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IMPACT ASSESSMENT - 2011 review of the Civil Protection regulatory framework

Accompanying the document

Decision of the European Parliament and the Council

on a Union Civil Protection Mechanism and on establishing a Civil Protection Financial Instrument for the period 2014-2020

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Disclaimer: This report commits only the Commission's services involved in its preparation and does not prejudge the final form of any decision to be taken by the Commission.

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1. INTRODUCTION

1. The aim of EU action in the field of civil protection (CP) is to support and complement Member States' action in preventing, preparing for, and responding to natural or man-made disasters. As the number, intensity, and complexity of disasters are rising, the current systems for preventing and protecting against disasters, and the current means of coordination at the EU level are not able to deal with the upcoming challenges in an effective and efficient way. Eventually, this will lead to a lower level of protection of people, the environment and property in Europe and elsewhere in the world where European CP assistance is needed. Moreover, the European cooperation on response, preparedness through training and exercises and other measures, as well as prevention will make all the difference especially in the event of a high impact disaster, something that cannot be excluded in Europe
2. Since 2001, the basis for EU civil protection cooperation is the EU Civil Protection Mechanism (the Mechanism) decision,¹ which was recast in 2007.² The Civil Protection Financial Instrument (CPFI) provides a basis for funding of all activities under the Mechanism.³ The main role of the Mechanism is to support and coordinate the preparation and deployment of Member States' in-kind assistance (teams, experts and equipment) to countries requesting international assistance in major emergencies of all kinds, natural and man-made, within and outside the EU. Typical examples of CP assistance provided in the past include search and rescue after earthquakes, water purification and high capacity pumping during floods, field hospitals and medication, forest fire fighting with airplanes, emergency shelter and power generators.
3. Starting with just a few operations in 2002-2003, the Mechanism is now activated in up to 30 emergencies per year. Recent operations include for example the 2010 Haiti earthquake, floods in Poland, the 2011 earthquake, tsunami, and nuclear accident in Fukushima, Japan, as well as the explosion and energy shortage in Cyprus, to name but a few.
4. The Commission has established and directly operates a Monitoring and Information Centre (MIC), which is accessible around the clock and acts as a communication hub among 31 Participating States of the Mechanism (PS),⁴ the affected country and the EU experts deployed in the field. It also plays a co-ordination role by matching offers of assistance put forward by PS to the needs of the disaster-stricken country. Through the MIC, the EU can also co-finance costs of transport of assistance to the disaster site.
5. The need for stronger civil protection cooperation at EU level has been repeatedly recognised and emphasized at political level. Acknowledging the inherent limits of

¹ Community Mechanism to facilitate reinforced cooperation in civil protection assistance interventions; Council Decision 2001/792/EC, Euratom of 23 October 2001 (OJ L 297, 15.11.2001, p. 7).

² Council Decision 2007/779/EC, Euratom of 8 November 2007 establishing a Community Civil Protection Mechanism (recast) (OJ L 314, 1.12.2007, p. 9).

³ Council Decision 2007/162/EC, Euratom of 5 March 2007 establishing a Civil Protection Financial Instrument (OJ L 71, 10.3.2007, p. 9).

⁴ EU-27, Iceland, Liechtenstein, Norway and Croatia.

the Mechanism, the Commission adopted in October 2010 a Communication to the European Parliament and the Council *'Towards a stronger European disaster response: the role of civil protection and humanitarian assistance'* presenting a broad vision and concrete proposals on how to reinforce in particular the effectiveness, efficiency, coherence and visibility of EU's response to disasters.¹ The General Affairs Council welcomed the key ideas² and the substance of the Commission's proposals has met with strong support by the European Parliament.³ The response options developed in this impact assessment were included in the Communication and its associated assessment of impacts.

6. Preparedness actions are directed towards national CP services. Main actions to better prepare them for operations outside of national borders and coordination activities currently include training courses, full-scale field exercises, and an exchange of experts programme.⁴ These preparedness actions are widely praised for their important contribution to improving compatibility and complementarities between intervention teams operating in an international context. The 2008 Council conclusions on European disaster management training called for diversification and reinforcement of training.⁵ The Commission is also assisting PS in organising certain CP resources into intervention 'modules' that are interoperable and can be quickly deployed to the field. These modules are made up of national resources from one or more PS. A technical framework has been put in place for seventeen types of CP modules and more than 130 intervention modules are currently registered for information in a Commission's database. Examples of types of modules are high capacity pumping water purification, heavy and medium search and rescue, and aerial fire fighting with airplanes.
7. In 2007, the CPFI has enlarged the scope of CP cooperation to prevention projects. On the policy side, in line with requests from the European Parliament and Council, the Commission is implementing an EU disaster prevention framework⁶ and has recently issued guidelines on risk assessment for disaster management.⁷ EU-level disaster risk management policy was also announced in the Commission's Internal

¹ COM(2010)600 final. The Communication was accompanied by an impact assessment analysing various options: SEC (2010) 1242 final..

² Conclusions of the General Affairs Council, adopted on 14 December 2010, http://www.consilium.europa.eu/uedocs/cms_Data/docs/pressdata/EN/genaff/118460.pdf.

³ Report 'Towards a stronger European disaster response: the role of civil protection and humanitarian assistance' 2011/2023 INI (Rapporteur E. Gardini), approved in the plenary of 27 September 2011.

⁴ [Commission Decision No. 2004/277/EC, Euratom of 29 December 2003](#) lays down the rules for the implementation of the Mechanism, defining its duties and the functioning of the various preparatory measures, including a training programme.

⁵ 27.11.2008 Conclusions called for: (1) Promoting consistency amongst national training programmes in support of disaster management and enabling the improvement of training programmes provided by PS, and (2) Offering a wide range of training opportunities at EU level for disaster management experts and intervention personnel, primarily by diversifying and reinforcing the existing training programme.

⁶ COM(2009)82 final of 23.2.2009; The Communication on the Internal security strategy addressed the need for an integrated approach between security and other policies.

⁷ Commission [Staff Working Paper on Risk Assessment and Mapping Guidelines for Disaster Management](#), 21 December 2010, 17833/10, SEC(2010) 1626. The Commission guidelines were welcomed by related Council conclusions on Further Developing Risk Assessment for Disaster Management within the European Union, adopted by the Justice and Home Affairs Council on 11-12 April 2011.

Security Strategy, which states that the EU should establish by 2014 a coherent **risk management policy** linking threat and risk assessments to decision making.¹

8. Disaster prevention policy and actions have become important themes in the European CP cooperation (and elsewhere), not least because of the close links between prevention, preparedness and response actions. In a Union of solidarity that fosters mutual assistance in times of crises,² it is crucial that each PS make the corresponding efforts to prevent emergencies from occurring in the first place. There are strong demands from PS stakeholders to support and complement European cooperation on cross-sectoral disaster risk management policies as a pre-condition for further solidarity on the response side.
9. In addition to the Council conclusions on response, preparedness and prevention, and the related European Parliament resolutions mentioned above, the Council has adopted a number of Conclusions recognizing the need for improvement and inviting the Commission and the Member States to take action, in particular on host nation support³, the role of the Mechanism in major emergencies⁴, EU disaster management training arrangements⁵, forest fire prevention⁶, innovative solutions for financing disaster prevention⁷, integrated flood management⁸, on further developing risk assessment⁹, and civil protection awareness-raising¹⁰.
10. The Lisbon Treaty created a dedicated Title XXIII on civil protection in Article 196 of the Treaty on the Functioning of the Union (TFEU), which also stresses the role of prevention actions in European CP cooperation.
11. By bringing together the CP capabilities of 31 PS, the Mechanism and European prevention actions help to protect people,¹¹ the environment and property in multiple ways:
 - (1) Monitoring of emergencies, information sharing, and coordination of actions increase the speed and effectiveness of CP interventions and thereby helps saving lives and protecting people, the environment and property;

¹ EU Internal Security Strategy In Action: five steps towards a more secure Europe, COM(2010) 673 final of 22.10.2010. Civil protection is also one of five major components in a shared EU agenda for increasing the security of EU citizens and in building resilience to natural and man-made disasters as an important part of the Stockholm Programme: 'An open and secure Europe serving and protecting citizens' (document 2010/C 115/01).

² As stipulated by Article 222 TFEU (Solidarity Clause).

³ Council Conclusions of 22 November 2010 on Host Nation support (document 15874/10).

⁴ Council Conclusions on the psychosocial interventions in the event of emergencies and disasters and on the role of the Union Civil Protection Mechanism in major events.

⁵ Council Conclusions of 14 November 2008 on European disaster management training (document 15520/08).

⁶ Council Conclusions of 26 April 2010 on prevention of forest fires within the EU.

⁷ Council Conclusions of 09 November 2010 on innovative solutions for financing disaster prevention.

⁸ Council Conclusions of 12 May 2011 on integrated flood management within the EU.

⁹ Council Conclusions of 12 April 2011 on further developing risk assessment for disaster management within the EU.

¹⁰ Council Conclusions of 18 May 2009 on civil protection awareness raising (document 9976/09).

¹¹ This applies to EU citizens inside the EU and travelling abroad, as well as populations of third countries.

- (2) Pooling of assets, and of knowledge, information and expertise leads to economies of scale and better cost-effectiveness, and allows to provide for higher protection levels;
 - (3) Training and exercises for international assistance, as well as other preparedness and prevention actions reduce the risks and consequences of disasters and raise awareness.
12. While the Mechanism has performed well for what it was designed for in 2001, in its current set-up its effectiveness and efficiency is limited by a number of shortcomings related notably to the limited response planning and the limited integration of preparedness and prevention actions, thus making it increasingly difficult to ensure an appropriate handling of the upcoming challenges.
13. This impact assessment will examine a range of policy options to improve the functioning of the CP disaster management cooperation in Europe. Its scope covers five key areas:
- (1) Improved disaster response through better planned EU coordination and a voluntary pool of pre-committed assets;
 - (2) Addressing critical response capacity gaps;
 - (3) Enhanced financial and logistical transport support;
 - (4) A more coherent European preparedness policy framework; and
 - (5) A European prevention policy framework and national disaster risk management plans integrated into the EU CP cooperation.

As will be discussed in this report, these areas are interlinked, complementary and mutually support each other.

2. PROCEDURAL ISSUES AND CONSULTATION OF INTERESTED PARTIES

14. This impact assessment report was prepared by the Commission Directorate-General responsible for humanitarian aid and civil protection (DG ECHO) to examine policy options in the field of EU CP cooperation and their impacts, including all relevant aspects of an ex-ante evaluation.¹
15. The impact assessment process² was accompanied by an Impact Assessment Steering Group involving 21 relevant services³ and benefitted from input of an external study.¹

¹ Commission Regulation (EC, Euratom) 2342/2002 of 23.12.2002, laying down detailed rules for the implementation of Council Regulation (EC, Euratom) No 1605/2002 on the Financial Regulation applicable to the general budget of the European Communities (OJ L 357, 31.12.2002, p.1).

² A summary list of steps taken and the timeline are included in Annex A.

³ SG, SJ, DG BUDG, DG HOME, DG ENV, DG CLIM, DG RTD, DG JRC, DG MOVE, DG ENER, DG REGIO, DG SANCO, DG AGRI, DG ENTR, DG INFSO, DG ELARG, DG DEVCO, FPIS, EEAS. Reports of the three consultation meetings are in Annex B.

2.1. Consultation of interested parties

16. Three targeted stakeholder consultations were carried out, in addition to a series of stakeholder events preceding the Commission's 2010 Disaster Response Communication. Two with a wide group of invitees² and one with national CP authorities who are the key stakeholders.³ National authorities also provided input in other informal ways, taken into consideration in this impact assessment.⁴
17. Other stakeholders interested in EU CP policy, all of whom were invited to provide comments, are professional or voluntary organisations active in the field of emergency management, the humanitarian community, UNOCHA,⁵ UNISDR,⁶ as well as relevant players active in the research, internal security, environment, foreign policy, and other related areas. Stakeholders were consulted on the basis of comprehensive consultation documents (Annex D).
18. As concerns the different policy proposals, there was a common ground among the key stakeholders that the EU should advance advanced planning of operations under the Mechanism. A large majority of stakeholders expressed support for building the European Emergency Response Capacity in the form of a voluntary pool of Member States' assets on call for EU operations, while some pointing out certain reservations, depending on the detailed implementation of such a pool. On the idea to provide possibilities for EU funding of response assets (EU-funded assets), there were stakeholder reservations that this should not lead to the EU owning assets or a command and control structure at EU level. Stakeholders expressed their general satisfaction with the current system of transport support and various opinions on different elements of it and strongly welcomed proposals to simplify procedures.
19. On the preparedness actions, stakeholders expressed general satisfaction in particular the current training and exercise arrangements and many speakers at the first stakeholder meeting expressed the view that the scope of the training needed broadening so as to include also other relevant subject matters of international cooperation. On the importance of prevention actions, there is a general agreement among all stakeholders that it needs to become an integral part of a balanced approach in moving EU civil protection forward.
20. All comments by stakeholders were fully considered and are reflected in the specific sections of this report.

¹ Study report Annex C. Just prior to the impact assessment, DG ECHO has been carrying out a comprehensive evaluation of all EU CP activities in the years 2007-2009. The evaluation was supported by an external and independent evaluation study which included a comprehensive stakeholder survey: http://ec.europa.eu/echo/policies/evaluation/thematic_en.htm.

² General stakeholder meetings were held on 6 April and 17 June 2011 with 600 invited stakeholders and about 120 participants each.

³ Meeting of CP Directors-General held in Budapest on 23-25 May 2011. Three consultation papers included a number of specific questions on the policy options in the field of prevention, preparedness, and response (see Annex F). MS CP authorities have regular and frequent contact among themselves and with the Commission on all matters of policy, implementation, evaluation, and lessons-learned, etc.

⁴ This includes a non-paper drafted by a group of Participating States in June 2011.

⁵ UN Office for the Coordination of Humanitarian Affairs.

⁶ UN International Strategy for Disaster Risk Reduction.

2.2. The Impact Assessment Board

21. In response to the IAB's opinion, this report was revised to improve the problem definition by providing more evidence of the size and seriousness of the problems. The baseline scenario and the content of the policy change options was clarified including diverging stakeholder views. Options are analysed in greater detail and their comparative advantages and value added of the preferred options is described in more detail using a clear set of comparison criteria. Finally, the monitoring and evaluation arrangements are spelled out in the text.

3. THE PROBLEMS TO BE ADDRESSED AND SUBSIDIARITY

22. Without renewal the CPFPI will expire at the end of 2013. But beyond the mere renewal and a possible strengthening of the CPFPI, the Mechanism is evolving in a context of three major challenges:

- 1) the continuing trend of increasing number, intensity, and complexity of disasters;
- 2) budgetary constraints related to the current economic situation; and
- 3) systemic limitations inherent in the current mandate of the Mechanism, restricting the effectiveness, efficiency, coherence and visibility of EU's disaster response.

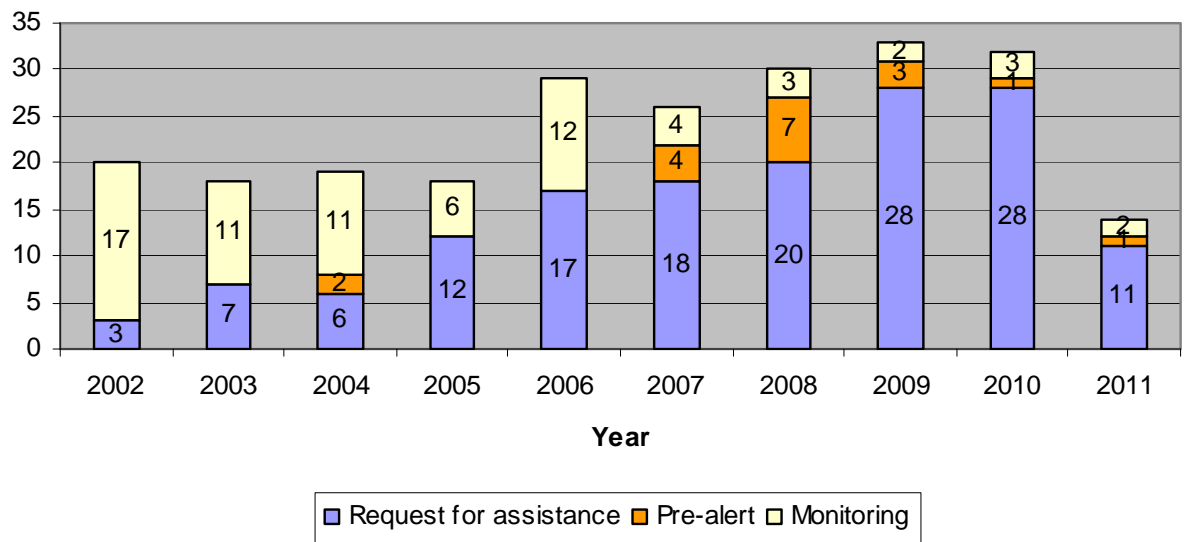
3.1. Overview of Mechanism operations and current activities financed by the CPFPI

23. The Mechanism has over the years significantly increased its activity, gained in professionalism, and has become an important component of international disaster management.¹ An extensive external evaluation of the Mechanism for the years 2007-2009 (Annex H) concluded that the current system of coordination among PS has led to a better response to disasters inside and outside the EU, while training and exercises have successfully raised the level of EU preparedness. The role of the MIC – currently reorganised into the European Emergency Response Centre (ERC) – is particularly appreciated by PS. The UNOCHA, which has a central coordination role for disasters outside the EU, recognises the Mechanism as a model 'regional' disaster management arrangement and cooperates closely with the MIC, including through joint expert missions.
24. When comparing the Mechanism/CPFPI budget of €189 million for 2007-2013 with the available budgets for humanitarian aid of next to €1 billion for the same period, it needs to be born in mind that the Mechanism is essentially a coordination instruments which helps channelling the national CP assistance, which in terms of volume sometimes reaches a substantial share of the overall relief effort. So, when placing the Mechanism in the context of international relief efforts, it is clear that the monetary contributions of the Mechanism are modest, but the coordination role is substantial. For example in the 2010 Haiti earthquake relief efforts, the Mechanism coordinated the involvement of 25 European countries in close cooperation with UNOCHA.

¹ Evaluation of the Mechanism for the years 2007-2009 (see Annex H).

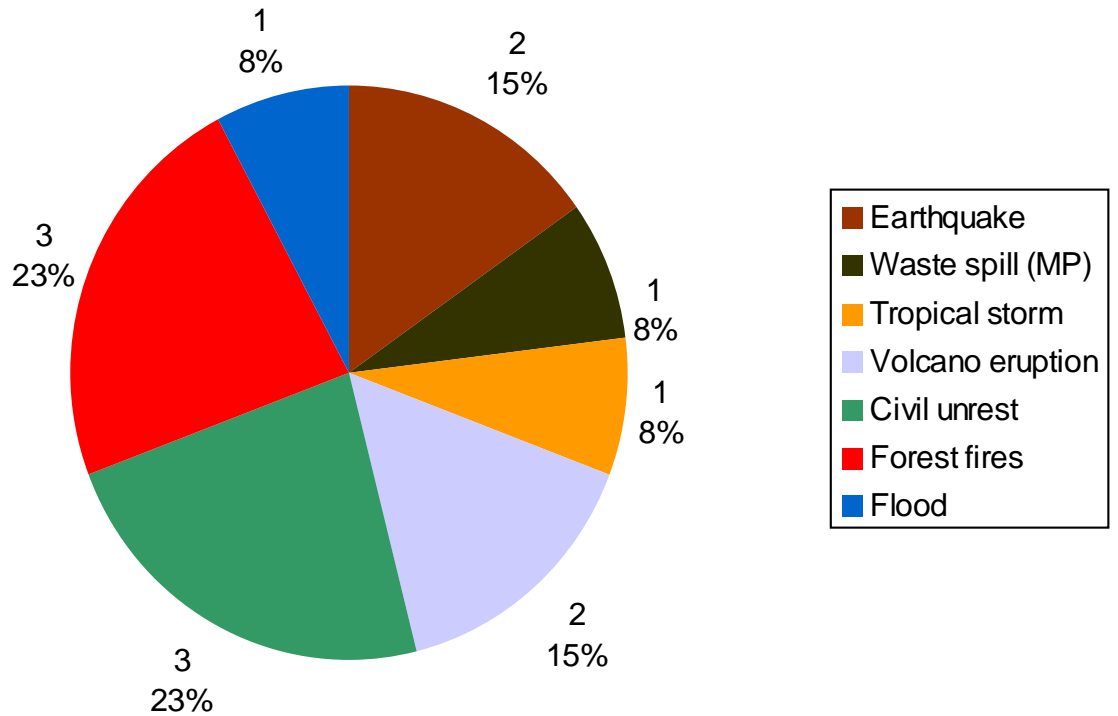
25. In the year 2010 the share between the different areas was as follows: €4.5 million for response, €8 million for transport, €10 million for preparedness, and €2.3 million for prevention.
26. On the response side the following graphs give an overview of the Mechanism activities (until mid 2011).

Total number of activations of the Mechanism



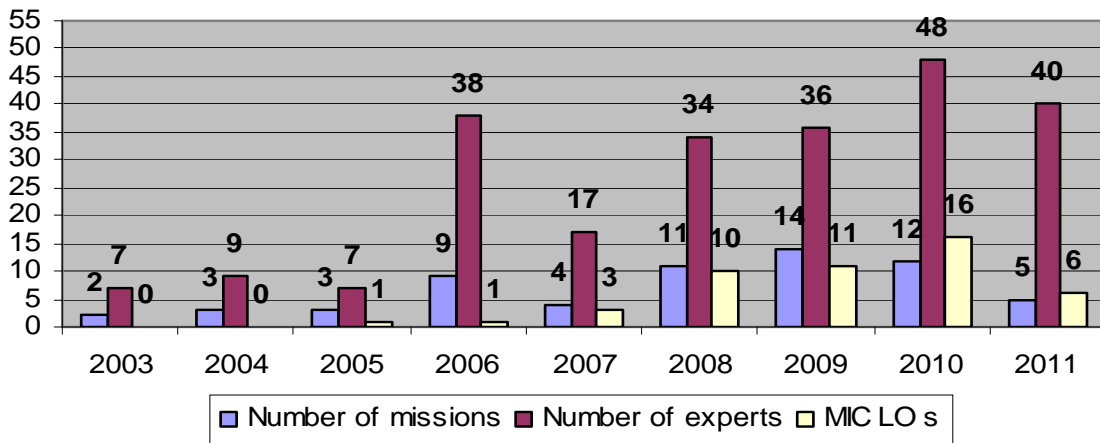
27. Mechanism activations 2011 per types of hazards.

Mechanism activations for different types of hazards

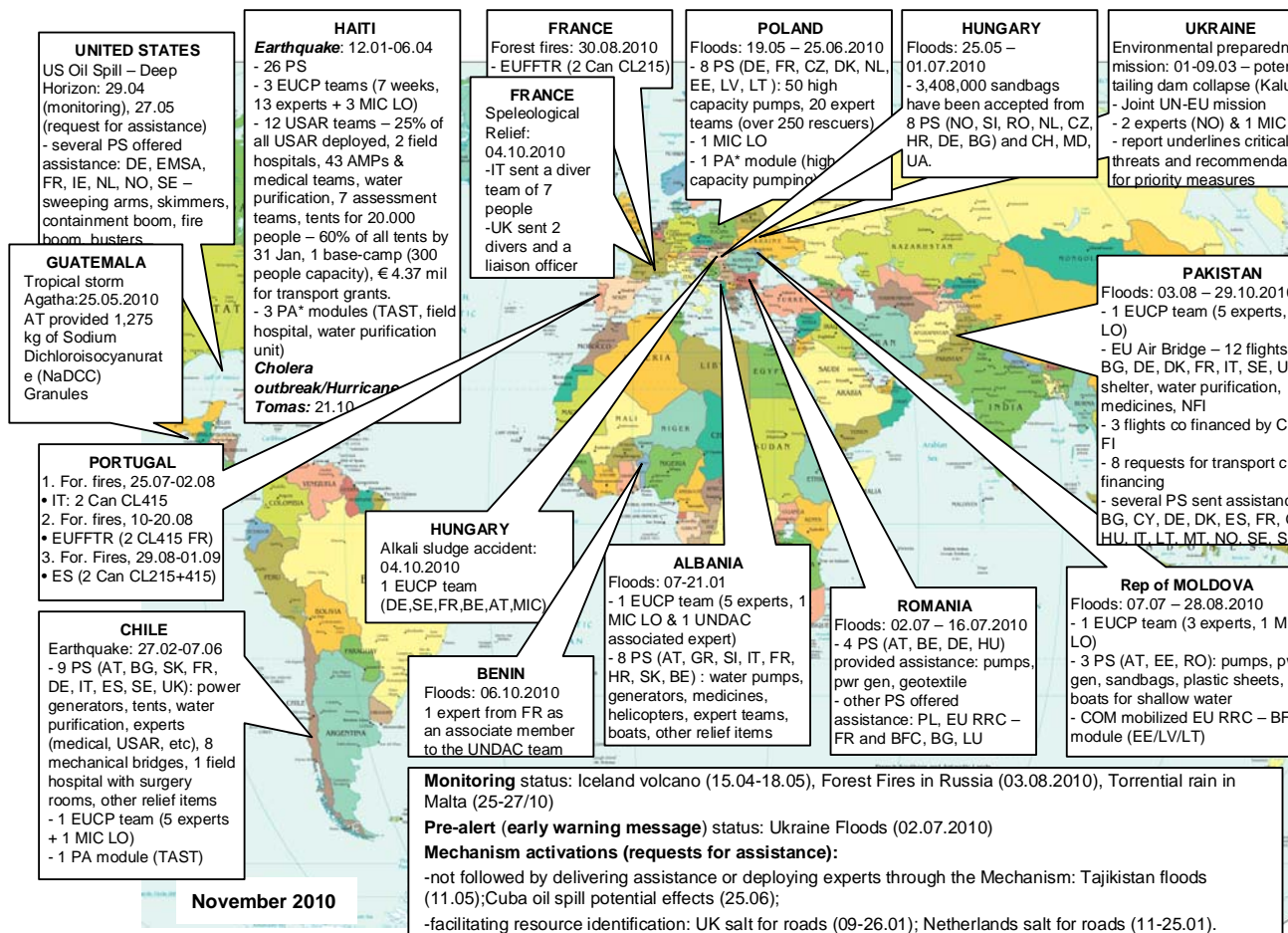


28. The deployment of assessment and coordination teams of experts on the site of an emergency, upon the request of an affected state can be financed by the CPFI.

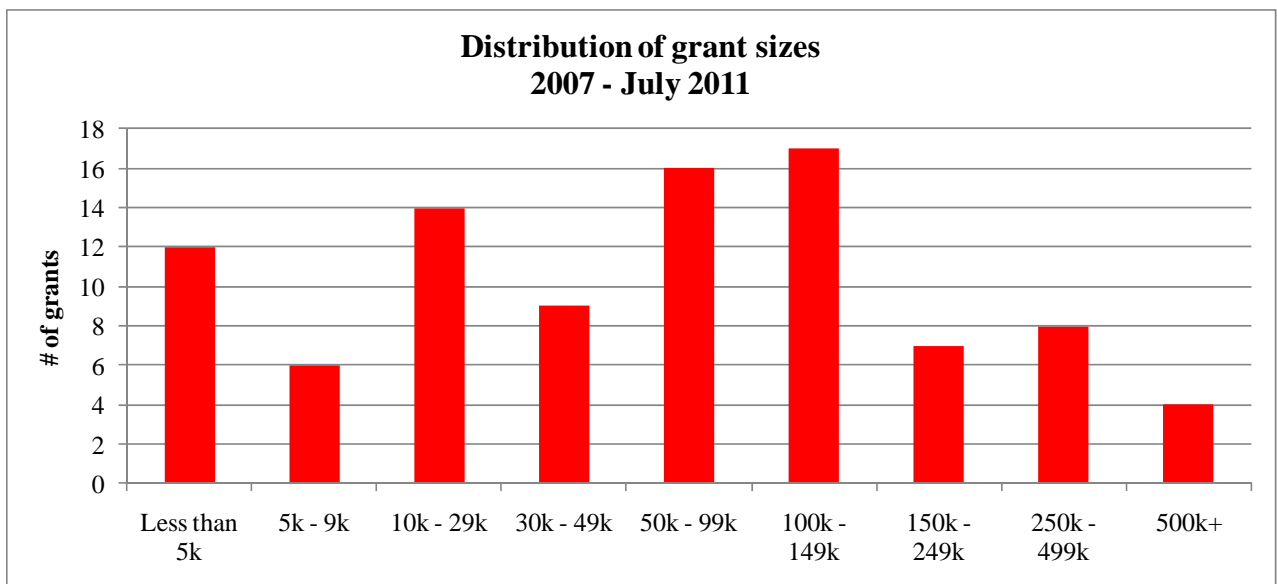
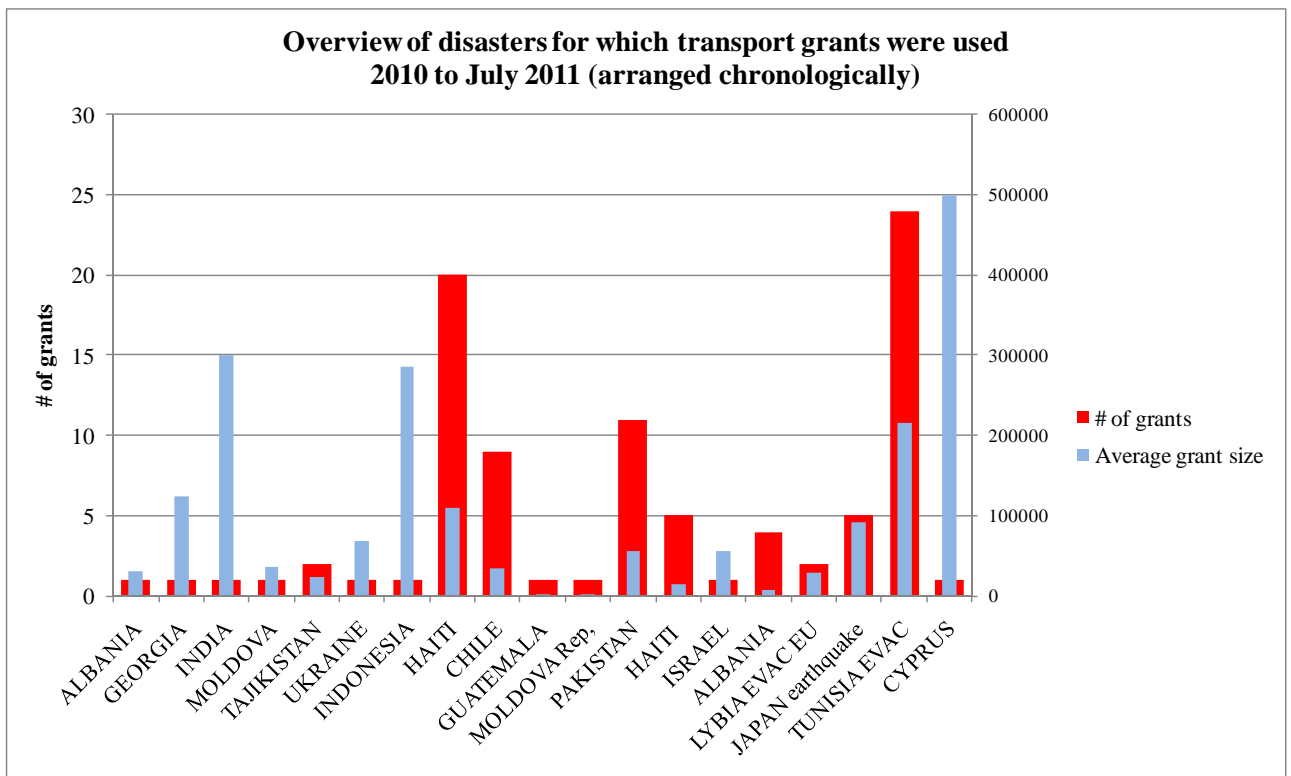
Number of experts and MIC Liaison Officers deployed on assessment and coordination missions



29. Mechanism activations 2010.



30. For transport assistance, a maximum of € 90 million can be used under the CP Financial Instrument over the period 2007 to 2013. The total of CPFIs co-financing used since the start of the transport provisions up to the end of May 2011 amounts to around €18,4 million, with 2010 and 2011 showing a marked increase in the number of requests for pooling and financial assistance. In 2007, there was one request for transport financing of a total value of around €0.03 million; the total value of the transport co-financing during 2008 and 2009 stayed at around €0.4 million yearly; in 2010, it reached around €6.6 million (for 55 requests), and in 2011 it has increased to €10.8 million (for 35 requests) so far.



31. Actions are eligible for financial assistance under the Instrument only if certain criteria are met. These criteria refer to (i) the additional transport resources being necessary for ensuring the effectiveness of the CP response under the Mechanism; (ii) all other possibilities for finding transport under the Mechanism have been exhausted; (iii) the assistance to be transported: - has been offered to and accepted by a requesting country, - is necessary to meet vital needs arising from the emergency. In order to fulfil the second criterion (prove that "all other possibility for finding transport under the Mechanism have been exhausted"), article 4 of the Commission Decision 2007/606/EC, Euratom provides for the organisation of the pooling procedure, and it also foresees that EU financing may become eligible only at the end of the pooling phase (which shall not exceed 24 hours from the notification, and may

be shortened by the Commission to a minimum of 6 hours, where this is necessary in order to respond effectively to urgent and vital needs).

32. For preparedness actions, the year 2010 training activities amounted to €4.2 million, €3.3 for exercises, and €0.6 million for the exchange of experts.
33. At the end of May 2010 a total of 142 training courses had been conducted and in total some 2500 participants received training. Training courses currently include the following types: Community Mechanism Induction Course (CMI), Operational Management Course (OPM), High Level Coordination Course (HLC), Assessment Mission Course (AMC), Staff Management Course (SMC), Media and Security Strategy Course (MSC), International Coordination Course (ICC), Operational Management Refresher Course (OPMR), High Level Coordination Refresher Course (HLCR), Modules Basic Course (MBC), Technical Experts Course (TEC).
34. Overall, there have been more than 22 full-scale exercises since 2002 supported by the Mechanism. The scenarios were: 11 earthquakes (incl. 3 CBRN), 7 floods, 5 CBRN, 4 terrorism, 1 forest fire, 1 volcano. On average five countries participate in any given EU exercise, and on average there are three exercises per year. On average, 14 mechanism countries (some 44 per cent of Participating States) participate annually in one or more simulation exercises. The most active countries are Germany, France, Sweden, Belgium, the UK and Italy.
35. The exchange of experts programme allows qualified civil protection personnel and officials to spend a number of weeks in another host country civil protection system for the purpose of learning, exchange of experience and creating networks. By now, some 200 experts have made use of this possibility, which is co-financed by the EU.
36. As regards prevention actions, the current Mechanism Decision makes no reference to prevention policy as part of the Civil Protection Cooperation. The current legislative provisions in the CPFI Decision include Article 1(2)(b) and Article 2(1) which place preventive measures within the scope and the subject matter of the CPFI. Consequently, the CPFI has financed a number of EU actions in this area. The eligible actions and criteria for both prevention and preparedness are specified in Article 4(1).

3.1. Current disaster trends

37. The impacts of disasters in Europe have been very substantial in the past and this despite the fact that Europe has been spared in recent decades of the mega-disasters that other regions have experienced. A recent report by the European Environmental Agency assessed the occurrence and impacts of disasters and the underlying hazards such as storms, extreme temperature events, forest fires, water scarcity and droughts, floods, snow avalanches, landslides, earthquakes, volcanoes and technological accidents in Europe for the period 1998-2009 (see figure below).¹

¹ EEA Technical Report No 13/2010: *Mapping the impacts of natural hazards and technological accidents in Europe*; Link: <http://www.eea.europa.eu/publications/mapping-the-impacts-of-natural>.

38. Thus, for the period 1998-2009 total disaster impacts in the EU are estimated at almost 100.000 fatalities and close to €150 billion in economic damage.¹ The most expensive individual European event was Winter Storm Xynthia, causing some €4.5 billion in losses in several countries. EU citizens are also exposed to disasters in third countries, such as the South-East Asian tsunami of December 2004.²

39. Disaster impacts in Europe in the last ten years:

Hazard	Hazard type	Main types of impacts			Impacts 1998-2009 EU		
		Human fatalities	Economic losses	Eco-system degradation	Events	Fatalities	Economic losses million EUR ¹⁾
Storms	Hydro-meteorological	x	x		155	729	44,338
Extreme temperature events	Hydro-meteorological	x			101	77,551	9,962
Forest fires	Hydro-meteorological	x		x	35	191	6,917
Water scarcity and droughts	Hydro-meteorological		x	x	8	0	4,940
Floods	Hydro-meteorological	x	x		213	1,126	52,173
Snow avalanches	Geophysical	x	x		8	130	742

¹ EEA Report 13/2010: "Mapping the impacts of natural hazards and technological accidents in Europe" at <http://www.eea.europa.eu/publications/mapping-the-impacts-of-natural>.

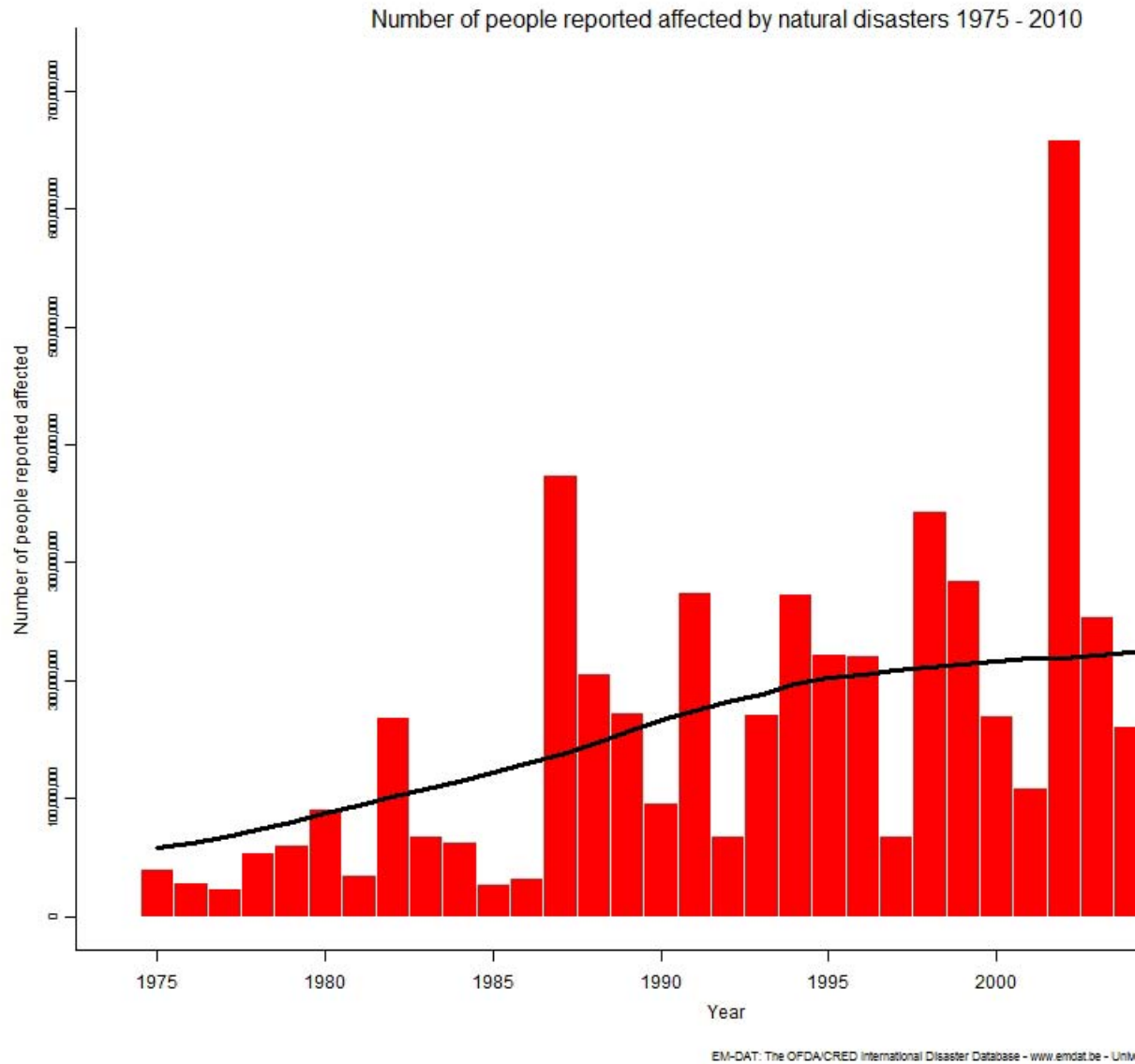
² For more on consular aspects see Communication "Consular protection for EU citizens in third countries: state of play and way forward" [COM(2011) 149 final] and related impact assessment.

Hazard	Hazard type	Main types of impacts			Impacts 1998-2009 EU		
		Human fatalities	Economic losses	Eco-system degradation	Events	Fatalities	Economic losses million EUR ¹⁾
Landslides	Geophysical	x	x		9	212	551
Earthquakes /volcanoes	Geophysical	x	x		46	18,864	29,205
Oil spills	Technological			X	9	n/a	70,000 tonnes spilled
Industrial accidents	Technological			X	339	169	
Toxic spills	Technological			X	4	n/a	5 million m ³ spilled
Total					928	98,972	148,831

40. On a worldwide scale, in just the one year 2010 more than 200.000 were people killed in the earthquakes of Haiti, Chile and central China, the floods in Pakistan, and the heat wave in Russia; overall some 17% of worldwide economic losses incurred in Europe.¹ The year 2010 demonstrated also the vulnerability of the networked global economy, as the eruption of the *Eyjafjallajökull* volcano in Iceland paralysed the entire air traffic in Europe for days, leading to worldwide economic repercussions.
41. Looking at the evolution over time we perceive a clear trend of increasing numbers, intensities, and complexity of disasters. The figures below provide a synthesis of the key data on disaster trends, showing in particular the continuous rise of the number of people affected by natural disasters in the last decades and the steep rise in economic damages.

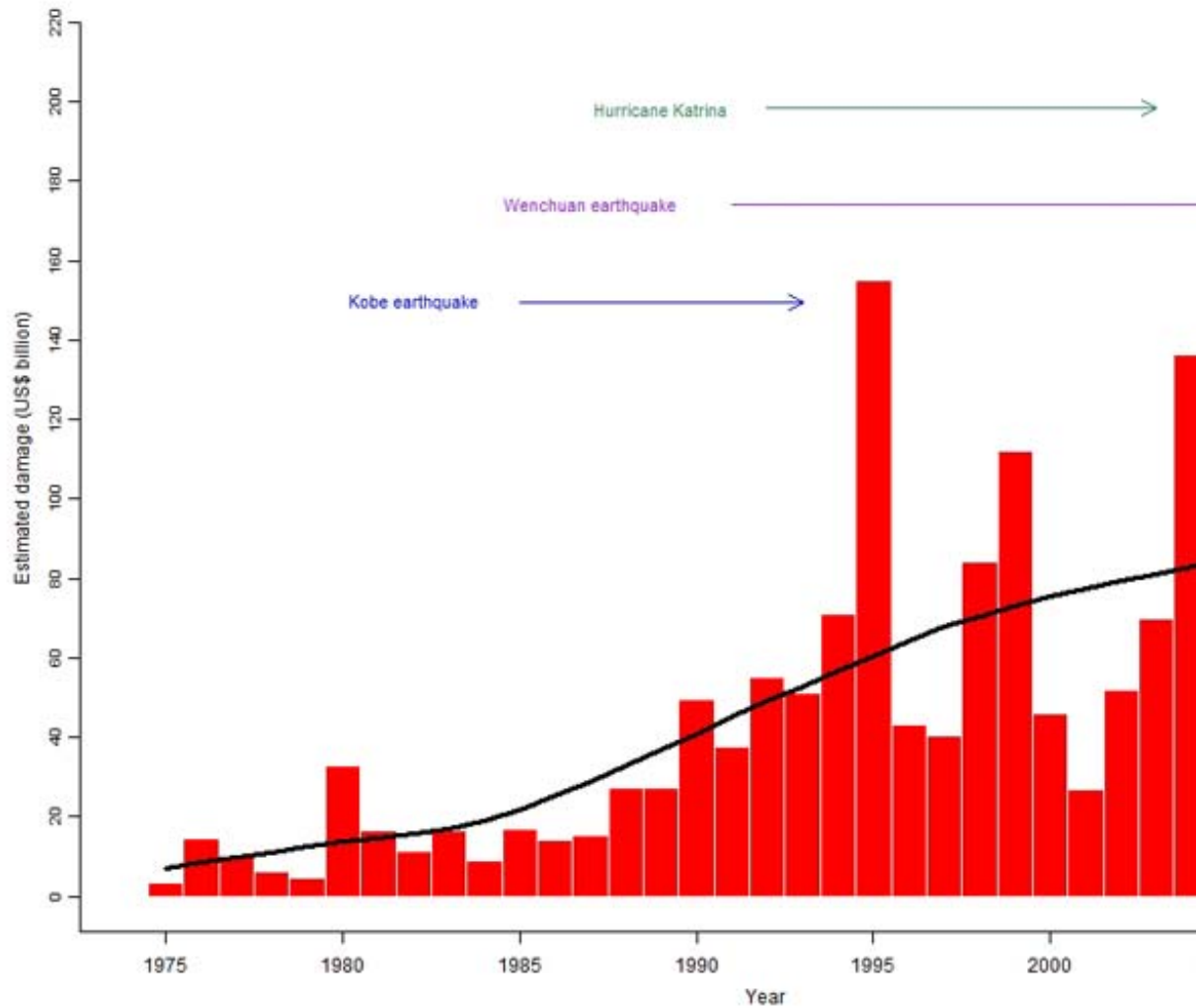
¹ Report of Munich Re: http://www.munichre.com/en/media_relations/press_releases/2011/2011_01_03_press_release_en.pdf.

Figures 2 and 3: Rising trends in disasters (people affected and damages caused by natural and technological disasters)¹



¹ EM-DAR: The OFDA/CRED International Database – www.emdat.be – Université Catholique de Louvain, Brussels, Belgium.

Estimated damage (US\$ billion) caused by reported natural disasters 1975 - 2010



EM-DAT: The OFDA/CRED International Disaster Database - www.emdat.be - UNISDR

42. The corresponding disaster figures for technological disasters display sudden surges but an overall less pronounced rising trend. The number of people reported killed from technological disasters started declining in the last decade.
43. Contributing to these rising trends is a number of new risks with potentially devastating effects in the future. According to recent reports and studies¹, these include complex risks such as the interaction between physical and technological hazards. Another driving factor are the effects of climate change, and its potential future security implications.

¹ For example, 2011 UNISDR Global Assessment Report on Disaster Risk Reduction, 2010 European Commission's 5th Report on Economic, Social and Territorial Cohesion, CRED Annual Disaster Statistical Review 2010, Munich RE Natural catastrophes 2010, EEA Report on the European Environment: State and outlook 2010 etc.

44. One of the main advantages of European CP cooperation resides in the advantages to collectively prevent, prepare for and respond to very large disasters that are overwhelming individual PS. The extent of possible problems caused by such disasters will be illustrated below by reference to the recent triple disaster in Japan. The earthquake-tsunami-nuclear disaster striking Japan in March 2011 is a salient reminder that even well prepared countries can be overwhelmed by complex disasters. Comparable events are possible also in Europe at any moment and may lead to a number of severe consequences, due to the increased vulnerability of today's networked societies with their reliance on technologies and infrastructure.¹

Example: As was shown by the disaster in Japan, a mega-disaster within Europe may require the urgent mass evacuation of tens/hundreds of thousands of inhabitants and give rise to enormous temporary shelter needs within Europe. They may also give rise to spontaneous population movements, with large groups travelling by their own means in search of safety and temporary shelter. Very few EU MS have had practical experience with such mass evacuations. The affected country may lose some of its capacity to coordinate the overall response. It was for this reason that Japan requested a coordinated EU approach, pooling all of the assistance and taking care of its delivery on a door-to-door basis. Another major impact may be on the available transport infrastructure, thus negatively impacting the capacity to deliver essential relief supplies. This is one of the reasons why Japan requested the EU to try to deliver its assistance directly to the beneficiaries in the affected municipalities. Furthermore, modern societies tend to face various types of legal obstacles when receiving external assistance in order to respond to mega-disasters and though the EU is based on the principle of free movement, a number of legal issues still constitute barriers to the free flow of assistance within the EU (and from non-EU country). The recent study carried out by the Red Cross, the Belgium Presidency Seminar on Host Nation Support (HNS) and the recent work on the HNS guidelines have identified various legal obstacles that need to be further addressed². Furthermore, the events of such scale would pose cross-sectoral issues going beyond the 'pure' remit of Civil Protection, such as those related to disruption of economic activity, massive movements of people, energy supply, law and order, security, even political issues etc. This would require extensive interaction and coordination between Civil Protection and other state authorities, businesses, as well as the service. In some MS, civil protection authorities will have a central coordinating role during major crises, bringing together the national actors across the various sectors. This is not mirrored at EU level, where the civil protection Mechanism is one sectoral instrument next to others. Finally, the additional challenge of rescue efforts under CBRN conditions may easily overwhelm national capacities.

45. Somewhat different to the example above which deals with unknown disasters is the fact that Europe faces also a number of known hazards which require attention. European countries feature ten volcanoes that potentially affect population centres with a total of 1.3 million inhabitants. Vesuvius is the most dangerous volcano in

¹ The following example was discussed at the recent Directors-General meeting in Krakow in September 2011. Necessarily, disaster prevention, preparedness and response actions are concerned with future risks for which the exact impacts are to an extent hypothetical.

² Inter alia, recognition of qualifications of regulated professions (e.g. doctors, nurses, paramedics, engineers, etc.), national cross border and transport regulations and restrictions, liability of international intervention teams, regulation concerning standards for food and medicines in emergency situations, visas regulations for non-EU personnel, in-country taxation for international intervention teams, etc.

Europe, creating life-threatening hazards to more than one million people.¹ Moreover, large earthquake events are expected any time in Lisbon and Istanbul. Such large events can by far overwhelm the capacities of individual countries. For an earthquake magnitude 7.5 in Istanbul, public estimates expect 55000 or more buildings destroyed or severely damaged, 73.000 fatalities, 120.000 severely injured inhabitants, 2 million homeless people, and economic damages of up to 60 billion € i.e. 30% of Turkey's gross national product.² Considering the time-scales of geo-physical phenomena, it is relevant to consider also the devastating effects of the 1755 earthquake causing the near destruction of Lisbon. Between 30 and 40 thousand people (of 200 thousand) lost their lives and 85% of the city's buildings were destroyed.

46. While today's buildings and emergency procedures may be considered more resilient than at earlier times, the economic values at risk have increased significantly, as has the population at risk in dangerous places. Moreover, today's networked societies are vulnerable to many severe knock-on effects, e.g. when the electricity supply is disrupted for longer periods. German authorities have analysed the effects of a prolonged electricity blackout on the German society and concluded that the effects would be wide-ranging and heavily disrupting after only a few days, with significant risks also to human lives.

3.2. Environmental, social and fundamental rights impacts of disasters

47. The impacts of natural and man-made disasters have immediate detrimental impacts on the environment and can contribute to climate change. The impacts can include loss of bio-diversity due to fires and/or floods. For example over 3.5 million ha of forest areas were burnt by forest fires in Europe 2003-2009 of which over half a million hectares were located in protected ecosystems – Natura 2000 areas.³ Impacts of forest fires on ecosystems are widespread. Other environmental impacts can include increased water pollution due to floods, as well as industrial and technological disasters, e.g. if waste water treatment plants are inundated or when factories holding large quantities of toxic chemicals are also affected. In addition forest fires can also contribute to increased CO₂ emissions.
48. Flooding and storms are the most important natural hazards in Europe in terms of economic losses (over €96 billion 1998-2009) (EEA 2010) and the floods affecting Europe in recent decades have shown an increase in economic losses as a result of increased population and wealth in the affected areas (EEA 2010).
49. At the same time vulnerability among people and territories affected by disasters is very heterogeneous throughout Europe, as highlighted by recent disasters. In the heat waves affecting France and other countries in the summer 2003, most of the fatalities were elderly people. The UK floods of 2007 affected disproportionately the poorer

¹ Spence, Robin; Gunsekara, Rashmin, and Zuccaro, Giulio: Insurance Risks From Volcanic Eruptions in Europe, Willis Research Network, October 19th 2009: http://www.willisresearchnetwork.com/Lists/Publications/Attachments/64/WRN%20-%20Insurance%20Risks%20from%20Volcanic%20Eruptions_Final.pdf.

² <http://www.zukunftforum-oeffentliche-sicherheit.de/downloads/ZOES-2-Wenzel.pdf>.

³ EFFIS, 2010 European Forest Fires Information System: <http://effis.jrc.ec.europa.eu>.

segments of people living in flood prone areas.¹ Many of the deaths from flooding in Romania and other Eastern European countries occurred in rural areas with insufficient flood control and defences. As reported by the Intergovernmental Panel on Climate Change in 2007 the burden of disasters including their health impacts falls disproportionately on vulnerable populations also in Europe, namely the poor, ethnic minorities, old people and people with disabilities.²

50. Involving the active participation of local communities, business and non-governmental organisations would boost the social impact of disaster management. Positive social impacts may occur in particular when EU citizens experience increasingly comparable levels of protection, irrespective of the region confronted with comparable risks. In terms of avoiding fatalities and cost damage, positive benefits occur when reducing the number of deaths and injuries, reducing damage to infrastructure and buildings, or reducing productivity loss, e.g. in industries and agriculture during flooding. A significant proportion of the prevention and preparedness funding will also contribute to combating climate change.
51. Actions that reduce casualties and minimize harm and damage to individuals and communities have a positive impact on a number of rights protected under the EU Charter of Fundamental Rights, in particular the right to life (article 2) and the right to the integrity of the person (article 3). Such actions help ensuring an improved access to health (article 35) and enhanced environmental protection (article 37). Improvements in the EU CP may also positively affect the consular protection of unrepresented EU citizens in third countries, therefore strengthening the fundamental right to consular protection (article 46).

3.3. The limitations of the current CP cooperation and the Mechanism

52. Current disaster trends and the possible event of a mega-disaster in Europe reveal that in its current set-up the Mechanism has a number of shortcomings related to the response to, preparedness for and also the prevention in particular of large-scale disasters, making it difficult to respond effectively to the future challenges. However, when considering also the likely limited public budgets available for increased CP actions, the European CP cooperation via the Mechanism must be seen as one of the most effective and efficient means of better preparing the European systems for preventing and protecting to the future disaster landscape.
53. When a disaster hits a European country, a great deal of national resources can be mobilised, in most cases including the military and sometimes even the private sector. However, whenever the national resources would be overwhelmed, it is the CP cooperation that may in most circumstances play the most effective and efficient role considering that it has been establishing functioning cooperation modes and participated in a lot of training and exercises. The Mechanism builds on this cooperation and tries to develop it further into a comprehensive disaster management cooperation system where the EU can play its role to support and complement MS

¹ UK Environment Agency 'Addressing Environmental Inequalities: Flood Risk' Science Report: SC020061/SRI. For instance over half the population of Hull, heavily damaged in 2007 lived in areas that were amongst the 20% most deprived in England.

² Intergovernmental Panel on Climate Change, Working Group II report, 2007, Climate Change: Impacts, Adaptation and Vulnerability, Geneva: United Nations.

efforts. As such it is not supposed to replace any regional cooperation that is already in place. But due to its larger scope of currently 31 PS it widens the scope of possible protection and is therefore more effective in the context of a larger disaster.

3.3.1. *Reactive and ad hoc mechanics of the EU CP cooperation limit the effectiveness, efficiency and coherence of European disaster response*

54. The current Mechanism has been set up as a monitoring and information sharing platform, and is therefore dependent on voluntary and ad hoc offers of assistance by PS (EU does not have own assets). It is **not in a position to guarantee the availability of assistance** when needed. This can lead to situations when life-saving assistance is not available or delayed, thus, undermining the effectiveness of EU response.

55. The *ad hoc* system also necessarily implies that the Mechanism is of a reactive rather than a pro-active nature. The impossibility of foreseeing exactly what and how much (if any), assistance will be offered for any given emergency means that a **meaningful contingency planning for deploying assistance cannot be done** for operations under the Mechanism. This inevitably leads to a degree of improvisation in the immediate response phase, which denies the (economic) advantages of pooling and thus negatively affects the *cost-effectiveness* of overall EU response. Furthermore, over the years it has become evident that the *ad hoc* system leads to a degree of **fragmentation of assistance**. Given that PS offer assistance without necessarily taking into account the overall EU response effort, the assistance may lack *coherence*. It has been a recurrent phenomenon that assistance provided by PS caters abundantly for some of the needs whilst unable to cover others.¹

56. An example of the past is the major forest fires in Bulgaria in the summer of 2007, where the request for assistance (fire fighting aircraft) was left unanswered by other PS, partly explained by the fact that their assets were either in use in other PS or on high alert to react domestically. Looking into the future, in an extreme case, a deployed field hospital could be rendered virtually useless in the absence of water purification support if access to clean water were an issue. It should be noted that there is a virtual consensus among the stakeholders on the need to step up the planning of operations under the Mechanism.

3.3.2. *Unavailability of critical response assets (capacity gaps)*

56.1. An effective EU disaster response requires that assets are available and can be quickly mobilised. Where gaps in response assets exist (which could be either because they are not available in sufficient quantities or not available for sharing), critical needs of disasters' victims may not be met. Gaps can occur especially with regard to assets to deal with **low probability/high impact** risks, when the risk is considered too low for an individual country to justify investment, even though the impact could be huge (for instance in the case of a massive terrorist CBRN² attack). Yet, the risk for the EU as a whole may in certain cases justify investing in such assets, thus filling the gap (i.e. situation comparable to that of 'market failure').³

¹ For details see Impact Assessment for 2010 Communication, SEC(2010)1243 – SEC (2010) 1242 final.

² Chemical, biological, radiological and nuclear.

³ For a detailed economic rationale see external consultant's study, Annex C, section 4.4.

Some reports suggest that in some extreme scenarios Europe may face for instance a shortage of CBRN-related capacities and medical facilities for burnt victims.¹

57. Gaps may also occur with regard to **specialised high-cost assets**, when initial investments could be very high or even prohibitive. In such cases there are strong economic arguments to jointly invest in some 'top-up' European capacities that could be shared by all PS. One example is the oil pollution combating vessels managed by the European Maritime Safety Agency (EMSA). Another example could be aerial forest fire-fighting. While all PS can be reasonably expected to prepare for the average level of risk – past experience indicates that this is the case in practice the EU as a whole is sufficiently equipped to deal with average forest fires seasons – it would be economically beneficial to develop reserve capacities for more extreme seasons and to share the burden related to that.²
58. Furthermore, some **'horizontal'** assets by their very nature are such that they can be used in virtually every emergency and serve equally all actors involved, as e.g. the Technical Assistance and Support Teams (TAST) that provide logistical support (field accommodation, communications, food etc.) to any expert team or CP 'module'.³ Similarly, private-sector stakeholders pointed that the same rationale could apply to heavy-lift helicopters that can be used for a variety of purposes in almost every emergency involving the Mechanism.
59. While the feasibility and usefulness of such arrangements has been successfully tested through pilot and preparatory action projects, the current CP legal basis does not allow the EU's support to filling such gaps and reaping benefits of economies of scale associated with sharing such assets at EU level, rather than having 31 PS making parallel investments. In this regard it should be noted that a number of key stakeholders felt strongly that in view of primary responsibility of PS for the protection of their populations, it would be inappropriate for the EU to develop its 'own' assets should it pose a risk of 'crowding out' the national capacities.

3.3.3. *Limited transport solutions and heavy procedures hinder optimal response*

60. Transport is a critical element in ensuring an effective, efficient and coherent response to disasters, and a major cost and logistical challenge for PS. The availability of means and funds for transport is usually checked at PS level before making offers of assistance and often leads to delays in offering assistance, or offers

¹ Study on Strengthening the EU capacity to respond to disasters: Identification of the gaps in the capacity of the CP Mechanism to provide assistance in major disasters and options to fill the gaps – A scenario-based approach, at http://ec.europa.eu/echo/civil_protection/civil/prote/pdfdocs/Final%20Report%20-%20scenario%20study.pdf, ECORYS 2009.

² This was successfully tested through a pilot and preparatory action projects on EU Forest Fire-fighting Tactical Reserve, whereas two CL215 fire-fighting aircraft were made available to assist all PS during 2009 and 2010 summer seasons. In 2009, this reserve was used in 6 out of 9 EU operations in four PS, largely covering the difference between the requested capacities and offers from PS.

³ EU aims to organise CP assets sent abroad into CP 'modules' that are fully interoperable and can be quickly deployed to the field, which is done on a voluntary basis. Technical specifications have been developed for 17 types of modules and more than 130 PS' intervention modules of various types are currently registered in the Commission's database. Examples of types of CP modules are high capacity pumping, water purification, heavy and medium search and rescue, and aerial fire fighting with airplanes.

not being made, or in less than required quantities.¹ Likewise, the delivery of assistance has often become a critical issue when unexpected transport costs arise during an operation.

61. The access to transport means can be a serious issue. In a number of past emergencies, the absence of good access to transport means precluded the provision of assistance, for example after the earthquake in Peru (August 2007), offers from Germany, Luxembourg, Malta, and Slovakia covering medical equipment, medicines, and other relief items were partly not delivered because of lack of transport. In addition, the broker² was also activated by a PS that reimbursed 100% of associated costs (Bulgaria for delivery of assistance in Pakistan, 2010), thus confirming that the access to transport is a problem in itself that some CP authorities face.³ Sometimes only military transport means are available, while the situation in the affected country requires a cautious use of military means.
62. PS can request support from the Mechanism according to the provisions of the revised 2007 CP legislation in the form of a 50% transport co-financing or the Commission's activation of a transport broker.⁴ However, the current burdensome procedures and the maximum 50% EU transport co-financing clearly represent a bottleneck in certain time-critical deployments of assistance. According to an extensive e-survey conducted for the 2010 CP Evaluation, 26 respondents considered that the existence of transport provisions have a decisive impact on the decision to offer assistance, against 22 respondents who considered the contrary, and 18 whom did not know.
63. Furthermore, the procedures for requesting EU financial transport assistance through grants and service contracts are considered administratively burdensome in the context of quick response actions. This was the conclusion of last year's Evaluation, and a significant number of PS has expressed it at the first stakeholder conference. To the extent that the administrative procedures deter PS from offering assistance, as explained by stakeholders, the current transport provisions pose a problem for the future functioning of the Mechanism as an effective and efficient response tool.

Administrative procedures: The burdens are considered excessive for both the Commission and the PS. There are several specific issues: 1) if two or more countries pool the transport of their assistance a corresponding number of requests for co-financing have to be submitted (one from each of the States that contribute with assets and that wants to request co-funding), see example below; 2) the procedure for transport grant agreements is lengthy, involving 100% of transport costs being paid by the Commission upon the signature of the grant agreement, and the PS reimbursing at least 50%; 3) organising the whole logistical chain of a transport operation involving several PS poses significant challenges, as important time can be

¹ During some of the recent emergencies (e.g., Japan 2011, Tunisia evacuation 2011), there were cases when some PS made offers of assistance, while announcing their lack of financial means to cover transport costs.

² When requested by PS, the Commission tries to identify cost-efficient transport options by using the services of a transport contractor ("broker") to lease transport assets. Such operations can be co-financed by the Commission up to maximum 50 per cent.

³ This disregards the (few) cases where offers from the broker were rejected.

⁴ For details see Annex L.

wasted and administrative and logistical costs incur when trying to organise operations in airport hubs or in the affected country, due to the fact that EU transport co-financing can only cover a maximum of 50% (meaning that administrative and financial procedures have to be carried out with each of the concerned PS for very small amounts), see example below; 4) an affected PS cannot benefit directly of transport services provided by the Commission (access is limited to offering states), which can translate into a lengthy administrative procedure if the offering state engages in obtaining part of the transport costs from the Commission and the rest from the affected state.

64. One example is related to evacuating EU citizens from Libya (2011), for which the broker provided options. The operation did not take place *inter alia* due to the fact that there were more than four PS involved and some PS were reluctant to deal with the administrative process for sharing the 50% part.
65. An example of problems in managing complex operations occurred in during the Japan earthquake 2011 (organising storage and transport from Narita airport to the affected prefectures of assistance from three PS), and the Pakistan floods 2010 (organising the transport chain so that assistance from three PS gets on time in the common airport hub, making sure that all the assistance is packed in the right way and fulfils all requirements for overseas transport, ensuring storage, loading and unloading upon arrival).

3.3.4. *Limited CP preparedness in training and exercises*

66. CP preparedness training consists of PS' national training/exercises programmes and the EU training courses. The latter focuses on preparing for response actions involving the Mechanism. Other preparedness actions include the development of early warning systems and preparedness projects, as well as assisting PS in organising their CP resources into intervention modules.
67. As mentioned stakeholders expressed general satisfaction in particular the current training and exercise arrangements. However, since national trainings have been developing independently from each other, coordination and sharing of experience is limited. Each PS has its own individual set-up, which is developed, implemented and evaluated independently of the actions and programmes of other PS. There is no systematic exchange of experience or best practice between the PS (even if a number of regional and neighbouring arrangements may be well developed), nor does any systematic effort for interoperability take place (even if there may be specific examples of transfer between e.g. neighbouring countries as well as specific agreements on or tradition for mutual assistance). Consequently, emergency operations across-borders are difficult when teams from different states operate together. Precious time is lost due to a lack of a common vocabulary, or incompatible operating procedures. Incompatibility problems have arisen for equipment, cooperation procedures, individual preparedness, and a good understanding and trust into the partners' capabilities. Moreover, without a minimum of consistency between national systems, the sharing of experiences, good practices, and lessons learned will remain under-developed. The current situation based on neighbouring countries' cooperation is not reaping the important benefits and synergies of closer EU cooperation, which are therefore lost. Likewise, the EU CP preparedness programme

has been too limited in terms of scope to bridge this gap, in particular as regards overwhelming events inside EU requiring international assistance.¹

68. Indeed, the current EU training and exercises programmes and the applicable legal provisions focus on coordination tasks and have not yet integrated further developments in preparedness cooperation, including training on prevention, host-nation support and consular support.² Member State stakeholders have made strong request to broaden the scope of the training so as to include also other relevant subject matters of international cooperation, and to develop a proper training network.
69. Finally, in the stakeholder consultations several PS have noted that without assistance from the EU they will not be able to substantially raise their preparedness levels for overwhelming and cross-border events.³ The challenges are particularly pronounced for receiving incoming assistance in the event of an overwhelming disaster, so-called “host nation support.”⁴ This seems to be the case for most PS, particularly for those with insufficient experience and financial capacity.

3.3.5. *Lack of integration of prevention policies*

70. EU prevention policy in the area of CP have led to some limited cooperation among PS in the area of risk assessments and a number of policy declarations. The latter included the 2009 Commission Communication on prevention and the related Council conclusions in 2009⁵, 2010⁶, and 2011⁷. The 2009 Communication was also endorsed by the European Parliament.⁸ However, the CP cooperation and progress in PS is uneven and slow, as will be explained below.
71. The drivers behind increased prevention activities at Member State level have hitherto been sector-based legislative demands, such as in the areas of critical infrastructures, dangerous substances, electricity, IT, water, transport, agriculture, etc. At the EU level, several pieces of legislation address sector-based hazards and include detailed provisions on risk assessments, minimum prevention standards, and risk management plans.⁹ However, separate planning and isolated action (“silo”

¹ The CP Evaluation (see Annex H).

² The need for more inter-operability between CP and consular experts was expressed e.g. at recent consular seminar and workshop on the concept for common trainings for CP and consular experts. The issue is explained in an Impact assessment on the coordination and cooperation measures regarding the consular protection of unrepresented EU citizens prepared by DG JUST in parallel to this report.

³ Most recently again in the interviews carried out by the external consultant, see Annex C.

⁴ *Idem*. The report which reports on the broad agreement among MS on this point. These recognised shortcomings have led to the work on related guidelines on host-nation support.

⁵ On a Community framework on disaster prevention within the EU of 30.11.2009 (document 15394/09).

⁶ On prevention of forest fires within the EU of 26.04.2010, and: On innovative solutions for financing disaster prevention of 09.11.2010.

⁷ On further developing risk assessment for disaster management within the EU of 12.04 2011, and On integrated flood management within the EU of 12.05.2011.

⁸ Resolution of 21 September 2010 on the Commission communication: A Community approach on the prevention of natural and man-made disasters (2009/2151(INI)).

⁹ Such as the Directives on flood risk management (2007/60/EC), on the protection of critical infrastructures (2008/114/EC), on the control of major accident hazards (Seveso-96/82/EC), on drought management (2000/60/EC), as well as other initiatives on climate change, environment, land use policy, health, nuclear safety, consular protection (incl. Guidelines on consular protection of EU citizens in

operations) without improved coordination will prove insufficient to prevent the consequences of future disasters given the growing complexity of emergencies in our networked societies.¹ What is missing is a general EU risk management framework where the different elements can be brought together to better link the prevention actions with those of preparedness and response.

72. Furthermore, the sharing of experience is under-developed in Europe. Most PS are developing their own methods, processes and knowledge bases for assessment and management of the risks they are exposed to. The lack of minimum comparability between the national disaster risk management systems hinders cross-border cooperation and the sharing of experience. There is a unanimous agreement among stakeholders that EU action would be the most efficient way to address this problem and avoid duplication of work. During stakeholder consultations for this impact assessment, as well as in a number of Council conclusions, PS have repeatedly called for a more systematic and structured approach to sharing knowledge and best practices across national borders, an view that is shared in Parliament reports. One example to illustrate the importance of pooling and sharing of experience and resources is the now possible use of satellite technology to provide European citizens with an optimum of protection at affordable costs, which would otherwise not be possible. Satellite technologies have helped save lives in the immediate aftermath of disasters, but are also used as predictive tools both for immediate preparedness and for longer term prevention issues.
73. Prevention generally constitutes a good investment when comparing to the cost of response to disasters.² However, the costs for prevention measures are immediate while the benefits lie in the future and are spread out over time. There is a general lack of awareness among the population and decision-makers on the possible devastating effects of disasters. Therefore, it is important to foster the awareness of stakeholders and to raise the political will and vision to engage in strategic longer-term investments. Some PS explicitly refer to insufficient human and financial resources as a barrier for introducing proper preventive measures.³ The lack of coordination between national authorities and the unclear definition of responsibilities also impede necessary investments in prevention. The current Mechanism decision lacks any reference to prevention objectives, and thus cannot contribute to implement a closer link between prevention and response. There are currently a number of efforts ongoing at the EU level to better integrate prevention consideration in all spending programmes, such as the Structural Funds. However, the current Mechanism itself cannot be used as an instrument to reinforce prevention policies.

third countries – Council documents 10109/2/06 and 15613/10 (not published), etc. Further descriptions available in Annex I.

¹ The impact assessment for the Floods directive concluded that the real added value of flood prevention is the integrated preventive approach, recognizing that local flood protection measures alone can have negative effects further downstream. It is therefore important to address the risk in an integrated manner and across administrative and geographical boundaries by integrated flood risk management plans.

² Literature gives strong indications that investments in prevention pay off; estimates quotes between 1:4 and 1:7 when comparing prevention costs and savings due to preventive efforts. Natural Hazards, UnNatural Disasters, The Economics of Effective Prevention, the World Bank and the UN, 2010.

³ See external consultant's study, Annex C, section 2.

Examples of prevention benefits¹: Investment in various types of early warning systems can help save lives, protect property and the environment, and even more so if integrated with relevant preventive risk assessment and preventive planning measures. Global studies have shown that benefits of weather-related information and forecasts can be ten times as high as costs.²

Mortality in the United States has declined significantly over the years because its early warning systems for recurring hazards such as lightning, floods, storms, and heat waves have continually improved: mortality fell by 45 per cent and injuries by 40 per cent in 15,000 tornadoes from 1986 to 1999.³

Heat health warning systems have been particularly effective in reducing mortality. In France, after the 2003 heat wave that killed 15,000 corresponding to a 60 per cent increase in expected mortality in France, the French Institute for Public Health Surveillance elaborated a heat health watch warning system based on biometeorological indicators as well as a National Heat Wave Plan (NHWP). This was tested during the July 2006 heat wave, and despite the 2,000 extra deaths observed, an evaluation showed that approx. 4,000 premature deaths were avoided during the 2006 event, most of which were probably due to public awareness and the NHWP. In operation from 1 June to 31 August, the French preventive warning system aims at modifying the behaviour of people, health institutions and health authorities concerning high summer temperatures and provides special communication and assistance to people at risk⁴. Efficient and timely services from climate and meteorological services to health authorities can thus to a large degree prevent heat waves from causing premature deaths.⁵

In 2007, the Department of Health and the Cabinet Office in the UK developed a national framework for responding to H1N1 pandemic flu. This framework included prevention, preparedness and response measures, such as national pandemic flu services, sleeping contracts with vaccine manufacturers, stockpiles of antivirals, as well as clear policies on how to behave during the pandemic. The national planning framework was informed by a number of exercises involving more than 5,000 people from government, industry, and third sector, in response to what was ranked as one of the top risks facing the UK in its National Risk Register. The framework was developed based on the assumption that it would not be possible to prevent the pandemic, but focused on what could be done to slow down its spread and to prevent (delay) its arrival, and what would be efficient in this respect, recognising that efficient preparedness and response to a global health emergency depend on the level of prevention planning. A later review of the UK pandemic prevention planning⁶ concluded with respect to the economic review of the business case (value for

¹ Examples from the External study, See Annex C.

² Natural Hazards, UnNatural Disasters, the Economics of Effective Prevention, 2010.

³ David Rogers and Valdimir Tsirkunov, Cost and Benefits of Early Warning Systems, 2010, Global Assessment Report on Disaster Risk Reduction 2011 (ISDR; The World Bank), referring to Teisberg and Weiher, 2009.

⁴ Fouillet Anne, G.Rey, E.Jouglà, D. Hémon, 2006b: Estimation de la surmortalité observée et attendue au cours de la vague de chaleur du mois de juillet 2006, Rapport remis à l'Institut de Veille Sanitaire, 6 Décembre 2006.

⁵ David P. Rogers, Melvyn A. Shapiro et al., Health and Climate - opportunities, *Procedia Environmental Sciences* 1 (2010) 37-54.

⁶ Dame Deirdre Hine, *The 2009 Influenza Pandemic*, July 2010, which also presents further breakdown of costs.

money) that the benefits substantially outweighed the costs, the pandemic flu pre-planning and preparedness programme offered significant value for money. Based on the impact of the -in the end less severe- flu, the benefits turned out to be smaller than in the expected severe outbreak, however still the 'value for money case' for maintaining substantial preparedness programme remained sound. The total costs of preparedness and response was estimated to be GBP 1242.13. The level of details in the framework pre-planning meant that all key issues were already outlined with 'to-do-lists' for all involved, which became the key to organising a rapid response and reduced pressure on the central decision-making process.

74. The link between prevention, preparedness, and response is crucial. In a Union of solidarity that fosters mutual assistance in times of crises, it is self-evident that each PS makes the requisite efforts to prevent emergencies or disasters from occurring. As stressed repeatedly by stakeholders¹, further progress in the development of CP cooperation between PS requires a common understanding of minimum good practices in disaster prevention and of the challenges ahead. The current Mechanism Decision has not established a clear link between prevention, preparedness and response in line with the wording of Article 196 TFEU and by the above-mentioned Commission Communications and Council Conclusions.
75. Under the current CPFI provisions, the development and implementation of disaster risk management plans at national or lower levels cannot be co-financed through the CPFI, as CPFI co-financing on prevention is limited to studies, surveys, modelling and scenario building, demonstration projects and public awareness activities.
76. Considering the above, and as clearly expressed by all stakeholder comments, further advances in cooperation on CP response are only possible in line with the development and integration of a more coherent EU prevention policy framework.

3.4. Baseline

77. The baseline implies that no changes to the Mechanism Decision would be made and that the CPFI would be renewed in its current form.
78. Generally speaking, not adequately addressing the challenges and problems outlined above while bearing in mind the rising trends in disasters and limited public budgets, will result in: 1) widening gap between the needs of disaster-stricken populations and the provided assistance, 2) losing the economic benefits of European cooperation and pooling, and 3) leaving unexploited the potential to avert the most severe consequences of disasters through reinforced prevention and preparedness cooperation. For the different areas, the following developments would constitute the baseline against which the different policy options will be compared.
79. In response operations, the Mechanism would continue its work coordinating PS' assistance offered via the MIC, offer monitoring, information and early warning services, maintain a database of CP modules, develop guidelines on certain response issues, such as host-nation support or module requirements, and provide co-financing for certain transportation needs. However, the number, intensity and complexity of

¹ See Annex E – stakeholder consultation meetings reports

disasters will increase and the expected investments in additional assets will remain limited. In these circumstances, PS would make fewer assets available for deployment via the Mechanism because they would be needed domestically. The Mechanism would more frequently fail to ensure an effective, efficient and coherent EU response to disasters. Consequently, the level of protection of European citizens would generally fall. The gap between the needs and the assistance actually provided would gradually widen. This would in particular be the case in case of a mega disaster hitting Europe.

80. As regards the transportation of assistance, a few measures can be implemented without legislative changes, such as the use of framework partnership agreements with PS,¹ which may reduce the costs compared to processing individual transport grant requests. Other simple measures may include fast-track grant procedures and partnerships for cost-free transport by private companies. These measures may reduce to a limited degree the administrative costs for PS and the Commission, but would not significantly improve the availability of transport. As a result, the deployment of European assistance would not be significantly improved. Consequently, transport-related problems are expected to be more pronounced in the future considering the rising disaster trends and the possible large disasters.
81. EU preparedness actions would continue to further develop, but the convergence of national preparedness programmes to the point that they would allow for smooth cooperation, cost-savings and effective sharing of experience is a very slow process with no defined objective or benchmarks. Without setting of clear objectives, broadening the scope of preparedness actions and providing additional finance via the CPFI, EU preparedness actions will not be able to accommodate for the future needs. Some PS stakeholders expressed the view that individual Member States will not be able to lift their preparedness sufficiently in relation to overwhelming and cross-border events at a national level without assistance from the EU.² In particular the training, exchange of experience, and policy on receiving assistance, on prevention and other future needs could not be pursued with the requisite financial push from the EU-level, which will leave some short-term risks (in particular of large-scale overwhelming disasters) largely unmanaged.
82. Considering the limited progress achieved so far in further developing the cooperation of a training network across Europe beyond the mere co-financing of MS training, exercises, and exchange of experts actions, the Council Conclusions of 16 June 2008 remain valid: 'The Council of the European Union urges the Commission to assess a wide range of options for establishing and coordinating a sustainable European Disaster Management Training Network, covering all phases of disaster management, and to present proposals for such a network as soon as possible' (item 15). Further, the Council Decisions also welcomed the integrated approach to disaster prevention put forward by the Commission that covers the full disaster cycle.

¹ Under Article 6.3 of the Commission Decision 2007/606/EC, Euratom, the Commission may conclude framework partnership agreements as defined in Article 163 of Commission Regulation (EC, Euratom) No 2342/2002 with the relevant competent authorities of PS. This provision has not been used yet.

² Study by the external consultant in Annex C.

83. Prevention: The current Mechanism Decision makes no reference to prevention actions, while the CPFI has financed a number of EU actions in this area.¹ Current prevention actions at EU level mainly address four areas of voluntary cooperation and there is a minimal amount of available financing and resources available: (1) actions to improve the knowledge base, (2) strengthening of national and EU risk assessment and mapping capacities, (3) providing good practice examples and minimum prevention standards, and (4) combining all of these elements in a risk management policy.²
84. Assuming that no further action is taken at the EU level, the trend towards partial and uneven systems of national risk assessment and risk management procedures are likely to continue. Guidelines will be issued on developing national disaster risk management plans to help Member States in their efforts to draw together sectoral policies. However their use is not linked to any legal objective in the EU CP cooperation. Even though a few advanced Member States have developed methodologies for risk assessment procedures at either horizontal or sectoral levels, the other Member States have no such systems or are developing these only at a very slow pace due to lack of political priority and resources.³ As there are no systematic and comparable prevention approaches across borders, cooperation benefits in prevention are left under-utilised, which negatively affects the cooperation in the areas of preparedness and response. The sharing of experiences between Member States would develop in an uneven manner, slowing down overall progress, in particular where several countries are sharing the same risks.
85. Assuming that the policy framework is not developed further, the opportunities for better linking prevention and preparedness and response will not be fully explored.
86. An additional dimension to effective and efficient risk management procedures is that preventive and mitigating action should reflect expectations of actual damage. Presently, there are few examples of cost benefit analyses at the EU level of preventive efforts at Member State or EU level. Adopting a more global perspective, the World Bank's recent report concludes, "*Prevention is often possible and cost-effective*", and further "*Prevention pays, but you do not always have to pay more for prevention. A relatively easy and effective measure is for governments to make information about hazards and risks easily accessible (such as maps of flood plains...)*" The report also concludes that most governments do not routinely collect or monitor spending on disaster prevention, and measuring prevention spending require much effort and considerable judgment to identify spending across sectors and levels of government and to collect budgeted amounts. Even though cost benefit analyses are useful as ex ante guides, and ex post evaluations ensure that lessons are

¹ CPFI has co-financed some 20 prevention cooperation projects with more than €5 million.

² In addition to these, there is also limited funding available for awareness actions. Further details of the prevention policies are included in Annex L.

³ The external study estimated that the group of advanced countries include: Austria, Belgium, Denmark, France, Germany, Netherlands, Sweden and UK. The group of medium advanced countries include: Cyprus, Czech Republic, Finland, Greece, Hungary, Ireland, Italy, Luxembourg, Malta, Poland, Portugal, Slovakia, Slovenia and Spain whereas the less advanced countries are assumed to be Bulgaria, Estonia, Latvia, Lithuania and Romania.

learned, these are only rarely used.¹ Assuming that no further work is done on cost benefit analyses in sector risk management systems as well as horizontal risk assessment systems, it appears to be difficult to persuade policy and decision makers to act on the insight that disaster prevention pays off.

87. Considering all of the above elements, slow progress and in particular lack of comparability and coherence would likely lead to prevention and preparedness achievements that are insufficient to match the trend of increasing numbers and intensities of disasters and would fall behind the political will of improving such systems. As a result, the overall protection in Europe may even decrease as compared to current levels. Indeed, a number of PS stakeholders have already noted that it may be difficult to define appropriate disaster risk prevention measures without an overall disaster prevention framework. Other stakeholders have focused more on preparedness and response actions due to lack of resources. Finally, as clearly noted by a number of key PS stakeholders, absent further progress in the field of disaster prevention, where the biggest achievements can be made for protecting Europe from the consequences of disasters, further advancement in EU CP cooperation will not be possible.

3.5. Justification for EU action and subsidiarity

88. The Union's role in the field of civil protection at Treaty level is for the first time set out in Article 6(f) TFEU, according to which the Union shall have competence to carry out actions to support, coordinate or supplement the actions of the Member States, without thereby superseding their competence in this area. Article 196 TFEU provides the specific legal basis which sets the scope and arrangement for the exercise of the Union's powers in the civil protection policy. Accordingly, the Union shall *inter alia* support and complement Member States' action at national, regional and local level in preventing, preparing for and responding to natural or man-made disasters within the Union and promote consistency in international civil-protection work. Harmonization of Member States' laws and regulations is explicitly excluded.
89. The subsidiarity principle applies insofar as civil protection does not fall under the exclusive competence of the Union. To solve the problems presented in this impact assessment an EU-level action and coordination is necessary (necessity test). The Mechanism was established because major disasters can overwhelm the response capacities of any Member State which can no longer cope alone. EU action in this field involves managing situations with a strong trans-/multinational component, which necessarily require an overall coordination and concerted action beyond the national level. This is particularly relevant for the overall pre-planned EU response and the voluntary pool of assets. Likewise, sufficient level of preparedness for cross-border and large-scale disasters cannot be achieved only at Member State level. In addition, the joint work on prevention and risk management has been carried out in recognition of the fact that significant progress in the cooperation between the Member States needs to rely on reinforced coherence and coordination at EU level.

¹ Natural Hazards, UnNatural disasters - The Economics of Effective Prevention, The International bank for Reconstruction and Development/the World Bank, 2010.

90. Taking into account the benefits in terms of reducing the loss of human life, environmental, economic and material damage, the proposed action would bring clear EU added value. It would allow Member States to contribute more effectively to the EU assistance under the Mechanism and to benefit from improved coordination and cooperation which links prevention, preparedness and response. Simultaneously, it would provide Member States with the reassurance of a more effective, efficient, coherent and visible assistance in times of need, an increased level of preparedness and a more coherent disaster risk management policy.
91. The proposed amendments would allow Member States to pursue economies of scale, such as cost-effective logistics and transport, coherent and effective response through the voluntary pool of assets and better use of scarce resources by sharing the EU-funded assets. The work on prevention and risk management would generate also economies of preventive action instead of post factum response to disasters.

4. OBJECTIVES

4.1. General objectives

92. The general objective of the review of the CP legislative framework is to improve the arrangements for EU CP cooperation enabling it to face future challenges. To encourage cooperation between MS in order to improve the effectiveness of systems for preventing and protecting against natural or man-made disasters, ensure an adequate level of prevention, preparedness and response to disasters, and promote swift, effective operational cooperation within the Union between national civil-protection services (Article 196 TFEU), EU CP should:

- (1) Provide more effective and efficient means of response cooperation through pre-planning and enhanced availability of assistance;
- (2) Address critical gaps in response capacity;
- (3) Improve the response to major emergencies through better transport solutions;
- (4) Support and complement PS actions at national, regional, and local level by preparedness actions taken in advance;
- (5) Support and complement PS actions at national, regional, and local level by setting a more coherent prevention policy framework;

while taking into account the recent experience in disaster risk management and in line with the new legal basis under Article 196 TFEU and the political commitments of the European Parliament and the Council.

4.2. Specific objectives

93. The specific and operational objectives and options and their impacts will be discussed below individually for each of the elements related to response, transport, preparedness, and prevention.¹
94. As will be specifically assessed in the impacts sections for each option, more effective and integrated EU support for disaster management including risk management planning will always have a positive impact on society and provide positive environmental impacts including contributing to adaptation to climate change.²
95. The following table shows how the problems are linked with the specific objectives in the areas of response, transport, preparedness, and prevention.

Problems	General objectives	Specific objectives
Reactive and <i>ad hoc</i> mandate of the Mechanism limits the effectiveness, efficiency and coherence of the European disaster response	Response (1) More effective and efficient response through planning and enhanced availability of assistance	Shift from a reactive and <i>ad hoc</i> coordination to a pre-planned, pre-arranged and predictable system
Certain needs cannot be met due to unavailability of assets (capacity gaps)	(2) Address critical gaps in response capacity	Identify and fill critical gaps in disaster response capacity in a cost-effective way
Limited financial and logistical transport solutions slow down or hinder optimal response	Transport (3) Improve the response to major emergencies through better transport solutions	Enhanced financial and logistical transport support. (A) Reduce bottlenecks posed by limited logistical and financial transport resources.
Burdensome EU transport administrative procedures		(B) Simplify the transport provisions and streamline administrative procedures
(1) Lack of consistency among national training programmes hinders the sharing of experience. (2) Limited scope of EU preparedness actions and limited link with national programmes lead to lower preparedness levels. (3) Uncertain preparedness for major emergencies leaves risks unmanaged.	Preparedness (4) Support and complement PS actions preparedness actions with a more coherent EU preparedness policy framework	(1) Better link national preparedness systems by creating more consistency. (2) Enlarge the scope of current EU preparedness actions and link them better with national programmes. (3) Define preparedness considerations explicitly as one objective of the EUCP cooperation and provide sufficient funding.
(1) Lack of coordination between sector-specific prevention policies. (2) Under-developed organisation for the sharing of experience. (3) Insufficient link between	Prevention (5) Support and complement PS disaster risk management actions by	(1) Foster the advancement of national disaster risk management planning. (2) Improve the sharing of experience by promoting a common understanding of disaster risk management practices and

¹ Social and economic impacts covering all the elements discussed in this report, as well as those on the fundamental rights, are discussed in a dedicated Chapter 9.

² EU disaster prevention policies work in close cooperation with the EU policies on climate change adaptation.

<p>prevention with preparedness and response. (4) Limited awareness, vision and strategic investments.</p>	<p>a more coherent EU prevention policy framework</p>	<p>provide funding for catching up to a high level of protection. (3) Integrate disaster prevention policies into the EU CP cooperation. (4) Strengthen the means in the EU for continuous support to prevention awareness raising.</p>
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5. BETTER RESPONSE THROUGH PLANNING AND PREDICTABILITY

96. The overall objective stated in the 2010 Disaster Response Communication¹ is to improve the effectiveness (rapidity of deployment and appropriateness of action), the efficiency (cost-effectiveness), coherence (among the various CP assets, as well as with other actors, primarily with humanitarian aid) and visibility of EU response to disasters. It shall be noted that some actions proposed in the Communication, such as increasing the visibility of EU response through e.g. presenting aggregate figures or wearing double badges (PS' and EU), are important and readily achievable, but would not have sizeable economic, social and environmental impacts that would justify their analysis in this report. The same applies for an obligation of PS to inform the ERC/other PS of *all* assistance they send to disaster-stricken countries, or the clarification of procedures for the use of the Mechanism in support of consular operations, which also has some positive impacts for the EU citizens but do not have to be elaborated here.²

5.1. Specific objective: Shifting from a reactive and *ad hoc* coordination to a pre-planned, pre-arranged and predictable system

97. The 2010 Communication calls for a shift of the EU's disaster response from the current *ad hoc* coordination towards a system that is pre-planned, pre-arranged and predictable. This shift would require a complex of measures related to advance planning of operations, underpinned by a predictable and ensured availability of key response assets. This includes developing reference scenarios, mapping PS' assets that could be used in these scenarios, and drawing contingency plans for their deployment. To increase the availability, it also includes developing a European Emergency Response Capacity in the form of a voluntary pool of pre-committed PS' assets on standby for European operations, as well as creating the *Emergency Response Centre*, reinforcing and streamlining arrangements for the transportation of European assistance to disaster areas, looking into areas where EU-funded assets might usefully fill response capacity gaps, as well as other measures. Ultimately, this should ensure a higher level of protection for disaster-victims.

¹ COM(2010) 600 final.

² On consular support, see impact assessment currently being developed by DG JUST in parallel to this report. In particular it covers (a) the possibility of triggering the Mechanism for consular support by the Lead State (possibly in consultation with the Presidency), (b) including consular experts in the EU CP assessment/coordination teams, and (c) including consular issues in the Mechanism training programme.

98. The idea of more planning, pre-arrangements and predictability is strongly supported by all stakeholders, including PS, European Parliament and the UN.¹

5.2. Policy options for better planning and availability of assets

99. The impact assessment preceding the Communication already looked into a wide spectrum of options to achieve the stated objective. These ranged from the 'no-action' and even discontinuing the Mechanism altogether on the one hand, which were discarded as not capable of delivering on the stated objectives, to a full-fledged EU CP Force (as advocated by 2006 Barnier report 'for a European Civil Protection Force: Europe Aid') on the other hand, which was eliminated due to subsidiarity/proportionality considerations, as well as prohibitive costs for the EU budget. This has left two realistic options, namely the strengthening of European disaster response through (1) the EU-level assets (a 'top-down' approach), which would have the advantage of effectiveness, and (2) a voluntary pool of committed PS' assets, which could bring about the advantage of cost-effectiveness and follows a 'bottom-up' approach favoured by the stakeholders. Having considered pros and cons of these options in detail, the impact assessment concluded in favour of the latter, while acknowledging the benefits of the former in some cases. The Commission in its 2010 Communication therefore proposed strengthening the EU's disaster response capacity primarily through the development of a voluntary pool of pre-committed PS' assets, which is most in line with the voluntary spirit of the Mechanism as it is today. Therefore, options related to the better planning and availability of assets analysed in this impact assessment centre around the voluntary pool of assets.

100. While assets committed by PS to the pool would remain under national direction and control, there would be an expectation that these assets would be made available for EU operations, unless the concerned State has a compelling reason to refuse their deployment (for instance due to domestic emergencies). Notably, these capacities would not sit idle in-between the EU operations, as PS would continue using them for national purposes. It is envisaged that the deployment of these on-call assets from the pool would form the nucleus of any EU CP operation, which would be further complemented by additional *ad hoc* offers provided in the same way in which the EU CP assistance is organised today.

101. The system would require a hub at European level that can plan (before emergencies) and organise (during emergencies) the overall EU response in the most efficient way. Once a request for assistance is received, this hub will quickly determine the core components of the European response (e.g. 2 SAR teams, 1 advanced medical post, 1 water purification team and 1 TAST) and launch a call to the relevant pool members to mobilise these specific modules within a certain deadline. The concerned PS will take the go/no go decision and inform the hub of their availability. Where more assets are available than necessary, the hub will make a selection based on different criteria, including cost-efficiency, capacity, transport possibilities and logistical constraints. The ERC could meaningfully play the role of a central hub in close partnership with PS, since such a role for the MIC has been already successfully

¹ It is recognised that the UN/OCHA (Office for Coordination of Humanitarian Affairs) is the central leading role for emergencies in the third countries. See e.g. European Consensus on Humanitarian Aid.

tested thought pilot actions.¹ To fulfil this role, the ERC will need to work in close partnership with PS. In this respect, the ERC could be reinforced by representatives of CP authorities of PS that contribute to the pool. These and other elements on the functioning of the pool would be detailed in implementing rules.

102. The creation of a voluntary pool of PS' assets on standby for EU operations would significantly facilitate the planning of operations and add an element of predictability, as it would ensure that some key assets can be relied upon when needed. This is of crucial importance, as the knowledge of which assets will be available in crisis is key for a meaningful contingency-planning. It will also allow ensuring an adequate EU response in all emergencies, as well as maximising synergies among the various deployed assets. It can be foreseen that intervention modules comprising the pool would need to comply with minimum quality requirements and respect the applicable international and EU guidelines, thus resulting in enhanced quality levels of the overall EU response. In the end, this would deliver a more robust EU response capacity.
103. It should be noted however that only a fully functioning and complete pool will lead to a well planned, quick and effective response to disasters. It is uncertain whether PS will be prepared to provide a sufficient number of assets without financial compensation for the use of their assets for EU operations.
104. With this in mind, policy options have been devised along the scope and degree of EU incentives that can be provided to PS for committing assets to the voluntary pool (VP):
- (1) VP Option 1: Voluntary pool without EU co-financing;
 - (2) VP Option 2: Voluntary pool with a limited EU co-financing (covering only deployment costs); and
 - (3) VP Option 3: Voluntary pool with a higher degree of EU co-financing (some development (including equipment) and standby costs, as well as deployment
105. The underlying rationale behind this classification is that different types of cost may require a different approach: when the EU calls for the deployment of certain assets from the pool and the relevant PS is mobilising the asset as part of an EU operation and to the benefit of the EU as a whole, it is appropriate to cover the full deployment costs from the EU budget. Since the assets are developed, used and kept on standby for both national and EU operations, any EU co-financing of the development and standby costs should in principle be limited to the portion of these costs that corresponds to their use for European operations.

5.3. Analysis of impacts of options for a voluntary pool

106. Impacts of the options are drawn and the options are compared to the baseline (no change of policy option) on the basis of multi-criteria analysis in terms of

¹ This includes ca. 20 projects under the preparatory action on an EU's Rapid Response Capability (calls issued in 2008-2010; some projects continue until mid-2012), as well as pilot project on EU Forest Fire-fighting Tactical Reserve (FFTR) implemented in 2008-2009.

effectiveness – the extent to which options achieve the specific objective, **efficiency** – the extent to which the objective can be achieved at least cost (cost-effectiveness), and **coherence** – the extent to which options would ensure a coherent EU response to disasters, while maximising possible synergies.

107. As outlined in the impact assessment report preceding the 2010 Disaster Response Communication, the pool would help reducing situations of non-deployment or delayed deployment of assistance, thus providing benefits in terms of effectiveness (delivering appropriate, timely and quality response) and cost-efficiency of assistance provided. It will also produce economic gains deriving from pooling and sharing logistics and transport, which are easier to achieve in a pre-planned and pre-arranged system. Furthermore, the voluntary pool will deliver important synergetic effects by ensuring the availability of complementary response assets that support and mutually reinforce the effectiveness of other assets, as well as that of the EU and international humanitarian and, as well as more coherence in European assistance in general.
108. In terms of costs for PS, the pool would be composed of assets that already exist in PS and would therefore not have significant impacts on capital investment. The increased use of these assets may result in increased wear and tear. However, this would need to be offset against the benefit of the increased visibility and additional 'training' opportunities associated with more frequent deployments in live-emergency situations. As to the administrative burden related to setting up the pool, it should be noted that most of PS' assets that are likely to be committed are already registered (though without any commitment) in the CECIS¹ database: the administrative effort involved in this registration has proven not to be prohibitive. Since assets committed to the pool are already on standby for national purposes, the cost of extending this function to a broader European service will in most cases be limited to some additional training of personnel and will therefore not be excessive. Finally, since the commitment of assets to the pool is voluntary, there would be no obligation for 'unwilling' PS to carry out any action or bear any of corresponding costs.
109. On the EU institutions' side, there would be some costs associated to the additional tasks of the ERC as the central hub for the pool (including developing scenarios, mapping assets and contingency planning, which in itself will require a joint effort of the Commission and PS). The most significant cost element related to the operations from the pool will be the deployment/transport costs, especially in cases of emergencies in far-away third countries.
110. All of the described options are fully coherent with overarching EU objectives, strategies and priorities. Depending on the option chosen, the pool would also have effects on equity and implications for the EU budget (mostly in terms of shifts of budgetary burden from PS to the EU level rather than an increase in absolute terms). The impacts of the options will differ from the baseline in the following way:

¹ The Common Emergency Information and Communication System.

5.3.1. *Impacts of VP-Option 1: Voluntary pool without EU co-financing*

111. This option could be implemented without legislative changes or could only introduce only essential elements and principles, and would not bring about any burden on the EU budget, except for some marginal costs for running the system (e.g. training of staff and updating communications software).
112. However it is unlikely that a purely political commitment without financial incentives from the EU can ensure the availability of a sufficient number of assets of various types in a sustainable way. It is unlikely that PS would commit substantial assets to an unknown future, where they would need to be ready to cover costs that may be significant. The option is therefore not fully effective and sustainable.
113. It should also be noted that VP Option 1 might have a negative impact on equity, in the sense that it would imply that PS committing assets to the pool would bear a higher fraction of the costs of the overall European response than other PS. This can also result in PS not committing assets to the pool becoming less active in the EU response and hence also less visible 'free-riders'.

5.3.2. *Impacts of VP-Option 2: Voluntary pool with limited EU co-financing (covering deployment costs but not development or standby costs)*

114. Providing EU co-financing for deployment/transport costs will enhance the effectiveness of the pool. Compensating the costs of deployments will substantially reduce the financial constraints on PS, making it more feasible to contribute assets to the pool. In order to provide a genuine incentive, the co-financing rates should be higher than those available under the present provisions (currently up to 50% of total transportation costs). Such a system would introduce a shift in burden-sharing where – compared with today – a higher fraction of costs of providing European coordinated assistance is shared through the EU budget rather than that of PS. Covering the deployment costs from the EU budget has the additional advantage of making the overall EU response more coherent and needs-based, as it allows the MIC to steer MS' response to those types of assets that are considered most urgent, avoid duplication and encourage complementarity. Finally, if funding for the deployment is available from the EU budget, MS will be able to decide very quickly on deployment, which will result in a more rapid delivery of life-saving equipment, enhanced predictability of the assistance and overall efficiency gains.
115. It is very difficult to estimate the annual costs associated with deployments/transport, as variations from one year to another can be very significant. Transport costs can vary hugely depending on the distance, timing (prices for transport tend to rise in the wake of major emergencies) and other factors. The best estimate made by the consultant is that the budgetary shift from PS to the EU (rather than overall increase) for having the voluntary pool up and running in line with this option (on the assumption of 100% EU funding of deployment/transportation costs) would amount to around €6 million/year.¹

¹ See external consultant's study Annex C, section 4.3.

116. VP-Option 2 would effectively achieve the stated objective. It would also be cost-effective, especially if compared to achieving the objective through EU-level (owned or leased) assets, the costs of which would be prohibitive.¹

5.3.3. *Impacts of VP-Option 3: Voluntary pool with higher EU co-financing (full deployment costs plus some development and standby costs)*

117. The same arrangement as described under VP Option 2 but with partial compensation of some development (including equipment) and standby costs will have comparable economic impacts. To the extent that these assets are also being used for EU operations, it may be appropriate to also cover a corresponding part of the development and standby costs, including notably additional investments needed to ensure the full interoperability with other modules. This would further enhance the effectiveness and efficiency of the pool, as it would more quickly result in a fully functional pool with all the necessary types of response assets in sufficient numbers. The EU co-financing of costs other than those related to deployment, especially those related to standby costs, would further add to the 'European' dimension of the pool and is likely to result in a stronger commitment from PS to make these assets available for EU operations. The consultant considered that some compensation arrangements for costs not related to deployments/transport could be especially useful in cases where capital costs are high compared to deployment costs, such as in the case of aerial forest fire-fighting or CBRN teams.²

118. It is estimated that VP-Option 3 would require the budgetary shift from PS to EU of around €9 million/year, of which around €1.6 million would cover the development/equipment costs and €1.4 million standby (based on assumption that 25% of development, 25% of standby and full deployment costs are covered). This higher budgetary shift appears to be reasonable compared to additional benefits gained.

5.4. Comparison of options

119. The impacts of options *vis-à-vis* the baseline are summarised below:

	VP Option 1	VP Option 2	VP Option 3
Effectiveness	0	++	++
Efficiency	+	+	++
Coherence	+	++	++
Social impacts	+	++	++
Environmental impacts	+	++	++
Ranking of options	3	2	1

(++ = high benefits, + = benefits, 0 = no benefits, - = problematic)

¹ Report 'Assessing costs and benefits of various options related to the development of EU Disaster Response Capacity' by GHK Consulting & Crown Agents on behalf of EPEC, 2010 (not published).

² This model should entail safeguards against the risk of distorting the balancing act performed by PS when deciding whether or not to invest in particular assets, e.g. by careful examination of candidates for such funding, minimum quality standards and not excessive co-financing rate.

120. All the options are comparable in terms of coherence, but only VP Option 2 and VP Option 3 can however effectively achieve objectives sought. VP Option 3 is superior in terms of efficiency and is therefore ranked above the others.

6. ADDRESSING CAPACITY GAPS

6.1. Specific objective: Identifying and filling critical gaps in response capacity

121. The primary responsibility for disaster preparedness and response lies with PS. It has to be recognised that PS are at different levels of development of their CP structures and capacities. An additional effort is required in some cases. These differences are best addressed through the Cohesion Policy instruments, which may be used to a certain extent and subject to various criteria to address gaps in certain MS' preparedness and response capacities.¹ Overlaps between the CPFPI and those instruments need to be avoided.
122. The CPFPI may have a role to play in addressing more structural gaps at EU-wide or regional level, i.e. cases where the normal mechanisms fail, where the sharing of assets results in economic gains or where the gaps have a particular relevance to the EU cooperation. In their investment decisions, PS are (mostly) guided by economic considerations, weighting the probability of certain disaster against the cost of developing the appropriate response capacities. A protection level of 100 per cent, which would imply that capacities are available for all possible disasters, is not realistic for any PS and some gaps are therefore inevitable. The objective here is to devise ways for the EU to support and facilitate filling capacity gaps – identified or potential – in a cost-efficient way to enhance the overall level of protection across the EU.
123. The work on gap analysis is closely linked to the ongoing work on risk assessments, scenario development and mapping of PS' assets, as well as the development of thresholds/determination of what would be an appropriate EU's protection level.² At this stage, therefore, the proposal should focus on process rather than concrete gaps.
124. Furthermore, the consultant's study points to the fact that in certain cases the cost of asset development would be more or less the same irrespective of whether the investment is done at PS or EU level, whereas the risk against which the asset in question can be used would be much higher for the Union taken collectively.³ In addition, central procurement may strengthen the EU's negotiation power on the market, resulting in further economic benefits. In such cases in particular burden-sharing in the form of jointly developed assets and their common use can provide a higher level of protection across the EU in a cost-efficient way, as each PS would not need to invest in expensive assets individually.

¹ The Commission intends to engage in awareness-raising activities in the relevant regions to ensure that disaster management needs are taken into account when setting priorities for the use of possible funding.

² Examples include Bulgaria 2007, Portugal 2010 and Poland 2010; see also ECORYS study quoted above.

³ See external consultant's report, Annex C, section 4.4.

125. In general, three broad categories of assets have been identified where further work is needed to determine whether burden sharing would be appropriate: a) assets to deal with **low probability/high impact risks** (e.g. specific technical equipment to respond to solar flares or volcanic ash cloud-like situations; b) assets performing **horizontal tasks**, thus benefiting equally all PS and other actors involved (assessment, logistics and coordination, such as TAST); and c) tactical reserves of **specialized high-value** assets (such as fire-fighting aircraft, or EMSA network of ships to deal with marine pollution). In all of these cases, there is a strong argument for EU action and it is unlikely that the objective of a higher protection level at acceptable cost could be achieved on a pure subsidiary basis. Decisions on burden sharing would need to be taken on a case-by-case basis, building on the ongoing work on risk assessment and asset mapping.
126. In view of PS' already relatively high preparedness and ability to assist others, it is clear that assets developed through this gap-filling exercise would form only a very limited part of all emergency response assets available in the EU. This could be further limited by emphasising MS' primary responsibility to prepare for risks occurring on their territory and by establishing clear criteria for the use of EU funds for the development of such common buffers. In addition, the decision on the development of such extra capacity, on top of what MS are expected to do at their level, should be based on a thorough economic analysis for each type of asset and should be taken in close consultation with MS, preferably through comitology (with expert support).
127. Therefore, the EU should develop a flexible mechanism that would allow identifying gaps, setting priorities and ensuring that they are filled in a cost-effective way. The essential principles, criteria and procedure of this mechanism could be usefully enshrined in the legislation itself, with details to be defined in implementing rules.

6.2. Policy options for addressing gaps in capacities

128. Critical capacity gaps can be filled by additional assets developed by PS or through EU-level assets. The former alternative could involve EU co-funding or not. Whichever method is chosen, PS should undertake the operational management of such newly developed disaster response assets – if needed on a delegated management basis – as they are the most apt and best equipped for such a role.
129. The assets developed to fill the gaps would be shared across the EU (or parts of it) and would be deployed in a similar way as those from the voluntary pool. When the assets are not required for EU operations, the PS managing the assets could use them domestically. Yet, wherever the EU funding is involved in the development of assets addressing the gaps, it would be reasonable to expect that in cases of competing national and EU needs their use would be prioritised for the EU operations.
130. The following options should be considered for filling the critical gaps (CG) in European disaster response capacities:
- (1) CG Option 1: filling gaps by PS without EU co-financing;
 - (2) CG Option 2: filling gaps by PS with some EU co-financing; and

(3) CG Option 3: filling gaps with EU-level assets.

6.3. Analysis of impacts

131. Impacts of the options are drawn and the options are compared to the baseline (no change of policy option) on the basis of multi-criteria analysis in accordance with the following criteria:

- effectiveness – the extent to which options achieve the specific objective.
- efficiency – the extent to which the objective can be achieved at least cost (cost-effectiveness).
- coherence – the extent to which options would ensure a coherent EU response to disasters, while maximising possible synergies.

132. The impacts of all the options would be positive to the extent that they would all contribute to avoiding potentially huge economic, social and environmental losses due to disasters. It is impossible to quantify these losses and to compare them with costs of limiting them with a degree of precision due to the inherently unpredictable nature of disastrous events. The level of magnitude can however be illustrated by for instance the fact that following the devastating forest fires in 2007, Greece was awarded the grant of €9.8 million from the Solidarity Fund (which represents a fraction of losses estimated at €2.1 billion). In comparison, the cost of a single aerial fire fighting module amounts to roughly €4.5 million/year.

133. The options involving EU support for the development of additional capacities (CG Option 2 and CG Option 3) offer a number of advantages over the CG Option 1. EU support may have an enabling effect, providing the necessary stimulus to engage in tasks that would otherwise be considered too complex (e.g. in the case of multinational modules developed by different MS). It will allow MS to expand the level of protection they can ensure by taking full advantage of economies of scale and shifting action from the PS to the EU as a whole when individual action is not deemed economically feasible. The EU support will also guarantee a greater availability of the assets to all PS and result in closer European cooperation in the development and use of the assets. .

134. It has to be noted that benefits from the filling of gaps with additional assets to a large degree are subject to sharing these assets, as it allows optimising their use.¹ When this is achieved, the identification and filling of gaps will increase the overall level of protection against disasters across the EU.

135. Considering the scope of the exercise limited to ‘topping-up’ PS’ assets above the ‘normal’ preparedness level, the amount required for this purpose can be expected to be at the level of magnitude of €5-10 million/year.² Depending on the option chosen, the costs would fall on PS or the EU budget, or be shared. The possible EU (co-

¹ *Idem.*

² *Idem.* Assumption is 80-100% co-financing, i.e. comparable to that applied during the preparatory action.

)funding would mean shifting some costs from PS to the EU level, thereby creating a new model for burden-sharing among PS.

136. The consultant's study explains that with regard to some types of assets investing into the development and subsequent *EU-wide* sharing of assets can provide important economic benefits and savings.¹ The latter would however depend on a number of factors, such as the frequency of use of assets in question, their mobility, high or low probability of risk, initial capital investment costs and sharing mechanism, such as for instance of CBRN scientific back-office or other assets for low probability/high impact risks. Even where the EU-wide sharing would not be economically justified, a case for a *regional* sharing would almost always be present. One example of the latter could be the multinational *BaltFlood* high capacity pumping module developed and successfully tested by three PS in the framework of preparatory action.

6.3.1. *Impacts of CG Option 1: filling gaps by PS without EU co-financing*

137. Although the option is virtually cost-free from the EU budget perspective, as costs would be limited mostly to research and the organisation of meetings and workshops aimed at identifying the gaps and setting priorities, the effectiveness of this option is limited: even when an identified risk would be important for the EU as a whole, it could still remain below the threshold prompting individual PS to invest, especially in cases where the initial capital costs are high.² The only multinational module registered in CECIS database so far is the *BaltFlood* module developed with EU co-financing. It should be noted however that EU funding could play an intermediate role to demonstrate the benefits from sharing, after which PS could continue jointly developing shared assets without EU financial support.

138. CG Option 1 would imply that PS investing in the deficit assets would bear the whole burden of initial costs, although the availability of asset should benefit all or at least a group of PS. Other PS not investing in assets in question but nevertheless benefiting from them might be therefore perceived as taking undue advantage of the system.

6.3.2. *Impacts of CG Option 2: filling gaps with EU co-financing*

139. Some EU financing would effectively lead to addressing gaps and sharing the developed assets across the EU, as compensating (some) of the related costs would reduce financial constraints for PS to invest in assets in question. All PS could therefore draw on these assets without making parallel investments. The PS developing, maintaining and deploying such assets would furthermore receive benefits of visibility and prestige, as well as 'training' in real-life situations, which would somewhat compensate for the part of investment it would need to cover.

140. CG Option 2 would lead to a more equitable model, as some of the development costs would shift from PS to the EU, thus introducing a (partial) burden-sharing in which all PS take part. Thus the relatively modest incentives could result in significant improvements in the overall EU response capacity.

¹ *Idem.*

² *Idem.*

141. Finally, as some PS are likely to benefit from some types of assets more than from the others, the proposal should take into account an overall balance among competing priorities of various PS and regions. Thus it might be useful to decide on priorities as 'packages' rather than on individual basis. Applicable decision-making procedure could also be conducive to keeping this balance (e.g. comitology process supported by expert advice should ensure such a balanced technical/political input).

6.3.3. Impacts of CG Option 3: filling gaps with EU-level assets

142. Filling gaps with EU-level assets scores high in effectiveness, as it would allow the EU taking decisive action in addressing any identified gaps in a timely manner – subject to budget availability of course. It also has advantages in terms of cost-efficiency, as economies of scale can be better pursued.

143. However, the implications for the EU budget are also more prominent (depending on the number and type of gaps to be filled). The lease of one aerial forest fire-fighting module would be at the level of around €4.5 million/year, while other types of assets can be much less expensive, as for instance the service of a small-sized TAST for one operation would bring the cost of approximately €7,000.¹ Importantly, however, few key stakeholders would support this option due to subsidiarity/proportionality considerations, especially if some PS/regions would benefit more than others. Therefore, it can be concluded that CG Option 3 would be justified only in very limited cases, such as for horizontal assets/services benefiting all.

6.4. Comparison of options

144. The table below gives a comparison of the options with the baseline.. At this stage of analysis and given the eminently political choices involved, no clear preferences are expressed. Using some EU co-financing (CG Option 2) nevertheless appears to merit particular attention, especially for assets dealing with low probability/high impact risks. CG Option 3 would appear justified for horizontal assets benefiting all actors, with smaller budgetary implications (such as TAST).

	CG Option 1	CG Option 2	CG Option 3
Effectiveness	+	++	++
Efficiency	++	+	+
Coherence	+	++	++
Social impacts	+	++	++
Environmental impacts	+	++	++

(++ = high benefits, + = benefits, 0 = no benefits, - = problematic)

¹ Actual amount from a service contract signed under the preparatory action 2009 call.

7. TRANSPORT

7.1. Specific transport objectives

145. Enhanced financial and logistical transport support and more cost-effective transport operations: The ultimate goal of the transport provisions is to improve the EU response to major disasters, by making it more coherent (making sure that all priority resources are deployed at the right moment and along with other complementary assets), more efficient (by choosing the most appropriate and least costly transport solution), and more cost-effective (in terms of financial and human resource requirements).
146. The operational transport-related objectives include reducing the bottlenecks posed by limited logistical and financial transport resources, in particular for the delivery of the most urgent priority needs, as well as simplifying the transport provisions and streamlining the relevant administrative procedures.
147. The voluntary pool of committed assets has the potential to significantly increase the availability of CP assets for operations conducted under the Mechanism, but it will probably not cover the entire range of the most urgent needs (e.g. generators, mobile laboratories, tents, medical supplies). Therefore, these needs will have to be covered through additional *ad hoc* offers by PS, and it is important to reduce potential barriers to the deployment of these assets.

7.2. Policy options

148. Two different sets of options were identified for each of the two objectives stated above:

7.2.1. *Options to reduce bottlenecks posed by limited logistical and financial resources*

149. The following options have been devised to reduce bottlenecks posed by limited logistical and financial resources:
- (1) Transport Option A1: a discontinuation of the scheme. No more support is provided at EU level in finding and financing transport activities.
 - (2) Transport Option A2 (baseline): no policy change. In addition to the current *modus operandi*, the Commission will also work on improving the current system within the limits of the existing legislative provisions.
 - (3) Transport Option A3: increase the EU transport maximum co-financing for the most urgent priority needs. The list of such needs would be set immediately in the wake of emergency based on the request for assistance and assessments on the ground (by EU CP Teams and humanitarian aid experts, UN reports and the like), and in the light of clear and transparent criteria defined in the legislation (e.g. *life-saving character, short supply, and rapid delivery (less than a week after the event)*, etc.). At the same time, the Commission/ERC will consider introducing a cut-off date/time after which offers will no longer be eligible for transport funding.

- (4) Transport Option A4: increase the EU transport maximum co-financing¹ across the board. This option concerns all transport operations.

150. Stakeholders have generally expressed support for further developing the transport support provided under the Mechanism, and therefore pursuing options A1 or A2 is not desired. A more consistent use of private cost-free transport solutions was favoured by some PS as an additional tool (it is part of the baseline scenario). Stakeholders' opinions on the increase of the co-financing rate were rather split, as some PS representatives see this as the right step forward, while others favour avoiding additional transport support and ensuring cost-effective CP operations, cautioning against false incentives from overly cheap transport, to the detriment of local/regional procurement.

7.2.2. *Options for simplifying and streamlining EU transport provisions*

151. The following options have been devised to simplify and streamline EU transport provisions:

- (1) Transport Option B1: no policy change is the baseline scenario. In terms of simplification, the only development as compared to the current situation will be the use of framework partnership agreements with PS.

- (2) Transport Option B2: simplification of the current transport provisions, with the aim of reducing the overall burden on the PS and the Commission. Five elements are included in this option: 1) introducing the possibility of a coordinating country to request transport grants when several PS are involved, which would allow one of the States contributing to a transport operation to apply on behalf of all of the States; 2) further simplification for the financing of small value transport grants and services; 3) paying the entire EU co-financing amount for a transport grant at the end of the transport operations (it means replacing the current system of the Commission pre-financing 100% followed by a reimbursement by the beneficiary of minimum 50%, and sometimes followed by recovery of undue amounts); 4) increased financing rate up to maximum 100% for local transport and other logistical operations in the airport hubs or in the affected countries to allow an effective and smooth delivery of assistance; 5) more extensive use of the transport broker and framework arrangements with service providers; 6) affected PS being able to request transport support at EU level.² The latter proposal (6) under option B2 would facilitate the organisation of transport operations inside EU. This is relevant for cases when an offering PS cannot organise or pay transport costs. It would allow the organisation of door-to-door deliveries during an emergency (organised through the Commission broker).

152. As part of transport Option B2, other small revisions will also be proposed in order to bringing more clarity (e.g. in case of support to consular assistance operations).

¹ This option refers exclusively to the delivery of assistance that is not included in the voluntary pool. For the pool, a full financing (100%) is being proposed (see chapter 6).

² The co-financing rate would be according to the rules in force for any other operation.

7.3. Analysis of impacts

153. Impacts of the options are drawn and the options are compared to the baseline (no change of policy option) on the basis of multi-criteria analysis in terms of **effectiveness** – the extent to which options achieve the specific objective, **efficiency** – the extent to which the objective can be achieved at least cost (cost-effectiveness), and **coherence** – the extent to which options would ensure a coherent EU response to disasters, while maximising possible synergies.

7.3.1. Impacts of Transport Options A1-A4

154. Transport Option A1: Discontinuing the transport support at EU level would strongly undermine the achievement of the CP objectives and of the specific and operational transport objectives. It would go against the results of the 2010 evaluation and against most stakeholders' views, which support further development of the transport provisions.

155. Transport Option A2: The baseline includes relying on private cost-free solutions and on PS offering transport to each other, which are both relatively neutral from a financial impact perspective, as these solutions could be offered in limited cases. The main drawback is the lack of certainty on whether transport solutions will be provided in specific situations, in sufficient quantity, and under time pressure.

156. Transport Option A3: Increasing the maximum EU co-financing rate for a limited part of the European response - the most urgent priorities will reduce the barriers related to financing transport, and it is expected to reduce the decision-making time in the PS when offering assistance. It will make the overall response needs-based, with a greater focus on priority needs. The financial impact is estimated on the basis of the previous operations and considering on average 5 priority deployments per disaster, for 10 disasters per year, with a value of €50,000 per deployment. Increased transport co-financing of up to 85% would lead to an increase of the transport budget with €75,000 yearly. 100% transport financing would lead to an increase of the transport budget with €1.25 million yearly. The financial impact of both possibilities is considered acceptable for the benefits that would be reached.

157. Transport Option A4: The financial impact of Transport Option A4 (increased maximum EU co-financing across the board), judging from the 2010 experience and as compared to the 2010 budget, ranges between €1.1 million/year increase (for a increase up to 85%), and €1.6 million/year (for a increase up to 100%). The main risk associated with this option is that overly cheap transport might lead to non-essential goods being deployed. This would need to be balanced by stricter needs assessments under the Mechanism.

158. Administrative costs, for the Commission, associated with Transport Options A3 and A4 would presumably be negatively affected, due to the potential increase of the number of grants and services, but in view of the use of the framework partnership agreements these costs should be limited. The administrative burden on external partners is likely to remain the same for these two options. The introduction of the concept of the "most urgent priority needs" leads to a need for clarifying it within an implementing act, thus having a limited impact from a simplification perspective.

7.3.2. Impacts of Transport Options B1-B2

159. Transport Option B1 is expected to yield benefits in particular to countries which regularly request transport co-financing, as it simplifies the settling of accounts. For countries which only rarely offer assets, however, the effort to conclude a framework contract with the Commission may be less obvious compared to the present practice of individual requests. Transport Option B1 is not considered sufficient to yield significant improvements of the system. The budgetary impact is considered small.
160. Transport Option B2: The elements proposed under the simplification option are all expected to contribute to reducing the administrative costs for the Commission and the PS. They are coherent with the Commission's better regulation objective. They will also contribute to achieving a faster response (through smoother transport procedures), and to achieving the overall transport and response specific objectives. As the various elements complement each other and have overall limited impacts, except for the simplification results, they are proposed as one single option, instead of separate options. Allowing an affected PS the possibility to request transport support is likely to have a low financial impact, taking into account that so far, during the four years of implementation, there was only one request for grant inside the Mechanism. It could, however, have important positive impacts for an affected PS in cases of low probability/high impact crises, as the affected state could ask the Commission to arrange door-to-door delivery of the most needed assistance and could also benefit of transport co-financing.¹ Stakeholders are generally in favour of the simplification process.
161. The overall financial impact of Transport Option B2 is estimated at around €300,000 per year, resulting mainly from the 100% financing proposed for local transport and other logistical operations in airport hubs or in the affected countries.² This is considered justified, in view of the benefits gained.

7.4. Comparison of options

162. Concerning the options for reducing the bottlenecks posed by limited logistical and financial transport resources, on the basis of the impacts assessed above and of the analysis below, Transport Options A3 and A4 are the highest ranking options. Taking into account the risk associated with Transport Options A4, Transport Options A3 is preferred. Within Transport Options A3, the financial impact of the two sub-options (85% and 100% financing rates) is comparable, while the maximum of advantages can be reached if full financing is provided. Therefore, Transport Options A3 with the 100% financing rate is preferred.
163. The options for simplification are straight-forward and the choice is easy to make. Thus, the simplification Transport Options is the preferred one.

	A1	A2	A3	A4	B1	B2
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¹ When organised through the Commission broker, the Commission is paying 100% of the transport operation, while the requesting state is reimbursing at a later stage the co-financing amount. During crisis times, this support can be significant for the affected state.

² Based upon experience, the order-of-magnitude of local costs as compared to other transport costs is typically quite small, ranging between €25.000-50.000.

Effectiveness	-	0	++	++	0	++
Efficiency	-	0	++	+	0	++
Coherence	-	0	++	++	0	++
Social impacts	-	0	++	++	0	++
Environmental impacts	-	0	++	++	0	++

(++ = high benefits, + = benefits, 0 = no benefits, - = problematic)

164. The social and environmental costs and benefits of the options are directly linked to achieving the objectives of improved provision of transport to the disaster site, and thus to the effectiveness criteria discussed above. This means that Transport Options A3, A4 and B2 score high, while Transport Options A2 and B1 score low.

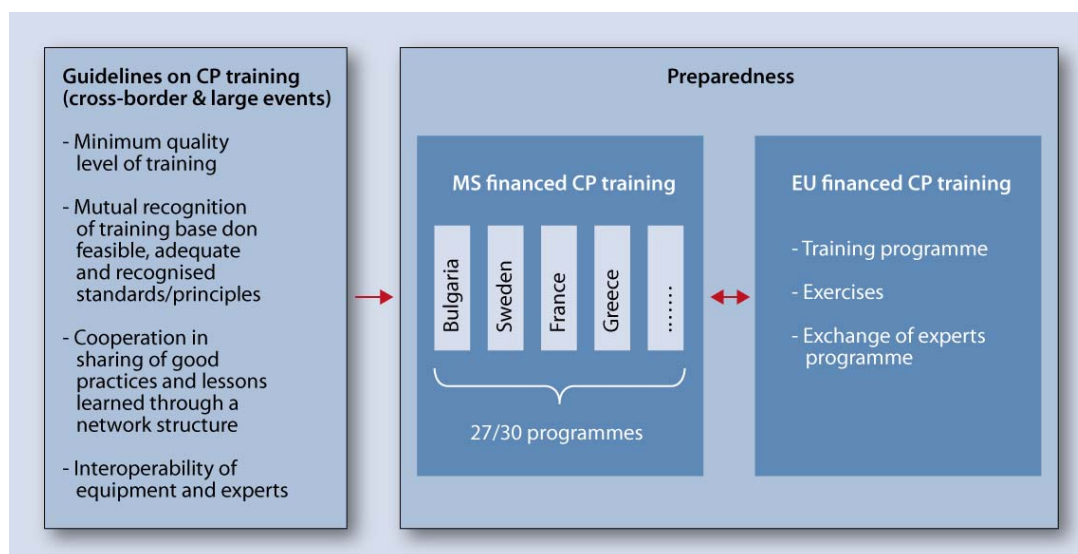
8. PREPAREDNESS

8.1. Specific preparedness objectives

165. (1) To address the lack of consistency among national training programmes, which hinders the sharing of experience, it is a specific objective of the EU CP regulatory review to better link national preparedness systems by creating more consistency. This linking of national preparedness systems can be best realised by work at the EU level. Even though currently there is some cooperation among some neighbouring MS in their CP preparedness efforts, MS cannot individually arrange for other MS to accept and adhere to a common understanding of methods and procedures for international coordination and cooperation. The system is dependent on common actions at the EU level, where MS can develop together the necessary common understanding on: (1) minimum quality levels of training, (2) mutual recognition of training based on feasible, adequate and recognised standards and principles, (3) cooperation in sharing of good practices and lessons learned through a network structure, and (4) interoperability of equipment and experts.
166. (2) To address the limited scope of current EU preparedness actions and the limited link with national programmes, it is a specific objective of the legislative changes to enlarge the scope of current EU preparedness actions and link them better with national programmes, including an established training network. Additional training programmes may include training on prevention, host-nation support, and consular support. The training network should focus on the preparedness for large-scale disaster events.
167. (3) To address the uncertain preparedness for large-scale disasters, it is a specific objective of the legislative review to raise the level of preparedness for such disasters within the EU by further integrating preparedness objectives into the EU CP cooperation and provide for sufficient preparedness funding. Adequate previous training and exercises will significantly enhance the effectiveness of response resources available within Europe. Integrating EU CP preparedness actions better into the EU CP regulatory framework will reinforce the link between prevention, preparedness and response.

8.2. Preparedness policy options

168. In the framework of the Training Policy Group (TPG) the Commission and the MS have made plans to develop guidance on enhanced national preparedness for large-scale disasters. The place of possible guidelines is illustrated in the picture below:



169. Because there is broad support for further developing EU CP preparedness policy, as recently reiterated in stakeholder meetings, and when considering the general agreement on substance, the legislative review focussed its reflection of options on the implementation options and the most appropriate levels of EU financial support.

170. It is noted that an option to introduce binding legislation or binding standards or quality labels has been discarded at an early stage of the assessment as these would not be possible by the legal basis of Article 196 TFEU, which excludes harmonisation. Likewise, the option of discontinuing the CPFI which would stop all EU CP related activities was discarded early on in the assessment as it is unacceptable to the MS stakeholders and would go contrary to the Treaty provisions of Articles 196 and 222 TFEU.

171. Considering that a certain baseline level of preparedness policy work will be carried forward in any case, including the development of guidance on CP training and exercises, the options considered for the impact assessment are the following:

- (1) Preparedness Option 1: No new EU legislation related to preparedness will be proposed. The Commission would issue non-binding guidelines on training and exercises, including (1) minimum quality levels of training, (2) mutual recognition of training based on feasible, adequate and recognised standards and principles, (3) cooperation in sharing of good practices and lessons learned through a network structure, and (4) interoperability of equipment and experts. The CPFI budgetary proposals would be at current spending levels.
- (2) Preparedness Option 2: The Mechanism decision would pronounce a general EU preparedness policy framework (objectives, slightly enlarged scope) but contain no binding provisions for PS. Supplementary EU financial assistance would support the establishing of a training network and other actions.

- (3) Preparedness Option 3: In addition to the policy framework and the supplementary funding under Prevention Option 2, EU support for CP training would be made conditional on PS training centres meeting certain minimum requirements, which could be set out in Commission guidelines.¹
172. Stakeholders generally welcomed the proposals for further development of the training and exercises arrangements.² A formal quality label for training centres as envisaged under Preparedness Option 3 received mixed reactions, with some representatives of MS expressing strong scepticism on any mandatory standard. Participants also expressed overall support for the need for training/exercises to be linked to the new developments in response and prevention policy, such as the outputs from risk assessments.
173. There seemed to be general agreement on the need to broaden the scope of the training. There were several requests from MS representatives for the EU to do more to support training for the general population, in particular in tourist areas where European citizens from many different countries may be affected by a disaster, including in third countries.
174. Finally, a number of MS representatives expressed their support for a future training network system for a better exchange of knowledge, and one also stressed the value of informality in such a network.

8.3. Analysis of impacts of preparedness options

175. The effectiveness of the options was assessed according to four criteria:
- (1) To what extent does the option maximise the consistency between national systems within the limits of the mandate of the CP mechanism and with due respect to the principle of subsidiarity?
 - (2) To what extent is the option likely to reinforce and ensure the rapid response to emergencies?
 - (3) To what extent does the option contribute to the integration of further developments in preparedness cooperation?
176. The efficiency of the options was assessed mainly in terms of reaching the specific objectives at minimal costs for the MS authorities and the EU budget. For this purpose an economic assessment of the costs compared to the benefits has been carried out by the external study. For this purpose an analysis of the impacts of the options on the preparedness levels was carried out, as follows.
177. The benefits ideally would be measured at the level of each type of natural and man-made disaster in each MS. Some MS have already more of a habit of international cooperation and may require only little supplementary efforts to bring their preparedness to a higher standard. Moreover, the exposure, vulnerability, and

¹ Budgetary proposal as in Option 2, but PS training centres must meet minimum requirements to be eligible for funding.

² Report from the 1st stakeholder meeting, Annex E.

resilience to different types of mega-disasters requiring international intervention vary between MS. The results of the analysis at the level of each MS may be summarized for the whole of Europe to isolate the estimations of costs and benefits for each of the options. The difficulty in assessing the impacts for the future preparedness policy framework lies in the fact that PS organise their preparedness systems in many different ways; some have a bottom-up approach where local and regional actors (private and public) play the core role. Other PS have a more centralised approach. Furthermore, PS have a different focus – it can be primarily on assets or it can be primarily on using already existing resources (including private companies, NGOs and volunteers). In this situation it is a challenge to decide which gains could be achieved for a number of different countries and different disaster types for the options assessed. The consultants have carried out a number of interviews with key MS and noted broad agreement that there is still room for improvement. From these interviews the study concludes that efficiency gains in the order of 20% could be gained by achieving faster and more targeted assistance inside Europe. On a number of real-life sample cases and using the revealed preferences method, the consultant then illustrates the value added that can be achieved by better preparedness, which can be easily in the area of €100000 for particular cases when using extremely prudent valuation methods. A full account of the methodology and the sample cases are reported in Annex C. An overview of the results of the study is provided in Annex G.

178. The coherence of the options was assessed in terms of the achievement of more consistency between national training systems enabling an improved level of cooperation and the effective sharing of experience.

8.3.1. *Impacts of Preparedness Option 1 (baseline): No legislative change, Commission guidelines*

179. This baseline scenario without legislative change of the Mechanism Decision would require the CP Financial Instrument to recycle the current provisions and budgets into the next programming period. EU guidelines would be non-binding.

180. This option would result in the continuing development of inconsistent national preparedness systems that cannot interface easily in times of emergencies. As the cooperation remains limited, and progress very slow, the option would likely lead to widely varying preparedness levels in the different MS. Therefore, for the Preparedness Option 1 the effectiveness is considered low.

181. Considering that the current budget levels will be spent also in a renewed CPF and contrasting these costs with the limited benefits in terms of effectiveness as outlined above, Preparedness Option 1 is considered inefficient.

182. Preparedness Option 1 will result in little achievements for more consistency between national training systems enabling an improved level of cooperation and the effective sharing of experience. Therefore the coherence of the option is low.

183. Expressed in terms of environmental and social impacts Preparedness Option 1 will lead to overall low levels of preparedness in Europe for people and the environment as compared to the other options. These aspects will be further elaborated in the discussions of the other two options below.

8.3.2. *Impacts of Preparedness Option 2: General EU preparedness policy framework (objectives, scope) plus dedicated funding for the establishing of a training network and other actions*

184. Given that the PS understand, organise and focus differently as regards preparedness, the implementation of guidelines will have different implications depending on the individual PS. The costs involved for each PS will differ accordingly. The funding to be provided would thus enhance the number of PS which would work to meet the standards of the guidelines. For those PS who decide to voluntarily adhere to a common minimum understanding, the preparedness levels will increase (for targeted areas) resulting in enhanced effectiveness and efficiency of preparedness systems. This would include improved host nation support. The overall higher preparedness levels would however be dependent on a sufficiently critical mass of PS to opt for adhering to the guidelines for any considerable impact to be obtained. If neighbouring countries and/or countries with similar risk profiles and ability to assist in relevant disasters do not decide to adhere to guidelines, then the benefit is minimal. This would be the case for economic, environmental and social impacts.
185. Providing funding for PS to adhere to the guidelines would most likely increase the effect of efficiency and effectiveness of preparedness systems. The impact would depend on the target of the funding and the degree of funding. The enhanced readiness for effective response during cross-border events or large events will result in a better protection of EU citizens, environment, infrastructure and buildings, in particular for less affluent societies.
186. Considering all of the above Preparedness Option 2 is rather effective, as it increases the consistency between national systems, improves preparedness cooperation to some degree and is likely to reinforce and ensure the rapid response to emergencies.
187. In some PS, cost of training, exercises etc may increase as the requirements may introduce new contents that were not there before, or that were covered to a significantly lower extent before. It is reasonable to assume, that those PS that would incur most costs by adhering to the guidelines may be less willing than those suffering less costs. For the PS where financing is provided by the EU, the cost will instead be incurred by the EU (to a certain extent depending on the degree of financing foreseen). The consultant notes that increased sharing of best practices and common training activities can also reduce Member States expenses on own training.
188. Due to the lack of data and the inherent uncertainty in the modelling of this policy option, the external study, despite best efforts, was unable to provide quantitative evidence. However, the consultant estimates that the value of the reduced damage is likely to be much higher than the examples provided though this was not quantified. Assuming 10-15 smaller intra EU deployments per year means that the value of improved preparedness could be in excess of €1-3 million per year.
189. Considering that with limited extra budgetary spending in MS and through the increased CPFI finance, a number of clear benefits in terms of effectiveness as outlined above can be achieved, Preparedness Option 2 is considered efficient.

190. The coherence of the option is good because Preparedness Option 1 will result more consistency between national training systems enabling an improved level of cooperation and the effective sharing of experience.
191. The administrative burden is considered low, as there would be no systematic reporting requirement over and above what MS have already agreed in the baseline. Finally, environmental and social impacts of Preparedness Option 2 will lead to overall higher levels of preparedness in Europe for people and the environment as compared to Preparedness Option 1, and are thus positive.
- 8.3.3. *Impacts of Preparedness Option 3: EU support for CP training conditional on PS training centres meeting certain minimum requirements that could be set out in Commission guidelines*
192. The guidelines on preparedness would in this option be compulsory for all PS as would the 'ownership' and responsibility for the network structure. The network structure should have the ability to facilitate exchange of knowledge and methods among PS also with a view to relevant external institutions.
193. The assessment of impacts would suggest significantly enhanced effectiveness and efficiency in response operations where two or more PS are involved, due to adherence to common principles, common knowledge and better interoperability. This includes also the effect through the 'bigger resource pool'. Economies of scale: costs related to developing and updating curricula may be less for each PS and the quality may be improved as the more joint development can ease the bringing on board of 'best practices'.
194. Considering the above, Preparedness Option 3 is very effective in achieving increased levels of consistency between national systems, improved preparedness cooperation, and reinforced rapid response to emergencies.
195. Preparedness Option 3 is also more expensive. Network costs at EU level may include additional costs up front for designing the network and some limited operation costs for ongoing coordination and exchange through the network. Implementation cost in MS/PS will relate to meeting standards for curricula and other minimum requirements. Due to the lack of data and the inherent uncertainty in the modelling of this policy option, the external study was unable to provide quantitative evidence of these benefits and costs. It has estimated benefits and costs of the Preparedness Options as follows:

	Benefits		Costs	
	Effectiveness of response	Efficiency of training etc	Cost to PS	Cost to EU
Preparedness Option 1	+	0/+	0	0
Preparedness Option 2	++	+	-/0	-
Preparedness Option 3	+++	+	-/0	-

196. In any case, increased adherence to common principles, common knowledge and better interoperability will involve substantial expenses in MS which need to be balanced against the additional benefits in terms of effectiveness. The assessment concludes that Preparedness Option 3 would score well in terms of efficiency, but

because of higher costs not necessarily significantly better than Preparedness Option 2.

197. The coherence of the option is very good because it will result more consistency between national training systems enabling an improved level of cooperation and the effective sharing of experience.
198. The administrative burden under this option may be more significant as the adherence to the standards and the fulfilment of the requirements will likely entail considerable extra reporting costs for MS as compared to the baseline. Finally, environmental and social impacts of Preparedness Option 3 will lead to overall much higher levels of preparedness in Europe for people and the environment as compared to Preparedness Option 2, and are thus positive.
199. As mentioned, this option has met reservations from stakeholders and may therefore not find the necessary political backing.

8.4. Comparing preparedness options

200. The following table provides an overview over the estimated benefits of each Preparedness Option:

	Preparedness Option 1	Preparedness Option 2	Preparedness Option 3
Effectiveness	0	+	++
Efficiency	0	+	+
Coherence	0	+	++
Social impacts	0	+	++
Environmental impacts	0	+	++

(++ = high benefits, + = benefits, 0 = no benefits, - = problematic)

201. It must be noted that in the world of CP which relies on the voluntary cooperation of Member States, setting standards that are hard to achieve for some countries could lead to the counter-productive result that it would exclude them from participation in the preparedness cooperation. Standards therefore have to remain achievable for all countries.
202. When comparing the three options, Preparedness Options 2 and 3 provide better results as regards effectiveness, efficiency and coherence, as compared to the baseline scenario (Preparedness Option 1). Preparedness Option 3 would lead to greater effectiveness and coherence in the EU preparedness policy. However, it has met significant reservations from stakeholders and may eventually not find the necessary political backing.

9. PREVENTION

9.1. Specific prevention objectives

203. (1) To address the lack of coherence and coordination between sector-specific policies, it is a specific objective of the legislative review to complement the sector-

specific work by combining them for major disaster risks into national disaster risk management plans allowing for the necessary overview and coordination. Risk management plans are based on risk assessments and guide the decision-making processes on developing, selecting, and implementing measures to reduce and mitigate risks cost-effectively.

204. (2) To address the under-developed organisation of sharing of experience among MS, national disaster risk management plans should be developed according to a minimum common understanding of what are the guiding principles, objectives, methods, and processes to be employed. It is therefore a specific objective of the legislative review to ensure the use of minimum standards and disaster risk management planning in the EU CP legislation and provide sufficient funding via the CPFII allowing for a generally high level of protection in Europe and for certain countries to catch up.
205. (3) To address the insufficient link between prevention and preparedness/response it is a specific objective of the legislative review to integrate disaster prevention policies into the EU CP cooperation.¹
206. (4) To address the limited awareness and vision of the value of prevention and consequential strategic investments, it is a specific objective of the legislative review to strengthen the means in the EU for continuous support to prevention awareness measures.² Wide dissemination and awareness-raising are important steps to further develop and fully integrate a risk management and prevention culture into sector policies, and for creating a strong prevention culture in Europe in view of an overall higher level of protection for EU citizens and elsewhere in the world. This policy aim should be an objective of the EU CP cooperation.

9.2. Prevention policy options

207. The proposed EU-level prevention policy has met great support by all stakeholders along the way and in the recent stakeholder consultations. Indeed, as regards the necessity and the contents of disaster management plans and the general prevention policy agenda, stakeholders have, in reply to several questions to this effect, unambiguously welcomed and endorsed the Commission's considerations. A few MS have merely cautioned that the Commission's guidance would need to find the right level of detail and remain flexible enough to provide added value to all MS.
208. In many sector-specific policy areas it seems generally understood that it is CP policy that can be the platform where the work of different sectors and policies on disaster risk management can be integrated into an overall risk management policy framework.

¹ The link derives from the objectives of Article 196 TFEU, as well as Council Conclusions and Parliament resolutions, which will be a basis for further advances in the operational cooperation in EU CP.

² This should include the development of coherent cross-sector national risk management plans on the basis of sound national risk assessments. Risk management plans necessarily improve the awareness and understanding of decision makers, stakeholders and interested parties of the risks a country faces, and bring them into a better position to determine the best prevention measures. The mere process of developing the plans is beneficial to the awareness and vision of public authorities, businesses, NGOs, and the general public alike.

209. Because of this broad support and agreement on substance, the Commission has focussed its considerations of the possible ways forward in the legislative review on the legal implementation of the prevention policy and the most appropriate level of EU financial support. The range of options that can be analysed is in any case strictly limited by the fact that harmonisation is explicitly ruled out by the provisions of Article 196 TFEU. Therefore, a Directive, for instance, is not possible, and also further details on the contents of the risk management plans cannot form part of the options.
210. The following options thus present the full range of legally possible ways of supporting and complementing PS disaster management actions by a more coherent EU prevention policy framework:
- (1) Prevention Option 1 (baseline): No new EU legislation related to prevention will be proposed. The Commission would issue in 2012 guidelines on minimum national prevention standards which would also address national disaster risk management plans. The CPFI budgetary proposals would be in line with current spending levels.
 - (2) In Prevention Option 2, the revised Mechanism decision will pronounce a general EU prevention policy framework stating the objectives of EU prevention policy in the context of the Mechanism and the actions to be pursued by the Commission and the MS. These would include Commission actions on the knowledge base, on national risk assessments, on an overview of EU risks, awareness-raising measures, and other actions. Member States actions would include the adoption and regular update of national risk management plans and other appropriate actions. None of these actions would be binding on the Member States. However, limited additional supplementary EU financial assistance via the CPFI would support the development and implementation of national risk management plans and the meeting of minimum standards.
 - (3) Under Prevention Option 3, the revised Mechanism Decision would pronounce a general EU prevention policy framework and increase funding as laid out in Prevention Option 2 above, and Member States would be required to draw up their national disaster risk management plans by a certain date, e.g. 2016, i.e. as early as possible after the entry into force of the revised Mechanism Decision. As in Prevention Option 2, the Commission would issue guidelines on certain characteristics of the plans.
211. Stakeholders have commented in very positive ways on these options which were first presented already in this form in April 2011. Many stakeholders spoke in favour of Prevention Options 1 and 2.¹ A few PS advocated mandatory risk management planning at national level (Prevention Option 3). Eight PS expressed reservations in respect of legal obligations, highlighting inter alia difficulties where the planning competence resides at sub-national level.

¹ Report from the 1st and 2nd stakeholder meetings (see Annex E).

212. There was full agreement among stakeholders that sharing experiences and good practices is an essential component of prevention policy, as well as developing a prevention culture that is shared by all actors. Finally, many stakeholders expressed support for the necessity to create more balance in the EU CP co-operation between prevention, preparedness and response actions. The Commission concluded that there was strong support for the risk management planning agenda, including guidance from the Commission; as well as for integrating prevention considerations into the Mechanism decision, making it an objective of EU CP policy.

9.3. Analysis of impacts of options for an EU prevention policy framework

213. The effectiveness of the options was assessed according to four criteria:

- (1) To what extent does the option reinforce the coordination between sector-specific policies within the limits of the mandate of the Mechanism and the existing legislation?
- (2) To what extent does the option contribute to the development of cooperation and sharing of experience between PS?
- (3) In how far does the option maximise the common understanding of good practices and challenges and thus generally raise the level of prevention across Europe?
- (4) To what extent is the option likely to contribute to raise the political will and vision for more investments and cooperation in the area of prevention?

214. The efficiency of the options was assessed mainly in terms of reaching the specific objectives at minimal costs for the MS authorities and the EU budget. For this purpose an economic assessment of the costs compared to the benefits has been carried out by the external consultant.

215. The external study focussed its economic analysis on the impacts of the additional funding under Prevention Option 2 or the binding nature under Prevention Option 3 on the benefits of higher prevention levels, as compared to the costs of achieving them. Benefits would result from: (1) better decision-making on the most cost-effective preventive measures, (2) saving costs of preparedness, response and recovery actions, and (3) saved lives, economic and social costs and avoided environmental damage. The benefits ideally would be measured at the level of each type of natural and man-made disaster¹ in each PS. Concretely, for each hazard the existing and likely future disaster management planning in each PS is considered in response to the supporting regulatory framework at EU level. The assessment of achievable protection levels in PS needs to consider also the size and the internal organisation of the country, its exposure, vulnerability, and resilience to different types of disasters. In addition to the analysis at PS level, costs and benefits should be also estimated at EU level and overall costs and benefits determined in the end. To simplify the analysis, the external study has clustered PS into three groups with respect to their current level of advancement in horizontal risk assessment and

¹ Storms, extreme temperatures, forest fires, water scarcity/droughts, floods, landslides, earthquakes, volcanic eruptions, oil spills, industrial accidents, toxic spills, and others.

prevention planning. Accordingly, 8 MS may be considered advanced, 13 medium advanced, and 6 less advanced. The detailed results of the consultant's analysis are available in Annex C. An overview of study results is presented in Annex G.

The cost-benefit calculations of the external study are based on a number of interviews with representatives from different Member States institutions in a selected number of national administrations in order to learn about their challenges, views, experience, costs and potential benefits. The interviews focused on those Member States which already have produced or carried out considerable risk assessment and mapping in this areas, such as UK, NL, DE, and SE.

Based upon this insight, the study has:

(1) Grouped Member States according to the current level of progress with regard to prevention into three groups: Very advanced, Medium advanced, and Less advanced.

(2) Assumptions: the advanced countries would achieve a 100% implementation in all three Prevention Options; moving from Prevention Option 1 to Option 2 (i.e. providing co-financing in support of the efforts) would provide an additional 20 percentage point increase in implementation for both the medium advanced and the less advanced Member States. The specific effect of Option 2 in terms of more prevention will depend on political decisions and priorities within each Member State. This is difficult to predict and hence, the 20% effect is an assumption to illustrate a likely order of magnitude. Option 3 would provide for 100% implementation for all Member States as it is mandatory.

(3) The study was able to obtain an estimate of the costs from two of the highly advanced Member States. Assuming a linear relation between implementation level and the cost level, cost estimates were developed for Prevention Option 1, 2 and 3.

The study then applied a break even assessment. For the effort to be worth the costs, the benefits should at least correspond to the costs. A recent European Environmental Agency study provides a minimum estimate of the costs of natural hazards in Europe over a decade. Comparing the cost calculations to these estimates indicated that if the better prevention resulting from the initiatives under consideration can reduce these costs by less than 1%, the initiative can be justified from cost-benefit arguments.

The study has supplemented the above generic calculations with specific examples to illustrate the benefits from prevention.

Uncertainties: Given the difficulties in obtaining cost data, the study opted for a methodology that was simple and transparent. Further refinements and work on the method would have added only little to the analytical results and would not have made the analysis more robust.

The key message that the analysis brings is that it would only demand a slight reduction in damage costs to justify the initiative.

216. The coherence of the options was assessed in terms of the achievement of a minimum common understanding which would be required for an improved level of cooperation and the effective sharing of experience.

9.3.1. *Impacts of Prevention Option 1 (baseline): No legislative change but Commission guidelines*

217. This baseline scenario would not require any legislative change in the Mechanism Decision but would presume the renewal of the CP Financial Instrument at current funding levels. EU guidelines would be non-binding. This option may lead to varying planning intensities in the different MS, some of which may opt not to have a disaster risk management plan or minimum prevention standards at all. To the extent that the Commission guidelines are likely not widely applied and there will be very different standards pertaining in MS, this option would contribute only little to coordination between sector-specific policies, cooperation between MS and a common understanding of good practices. It will not help to raise the political will and vision for longer-term investments in sensible prevention policies. Prevention Option 1 would therefore score low in terms of effectiveness. Because the comparability will be low, the sharing of knowledge will stay limited. This option therefore scores also low in terms of coherence.

218. As there would be no closer link between prevention with preparedness and response, this option would also slow down progress in these other fields of EU CP cooperation. Less progress in all of these areas will lead to more costly policies in most countries and Europeans will be less well protected. This option is therefore also inefficient, as MS will still incur disaster costs without the adequate benefits of cooperation. Expressed in terms of environmental and social impacts this option will lead to low levels of protection in Europe for people and the environment as compared to the other options. These aspects will be further elaborated in the discussions of the other two options below.

9.3.2. *Impacts of Prevention Option 2: General EU prevention policy framework, plus dedicated funding for the development and implementation of national disaster risk management plans*

219. The main result from Prevention Option 2 will be a faster implementation of the disaster risk management planning guidelines based on the assumption that PS will apply for EU funding where possible and/or that the financial assistance will be made available for those countries facing the biggest challenges on implementation of the guidelines. In addition, the better link with the Mechanism will ensure that prevention considerations can become an integral part of the EU CP cooperation and further develop in the future.

220. To the extent that the Commission guidelines would be applied sooner and more consistently due to the additional funding available that can help some MS to catch up on their prevention agenda, this option would significantly contribute to coordination between sector-specific policies, cooperation between MS and a common understanding of good practices. It will also help to raise the political will and vision for longer-term investments in sensible prevention policies. Prevention Option 2 would therefore score well in terms of effectiveness.

221. Prevention Option 2 could be very effective also in the sense that guidelines and national risk management plans could be developed from early on, rather than be linked to a deadline set out in legislation (Prevention Option 3), which after negotiations between the EU institutions may be quite far in the future or not

accepted at all.¹ Earlier preparation of risk management plans would provide opportunities for some implementing measures to be supported by the next generation of EU Structural Funds and could lead to a more rapid development of a risk management culture.

222. The stakeholder consultation shows overwhelming support from the PS and other stakeholders for the development of national risk management plans accompanied by guidelines from the Commission. Preparatory work could start before adoption of the revised legislation and Participating States could voluntarily commit to develop such plans over the next three to four years. The experience of the voluntary approach on risk assessments should be taken into account. Guidelines² have been prepared and all PS are committed (voluntarily) to prepare their national risk assessments within relatively short deadlines.
223. Because the comparability of MS's prevention approaches will increase, the sharing of knowledge will be much improved. This option therefore scores well also in terms of coherence.
224. The general EU prevention policy framework would create a closer link between prevention with preparedness and response. Prevention Option 2 would thus enable progress also in these other fields of EU CP cooperation.
225. In terms of costs of implementation by MS and the EU budget, and thus the measure of efficiency, the external economic study has carried out an estimate with available data. According to the external study, few examples exist today where cost-benefit analyses of preventive efforts have been carried out at PS or EU-level. The analysis therefore provided a number of illustrative examples, which make a compelling case for the immediate benefits of preventive measures based on integrated approaches.³ Good examples of such benefits and cost savings can be seen in the areas of flood risk management, early warning systems, flu pandemic prevention and climate change adaptation, discussed in more detail in Annex C. Using a rough estimation of reduction of total losses that is gained by implementing the option, the study has arrived at simulated benefits between €16 million and €157 million for Prevention Option 2 as compared to Prevention Option 1 and between €35 million and €350 million for Prevention Option 3 compared to Prevention Option 1.
226. The costs of Prevention Option 2 will depend on the level of EU co-funding available. Whereas this option may imply no extra costs or very little for advanced PS who already have a comprehensive disaster risk management system in place, other PS starting from a low level of prevention will have to invest substantial administrative resources to introduce horizontal risk assessment systems. Based on available information on the state of play and starting point in different PS, the

¹ Note e.g. long implementation periods agreed in the Directive on Flood Risk Management (6-8 years).

² Commission Staff Working Paper: Risk Assessment and Mapping Guidelines for Disaster Management SEC(2010) 1626 final.

³ From a more global perspective, the World Bank's recent report concludes: "Prevention is often possible and cost-effective. [It] pays, but you do not always have to pay more for prevention. A relatively easy and effective measure is for governments to make information about hazards and risks easily accessible (such as maps of flood plains...)." Natural Hazards, UnNatural disasters... quoted above.

external study has estimated average costs per one million inhabitants and additional implementation costs depending on the level of advancement of the national horizontal risk assessment. This option would entail 13% higher costs than Prevention Option 1, but as pointed out in the study the increase affects in most cases PS where public budgets are already constrained. Considering average implementation costs of €50,000 per person-year (staff costs), this option may be up to €13 million more expensive than Prevention Option 1. If EU co-financing would be provided up to 50%, the additional budgetary requirements would amount to a maximum of €6.5 million, which could be spread over several years.¹ These economic estimates can merely provide an order of magnitude, as they are based on strong assumptions.

227. Considering the costs of the option (€13 million) in relation to its possible benefits (between €16 million and €157 million), the efficiency of the option is good.

228. The administrative costs of additional reporting for public and private operators under this option are considered low, as there would be no systematic reporting requirement over and above what PS have already agreed in the baseline.

229. The social and environmental costs and benefits must be considered overall positive for Prevention Option 2 as it will lead to a higher state of prevention, preparedness, and ultimately also better response in Europe and elsewhere in the world. Indeed, more effective and integrated EU support for disaster management including risk management planning will have a positive impact on society and provide positive environmental impacts including contributing to adaptation to climate change.

9.3.3. *Impacts of Prevention Option 3: Legal requirement to establish a national disaster risk management plan by the end of 2015, plus the Commission's guidelines*

230. Prevention Option 3 would, in addition to the policy framework and the funding of Prevention Option 2, oblige PS to elaborate disaster risk management plans based on an all hazard approach by a certain date.² The Commission would issue guidelines on the content of risk management plans and minimum prevention standards.

231. As disaster risk management will in this option no longer be optional, Prevention Option 3 would likely provide for a more comparable, consistent and equal approach throughout the EU, in the medium-term probably above the level that can be achieved by Prevention Option 2. This option may lead to a higher degree of ambition and higher protection levels than the previous options, and a better understanding between PS of the common challenges and priorities.

232. However, the implementation may be delayed due to the length of the legislative processes and the difficulty to agree on a common target date. This may also make it more difficult to reap the benefits of early implementation and damage some good will of PS. A risk may also be that those PS that have already advanced and well-functioning horizontal risk management systems will have to align with a proposed

¹ It should be noted that the costs are mainly due to the faster implementation of comprehensive disaster prevention policies and would level off over the years.

² This option may be considered more in line with Article 222(4) TFEU, as well as the Internal Security Strategy.

new system, which should therefore provide sufficient flexibility accommodate current well-functioning risk management systems.

233. Overall Prevention Option 3 is considered to lead to a very high level of effectiveness and coherence in terms of achieving the specific objectives.
234. The assessment of costs and benefits by the external study has arrived at simulated benefits between €35 and €350 million for Prevention Option 3 compared to Prevention Option 1 (baseline). As for Prevention Option 2, this option may imply little additional costs for advanced PS which already have comprehensive risk assessment systems in place. However, other MS starting from a low level of prevention planning would have to invest substantial administrative resources. This may in particular affect MS where public budgets are constrained. With the assumptions mentioned above, the study estimate the additional costs of implementing this option would be in the order of 33% higher than Prev. Option 1, equal to some €29 million. A 50% maximum EU co-financing rate would thus lead to total EU budget expenditure of €14.5 million.
235. Considering the costs of the option (€29 million) in relation to its possible benefits (€35 and €350 million), the efficiency of the option is good.
236. The social and environmental costs and benefits of the option is directly linked to achieving the objectives of better disaster prevention, and thus to the effectiveness criteria discussed above.
237. The administrative burden of additional reporting for public and private operators under this option are still considered relatively low, as the requirement for setting up a planning programme will entail little extra reporting costs to MS over and above what is already agreed in the baseline.¹

9.4. Comparing the prevention options

238. The following table summarises the estimated impacts of the different options, as discussed above:

	Prevention Option 1	Prevention Option 2	Prevention Option 3
Effectiveness	0	++	++
Efficiency	0	+	+
Coherence	0	+	++
Social benefits	0	+	+
Environmental benefits	0	+	+

(++ = high benefits, + = benefits, 0 = no benefits, - = problematic)

239. While Prevention Option 1 is problematic as concerns effectiveness and coherence of European prevention policy, Prevention Options 2 and 3 would provide better

¹ Administrative burden has been estimated with the Commission Calculator of Administrative Costs (AC) & Administrative Burdens (AB) on Public authorities. Amount for the 27 MS are about €500 per state, i.e. a total of €13500 per year, and another €2000 per year for the other 4 Participating States: See full calculation at: http://adminburden.sg.cec.eu.int/Public_administrations/ECHO/

benefits in terms of effectiveness, efficiency and coherence. However, Prevention Option 3 was rejected by eight key PS at the stakeholder meetings.

240. In terms of social and environmental costs and benefits Prevention Option 3 may reach a slightly better score in the medium-term as compared to Prevention Option 2, but the results are too uncertain to sufficiently distinguish it.

10. SUMMARY OF OPTIONS AND KEY CONSIDERATIONS FOR THE PREFERRED OPTIONS

241. The following table summarizes the Options and key considerations leading to the preferred option

	Options	Key considerations / comparison of options
Response-Voluntary Pool	<p><u>VP-Option 1</u>: Voluntary pool without EU co-financing.</p> <p><u>VP-Option 2</u>: Voluntary pool with limited EU co-financing (covering only deployment costs).</p> <p><u>VP-Option 3</u>: Voluntary pool with higher EU co-financing (deployment, as well as (some) development and stand-by costs).</p>	Certain options (discontinuation, no-action, pool of EU-level assets and fully-fledged EU CP Force) discarded earlier in the impact assessment for 2010 Disaster Response Communication. Among the remaining 3 realistic options considered here, VP-Options 2 and 3 are superior in terms of effectiveness and efficiency, with benefits under VP-Option 3 more pronounced.
Response-EU-funded assets	<p><u>CG-Option 1</u>: Filling gaps by Participating States (without EU co-financing).</p> <p><u>CG-Option 2</u>: Filling gaps with (some) EU co-financing.</p> <p><u>CG-Option 3</u>: Filling gaps with EU-level assets.</p>	CG-Option 2 merits attention, notably with regard to assets for low probability/high impact risks, as well as those performing horizontal tasks (such as TAST), while CG-Option 1 can be implemented without legislative changes and is the least costly for EU budget, but is weak in terms of effectiveness; CG-Option 3 did not receive sizeable support of key stakeholders.
Transport Co-financing	<p><u>Transport-Option A1</u>: Discontinuation of the scheme.</p> <p><u>Transport-Option A2</u>: No policy change.</p> <p><u>Transport-Option A3</u>: Increase EU transport max co-financing for the most urgent priority needs</p> <p><u>Transport-Option A4</u>: Increase EU transport max co-financing across the board</p>	Transport-Options A3 and A4 both score relatively high on effectiveness, efficiency and coherence. Taking into account the high risk associated with Transport-Option A4 (overly cheap transport might lead to non-essential goods to be deployed), Transport-Option A3 is preferred.
Transport-Administration	<p><u>Transport-Option B1</u>: No policy change (some improvements in the limits of the current provisions).</p> <p><u>Transport-Option B2</u>: Simplification (incl. "coordinating country concept", 100% financing for local transport and other logistical operations, further simplification for low value grants, paying the entire EU co-financing at the end of operations, EU affected state becoming eligible)</p>	Transport-Option B1 is not considered sufficient to yield significant improvements of the system. The elements proposed under the simplification option (Transport-Option B2) are all expected to contribute to reducing the administrative costs for the Commission and the PS. They are coherent with the Commission's better regulation objective. Therefore, Transport-Option B2 is the preferred one.
Preparedness	<u>Preparedness Option1</u> : No legislative change, Commission guidelines.	Preparedness Options 2 and 3 provide better benefits in terms of efficiency and EU added-value. Preparedness Option 3 is

	<p><u>Preparedness Option 2</u>: General EU preparedness policy framework + dedicated funding.</p> <p><u>Preparedness Option 3</u>: EU support for CP training conditional on MS training centres meeting certain minimum requirements (to be set out in Commission guidelines).</p>	likely to be superior in terms of effectiveness and coherence, but it has met reservations from stakeholders.
Prevention	<p><u>Prevention Option 1</u>: No new legislation but Commission guidelines.</p> <p><u>Prevention Option 2</u>: General EU prevention policy framework + dedicated funding for the development and implementation of national disaster risk management plans (CPFI).</p> <p><u>Prevention Option 3</u>: Legal requirement to establish a national disaster risk management plan by the end 2015, + Commission guidelines & dedicated funding.</p>	Prevention Options 2 and 3 provide better benefits in terms of effectiveness, efficiency and coherence. They present different advantages. Prevention Option 2 can be implemented more speedily, while Prevention Option 3 may lead in the medium-term to more coherent implementation of disaster risk management plans in the longer term.

11. MONITORING AND EVALUATION

242. In order to improve the implementation and facilitate the evaluation of the CP system, the Commission will collect a limited, continuous series of monitoring and result indicators, as well as a number of baselines in terms of coordination mechanisms, time of response, coverage of preparedness and prevention measures, etc. (see Annex K for details).
243. On the basis of the monitoring information, as well as any other additional evaluation work, the Commission will evaluate the implementation of the legislation not earlier than three years after the coming into force of the new EU legislation, in order to allow for enough time for the results of the implementation to become measurable. On the basis of the baselines established the appraisal will identify implementation results that are an effect of the new EU regulatory framework, from other effects that would have come about in any case (baseline scenario), and will compare it with established benchmark levels and criteria (see below).
244. Moreover, on the basis of the monitoring indicators collected, the Commission will assess the evolution in the implementation of individual operations in the field of prevention, preparedness and, notably, response, by comparing them with the baselines identified at the beginning of the implementation of the measures.

12. LEGISLATIVE PROPOSAL AND FURTHER ELEMENTS OF CPFI EX-ANTE EVALUATION

245. On disaster response, it is proposed to include the essential elements and principles on the voluntary pool of assets, as well as those on the EU-funded assets, with a reference to the implementation rules. Furthermore, it would include some additional

elements without sizeable economic, social and environmental impacts and thus not covered in this report. To enable financing or related activities, this would require adapting the CPFI accordingly.

246. On transport support at EU level, it is proposed to revise some of the current legal provisions, to increase the maximum EU financing rate for transport operations (under specific conditions), and to simplify the applicable administrative procedures.
247. On disaster prevention and preparedness, it is proposed to integrate into the revised Mechanism Decision a general EU prevention and preparedness policy framework (definition of objectives and scope) and announce Commission guidelines. The latter could also be contained in a future Commission Recommendation. Furthermore, a legal requirement to develop national disaster risk management plans should be considered. Supplementary EU financial assistance would support the development and implementation of national risk management plans and minimum standards, as well as a training network and other actions. The funding would require changes to the CPFI, which should also continue all actions currently stipulated under Article 4 CPFI, although with shifted priorities.
248. Elements of the ex-ante evaluation¹ for the CPFI, which are not yet addressed in the earlier parts of the impact assessment, concern in particular the most appropriate method of implementation for the preferred options, the internal coherence of the proposed programme or activity and its relations with other relevant instruments, and an indication of the volume of appropriations.
249. Given that no substantial modification in the implementation of the CPFI would be introduced, the management method would continue to be the existing one, i.e., direct centralised management in the sense of art. 53a of the Financial Regulation. The annual work programme would be implemented through calls for proposals, direct grants, procurement and reimbursement of expenses.
250. There are close links and coordination between the internal CPFI and the following instruments: the Solidarity Fund supports recovery investments in the EU following a disaster; the Structural Funds support risk prevention and preparedness investments in MS, including infrastructure measures to prevent disasters; EU RTD framework programmes provide significant support to help develop tools and methods for improved disaster management; under the new GMES regulation support will be provided for mapping and early warning services for disaster response; other funding instruments with which CPFI is coordinated include the environment instrument LIFE+, and the Specific Programme Prevention, Preparedness and Consequence Management of Terrorism and other security related risks.
251. The proposed breakdown of CP budgets is in line with the financial envelope foreseen for the next MFF 2014-2020 (Communication 2011/500 of 29/06/2011). The following comparison table shows the additional funding needed for Options 2 and 3 as compared to the current situation (baseline).

¹ Commission Regulation 2342/2002 EC, Euratom, laying down detailed rules for the implementation of Council Regulation 1605/2002 on the Financial Regulation applicable to the general budget.

[€million]	Now	Additional funding for Option 2	Additional funding for Option 3
Response	4.0		
Voluntary Pool		+ 2	+ 5
Capacity Gaps		+ 5	+10
Preparedness	10.5	+ 2	+ 2
Prevention	2.5	+ 1	+ 2
Administrative	0.5	+ 0	+ 0
Other	1.0	+ 1	+ 1
Total inside EU	18.5	+11 Total Option 2 +29.5	+20 Total Option 3 +38.5
Response outside EU	19.0 ¹	+ 4 (Vol. Pool)	+ 4 (Vol. Pool)
Transport new		+ 1.6	+ 1.9
Total outside EU	19.0	+ 5.6 Total Option 2 + 24.6	+ 5.9 Total Option 3 + 24.9

252. Total funding for proposed options (grey in table above): €58.4 million = €33.5 million inside EU + €24.9 million outside EU.

¹ The estimate of €19.0 million for EU co-financing of transport operations is based on the budget figures for the year 2011 (status: October 2011).

13. LIST OF ACRONYMS

CBRN	Chemical Biological Radiological and Nuclear
CECIS	Common Emergency Communication and Information System
CP	Civil Protection
CPFI	Civil Protection Financial Instrument
DG ECHO	Commission Directorate-General responsible for Humanitarian Aid and Civil Protection
DG RTD	Directorate-General for Research and Innovation
EEA	European Economic Area
EMSA	European Maritime Safety Agency
ERC	European Emergency Response Centre
ERC	European Emergency Response Centre
EU	European Union
GBP	British Pound
GMES	Global Monitoring for Environment and Security
H1N1	Hemagglutinin type 1 Neuraminidase type1
HNS	Host Nation Support
IAB	Impact Assessment Board
MFF	Multiannual Financial framework
MIC	Monitoring and Information Centre
MS	Member States
NHWP	National Heat Wave Plan
PS	Participating States
SAR team	Search and Rescue team
SILO	Separate Planning and Isolated Actions
TAST	Technical Assistance and Support Teams
TFEU	Treaty on the Functioning of the Union
TPG	Training policy Group
UNISDR	United Nations International Strategy for Disaster Reduction
UNOCHA	United Nations Office for the Coordination of Humanitarian Affairs

14. LIST OF ANNEXES

Annex A: Impact Assessment summary list of steps and timeline

Annex B: Meeting minutes from the three Impact Assessment Steering Group meetings

Annex C: Impact Assessment external study final report by COWI

Annex D: Stakeholder meetings consultation papers

Annex E: Stakeholder meetings reports

Annex F: Consultation of CP Directors-General, consultation papers and meeting report

Annex G: Summary of results of the external study by COWI

Annex H: Evaluation of EU CP external study final report (plus web link)

Annex I: Examples of policies featuring risk management plans

Annex J: Main components of disaster risk management plans

Annex K: Criteria for monitoring and evaluation of implementation

Annex L: Current legislative and policy framework