and international organizations hastily interact with local and regional traditional people, assuming that the leaders who emerge first represent and serve the entire population”* (See: UNDP/DHA, *Disaster Management Ethics*, Module Edited by Evan Jenson, 1997,p. 59, accessible at: <http://www.disaster-info.net/lideres/spanish/mexico/biblio/eng/doc13980.pdf>. Last accessed: 29 October 2014). This is clearly mistaken.

²⁰ As Alexander stated, *“relief appeals are not solving the disasters problem is not an entirely unjustified one. When disaster strikes it is, of course, necessary to provide money and resources to ensure that survivors have the opportunity to rebuild their lives and hopefully to increase their resilience given the risk of future disasters. In some respects the immediate post-disaster period, with its high probability of obtaining a political consensus on the need for better mitigation, is the right moment to introduce mitigation. However, most practical mitigation strategies require more time, resources and persistence than can be meted out during the postdisaster window of opportunity”* (See: ALEXANDER, David, *Globalization of Disasters: Trends, problems and dilemmas*, *Journal of International Affairs*, Spring/Summer 2006, vol. 59 p. 8).

²¹ As Kurzman pointed out, in some cases representatives of disaster relief agencies were unable to respond adequately to survivors’ needs, and, in some cases, felt compelled to act contrary to survivors’ interests due to these factors. See: Kurzman, P., “Ethical issues in industrial social work practice” *Social Case Work: The Journal of Contemporary Social Work*, 64(2), 1983, p.105-111.

²² In that sense, Soliman and Rogge wrote: *“Notwithstanding the best efforts and intentions of organizations and individuals, the standards imposed by some disaster relief and response policies and procedures, or the implementation of such regulations, are not adequately responsive to survivors’ needs and may not be built on clear ethical and moral standards”* (See: SOLIMAN, Hussein H. and Mary E. ROGGE, “Ethical Considerations in Disaster Services: A Social Work Perspective”, *Electronic Journal of Social Work*, Vol.1 No.1, Issue of February 15, 2002, p. 1-23 (4)).

²³ As Jörgen Lissner highlighted that *“although governments in the donor nations do not have to raise funds for each and every disaster, they cannot ignore the general views of their taxpayers. Every government has to strike a balance between what humanitarian impartiality requires and what is politically acceptable to its taxpaying constituencies. This fact inevitably leads to compromises. The needs of the disaster survivors are not the sole factor determining what is being done-as exemplified by the dispatch with great fanfare from the capital of the*

In other cases, they need to provide evidence which demonstrates that their actions are effective and they usually do not have enough time to implement long term policies. As far as the news of the disaster, it will not be interesting after some time, and so they sometimes adopt a “marketing mind-set”, which is much profitable for them, but not as much for the victims of the disaster. Indeed, their performance might even worsen the situation of the victims, if the outsiders do not take into account the whole picture of the situation. As Jerry Aaker wrote, *“uncoordinated and spontaneous contributions of too much food had the effect of depressing local prices of crops for campesinos after a major earthquake in Guatemala. Crops were still in the fields, ready to harvest, and were not destroyed by the quake”*²⁴.

A second and very important issue is directly related to the fact that some CBRNE major crises achieve an impressive amount of funding, while others have to be faced with almost no funding at all. As David Alexander wrote in 2006, *“After the Indian Ocean tsunami of 26 December 2004 donor countries subscribed to post-disaster relief appeals so copiously that all the money could not be spent quickly enough to justify the reasons for which it was donated. For other contemporary disasters, particularly in sub-Saharan Africa, there was an alarming dearth of funds and a general failure to respond to international relief appeals. This paradox neither illustrates that the world is becoming more generous nor demonstrates the opposite. It does, however, highlight one of the many contrasts inherent in current approaches to disaster. As worldwide involvement in the relief and mitigation of catastrophe deepens and becomes more complex, so the approach becomes more fragmentary in some respects, particularly those that relate to global security strategies, and more uniform in others, especially in terms of where the international political system directs its limited attention”*²⁵. Alexander’s words reflect a reality which can hardly be neglected: there is an unfair unbalance between different CBRNE crises depending on a handful of factors which are usually very difficult to manage. As we will see in the next chapter, media coverage and the awareness are key, but geographical proximity, cultural linkage, etc. are also prominent causes that explain this fact. It is a matter of responsibility both from States and NGOs to

donor nation, large aircraft with relief supplies, some of which were readily available (and at lesser cost) in the recipient country itself or in one of its neighbouring countries” (See: UNDP/DHA, *Disaster Management Ethics*, Module Edited by Evan Jenson, 1997, p. 49, accessible at: <http://www.disaster-info.net/lideres/spanish/mexico/biblio/eng/doc13980.pdf>. Last accessed: 29 October 2014).

²⁴ See: UNDP/DHA, *Disaster Management Ethics*, Module Edited by Evan Jenson, 1997, p. 52, accessible at: <http://www.disaster-info.net/lideres/spanish/mexico/biblio/eng/doc13980.pdf>. Last accessed: 29 October 2014.

²⁵ See: ALEXANDER, David, Globalization of Disasters: Trends, problems and dilemmas, *Journal of International Affairs*, Spring/Summer 2006, vol. 59 p. 1. Some similar stories may be found in the World Disasters Report 2003 (See: INTERNATIONAL FEDERATION OF RED CROSS AND RED CRESCENT SOCIETIES, World Disasters Report 2003, chapter 1, http://www.ifrc.org/PageFiles/89755/2003/43800-WDR2003_En.pdf. Last accessed: 29 October 2014).

adopt a rational strategy regarding the gathering and distribution of the funds, so as to avoid their waste or create “donor frustration”.

Finally, we should always keep in mind that, whenever possible, funding should play a decisive role reactivating the economy of the affected population. Thus, it makes sense to spend funding on local producers, even if prices could be higher than those offered by donor countries’ producers. Re-activating the economy is a main issue in the recovery phase and the donor agent should act consequently²⁶. Sometimes this quite easily understandable rule is completely forgotten and lots of money which could be extremely useful in order to reactivate the local economy is wasted. Air-freighting of bottled water into the crisis zone from Europe in the case of the South Asia tsunami in 2004 constitutes an impressive example on this²⁷.

²⁶ As Joel R. Charms wrote, “A fundamental problem in disaster response is not lack of funds, but how funds are spent. A major ethical issue in disaster response is that millions of dollars are spent on salaries, per diems, transportation, and other support costs for the expatriate disaster relief experts. This money is spent back in the industrialized world or in the country which serves as the logistical base for the relief effort (Thailand for Cambodia, or Kenya for Somalia). Far more disaster response spending should be done by contracting services from the affected communities themselves, placing resources directly into the hands of the community whenever possible, and allowing the community to make decisions as to priorities for spending” (See: UNDP/DHA, *Disaster Management Ethics*, Module Edited by Evan Jenson, 1997, p. 53, accessible at: <http://www.disaster-info.net/lideres/spanish/mexico/biblio/eng/doc13980.pdf>. Last accessed: 29 October 2014). In the same sense, Arthur E. Dewey stated that “Humanitarian assistance must be needs-driven, not resource-driven. The US and Western European response to needs in the Newly Independent States in 1992-1993 represents a classic violation of this principle. Contributions driven by resource convenience or availability, over objective need, must be seen for what they are— both national embarrassments and immoral responses” (See: UNDP/DHA, *Disaster Management Ethics*, Module Edited by Evan Jenson, 1997, p. 54, accessible at: <http://www.disaster-info.net/lideres/spanish/mexico/biblio/eng/doc13980.pdf>. Last accessed: 29 October 2014). We will finally quote Kenlynn Schroeder’s words: “If needed resources are available in the region, however, it is not appropriate to import them. Cash infused into the local area to purchase resources stimulates the economy. This in turn helps integrate relief and recovery into long-term development and economic sustainability” (See: UNDP/DHA, *Disaster Management Ethics*, Module Edited by Evan Jenson, 1997, p. 54, accessible at: <http://www.disaster-info.net/lideres/spanish/mexico/biblio/eng/doc13980.pdf>. Last accessed: 29 October 2014).

²⁷ See: INTERNATIONAL FEDERATION OF RED CROSS AND RED CRESCENT SOCIETIES, “[Humanitarian media coverage in the digital age](http://www.ifrc.org/en/publications-and-reports/world-disasters-report/wdr2005/wdr-2005---chapter-6-humanitarian-media-coverage-in-the-digital-age/#sthash.VSNv18y6.dpuf)”, *World Disasters Report 2005*, Chapter 6, International Red Cross, at: <http://www.ifrc.org/en/publications-and-reports/world-disasters-report/wdr2005/wdr-2005---chapter-6-humanitarian-media-coverage-in-the-digital-age/#sthash.VSNv18y6.dpuf>. Last accessed: 29 October 2014. Another good example is provided by Alexander: “After the Iranian earthquake of 26 December 2003 some 1,600 foreign rescuers arrived in the city of Bam, the center of the devastation, within seventy- two hours. As none of the rescuers reached the area during the critical six to eight hours after the earthquake when urban search and rescue (SAR) are at a premium, they pulled out only thirty people alive from the rubble. In this respect it resembled most of the other major international earthquake disasters in the last few decades. The cost of such interventions averages around one million dollars per life saved. If they were conducted by local SAR teams it could be reduced to fifty cents per life saved, and many logistical and communications problems could be avoided” (See: ALEXANDER, David, *Globalization of Disasters: Trends, problems and dilemmas*, *Journal of International Affairs*, Spring/Summer 2006, vol. 59 p. 12).

The main conclusion we should arrive at according to these data is that maximizing the utility of the resources is always an ethical imperative and it can only be correctly addressed by an adequate coordination of the international agencies and the local communities. Indeed, “a balance must be struck between imported and indigenous sources of knowledge, favoring the latter when it is able to produce good results without compromising safety and equity”²⁸. Anyway, the implication of the victims is an absolute necessity and an ethically acceptable recovery plan should always consider this issue.

2.2.- Issues related to public involvement

The provision of public funding in the recovery phase raises very interesting ethical issues which have a lot to do with concepts such as the dichotomy of human rights/citizenship, the limits of solidarity as a concept and the importance of the recovery as a key-stone for a future prevention, etc. Dilemmas regarding public involvement in a CBRNE incident could be summarized this way: in case of a crisis located in a State, it seems quite clear not only from an ethical, but also from a legal point of view that this State must do its best to protect the affected people who happen to be its citizens, even if it does not always happen in practice²⁹.

However, what are the obligations of a State when a CBRNE incident happens somewhere else? In this case, we can think about two different possible scenarios (that, of course, could merge in some ways). The first scenario is that of a located catastrophe that could hardly cause a trans boundary harm, such as the explosives attacks in the subway in Madrid in 2004. The second one includes the possibility of an international crisis: even if the

²⁸ See: ALEXANDER, David, “Globalization of Disasters: Trends, problems and dilemmas”, *Journal of International Affairs*, Spring/Summer 2006, vol. 59 p. 13. See also: SCHWARE, Robert, "Official and Folk Flood Warning Systems: An Assessment," *Environmental Management* 6 (1982): 209-216.

²⁹ As Jörgen Lissner wrote, “In some cases, the government in an affected country considers the affected population to be “politically unimportant” or of marginal significance to the economy of the country. This was clearly the calculation of Emperor Haile Selassie when the Ethiopian highlands were hit by pervasive droughts in 1973-1974. In other cases, the government does not want to divert funds from what it considers concerns of a higher priority, be it large infrastructure projects or military hardware. In either case, the ready availability of foreign aid for the survivors of disaster makes it possible for such a government to pursue a benign neglect policy and to avoid reassessing and revising its priorities. Cases of malignant neglect are found particularly when the affected population is seen to be in direct opposition to those who control the reins of government. In such situations-exemplified in Southern Sudan or in the Kurdish provinces of northern Iraq-disaster relief becomes a central element of contention, if not an outright weapon of war” (See: UNDP/DHA, *Disaster Management Ethics*, Module Edited by Evan Jenson, 1997,p. 48, accessible at: <http://www.disaster-info.net/lideres/spanish/mexico/biblio/eng/doc13980.pdf>. Last accessed: 29 October 2014).

incident was caused in a concrete State, it might bring severe consequences to some other ones. A bioterrorist attack with Ebola virus in Japan, as the perpetrators of the attacks on the subway with sarin gas were planning to commit could be a good example of that.

Both scenarios include different issues from an ethical point of view. In the first case, the obligations of the non-affected States have usually been considered as strictly related to solidarity, if not, directly, to charity. However, it is perfectly possible to wonder whether this is the right way to think about it. Of course, the answer to this question will be linked to the concept of solidarity that we keep in mind and the normative obligations that solidarity might raise. The solidarity clause, created by the Treaty of Lisbon and currently included in article 222 of the Consolidated version of the Treaty on the Functioning of the European Union³⁰, is quite a good example of how the concept of solidarity might be used to stress international cooperation in the case of a CBRNE emergency. The solidarity clause is often considered as an extremely important document in terms of response and recovery from a natural or man-made disaster, including, of course, CBRNE incidents. Indeed, as Myrdal and Rhinard stated, *“this one-page provision creates one of the most explicit demands upon EU members to act jointly and to assist one another in the face of disasters, emergencies, and crises on the European continent”*³¹.

Could the solidarity clause be a good example for the future of international cooperation against a CBRNE crisis? We dare to answer affirmatively to this question. Indeed, the Hyogo Framework for Action includes a sort of compromise in this direction³². However, it seems quite clear that the implementation of this sort of compromise in an

³⁰ See: Consolidated versions of the Treaty on European Union and the Treaty on the Functioning of the European Union, Official Journal of the European Union, vol. 53, 30 March 2010, Notice number 2010/C 83/01, at: http://bookshop.europa.eu/is-bin/INTERSHOP.enfinity/WFS/EU-Bookshop-Site/en_GB/-/EUR/ViewPublication-Start?PublicationKey=QC3209190. Last accessed: 29 October 2014. The concrete significance of the Solidarity Clause has been fixed afterwards thanks to two specially important documents: the Joint Proposal from the Commission and the High Representative of the Union for Foreign Affairs and Security Policy to the Council of the European Union (Joint Proposal for a Council Decision on the arrangements for the implementation by the Union of the Solidarity clause) (See: **See:** Interinstitutional File: 2012/0370 (NLE) at: <http://www.statewatch.org/news/2013/jan/eu-com-solidarity-clause-art-222-18124-12.pdf>. Last accessed: 29 October 2014); and the 2014/415/EU: Council Decision of 24 June 2014 on the arrangements for the implementation by the Union of the solidarity clause (See: <http://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32014D0415&from=EN>. Last accessed: 29 October 2014).

³¹See: MYRDAL, Sara and Mark RHINARD, “The European Union’s Solidarity Clause: Empty Letter or Effective Tool?”, *UI Occasional Paper*, Swedish Institute of International Affairs, 7 June 2010, p. 3, at: http://www.sipri.org/research/security/old-pages/euroatlantic/eu-seminar/documentation/2010_Myrdal%20Rhinard_EU%20Solidarity%20Clause_UIOP.pdf.

³² See: Hyogo Framework for Action, 2005-2015. Building the Resilience of Nations and Communities to Disasters, Extract from the final report of the World Conference on Disaster Reduction (A/CONF.206/6), 2005, point 34, p.18 and 19.

international level is an extremely difficult aim, even if we could consider that we hold an ethical obligation to help human beings suffering from extreme circumstances. Indeed, one could easily answer that if we were to settle a legally binding agreement which involves the obligation to aid people suffering from major disasters, then it would remain unclear why we should not do the same if the circumstances were the same, even if it is caused by something else. What is the real importance of the origin of a famine plague in order to determine our ethical obligations against the survivors? Does it really matter if famine comes from a CBRNE incident or if it is simply the consequence of an endemic lack of water?

Keeping this in mind it seems quite clear that it will be hard to arrive at these sorts of commitments. The case of the European Union (a group of States linked by international agreements creating a supranational entity) is not easily reachable in the global arena and most States will not accept any kind of solution that involves provisions of funding to protect human beings who are not, unfortunately, their own citizens, even if some political declarations explicitly include this principle³³. This obviously explains the lack of reaction to several crises which caused terrible harm in geographical areas such as Africa or South America.

However, we should never forget that the logic of solidarity as a moral obligation, developed, among others, by Thomas Pogge or Peter Singer should always be kept present, even if it is not a realizable objective in the short or medium term. And, moreover, we should always keep present that there are not moral tools which justify the lack of reaction against a government which refuses to protect its own people, a situation that sometimes happens because of a lack of adequate resources³⁴ and sometimes is the result of a conscientious policy designated to eliminate a national collective. As Kenlynn Shroeder stated, "*All people within national borders, including displaced people and refugees, have the right to decent, humane treatment, as well as to protection and assistance when needed. When governments blatantly violate human rights, the international community has a moral duty to intervene*"³⁵. Even more unethical should be considered the acts of those governments that make decisions thinking in their own interests instead of people's relief after a CBRNE

³³ For instance, The Millennium Declaration of September 2000 (General Assembly resolution 55/2), identified key objectives of "*Protecting the vulnerable*" and "*Protecting our common environment*", which resolve to "*intensify cooperation to reduce the number and effects of natural and man-made disasters*". However, a declaration of intentions can hardly be considered as a binding document, at least from a legal point of view.

³⁴ We should not forget that sometimes, national policies are "*unclear, poorly explained, too rigid, and required a high level of middle-class financial management skills to comply with eligibility requirements*" (See: Cherry, A., & Cherry, M., "A middle class response to Disaster: FEMA's policies and Problems" *Journal of Social Service Research*, 23(1), 1997, p. 71-87 (71)).

³⁵ See: UNDP/DHA, *Disaster Management Ethics*, Module Edited by Evan Jenson, 1997, p. 59, accessible at: <http://www.disaster-info.net/lideres/spanish/mexico/biblio/eng/doc13980.pdf>.

disaster³⁶. Sometimes aid is used as a vehicle of expanding political influence. In these cases, it is the interest of the donor country instead of the affected one which leads the process. Of course, these kind of political choices are extremely unethical and should be denounced whenever we are aware of them³⁷.

A scenario characterized by a trans boundary crisis seems much more promising in terms of public sector implication and international response. The reason is easy to understand: as far as the CBRNE crisis might cause harm to the citizens of a foreign State, it should be much more interested in cooperating with the originally affected nation, and in doing so, it would be protecting its own citizens³⁸. The recent Ebola crisis constitutes an excellent example of this. It is clear right now that a decisive implication of Western countries would have been extremely important in order to erase the disease in its first stages³⁹. Had

³⁶ As Arthur E. Dewey, *“The classic immorality in reporting had to do with UK Prime Minister Harold Wilson’s inability to fulfil his promise to the British people that following the Nigerian Civil War, all possible aid would be rushed to the civilian victims. When the Nigerian Government turned back Wilson’s air relief armada, Wilson felt he then had to demonstrate that the aid was not needed after all. So, he instructed an otherwise honest and respected emissary to go to Nigeria and report back to parliament and the people that the post-war relief needs were being adequately handled. With great personal anguish, the emissary followed instructions. His actions potentially condemned masses of Eastern Nigerians to prolonged and unnecessary suffering, but saved Harold Wilson’s government”* (See: UNDP/DHA, *Disaster Management Ethics*, Module Edited by Evan Jenson, 1997, p. 54, accessible at: <http://www.disaster-info.net/lideres/spanish/mexico/biblio/eng/doc13980.pdf>. Last accessed: 29 October 2014)

³⁷ As the Red Cross and Red Crescent have denounced, *“The recent history of humanitarian interventions is littered with examples of inappropriate aid, which reflect more the priorities and needs of donor agencies than the needs of those affected by crisis. The fledgling Afghan administration has complained that the billions donated in aid have been too focused on relief rather than reconstruction. Huge food imports have undermined local markets. Meanwhile the influx of hundreds of international aid organizations during 2002 has sent rents and salaries sky-high, driving local non-governmental organizations from their premises and sucking most skilled and experienced Afghans who remain in the country away from vital posts in government and civil society”* (See: INTERNATIONAL FEDERATION OF RED CROSS AND RED CRESCENT SOCIETIES, *World Disasters Report 2003*, p. 7, accessible at: http://www.ifrc.org/PageFiles/89755/2003/43800-WDR2003_En.pdf. Last accessed: 29 October 2014)

³⁸ As the Johannesburg Plan of Implementation of the World Summit on Sustainable Development (A/CONF.199/20), held in 2002, states in its paragraph 37, *“An integrated, multi-hazard, inclusive approach to address vulnerability, risk assessment and disaster management, including prevention, mitigation, preparedness, response and recovery, is an essential element of a safer world in the twenty -first century”* (See: Plan of Implementation of the World Summit on Sustainable Development, at: http://www.un.org/esa/sustdev/documents/WSSD_POI_PD/English/WSSD_PlanImpl.pdf. Last accessed: 29 October 2014).

³⁹ Indeed, the Johannesburg Plan of Implementation of the World Summit on Sustainable Development (A/CONF.199/20), included in paragraph 64: *“Mobilize financial and other support to develop and strengthen health systems that aim to: (a) Promote equitable access to health -care services; (b) Make available necessary drugs and technology in a sustainable and affordable manner to fight and control communicable diseases, including HIV/AIDS, malaria and tuberculosis, and trypanosomiasis, as well as non - communicable diseases, including those caused by poverty; (c) Build capacity of medical and paramedical personnel; (d) Promote*

Western States followed this pattern, they would have contributed to protecting not only African people, but also their own citizens against the terrible consequences of a global pandemic. Therefore, it could be stated that while doing the opposite, they have compromised the health of their own citizens due to a misunderstanding of the gravity of the situation. And, indeed, this involves serious ethical issues. Of course, a chemical, nuclear or radiological crisis should lead to similar conclusions: the international community should feel much obliged to intervene against these situations not only because of the solidarity that links the whole human race, but also because of their obligation to protect their own citizens in the most efficient manner.

Therefore, the main conclusion we should arrive at is that a huge involvement of the public sector, comprising the main actors in the international community is an exigency of the solidarity principle which links the whole human race, but it might also be a consequence of the moral imperative to adequately protect their citizens that all different States assume⁴⁰. Thus, CBRNE incidents should attract an immediate international response that should last until the recovery phase is finished, at least in the case of overwhelmed States that demand international aid. This is not only an economic and political, but also an ethical imperative which should be strictly respected.

2.3.- Issues related to private involvement

Most humanitarian crises, including, of course, CBRNE crises, cause a deep emotion in all those who are aware of them. This explains the considerable increase of private funding able to be used in the recovery phase of a CBRNE incident. All these resources are usually managed by Non-Governmental Organizations (NGO, onwards), which

*indigenous medical knowledge, as appropriate, including traditional medicine; (e) **Research and control Ebola disease***".

⁴⁰ In this sense, the Hyogo includes the following point: "5. *Strengthen disaster preparedness for effective response at all levels- 20. At times of disaster, impacts and losses can be substantially reduced if authorities, individuals and communities in hazard-prone areas are well prepared and ready to act and are equipped with the knowledge and capacities for effective disaster management. Key activities (...) (c) Strengthen and when necessary develop coordinated regional approaches, and create or upgrade regional policies, operational mechanisms, plans and communication systems to prepare for and ensure rapid and effective disaster response in situations that exceed national coping capacities (...) (e) Promote the establishment of emergency funds, where and as appropriate, to support response, recovery and preparedness measures*" (See: Hyogo Framework for Action, 2005-2015. *Building the Resilience of Nations and Communities to Disasters, Extract from the final report of the World Conference on Disaster Reduction (A/CONF.206/6), 2005, p.5).*

are usually considered to be a key tool in this critical sector. However, private funding also raises very controversial ethical issues.

The main ethical problems related to private funding are usually linked to the use of suspicious means to gain a good end. For instance, it is quite common that NGOs use all possible means in order to achieve as much funding as possible. This creates a kind of competition between them that might create serious problems in terms of inconsistency, conflict, and lack of coordination in service delivery⁴¹. Moreover, it sometimes brings them to ethically suspicious practices, such as the exhibition of helpless victims, including photographs of minors⁴². This strategy is completely rational from a practical point of view, and images of children suffering pain are particularly effective in creating empathy in the possible donors. However, this kind of behaviour often transmits the idea that local communities are utterly helpless, which is not really true and might go both against victims' dignity and the community's interest, enforcing the idea of paternalism that we have merely denounced⁴³. We should always keep in mind that, even if money is of course necessary to guarantee recovery from a CBRNE disaster, *“hard-sell fund-raising aimed at income*

⁴¹ See: ROBARDS, K.J., GILLESPIE, D.F., & MURTY, S.A., “Clarifying coordination for disaster planning”, *Tulane Studies in Social Welfare*, 21-22, 2000, p. 41-60.

⁴² As Jörgen Lissner wrote, *“The main focus of such fund-raising efforts is normally on the plight of the disaster-stricken people. However, as information on any problems in remote parts of the world is often only part of a multitude of other information usually about matters more close by, any fund-raising NGO is under considerable pressure to dramatize its message in order to receive attention. Experience shows that “the starving child image” (which includes variations on the theme, such as despairing fathers and grieving mothers) is one of the most potent tools at the disposal of fund-raisers. Many will argue that the starving child image is a necessity to ensure that sufficient funds will be mobilized, and the disaster relief agencies will remain in business”* (See: UNDP/DHA, *Disaster Management Ethics*, Module Edited by Evan Jenson, 1997, p. 49, accessible at: <http://www.disaster-info.net/lideres/spanish/mexico/biblio/eng/doc13980.pdf>. Last accessed: 29 October 2014).

⁴³ As Joel R. Charny stated, *“The issue of “starving babies” is not that the images are indecent, but rather that the image portrays utter helplessness. No community is utterly helpless, even in times of war and famine. Repeated use of these images has dulled the public to real suffering, while encouraging the public to view people as unable to solve their own problems. The dignity and capacity of the affected people must be conveyed, along with real analysis as to causes of the disaster. Only with understanding created through analysis of root causes will the public begin to understand and support long-term solutions to the problems which create large-scale disasters”* (See: UNDP/DHA, *Disaster Management Ethics*, Module Edited by Evan Jenson, 1997, p. 53 accessible at: <http://www.disaster-info.net/lideres/spanish/mexico/biblio/eng/doc13980.pdf>. Last accessed: 29 October 2014). In similar sense, Jörgen Lissner wrote that *“The public display of an African child with a bloated stomach in advertisements is indecent because it exposes something in human life that is deeply personal: suffering. What many consider ethically unacceptable is not that certain segments of reality are shown for what they are, but that repeated dissemination through the mass media of the starving child image (almost invariably emanating from the Third World) has a problematic long-term effect on the international psyche. It is not conducive to an atmosphere of mutual respect and solidarity”* (See: UNDP/DHA, *Disaster Management Ethics*, Module Edited by Evan Jenson, 1997, p. 49 accessible at: <http://www.disaster-info.net/lideres/spanish/mexico/biblio/eng/doc13980.pdf>. Last accessed: 29 October 2014).

*maximization for the disaster relief agencies is no longer acceptable as an overriding objective in disaster relief*⁴⁴.

Another important issue is the discrimination that funding might create. Imagine, for instance, that a huge donor wants his/her money to be used exclusively in the recovery of a district of a town affected by a CBRNE incident, maybe because he/she lived there a long time ago. Someone might perfectly stand that this could involve an unethical result, as it could involve misuse of the funds. Indeed, it is possible that those resources would be much more useful in another district, as far as they would cover much more urgent need.

This is a complex issue. If the donor were a public institution, it would be much easier to prove that its behaviour would be considered unfair, because the allocation of public resources is supposed to maximize public interest. However, even this logic fails when we are thinking in terms of international politics. In the political arena it is quite common to think that the regional economic leaders have a major role to play in disasters located in their region than in those which happened far away from them⁴⁵. We usually do not consider this kind of behaviour as ethically unacceptable, even if it does not necessarily bring the whole world the maximum utility.

If this is acceptable in some way in the case of the States, it must also be considered so in the case of private funding. Indeed we should always keep in mind that the obligation to give aid could be considered a supererogatory duty. Thus, the private donor is not really obliged to provide funding. Under these circumstances, it seems advisable to let him/her make his/her decision freely, even if it will not bring the best results, under one condition: that it does not create an unfair discrimination between human beings while attempting to uphold fundamental human rights. This condition would make it completely unacceptable to permit someone to gather funding exclusively for white people or catholic people, as far as it would go against a fundamental human right, which is the right not to be discriminated against because of your race, religion, gender, etc. Different to the former case, in this occasion the donor would be contributing towards a mind-set which goes directly

⁴⁴ See: UNDP/DHA, *Disaster Management Ethics*, Module Edited by Evan Jenson, 1997,p. 51, accessible at: <http://www.disaster-info.net/lideres/spanish/mexico/biblio/eng/doc13980.pdf>. Last accessed: 29 October 2014. The paragraph continues this way: “*Money is obviously necessary, but it is a very blunt instrument which can only be used responsibly in the context of carefully calibrated long-term policies and considerable inter-cultural sensitivity*”.

⁴⁵ As Jörgen Lissner wrote, “*it is well known that factors such as proximity and cultural affinity play an important role as well. For obvious reasons, the governments of Australia and New Zealand involve themselves more readily in disaster relief in the Pacific than in the Caribbean, just as the donor governments in North America are more likely than those in Europe to take a keen interest in disasters in Latin America*” (See: UNDP/DHA, *Disaster Management Ethics*, Module Edited by Evan Jenson, 1997,p. 49, accessible at: <http://www.disaster-info.net/lideres/spanish/mexico/biblio/eng/doc13980.pdf>. Last accessed: 29 October 2014)

against a basic human rights principle and thus should be strictly forbidden, even if it might provoke the loss of some funds.

3 THE ROLE OF MASS MEDIA: ETHICAL ISSUES.

Mass media often show considerable interest in CBRNE major crisis situations. This usually means good news for the victims of the disaster, as far as the international community feels much more pressure to intervene when public opinion is well aware of the drama that it involves⁴⁶. At the same time, private donors are especially sensitive when they watch the images of the consequences of the disaster on television, through the internet or in magazines. Nevertheless, this is not the only role to be played by mass media. It also constitutes an excellent tool to learn about people's needs and give a voice to the affected communities -a tool that can hardly be substituted⁴⁷. Therefore, it seems reasonable (even if some academics have hardly argued against it⁴⁸) to conclude that mass media coverage plays a key role in the final reaction to a crisis⁴⁹. Indeed, it could even be stated that, as far as mass media creates the conditions to guarantee an effective response and recovery strategy, they are morally obliged to offer a fully and objective cover of the real situation⁵⁰.

⁴⁶ This is especially true when no political decisions have been made yet. See: ROBINSON, P., "The policy-media interaction model: Measuring media power during humanitarian crisis", *Journal of Peace Research*, 37(5), 2000, p. 613-633.

⁴⁷ See: RICHMAN, N., "Ethical issues in disaster and other extreme situations. In D. BLACK, M. NEWMAN, J. HARRIS-HENDRIKS & C. MEZEY (Eds.). *Psychological Trauma: A Developmental Approach*. London, England UK: Gaskell/Royal College of Psychiatrists, 1997; ROBINSON, P., "The policy-media interaction model: Measuring media power during humanitarian crisis", *Journal of Peace Research*, 37(5), 2000, p. 613-633.

⁴⁸ See: STROBEL, Warren, *Late Breaking Foreign Policy*. Washington, DC: United States Institute of Peace, 1997; GOWING, Nik, "Real-Time Television Coverage of Armed Conflicts and Diplomatic Crises: Does It Pressure or Distort Foreign Policy Decisions", *Harvard Working Paper*, Joan Shorenstein Barone Center on the Press, Politics and Public Policy, Harvard University, Cambridge, MA, 1994.

⁴⁹ See. SHAW, Martin, *Civil Society and Media in Global Crise*, London: Pinter, 1996. As the World Disasters Report 2005 stated, there are some key factors that explain the growing interest of the media in humanitarian crisis: "Some media trends actually favour humanitarians: the growing prominence of climate change, technical advances in video newsgathering, the rise of Africa as a geopolitical issue, posited links between poverty and terrorism, growth of peer-to-peer media and the approach of the 2015 millennium development goals. The Internet and 24-hour news have vastly increased the market for humanitarian testimony" (See: INTERNATIONAL FEDERATION OF RED CROSS AND RED CRESCENT SOCIETIES, "[Humanitarian media coverage in the digital age](#)", *World Disasters Report 2005*, Chapter 6, International Red Cross, at: <http://www.ifrc.org/en/publications-and-reports/world-disasters-report/wdr2005/wdr-2005---chapter-6-humanitarian-media-coverage-in-the-digital-age/#sthash.VSNv18y6.dpuf>. Last accessed: 29 October 2014).

⁵⁰ As Alan MWENDWA wrote, "Despite the fact that private media groups and channels do have commercial interests, the media's role in the case of a disaster should be based more on ethical and moral dimensions. This is one area where the media should be much more responsible in disseminating information. It must win people's confidence, and the provision of reliable information will serve the purpose. The media should not only

However, this general rule should not hide the fact that mass media involvement raises a number of ethical issues. For instance, it is unfair that crises receive media attention depending on their impact on the audience instead of the harm they cause. Indeed, the ethical significance of criteria such as the accessibility of the location or the unusual character of the crisis is not relevant at all. Nevertheless, it is these criteria which determine what is news and what is not⁵¹. This situation sometimes provokes extremely awful consequences, such as high-profile aid interventions that are not based on sound needs assessments, prospects of raising too much money and the existence of “Forgotten” emergencies, that is, emergencies that receive no attention at all due to the excessive cover of some others⁵². In order to fill this gap, the United Nations Office for the Coordination of Humanitarian Affairs (OCHA) created ReliefWeb, a specialized digital service offering permanent information about disasters⁵³. Unfortunately, its impact cannot be honestly compared with that of mass media and social networks nowadays.

However, the most important issues are directly related with the tension between the impact of the news and the need to respect confidentiality, autonomy or the dignity of people

be providing correct information and the right message at the right time but should also create an environment of solidarity and faith. This will help in augmenting the collective responsibility of all segments of society to tackle the challenges posed by any disaster” (See: MWENDA, Alan, “The role of media in disaster management”, *Daily Times*, Tue, 12/17/2013, accessible at: <http://www.urbangateway.org/content/news/role-media-disaster-management>. Last accessed: 29 October 2014).

⁵¹ As the Red Cross pointed out, “*News judgment reflects established criteria. News must be new. Editors sort stories by death tolls. Disasters that are unusual yet explicable, and that cause considerable death or destruction in accessible places which the audience is believed to care about, get covered. Baffling stories get less attention. The commercial imperative has sharpened journalists’ quest for ratings. Today, TV news is part news and part entertainment. So it’s understandable that sudden, dramatic disasters like volcanoes or tsunamis are intensely newsworthy, whereas long-drawn-out crises (difficult to describe, let alone film) are not (...)*” *The commercial imperative has sharpened journalists’ quest for ratings. Today, TV news is part news and part entertainment. So it’s understandable that sudden, dramatic disasters like volcanoes or tsunamis are intensely newsworthy, whereas long-drawn-out crises (difficult to describe, let alone film) are not*” (See: INTERNATIONAL FEDERATION OF RED CROSS AND RED CRESCENT SOCIETIES, “[Humanitarian media coverage in the digital age](#)”, *World Disasters Report 2005*, Chapter 6, International Red Cross, at: <http://www.ifrc.org/en/publications-and-reports/world-disasters-report/wdr2005/wdr-2005---chapter-6-humanitarian-media-coverage-in-the-digital-age/#sthash.VSNv18y6.dpuf>. Last accessed: 29 October 2014).

⁵² For instance, Anup Shah mentions some examples of these phenomena: “*an analysis of 200 English-language newspapers worldwide that showed the Asian tsunami generated more column inches in 6 weeks than the world’s top 10 “forgotten” emergencies combined over the previous year. A comparison whereby the Asian tsunami “media blitz prompted unprecedented generosity. By February 2005, the international community had donated US\$ 500 per person affected by the tsunami, compared to just 50 cents for each person affected by Uganda’s 18-year war*” (See: SHAH, Anup, “Media and natural disasters”, *Global Issues*, 2005, at: <http://www.globalissues.org/article/568/media-and-natural-disasters>. Last accessed: 29 October 2014).

⁵³ See: <http://reliefweb.int/about>. Last accessed: 29 October 2014

affected by the disaster⁵⁴. For instance, mass media are often tempted to show dramatic images of people suffering terrible harm as a consequence of the CBRNE incident. However, this kind of behaviour might lead into terrible consequences. As Soliman and Rogge wrote, *“By focusing on dramatic news about disaster-related death, injuries, damages, and loss, the media may perpetuate suffering rather than address survivors’ needs. Whether publicized information about the performance of disaster response organizations is correct or inaccurate, the pressure of operating under the media’s watchdog function may result in widespread efforts to correct systematic failures to anticipate and react effectively and efficiently to the disaster. Alternatively, such tremendous pressure may exacerbate intraorganizational chaos, create interorganizational conflict, and heighten survivors’ anxiety and distrust in service organizations. Social workers have obligations following disasters to engage members of the media judiciously in ways that protect the rights of survivors and that balance the broader community’s right to know with organizational autonomy to function”*⁵⁵. However, this is not so easy to do in practice, as far as mass media representatives are usually conscious of their own power and often act according to their own interest instead of local communities’ interest.

The magnitude of the issue increases if we keep present that the cover of the incident is much higher in its first stages and then it is forgotten once it no longer attracts the interest of the audience. This fact involves a gap between the needs of the recovery phase, which are distributed in a long timeline, and the period when the resources able to face those needs can be easily attracted –the time when media incorporate news about the disaster. As a consequence, NGOs planning to operate in the crisis scenario often feel tempted to use all possible means to achieve as much impact as possible in the first moments of the recovery phase⁵⁶. As a consequence, they feel tempted to compromise their own behaviour by offering

⁵⁴ See: SOLIMAN, Hussein H. and Mary E. ROGGE, “Ethical Considerations in Disaster Services: A Social Work Perspective”, *Electronic Journal of Social Work*, Vol.1 No.1, Issue of February 15, 2002, p. 1-23 (8)); PRIEUR, Michel, “Ethical Principles on Disaster Risk Reduction and People’s Resilience”, *European and Mediterranean Major Hazards Agreement (EUR-OPA)*, 2011, recommended by Resolution 2011 – 1 of the Committee of Permanent Correspondents on Ethical Principles relating to Disaster Risk Reduction and contributing to People’s Resilience to Disasters, adopted at the 60th Meeting of the Committee of Permanent Correspondents, Strasbourg, France, 15 April 2011, accessible at: http://www.coe.int/t/dg4/majorhazards/ressources/resolution/RES_2011-1_EthicalPrinciplesDRR_EN.pdf. Last accessed: 29 October 2014.

⁵⁵ See: SOLIMAN, Hussein H. and Mary E. ROGGE, “Ethical Considerations in Disaster Services: A Social Work Perspective”, *Electronic Journal of Social Work*, Vol.1 No.1, Issue of February 15, 2002, p. 1-23 (7-8))

⁵⁶ As the World Disasters Report 2005 states, *“some aid workers blame journalists for not doing more to highlight the world’s ‘forgotten crises’. The tsunami dominated news headlines for weeks, leading to record public donations. Meanwhile chronic disasters caused by war, drought and disease attract little attention. However, few aid agencies have themselves focused on places and people in greatest need. Instead, they tend to follow the flow of media coverage and donor resources”* (See: INTERNATIONAL FEDERATION OF RED

images of the victims, especially those taken by them, so as to increase their funding. This way, they contribute to the most censurable practices of mass media. As previously expressed, this constitutes an unacceptable strategy which should be strictly avoided. Instead, they should follow the Red Cross guidelines: *“Humanitarian communicators have to work harder to increase the visibility of ‘hidden’ crises. Cultivating relationships with journalists is far more important than issuing press releases, which often lie ignored. Reporters are more interested in sources. Targeting the right journalists is important. Drought is more likely to be reported by the environment correspondent than the news desk. Speed is critical, while the story is ‘hot’. Agencies must stay perpetually alert, unencumbered by bureaucracy”*⁵⁷.

As a conclusion, it must be highlighted that mass media and social networks play a key role in the recovery phase of a CBRNE crisis. They are the best vehicle to transmit the images of the crisis scenario to the public. Consequently, they must try to achieve a minimum ethical standard. This implies that they should avoid relegating victims’ interests and rights in the search of a larger audience. They should always keep in mind that they are obliged to provide for accurate and timely information, trying to balance their private interest with the public service they offer.

CROSS AND RED CRESCENT SOCIETIES, World Disasters Report 2005, accessible at: <http://www.ifrc.org/en/publications-and-reports/world-disasters-report/wdr2005/wdr-2005---chapter-1-data-or-dialogue-the-role-of-information-in-disasters/>. Last accessed: 29 October 2014).

⁵⁷ See: INTERNATIONAL FEDERATION OF RED CROSS AND RED CRESCENT SOCIETIES, *“Humanitarian media coverage in the digital age”*, World Disasters Report 2005, Chapter 6, International Red Cross, at: <http://www.ifrc.org/en/publications-and-reports/world-disasters-report/wdr2005/wdr-2005---chapter-6-humanitarian-media-coverage-in-the-digital-age/#sthash.VSNv18y6.dpuf>. Last accessed: 29 October 2014. The Report concretises this general approach in some recommendations: *“Here are some practical tips:*

- *Invest in media relations, communications training and expertise, down to the local level.*
- *Keep up a dialogue with the media: provide background material on complex emergencies, but not 15 minutes before deadline.*
- *Put a number on it: death tolls give journalists pegs to hang their stories on. And they go some way towards quantifying the unimaginable.*
- *Bring in the big names: It’s controversial, but enlisting celebrities can work. The press follows the famous face and ends up reporting on the cause.*
- *Make it visual: Nothing sells a story like a good picture. In disasters, aid agencies may have the only photos available.*
- *Be creative and proactive: Tell the bigger story through the eyes of individuals. Fit what you’re doing into the news agenda.*
- *Organize trips for reporters.*
- *Never give up: In this game, persistence really does “pay off”*

4 ASSUMING THE CONSEQUENCES OF A DISASTER: ARE WE MORALLY OBLIGED NOT TO REPEAT THE SAME MISTAKES?

One of the most important issues to be considered when planning the prevention and mitigation strategies to be used is related to the economic cost of the measures involved and the possibility of adopting new plans which might dramatically change the distribution of the population⁵⁸, and the responsibility of those who are exposed to the consequences of a CBRNE major crisis situation. Let us think, for instance, in the case of Hurricane Katrina in the USA. As commonly known, New Orleans was continuously exposed to flooding caused by this type of terrible event. Its citizens were aware of the risk that living in New Orleans involved. The former experience produced by Category 3 Hurricane Betsy that struck New Orleans in 1965 was an excellent example of the dangers involved in living there.

In fact, the possibility of a new, devastating flood had been anticipated by the expert community for many years and reported on publicly three years before Katrina in a widely disseminated account in the newspapers. Moreover, a simulation exercise had been performed one year before the disaster happened⁵⁹. Even in that case, most of the citizens preferred to keep on living there. Parting from that fact, an American author, McGee questioned the ethics of federal funds being used to pay to subsidize the recovery of people who knowingly lived in flood zones⁶⁰.

However, his approach was not accepted by many people who wanted to go back to their homes, even if it was quite clear that it involved a serious danger. Indeed, one of the most relevant issues that raised in the recovery phase of the Hurricane Katrina was that the tensions lingered between those who felt that residents had the “right to return” and those

⁵⁸ As Lindell stated, “*The inclusion of hazard mitigation means that homes, businesses, and critical facilities such as schools and hospitals can be moved out of hazard prone areas. Moreover, any residential, commercial, or industrial structures that remain in hazard prone areas can be retrofitted to higher standards of hazard resistance. Thus, a pre-impact plan can not only accelerate recovery but also decrease the community’s vulnerability to future disasters*” (See: LINDELL Michael K., “Recovery and reconstruction after disaster”, BOBROWSKY, P. T. (Ed.), *Encyclopedia of Natural Hazards*, Springer, 2013, p.812- 824 (823)

⁵⁹ See: COLTEN, Craig E., Robert W. KATES, and Shirley B. LASKA, Three Years. Lessons for Community Resilience, *Environment: Science and Policy for Sustainable development*, vol. 50 (5), 2007, p.36-47 (42)

⁶⁰ See: Sara Kathleen Geale, (2012) "The ethics of disaster management", *Disaster Prevention and Management*, Vol. 21 Iss: 4, pp.445 - 462

who argued that land development in the most vulnerable areas of the city should be restricted or prohibited, such as McGee⁶¹.

In our opinion, it is a real fact that we must always try to avoid risks related to CBRNE incidents. Sometimes this can be impossible. For instance, in the case of nuclear risk, it is hard to imagine a way by which we could feel totally sure that no incident will happen or we could make sure that the consequences of it will be minimal. Experiences such as the Fukushima nuclear crisis are extremely difficult to foresee and even more difficult to handle. However, some other types of incidents are much easier to avoid. This is certainly the case of incidents related to explosives: it should be enough to store them far from an inhabited area to keep sure that an incidental explosion will cause no harm. The case of chemical incidents is somewhere in between these two sides of the line. It is difficult to adopt effective measures protecting people who are already living near to a chemical plant, but forbidding new construction should not be so.

Provided that some kind of risks are avoidable, it makes sense not to distinguish between risks that already exist and those which do not. They should all be avoided. This implies that we must do whatever possible to impede people to assume major risks which have already been identified. The question on whether those people decided to accept the risks from the beginning, if they were aware on them only afterwards, who should be blamed on that, etc., are not so relevant in order to make the decision on what should be done. Indeed, decisions about risk must not be adopted exclusively by the people who are to face the consequences in the first place.

In this respect, we must remember that social workers, policemen, fire workers, health care workers, etc., are supposed to risk their lives and health in case of a major CBRNE crisis. Thus, their opinion and interest should always be kept in mind while deciding what kind of risks lay people are to play. In our honest opinion, it would not be fair if we did anything other than forbidding all decisions which might create a serious danger for people who are supposed to face the consequences, even if it involves traumatic translations. However, this line of action should be adopted fully respecting people's feelings. Thus, psychological support, adequate information, professional support, etc., should be provided to make the process as smooth as possible. If possible, communities should be conserved in the way they worked prior to the disaster⁶². Creating a Mitigation/Recovery Committee which

⁶¹ See: COLTEN, Craig E., Robert W. KATES, and Shirley B. LASKA, Three Years. Lessons for Community Resilience, *Environment: Science and Policy for Sustainable development*, vol. 50 (5), 2007, p.36-47 (41).

⁶² We should not forget that "*Voluntary and forced evacuation from homes and community are highly stressful experiences for individuals, families, and communities*" (SOLIMAN, Hussein H. and Mary E. ROGGE, "Ethical

includes prominent members of the community should be a high priority on this purpose, as people get much more involved when they feel that their opinion counts in final decisions⁶³.

The issue of whether people should be compensated because of the impossibility of returning to their homes is quite a different issue, even if directly connected with the former one. In this case, we should start distinguishing several factors that might be relevant in order to make up our minds. One of them is directly related to the responsibilities involved in the prevention of the disaster. Did the authorities do as much as possible to prevent the catastrophe? In the case of Hurricane Katrina, it was quite clear that a negative answer was needed. As stated by Colten, Kates and Laska, *“despite such anticipation, the protective works were both incomplete and failed, and Louisiana’s emergency plan had not been updated. Utility and transportation companies did have their own recovery plans, but there were no plans, public or private, for reconstruction. Furthermore, the event occurred before planning and preparation were complete”*⁶⁴.

Under these circumstances, it seems reasonable to conclude that the authorities of the State of Louisiana (at least them) had certain ethical obligations to improve the measures to avoid new floods in the future forgetting about budget restrictions⁶⁵. If this is not reasonably possible from a technical or an economical point of view to take care of those people who would never be able to return home, then the State authorities should pay for a new home for the refugees.

Of course, a completely different solution should be offered in those cases in which people voluntarily disobey a rule established for risk reduction purposes. Under these

Considerations in Disaster Services: A Social Work Perspective”, *Electronic Journal of Social Work*, Vol.1 No.1, Issue of February 15, 2002, p. 1-23 (13)).

⁶³ As Lindell stated, “The Recovery/Mitigation Committee should examine the findings from the community hazard/vulnerability analysis to identify the locations having the highest levels of hazard exposure, physical vulnerability, and social vulnerability. The committee should begin to work with the rest of the community and especially with those at greatest risk, to formulate a vision of the disaster recovery it intends to implement” (See: LINDELL Michael K., “Recovery and reconstruction after disaster”, BOBROWSKY, P. T. (Ed.), *Encyclopedia of Natural Hazards*, Springer, 2013, p.812- 824 (820).

⁶⁴ COLTEN, Craig E., Robert W. KATES, and Shirley B. LASKA, Three Years. Lessons for Community Resilience, *Environment: Science and Policy for Sustainable development*, vol. 50 (5), 2007, p.36-47 (43)

⁶⁵ Indeed, budgetary shortcuts in CBRNE major disaster prevention, mitigation and preparedness constitutes a highly unmoral practice which goes against the Hyogo Framework for Action, which states that *“The promotion of a culture of prevention, including through the mobilization of adequate resources for disaster risk reduction, is an investment for the future with substantial returns. Risk assessment and early warning systems are essential investments that protect and save lives, property and livelihoods, contribute to the sustainability of development, and are far more cost-effective in strengthening coping mechanisms than is primary reliance on post-disaster response and recovery”* (See: See: Hyogo Framework for Action, 2005-2015. Building the Resilience of Nations and Communities to Disasters, Extract from the final report of the World Conference on Disaster Reduction (A/CONF.206/6), 2005, p.5.).

circumstances, one might easily think that these people should not only forget about a sort of recovery that goes beyond their psychological recovery, but also be obliged to compensate the community for the efforts made in relation with their needs after the CBRNE incident. However, the main problem is that some of the people suffering the consequences of a disaster cannot be so easily blamed on their own destiny, as some of them would be unable to understand their situation, due to their illiteracy, general lack of education, etc. Therefore, we should always be extremely careful before blaming someone on their behavior in relation to a CBRNE incident. Solidarity, again, merges as a much more appreciable value.

5 OVERVIEW OF ETHICAL IMPLICATIONS OF RESEARCH AFTER DISASTERS

5.1.- Introduction

On the basis of the idea that both natural and manmade disasters can happen at any time and in any location, we must highlight that there exists a set of ethical problems that we must face during the decision making process developed after a disaster. In this sense, both disaster survivors and citizens who have not been affected by the catastrophe are in a particularly vulnerable position while public and private institutions make huge efforts towards social recovery. Different kinds of research can provide crucial information about the alternatives we have to deal with and to prevent new potential catastrophes⁶⁶.

Society's concern in the prevention of these kinds of events has been a crucial factor that, largely, has propelled our current technological development. In this sense, after disasters, some specific types of research activities can, directly and indirectly, be used in order to manage, deal and minimize damages for both current catastrophes and new potential disasters. Doctrine has indicated that, for instance, epidemiological information, treatment guidelines and protocols and pathophysiological research on post-traumatic stress disorder are crucial not only to deal, treat and understand the disaster's consequences, but to prevent new and potential events⁶⁷. Thus, biomedical research in such circumstances may require some activities that potentially may affect the interests and rights of different kinds of citizens. For that reason it is quite important to establish the best way to balance that urgent need for biomedical research with the equally important duty and obligation not only to respect, but to protect the interest and rights of the participants in said biomedical research process. Guidelines and standards developed to face this challenge must take into account

⁶⁶ Collogan, Lauren K. / Tuma, Farris / Dolan-Sewell, Regina / Borja, Susan / Fleischman, Alan R., "Ethical Issues Pertaining to Research in the Aftermath of Disaster", in *Journal of Traumatic Stress*, Vol. 17. No. 5. October 2004. p. 363; O'Mathúna, Dónal P., "Roles and Challenges for IRBs with Disaster Research", in *Research Practitioner*, Volume 13, Number 5, September–October 2012, pp. 168-169.

⁶⁷ Cfr. Iijima, Yoshihiko / Aleksic, Branko / Ozaki, Norio, "Necessity for ethical consideration of research in the aftermath of disaster", in *Psychiatry and clinical neurosciences*, 2011, 65, pp. 535.

the impact of the specific principles and values of bioethics⁶⁸ (dignity, non-maleficence, autonomy, beneficence, justice, precaution) and, of course, the general ethical and legal principles.

Nevertheless, it is important to remark that in the general field of ethical implications of research after disasters there are, at least, two other challenges we must face in order to define the general and specific framework to make a decision. The first one is related with the problems of ethical (and legal) liability of people that refuse to participate in the recommended or, more complex, compulsory treatment process after a catastrophe. In effect, we must establish which would be the best way to balance the interest to protect public health when it conflicts with the equally important interest to protect some fundamental human rights (for instance the “freedom to walk around”). This problem occurs, for example, when an infected person (especially if the illness is completely lethal and contagious) escapes quarantine. In the field of law, we must remark that the general trend in Europe has been to not establish criminal liability when public health is affected by this specific kind of behavior⁶⁹, but we must assume that it is important to, at least, start a deep discussion about this “legal loophole”. It appears that so far we have not faced this problem, but we do not know when we will have to deal with it.

On the other hand, the second challenge we must face in order to define the general and specific framework to make a decision about the ethical and legal viability of conducting a research that can provide crucial information about the alternatives we have to deal with or to prevent new potential catastrophe, is one which is related with the problems and conflicts in the field of criminal investigations. In effect, fortunately it is known that the whole Criminal Justice System in democratic countries has been endowed with an important number of principles and guarantees developed to prevent fundamental human rights abuses of the accused as well as convicted persons, from the intervention of the criminal justice system and/or the bad interpretation or execution of general and specific criminal rules. Nevertheless we do not know at which point an extreme or emergency situation could justify—at least from the ethical point of view—an unusual decision in a criminal investigation

⁶⁸ Cfr. Iijima, Yoshihiko / Aleksic, Branko / Ozaki, Norio, *op. cit.*, pp. 536; Collogan, Lauren K. / Tuma, Farris / Dolan-Sewell, Regina / Borja, Susan / Fleischman, Alan R., “Ethical Issues Pertaining to Research in the Aftermath of Disaster”, *op. cit.* 364.

⁶⁹ It is important to remark that in general terms, Criminal Codes punish a group of behaviors that could affect the “public health” (usually those related to the distribution of substances harmful to health) but we must note that in such list have been not included the behavior described in the paragraph above. See, for instance, articles 359 to 378 (Chapter III “Crimes against public health”, Title XVII “Crimes against collective security”, Second Book “Crimes and their punishment”) of the Spanish Criminal Code).

procedure⁷⁰. We would be involved in such situation, for example, when we know that the arrested terrorist we have in the Police Station knows where a biological weapon is hidden that will explode within two hours and will disseminate a very lethal and contagious illness in the city center (preliminary reports quantify the number of casualties in several thousands of persons inside the country and calculate that such illness could be spread in several other countries of the region killing an incalculable number of citizens). Well, in such imaginary situation, we would ask ourselves if it would be ethically correct to use the outlawed practice of torture even if with said decision police agents break the fundamental rules on the field of criminal investigation in our democratic country. What should be the consequences for the police officers and other authorities involved in such situation?

In this section we will not address the last two described problems of investigation and research that can provide crucial information about the alternatives we have to deal with or prevent new disasters. We will focus specifically in the field of ethical implications of biomedical research after disasters.

5. 2. After disaster: The extraordinary nature of social situation

Clearly, the occurrence of a catastrophe puts the society in a position of extraordinary nature. As indicated, disasters (both natural and manmade) can happen at any time and in any location, so it is prudent to say that at said moment we could not be prepared to face it —or, at least, not as well prepared as we would expect. Depending on the specific situation a disaster can lead people to feel completely insecure in most social situations (especially if the disaster has been caused by a biological agent), an important number of physicians who work in health care probably will refuse to go to work in order to avoid a set of circumstances which can lead him/her to contract such illness and to spread it to their family or friends; in the same situation there will probably be some people (healthy or sick) that in different circumstances would be completely willing to participate in research programs to face an emergency. Of course the complexity of that situation can be increased due to the level of economic damage caused by the catastrophe and suffered by the country,

⁷⁰ Armaza Armaza, Emilio José, “Bioterrorism and its regulation: a pending issue”, in *Perspectivas en Derecho y Genoma Humano*, Number 20, December 2012, Inter-University Chair – Provincial Government of Biscay, University of Deusto, University of the Basque Country, p. 2.

and other potential circumstances such as a lack of political leadership to deal with the disaster⁷¹.

After a biological —or similar— disaster, this would be, to summarize, the general situation in which society would be in: Lack of confidence in the health care system, lack of confidence in the institutions' economic capacity (and, in general terms, government's capacity) to deal with the situation and, of course, lack of confidence in the established general policies, rules, guidelines and protocols to recover the normality in the affected country or region. It is important to remark that we can add to this situation the extraordinary and urgent need to develop, as fast as we can, a number of specific biomedical research projects in order to find the way to face the disaster⁷². At this point it is important to remark again that we must solve a set of particular problems related with the balanced assessment of the —private or public— interests involved on both sides of the conflict (researchers and persons who decide to participate in the proposed experiments).

5. 3. The general ethical and legal framework of biomedical research

There is no doubt that ethical considerations have had a deep impact on the legislative production at national and international level. The main international treaty connected with the application of Biomedicine to human beings is the Convention for the protection of Human Rights and Dignity of the human being with regard to the application of Biology and Medicine (signed on April 4, 1997 and known as the “Convention on Human Rights and Biomedicine” or “Oviedo Convention”). This document establishes a set of fundamental principles applicable not only in the field of health care, but also in the field of biomedical research, especially since the publication of the Additional Protocol concerning Biomedical Research in 2005. From the European perspective we have to remark that there is one important document related to clinical research: Directive 2001/20/EC of the European Parliament and of the Council of 4 April 2001 on the approximation of the laws, regulations and administrative provisions of the Member States relating to the implementation of good clinical practice in the conduct of clinical trials on medicinal products for human use. Finally, it is important to point out that in the field of internal Policy and Law, developed countries tend to have specific tools to regulate this field. In Spain, for instance, we can find the

⁷¹ Cfr. Armaza Armaza, Emilio José, “Bioterrorism and its regulation: a pending issue”, op. cit., p. 2.

⁷² Cfr. Iijima, Yoshihiko / Aleksic, Branko / Ozaki, Norio, op. cit., pp. 536.

Biomedical Research Act of 3 July 2007. The object of this Law —with full respect afforded to human dignity, identity and the inherent rights of a person— is the regulation of biomedical research⁷³.

Taking into account the general and specific rules and ethics principles contained in such documents we can enumerate some common basic rules concerning a researcher's duties and a patient's rights in the field of biomedical research⁷⁴:

- a) The primacy of the human being
- b) Information for research participants
- c) Respect for autonomy (consent)
- d) The absence of alternatives
- e) The proportionality of risks and benefits
- f) Approval by a competent and independent body (Ethics Committee)
- g) The scientific quality
- h) Insurance
- i) Protection of personal information

Of course, the indicated general rules and principles will be also applicable in the case of research projects developed after disasters. However, given that after catastrophes, as we have indicated, society would be absorbed in a specific and extraordinary situation (see previous section) in which the need to develop some research projects has been dramatically increased because of the need to find the mechanisms to face the biological crisis, is advisable to consider that discussion about general rules concerning biomedical research must be analyzed from a special point of view. A point of view that could offer the possibility to discuss the possibility to establish some differences and exceptions with the normal situation, based on the special circumstances presented after a disaster⁷⁵.

Not only the ethical reflections, but legal reflection and also official laws and documents have fundamental and indisputable principles in biomedical research the respect

⁷³ Particularly: *a.* Research related to human health that uses invasive procedures. *b.* The donation and use of human oocytes, sperm, pre-embryos, embryos and fetuses or their cells, tissues or organs for biomedical research purposes and its possible clinical applications. *c.* The handling of biological samples. *d.* The storage and movement of biological samples. *e.* Biobanks. *f.* The Spanish Committee on Bioethics and other entities with competence on biomedical research matters. *g.* The mechanisms for fostering and promoting, planning, evaluating and coordinating biomedical research. Similarly, and exclusively with regard to health, such Law regulates the undertaking of genetic analysis and the processing of genetic data of a personal nature.

⁷⁴ Wnukiewicz-Kozłowska, Agata, "The admissibility of research in emergency medicine", in *Sci Eng Ethics*, 13, Springer, 2007, p. 319.

⁷⁵ Wnukiewicz-Kozłowska, Agata, "The admissibility of research in emergency medicine", op. cit., p. 319.

for human dignity. From it derives the principle of primacy of the human being and also the important and basic principle of autonomy.

Concerning the principle of primacy of the human being, we have to remark that it establishes that the “interests and welfare of the human being shall prevail over the sole interest of society or science” (Article 2, Oviedo Convention)⁷⁶. As Wnukiewicz-Kozłowska indicates, from this explanation, it is possible to interpret the collision norm, which shows that in a situation of a conflict between some provisions, the first consideration should be the primacy of the human being⁷⁷.

Of course, this has been the usual and common interpretation during the last years in the field of Bioethics and Biolaw concerning the general principle of primacy of human being. However, and for our scientific purposes, it would be advisable to rethink and discuss some of the most important aspects of such principle taking into account the specific situation in which some society can be after a catastrophe. In effect, are we willing to continue defending that interpretation even if we are trying to avoid a much greater catastrophe? Clearly it is not easy to answer that question. To do it first we would require additional information about the specific situation and needs.

In this sense, this is the situation that can lead us to discuss some limits for the respect to the autonomy principle (as well as its form of materialization: the previous consent)⁷⁸. Maybe we can consider and discuss the possibility that some activities that in a normal situation are forbidden (for example to take biological samples from the saliva or even a small blood sample without consent), but in case of a biological emergency could be allowed⁷⁹.

⁷⁶ Concerning that issue the Explanatory Report to the Additional Protocol concerning Biomedical research notes that: *“This article affirms the primacy of the human being participating in research over the sole interest of science or society. Priority is given to the former and this must as a matter of principle take precedence over the latter in the event of a conflict between them. The whole Additional Protocol, the aim of which is to protect human rights and dignity, is inspired by the principle of the primacy of the human being, and all its Articles must be interpreted in this light”*.

⁷⁷ Wnukiewicz-Kozłowska, Agata, “The admissibility of research in emergency medicine”, op. cit., p. 320.

⁷⁸ Cfr. Collogan, Lauren K. / Tuma, Farris / Dolan-Sewell, Regina / Borja, Susan / Fleischman, Alan R., “Ethical Issues Pertaining to Research in the Aftermath of Disaster”, op. cit. pp. 367-368; O’Mathúna, Dónal P., “Roles and Challenges for IRBs with Disaster Research”, op. cit., p. 172.

⁷⁹ Ernst, Amy A. / Fish, Susan, “Exception from Informed Consent: Viewpoint of Institutional Review Boards—Balancing Risks to Subjects, Community Consultation, and Future Directions”, in *ACAD EMERG MED*, November 2005, Vol. 12, No. 11, pp. 1050-1054; Cfr. Collogan, Lauren K. / Tuma, Farris / Dolan-Sewell, Regina / Borja, Susan / Fleischman, Alan R., “Ethical Issues Pertaining to Research in the Aftermath of Disaster”, op. cit. pp. 367-368.

On the other hand, no less important is the discussion about other traditional and important guarantees of the biomedical research. In effect we have to focus now, at least from a general overview, in the possibility to increase the flexibility of the ethical and legal requirement of “absence of alternatives” —we must emphasize the relevance of such requirement given that it is included in article 16 of the Oviedo Convention⁸⁰ and in the article 5 of the Protocol⁸¹. In this sense it would be possible to face the situation that we have an alternative of comparable effectiveness but the research project will suffer an important delay if we use that alternative first. Several issues must be analysed to elaborate some conclusions about this conflict, for example which kind of experiment we will carry out? Will there be some damage to the participant? If we decide to use the alternative, how long would this decision delay the research? And will this delay affect the results of our research? In any case we think that it is crucial to establish the guide lines to solve said problem.

Another important question to be addressed is the issue of the limits of personal data protection. In this sense it would be important to define the standards to increase flexibility in the access to personal information when that decision could be decisive to deal with the disaster. To develop that task it would be compulsory to take into account the special protection that this kind of information deserves⁸².

⁸⁰ Article 16 of the Oviedo Convention establish: “*Research on a person may only be undertaken if all the following conditions are met: i. there is no alternative of comparable effectiveness to research on humans; [...]*”

⁸¹ Article 5 of the Protocol establish: “*The Article sets out the requirement that research on human beings can only be undertaken if there is no alternative of comparable effectiveness. Comparable effectiveness refers to the foreseen results of the research, not to individual benefits for a participant. Invasive methods will not be authorised if other less invasive or non-invasive methods can be used with comparable effect. Consequently, research on human beings will not be allowed if comparable results can be obtained by other means unless this is clearly unreasonable. Such alternatives include computer modelling or research on animals. This does not imply that the Protocol authorises using alternatives that are unethical. The Protocol does not evaluate the ethical acceptability of research on animals or other alternatives. These matters are addressed by other legal instruments, such as the Council of Europe Convention for the Protection of Vertebrate Animals used for Experimental and Other Scientific Purposes (ETS No. 123), national law and professional obligations and standards.*”

⁸² Not only the Oviedo Convention has incorporated rules regarding the private life and right to information (Article 10 establish that “*Everyone has the right to respect for private life in relation to information about his or her health. Everyone is entitled to know any information collected about his or her health. However, the wishes of individuals not to be so informed shall be observed. In exceptional cases, restrictions may be placed by law on the exercise of the rights contained in paragraph 2 in the interests of the patient*”), but also the Protocol Concerning Biomedical Research. In effect, chapter VIII contain the rules about confidentiality and the right to information: *Article 25 – Confidentiality: 1. Any information of a personal nature collected during biomedical research shall be considered as confidential and treated according to the rules relating to the protection of private life. 2. The law shall protect against inappropriate disclosure of any other information related to a research project that has been submitted to an ethics committee in compliance with this Protocol. Article 26 – Right to information: 1. Research participants shall be entitled to know any information collected on their health in conformity with the provisions of Article 10 of the Convention. 2. Other personal information collected for a research project will be accessible to them in conformity with the law on the protection of individuals with*

5. 4.- Vulnerability in Disaster Research

Other important discussion in the field of research after disasters is the question of the specific characteristics and challenges of the concept of vulnerability⁸³. Doctrine has insisted in the fact that the vulnerability of some social groups could probably be increased due to the occurrence of a disaster. In this sense, it is important to remark that taking into account such specific situation of these groups (deemed “vulnerable”) imposes an important duty on the researcher, ethics committees, authorities and law and policy makers to provide special protection for their interests and rights⁸⁴. From this perspective, we can notice newly that we have to define the best way to balance said special protection to vulnerable persons with the purpose of ensuring effective disaster management⁸⁵.

To finish, and together with Professor Carol Levine, we must stand out that in the field of a research after disaster, there are some questions that still should be asked⁸⁶:

- i.* Is the population at risk of being "exploited", in the sense of being asked to participate in several protocols, or subject to pressure because of their status as first responders, thereby increasing whatever potential for harm or wrong may exist?

regard to processing of personal data. Article 27 – Duty of care: If research gives rise to information of relevance to the current or future health or quality of life of research participants, this information must be offered to them. That shall be done within a framework of health care or counselling. In communication of such information, due care must be taken in order to protect confidentiality and to respect any wish of a participant not to receive such information. Article 28 – Availability of results: 1. On completion of the research, a report or summary shall be submitted to the ethics committee or the competent body. 2. The conclusions of the research shall be made available to participants in reasonable time, on request. 3. The researcher shall take appropriate measures to make public the results of research in reasonable time.

⁸³ Collogan, Lauren K. / Tuma, Farris / Dolan-Sewell, Regina / Borja, Susan / Fleischman, Alan R., “Ethical Issues Pertaining to Research in the Aftermath of Disaster”, op. cit. 366; O’Mathúna, Dónal P., “Roles and Challenges for IRBs with Disaster Research”, op. cit., p. 171.

⁸⁴ Levine, Carol, “The Concept of Vulnerability in Disaster Research”, in *Journal of Traumatic Stress*, Vol. 17. No. 5, October 2004, pp. 395-402; O’Mathúna, Dónal P., “Roles and Challenges for IRBs with Disaster Research”, op. cit., p. 171.

⁸⁵ Cfr: Collogan, Lauren K. / Tuma, Farris / Dolan-Sewell, Regina / Borja, Susan / Fleischman, Alan R., “Ethical Issues Pertaining to Research in the Aftermath of Disaster”, op. cit. p. 366; O’Mathúna, Dónal P., “Roles and Challenges for IRBs with Disaster Research”, op. cit., p. 171.

⁸⁶ Levine, Carol, “The Concept of Vulnerability in Disaster Research”, op. cit., p. 402.

- ii.* What other kinds of interviews have already taken place or will take place, e.g., by the police, military, news media? Have the participants been affected by these interviews in ways that alter their perception of their ability to refuse to participate in a research study?
- iii.* Is there political or social turmoil surrounding the disaster that may affect participants' ability to make an informed choice?
- iv.* Will children or adolescents be participants?
- v.* Is there some screening method to determine which of the potential participants might have cognitive impairments or which might be at particular risk for a serious mental health outcome?
- vi.* Are the consent procedures clear, unambiguous about the right to refuse to participate, and candid about risks and benefits?

Of course, the answer to these questions will improve the way we would develop a policy in order to face the challenges that biomedical research presents in the context of disasters.

6 CONCLUSIONS

- A huge involvement of the public sector, comprising the main actors in the international community is an exigency of the solidarity principle which links the whole human race, but it might also be a consequence of the moral imperative to adequately protect their citizens that all different States assume. Thus, CBRNE incidents should attract an immediate international response that should last until the recovery phase is finished, at least in cases of overwhelmed States that demand international aid. This is not only an economic and political, but also an ethical imperative, which should be strictly respected.

- Maximizing the utility of the resources is always an ethical imperative and it can only be correctly addressed by an adequate coordination of the international agencies and the local communities. The implication of the victims is an absolute necessity and an ethically acceptable recovery plan should always consider this issue. Moreover, whenever possible, funding should play a decisive role re-activating the economy of the affected population. Thus, it makes a sense to spend funding with local producers, even if prices could be higher than those offered by donor countries' producers. Re-activating the economy is a main issue in the recovery phase and donor agents should act consequently.

- Mass media and social networks play a key role in the recovery phase of a CBRNE crisis. They are the best vehicle to transmit the images of the crisis scenario to the public. Consequently, they must try to accomplish a minimum ethical standard. This implies that they should avoid relegating victims' interests and rights in search of a larger audience. They should always keep in mind that they are obliged to provide accurate and timely information, trying to balance their private interest with the public service they offer.

- There exists a set of ethical problems that we must face during the decision making process developed after a disaster. In this sense, both disaster survivors and citizens who have not been affected by such catastrophe are in a particularly vulnerable position while public and private institutions make huge efforts towards social recovery. Different kinds of research can provide crucial information about the alternatives we have to deal with these disasters and to prevent new potential catastrophes. Thus, biomedical research in such circumstances may require some activities that may affect the interest and rights of different kinds of citizens. For that reason it is quite important to identify the best way to balance that urgent need for biomedical research with the equally important duty and obligation not only to respect, but to protect the interest and rights of the participants in said biomedical research process. Especially problematic could be the balance when referring to the question of the protection of human dignity, primacy of the human being, autonomy and

personal data. We have to conclude that a study about the possibility to increase the flexibility of the ethical and legal requirements in the field of research after disasters is needed in order to establish the guidelines and rules to govern this matter.