Concept Paper

for Mainstreaming Water and Sanitation in Emergencies, Protracted Crises, LRRD and Disaster Preparedness Operations

EUROPEAN COMMISSION

Humanitarian Aid

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DIRECTORATE-GENERAL
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Humanitarian Aid

A Review of Water and Sanitation issues relating to the funding of Humanitarian Operations under the EC Humanitarian Regulation

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Abbreviations

ACF	Action Contre La Faim
DP	Disaster Preparedness
DANIDA	Royal Danish Ministry of Foreign Affairs
DIPECHO	Disaster Preparedness programme of ECHO
DFID	Department for International Development (UK government)
EC	European Commission
ECHO	European Commission Directorate-General for Humanitarian Aid
EHP	Environmental Health Project
ICRC	International Committee of the Red Cross
IDP	Internally displaced people
IFRC	International Federation of the Red Cross and Red Crescent
IRC	International Rescue Committee, USA
IRC(2)	International Water and Sanitation Centre, The Netherlands
HIV/AIDS	Human Immunodeficiency Virus / Acquired Immune Deficiency Syndrome
LSHTM	London School of Hygiene and Tropical Medicine
LRRD	Linking Relief, Rehabilitation and Development
MDG	Millennium Development Goals
MSF	Médecins Sans Frontières
NGO	Non-Governmental Organisation
O&M	operation and maintenance
PHAST	Participatory Hygiene and Sanitation Transformation
PRA	Participatory Rural Appraisal
PAHO	Pan American Health Organisation
REDR	Registered Engineers for Disaster Relief
SMART	Specific, Measurable, Agreed, Realistic and Timed
UN	United Nations
UNICEF	United Nations Children's Fund
UNHCR	United Nations High Commission for Refugees
USAID	United States Agency for International Development
VOICE	Voluntary Organisations in Cooperation in Emergencies
Watsan	Water, sanitation and hygiene promotion (in the broadest sense of its meaning, including institutional capacity at the community level)
WEDC	Water Engineering and Development Centre, UK
WHO	World Health Organisation

1 Introduction

1. The purpose of this Concept Paper is to strengthen the coherence, consistency and quality of ECHO funded operations in the water and sanitation sector[1]. The positions put forward in the Concept Paper are firmly set within the context of ECHO's legal mandate for the provision of humanitarian aid and support the underlying needs-based approach of the organisation. The conceptual overview, analysis and recommendations in the document provide the necessary direction and clarity to ECHO staff and implementing partners to improve the suitability and effectiveness of interventions in the water and sanitation sector.

2. Although this paper maintains a sectoral focus, it does address a number of broader issues that apply to all other sectors funded by ECHO. These have been included only where they are deemed to have a significant impact on operations in the water and sanitation sector. The detailed aspects of technical interventions for emergency water and sanitation are presented in the accompanying *ECHO Model Guidelines for Mainstreaming Water and Sanitation in Emergencies, Protracted Crises, LRRD and Disaster Preparedness Operations* (referred to as the "**Model Guidelines**").

3. This Concept Paper is divided into eight main sections. The first section introduces ECHO's mandate and a number of important contextual issues regarding water, sanitation and hygiene. The second section looks in more detail at key external factors and trends which impact on the sector and humanitarian aid in general. The third part of the Concept Paper presents important ECHO policies and strategies that have a bearing on the funding of sector interventions. The fourth section addresses financing issues. The fifth section considers the design and selection of projects and examines the case for sustainable interventions. The sixth section provides an introduction to the categorisation of interventions, linking this to the *Model Guidelines* document. The final two parts of the paper present the main conclusions and recommendations regarding ECHO funding of water and sanitation interventions in emergencies.

4. The Concept Paper and Model Guidelines were researched and developed by a team of independent consultants working for the UK-based consulting company, AGUACONSULT Ltd. The primary author of the Concept Paper was Peter Sinclair. Considerable input was provided by Harold Lockwood, Director of AGUACONSULT, as well as Tom de Veer and Trea Christoffers, the principal authors of the Model Guidelines. Sean Lowrie was the author of Annex 1.

5. The review drew on material from ECHO and broader EC documentation, sector publications and existing evaluation reports. The team carried out extensive interviews with key personnel from operational, donor, UN and research agencies,

[1] The definition of 'water and sanitation' (or 'watsan' for short) used in this paper encompasses a wide range of activities covering domestic water supply, environmental sanitation (including excreta disposal, solid waste management and vector control) and hygiene promotion.

1 Introduction

1.1 ECHO's Mandate

both in headquarters and at operational level. Field missions were made to the Palestinian Territories, Kenya, Burundi, Bangladesh and Indonesia. A number of agencies also provided feedback and comments on the initial drafts. The authors would like to acknowledge the valuable contribution of these organisations as well as support provided by the Evaluation Sector and DG ECHO's Aquarius Group throughout the review process.

6. Comment or feedback on this Concept Paper or the *Model Guidelines* can be made by contacting the DG ECHO Evaluation Section directly at: **ECHO-EVAL@cec.eu.int**.

1.1 ECHO's Mandate

7. The Council Regulation (EC) 1257/96 of 20 June 1996 concerning humanitarian aid outlines ECHO's overall mandate as the following:
   ▲ *to save and preserve life during emergencies and their immediate aftermath;*
   ▲ *to provide the necessary assistance and relief to people affected by long-lasting crisis;*
   ▲ *to carry out short-term rehabilitation and reconstruction work;*
   ▲ *to cope with the consequences of population movements; and*
   ▲ *to ensure preparedness for risks of natural disasters or comparable emergencies.*

8. The scope of this mandate offers a wide spectrum of possible scenarios under which ECHO can legitimately respond. This extends well beyond the "saving and preserving life" phase of an emergency, traditionally seen as the core of ECHO's work[1]. The breadth of the mandate is central to ECHO's role in the water and sanitation sector, particularly as it also expressly includes interventions which take "longer-term-development objectives into account where possible"[2].

9. ECHO's mandate is founded on the international humanitarian principles of humanity, impartiality, neutrality and independence; it is firmly rooted in the needs-based approach to humanitarian assistance. ECHO also subscribes to the principles of Good Humanitarian Donorship which represent a long-term commitment to accountability, the promotion of humanitarian principles and to strengthening the effectiveness, efficiency and timeliness of humanitarian interventions[3].

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[1] Although there is lively debate among ECHO staff and partners about whether ECHO should concentrate more exclusively on its "primary mission" (i.e. acute emergencies), this is a fundamental issue which exceeds the sectoral focus of this paper. The Concept Paper and Model Guidelines have been developed to suit the composition of ECHO's current portfolio of activities while at the same time analysing and incorporating changes and trends which might affect this in the future.

[2] Council Regulation (EC) No 1257/96, Article 2(d). June 1996.

[3] Continued Commitment to Good Humanitarian Donorship and a Roadmap for the Way Forward; Chair's Overview. 2nd International Meeting on Good Humanitarian Donorship, Ottawa, Canada, October 2004.

1 Introduction

1.2 Why Water is so Important in Humanitarian Crises

1.2 Why Water is so Important in Humanitarian Crises

10. There is no other resource like water and its importance in humanitarian aid is highlighted by its multifaceted, even paradoxical, nature. Water is the cause of many natural disasters, but it is also critical to any humanitarian response. Unclean water can be the cause of serious, often fatal, disease, while at the same time washing with water can be one of the most effective ways to prevent disease. Water can be a source of conflict and a target of war, but it can also be the source around which peaceful dialogue can occur. Water is both an economic and social good, it holds value and therefore can be strongly contested. Water falls freely from the sky, but incurs significant costs when there is a need to clean, store and distribute it. Without water people die, but if it is clean and available in sufficient quantities, water can lead to healthier, more productive individuals and communities.

> **Box 1 – Water Related Diseases**
>
> **Waterborne diseases:** caused by the ingestion of water contaminated by human or animal faeces or urine containing pathogenic bacteria or viruses; includes cholera, typhoid, dysentery and other diarrhoeal diseases.
>
> **Water-washed diseases:** caused by poor personal hygiene and skin or eye contact with contaminated water; includes scabies, trachoma, and flea, lice or tick borne diseases.
>
> **Water-based diseases:** caused by parasites found in intermediate organisms living in contaminated water; include dracunculiasis, schistosomiasis and other helminths.
>
> **Water-related diseases:** caused by insect vectors, especially mosquitoes, that breed in water; include dengue, filariasis, malaria, onchocerciasis, trypanosomiasis, and yellow fever.
>
> **Source: Dirty Water: Estimated Deaths from Water-related Diseases 2000-2020. Peter Gleick, 2002.**

11. The provision of water is a critical element in efforts to preserve life in an emergency situation and has therefore been recognised as an intervention of paramount concern to ECHO[1]. Deaths from water-related diseases have been estimated at anywhere from 2 to 12 million people per year, with diarrhoea, malaria and cholera being the main killers[2] (see Box 1).

12. During or following a long-lasting crisis situation, an improved water supply can be the catalyst which enables those recovering to return to minimum levels of self-sufficiency. Water is a major contributing factor to many other essential services – health, education, livelihoods, shelter – all of which are critical to people recovering from the effects of a disaster or conflict. Clean water is a multiplier of humanitarian aid.

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[1] **ECHO Aid Strategy 2005.**
[2] **Peter Gleick, Dirty Water: Estimated Deaths from Water-related Diseases 2000-2020., 2002.**

1 Introduction

1.3 Why Hygiene and Sanitation is so Important in Humanitarian Crises

1.3 Why Hygiene and Sanitation is so Important in Humanitarian Crises

13. Intuitively, it is a safe supply of water which is the priority for survival. But in most cases, a clean water supply alone is insufficient to bring about the desired impact on the health of a population affected by disaster or conflict. The promotion of good hygiene and sanitation practices is often a very cost-effective approach to reducing morbidity and mortality, especially among populations living in crowded conditions often associated with emergencies.

> **Box 2 – Importance of hygiene and sanitation interventions in reducing disease transmission**
>
> ▲ Pit latrines, when used by adults themselves and for the disposal of infant's stools, can reduce: diarrhoea by 36% (cholera by 66%) or more and worm infestations by 12-86%;
>
> ▲ Hand-washing with soap (or substitute) and water after contact with stools can reduce diarrhoeal disease by 35% - 48% or more. Eye and skin infections can also be reduced with more frequent face and body washing;
>
> ▲ Improved water supply can generally be associated with a reduction in diarrhoea by 20%.
>
> **Source: Esrey et al (1991), The effects of water supply and sanitation (Bull. WHO).**

14. There is now a growing acceptance of the importance of hygiene and sanitation activities in reducing disease transmission, particularly diarrhoea, cholera and typhoid. This trend is based primarily on the groundbreaking epidemiological research by Esrey in the 1980s and 90s (see Box 2) and supported further by a number of more recent studies[1].

15. Hygiene and sanitation interventions first and foremost should be designed on the basis of field-level assessments of the highest risk factors. In most circumstances *safe handling and storage of water, handwashing* and the *safe disposal of human excreta* (including that of children and infants) are the three hygiene and sanitation practices, which if adopted, have the greatest potential to reduce the transmission of water related diseases[2]. Furthermore, improved sanitation can also bring other non-health benefits to affected populations. The privacy, safety and dignity associated with improved sanitation facilities, for example, are often aspects most valued by the victims of an emergency, particularly by women and girls.

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[1] See for example: i) Fewtrell, L. and Colford, J.M. (2004). Water, sanitation and hygiene: Interventions and diarrhoea, a systematic review and meta-analysis; Discussion paper for World Bank., ii) Curtis, V. and Cairncross, S. (2003). Effect of washing hands with soap on diarrhoea risk in the community; a systematic review. Lancet Infectious Diseases 3, 275-281 and iii) Cairncross, S. (2003). Handwashing with soap; a new way to prevent ARIs? Tropical Medicine and International Health 8 (8): 677-679.

[2] WaterAid Hygiene Promotion Strategy (1999); Ferron S., Morgan J., and O'Reilly M; Hygiene Promotion: A practical manual for relief and development, IT Publications, 2000; Hygiene Improvement Framework: A Comprehensive Approach for Preventing Childhood Diarrhea, Environmental Helath Project Joint Publication, 2004

1 Introduction

1.4 The Millennium Development Goals

1.4 The Millennium Development Goals

16. The importance of improved water supply and sanitation has been recognised by their inclusion as specific targets in the framework of the Millennium Development Goals (MDGs). The target aims to halve, by 2015, the proportion of people without sustainable access to safe drinking water and basic sanitation. Many see this target as one of the most important, as equitable access to improvements in water and sanitation can have such a major impact on other MDG targets, such as those concerning hunger, education, child health, gender and HIV/AIDS[1]. For example, an improved water supply closer to the home can free up time which can be used for income generating activities, can improve health which again saves time and money on health care and enables young people, particularly girls, to attend school more regularly.

17. According to a recent progress report, the overall global trend for water supply is on track to meet the MDG target, with 83% of the world's population now having access to an improved supply, up from 77% in 1990[2]. However, these global figures mask very slow progress in certain regions, most notably sub-Saharan Africa where 42% of the population still do not have access to clean water. Although global sanitation coverage rose from 49% in 1990 to 58% in 2002, there are still 2.6 billion people in the developing world without access to improved services; if this trend continues until 2015 the world will miss the MDG sanitation target. As well as rural-urban disparities there are also large differences in coverage rates within urban populations, with much lower access rates for the urban poor living in marginalized or illegal settlements.

18. There are a multitude of factors which contribute to the slow progress in reaching the MDGs, including poor governance and lack of funding. But this progress is also significantly hampered by high population growth, chronic poverty, conflict, political instability and the impact of natural disasters. Poor sustainability of services also significantly contributes to the slow progress, whereby new infrastructure often becomes inoperative either due to technical problems, lack of proper maintenance or inadequate financing. This is a problem that ECHO has recognised in its 2005 Aid Strategy which states that "the linkage of humanitarian aid to development aid is one of the many necessary elements to facilitate the achievement of the MDGs."[3]

[1] See WELL Briefing Note Series, 2004, and Water Supply and Sanitation Collaborative Council, July 2004.
[2] WHO/UNICEF, Meeting the MDG Drinking Water and Sanitation Target: A mid term assessment of progress, 2004.
[3] ECHO Aid Strategy 2005, pg 10.

2 Review of Key External Issues, Trends and Actors

2.1 Humanitarian Aid

2.1 Humanitarian Aid

19. This section outlines the key issues and trends in humanitarian aid and how they impact (or potentially impact) on water and sanitation interventions funded by ECHO.

20. **The changing nature of emergencies**: whether it is from international geo-political pressures, civil conflict, failed states, global warming or stress on natural resources, the volume, intensity, complexity and duration of global humanitarian crises continues to increase[1]. The extent to which civilians are now being affected is the most alarming consequence of these changes, as is the protracted nature of so many conflicts. There is growing evidence of the increasing prevalence of underlined natural disasters around the globe; this is in part linked to the effects of climate change and increased climatic variability. It is estimated that weather and climate-related extreme events account for nearly 75 % of all disasters[2]. The impact of such events has been exacerbated by rapid population growth and increasing vulnerability resulting from the combined effects of extreme poverty and environmental degradation. Conflict is a cross-cutting factor that can also impact directly on water and sanitation, both by disrupting access and by contributing to a breakdown in the systems and human resources required to manage and deliver services. Security concerns in conflict situations can also frequently obstruct or limit the ability of aid agencies to deliver basic services to people in need.

21. **Urbanisation**: high levels of rural to urban migration and overcrowding coupled with wholly inadequate or deteriorating public water and sanitation services will lead to a growing number of humanitarian crises occurring in urban or peri-urban environments. Urban populations are often more vulnerable to disruption of water supplies caused by structurally damaging disasters such as earthquakes or mudslides due to high density populations, the more sophisticated nature of urban water supply systems and the lack of alternative sources[3]. The geographical concentration of people, industrial production and pollution in urban areas also amplifies the biological and chemical hazards to which urban populations can be exposed, as illustrated by the affects of Hurricane Katrina on New Orleans in 2005. Poor slum dwellers have little way of insulating themselves from these dangers which is one reason why morbidity and infant mortality rates among slum dwellers are higher than other urban dwellers or rural populations.[4]

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[1] Heidelberg University Institute for Conflicts and Crisis (December 2003) as cited in the ECHO Proposal for consolidating the Community Humanitarian aid policy/instrument in the new Financial Perspectives, 2004.
[2] WHO, "Health in Emergencies" Newsletter, Issue No 19, March 2004.
[3] WHO Environmental Health in Emergencies and Disasters: A Practical Guide, 2002.
[4] Lenton R, Background Paper of the Task Force for Water and Sanitation, UN Development Group, April 2003

2 Review of Key External Issues, Trends and Actors

2.1 Humanitarian Aid

22. **Convergence and overlap of humanitarian actors**: the response to the Asian Tsunami in late 2004 served to highlight the growing number and diversity of actors involved in humanitarian response, particularly to natural disaster events. High profile, and sometimes sensational, media coverage of disasters, often focussing on the urgency of water and sanitation needs, can trigger responses from actors with a wide range of experience and competence. Government authorities and civil society actors, particularly in middle-income countries, are now increasingly playing a role in the response to crises on their doorstep. The complex situations in Iraq, Afghanistan, West Africa and a number of Tsunami-affected countries, have also underlined the growing trend of military involvement (domestic, foreign and multilateral) in humanitarian operations. This increase in the number and range of active humanitarian agencies can be both an asset and a significant challenge to providing a coordinated and comprehensive humanitarian response.

23. **Participation and accountability**: there is now growing recognition of the importance of consultation with, and accountability to, affected populations in humanitarian responses, as opposed to treating them as passive recipients of aid. Incorporating local perceptions and priorities is a key element in the delivery of appropriate services. While the urgent nature of emergencies and the breakdown of social networks mean that consultation is often more difficult, both for beneficiaries and implementing agencies, it does not diminish its importance. The level of participation is a significant determinant of the effectiveness of aid delivered in post-emergency phases. This applies especially to water and sanitation projects, in which early consultation can help avoid unintended negative consequences and facilitate linkages between relief and development.

24. **Human resources**: while humanitarian aid work has often been criticised for its "lack of professionalism"[1] the sector now appears to be characterised by two divergent groups of agencies. On the one hand there are a small number of well-managed, reputable, professional organisations which are able to retain veteran staff who can be deployed quickly and at short notice. On the other hand there is a growing number of small, less-well funded organisations with limited professional staff, which tend to rely on young, untried but well-meaning humanitarian workers. Employment of regional expatriates and senior national staff is on the rise, a trend which can generate both considerable benefits and challenges alike. With increasing demands to deliver aid in a more professional manner, there is a growing realisation that staff training, job security, compensation, and other staff retention techniques need to be enhanced. Linked to retention is the need to improve personal security for humanitarian field personnel.[2]

[1] **ECHO: An introduction to good practice in humanitarian aid. A guide for ECHO staff.**
[2] **See: ECHO Report on Security of Humanitarian Personnel, 2004.**

2 Review of Key External Issues, Trends and Actors

2.1 Humanitarian Aid

25. **Standards and results-based approaches**: the emergency aid sector is moving ever closer to universal acceptance of the Sphere minimum standards[1] in humanitarian response, although there are still diverse interpretations regarding the application of these standards. The emphasis on delivering results is compelling aid organisations to move from measuring success based on input indicators (e.g. money spent, pumps purchased) to output indicators (e.g. number of latrines and water points constructed, number of training sessions held, etc). For more analysis and discussion of standards and indicators, including the applicability of Sphere to ECHO funded projects, see Annex 1.

26. **Facilitating the transition to development**: aid agencies are now acknowledging the importance of delivering humanitarian assistance in ways that are supportive of recovery and longer-term development processes, particularly in chronic situations. Consideration of the post-crisis phase at the very start of a humanitarian intervention can reduce dependency and lead to a much smoother transition to self-sufficiency; this is sometimes referred to as 'connectedness'.[2] ECHO recognises this trend and includes a strong focus on the link between relief, rehabilitation and development (LRRD) as a key issue in the delivery of humanitarian aid. This subject is covered in more detail in section 3.3.

27. **Disaster preparedness and mitigation**: there is a growing recognition of the need to incorporate disaster preparedness and mitigation elements into the design and development of emergency water supply and sanitation projects. This is an obvious and necessary step for parts of the world with high-risk of natural hazards such as flooding, hurricanes and cyclones. There are also compelling economic arguments for investment in preparedness and mitigation activities. A recent study commissioned by the UK government's Department for International Development highlights evidence suggesting that the economic benefit of many risk reduction measures significantly outweigh their cost[3] (see Box 3).

Box 3 – Evidence of the cost-effectiveness of disaster risk reduction measures

▲ In Darbhanga district in North Bihar, India, a cost-benefit analysis of disaster mitigation and preparedness interventions suggests that for every Indian rupee spent, 3.76 rupees of benefits were realised. The Net Present Value (NPV) of the project was calculated at €69,000.

▲ In the same district a cost-benefit analysis of installing raised handpumps less susceptible to flooding compared two scenarios – a 'without' scenario where government handpumps were blocked each year by silt and debris carried by flood water, and a 'with' scenario where raised handpumps did not become blocked or contaminated. The benefit/cost ratio of raised handpumps was calculated at 3.20 with a NPV of almost €4,500.

Source: Cost benefit analysis of community level disaster mitigation and preparedness interventions in India (draft), Tearfund 2004

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[1] The Sphere Standards are a set of universally recognised standards initially developed by a group of humanitarian NGOs and the Red Cross Red Crescent Movement in the mid-1990s, an initiative funded in part by ECHO.
[2] Evaluating Humanitarian Action: An ALNAP Guidance Booklet, 2003.
[3] Department for International Development, Disaster risk reduction: a development concern, DFID 2005.

2 Review of Key External Issues, Trends and Actors

2.2 The Water and Sanitation Sector

2.2 The Water and Sanitation Sector

28. This section outlines the key issues and trends in the water and sanitation sector and how they impact (or potentially impact) on humanitarian interventions funded by ECHO.

29. **The extent of the need**: Over one billion people still remain without access to a clean water supply, and 2.6 billion do not have adequate sanitation facilities, prompting the World Health Organisation and UNICEF to jointly declare this crisis a "silent emergency"[1]. This creates huge challenges for aid agencies, most notably because many emergencies occur in areas which have poor water and sanitation services in the first place, often well below the minimum levels to which humanitarian organisations aspire. For a needs-based organisation like ECHO, the entry and exit strategies in these situations become much more complex. Intervention criteria must be balanced against a number of other factors such as pre-crisis levels of service, needs of the affected population in relation to local communities, and the cost-effectiveness of activities.

30. **The importance of integrated approaches**: several studies in the last few decades have found relatively little health benefit resulting from interventions when water quality alone was improved. There is now widespread acceptance among sector professionals of the need to integrate improvements in hygiene, sanitation and water supply in order to positively impact on public health[2]. Promoting good hygiene practices in particular can be a low-cost, high impact intervention, especially when targeting specific disease threats[3]. The importance of taking an integrated approach, even in the constrained operating environments of an emergency response, is generally accepted as best practice among humanitarian practitioners, although the manner in which this can be realised on the ground is still unclear to many.

31. **Private sector participation**: depending on the location and the nature of an operation, the private sector can potentially provide essential products (e.g. water purification equipment) and practical solutions (e.g. logistical and engineering support) faster or more cost-effectively than relief agencies[4]. The Kosovo crisis in 1999 represented a turning point in the "commerciality of humanitarian aid" with companies competing for relief and reconstruction contracts, something widespread in countries like Iraq and Afghanistan today. Competition brings with it associated

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[1] WHO website article entitled "World facing silent emergency as billions struggle without clean water or basic sanitation" at www.who.int/mediacentre/news/releases/2004/pr58/en/
[2] Cairncross, S., "Water supply and sanitation: some misconceptions", Editorial in Tropical Medicine and International Health Journal, Vol 8. No 3, Mar 2003.
[3] Examples of the strategic importance of integrating water, sanitation and hygiene interventions in natural disasters and post-conflict settings is discussed in: Kleinau E., Post M., and Rosensweig F. Advancing Hygiene Improvement for Diarrhoea Prevention: Lessons Learned, EHP Strategic Report No. 10, October 2004
[4] Human Disaster Relief: The Corporate Response, IBLF website (www.csrforum.com).

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2.2 The Water and Sanitation Sector

practices which can be both to the benefit and detriment of humanitarian aid. Increasingly, private sector operators are becoming involved in urban water provision, although in situations associated with *force majeure* events (such as natural disasters, civil disturbances, etc) responsibility is still most often borne by the regulating authority (i.e. the government)[1]. When such events do occur, humanitarian agencies need to work closely with both the regulatory authority and private operators to ensure that disruption to essential services is minimised.

32. **Gender**: the majority of those worst affected by emergencies are likely to be women and their children. In the vast majority of cultures women are, to a large extent, responsible for water provision and hygiene, as well as for the overall survival strategy of the family. In addition to these extra burdens on women and girls, it is recognised that each gender has specific water and sanitation needs; for example, safety and privacy are important issues for females, particularly where sanitation is concerned. Understanding gender dynamics is particularly important in times of disaster, not only because women and children are disproportionately affected, but also because emergency interventions can seriously compromise the long-term future for women by creating further imbalances in their relations with men at a time of stress[2].

33. **Water resources and the environment**: fresh water is a finite and vulnerable resource essential to sustain life, development and the environment[3], although in many parts of the world it is increasingly a resource under strain. This is due to a number of factors, but principally to increasing population growth and demand for agricultural and industrial purposes to meet the changing consumption patterns of a growing and increasingly urbanised population[4]. Integrated water resource management is now a prominent theme on the international development landscape, something to which the EC has made a strong contribution through its "Strategic Approach" document[5]. Although the quantities of water required for drinking water supply and sanitation purposes comprise a relatively small proportion of total water use[6], in water scarce regions the technical viability and sustainability of systems is now threatened by over-exploitation for other purposes. Emergency water and sanitation projects in these contexts must ensure that due consideration is given to environmental concerns and that unsustainable practices are avoided.

[1] Jeffrey Delmon; Water Projects: A Commercial and Contractual Guide. 2001.
[2] Bridget Walker; Women and Emergencies; Oxfam, 1994
[3] From the Dublin Principles.
[4] Rosegrant M. et al, World Water and Food: Dealing with Scarcity, 2002.
[5] For details see: "Towards Sustainable Water Resource Management: A Strategic Approach", EC, 1998.
[6] Domestic water consumption represents only 2% of the global total use (Cairncross, Editorial: Water supply and sanitation: some misconceptions, 2003).

2 Review of Key External Issues, Trends and Actors

2.2 The Water and Sanitation Sector

34. **Water stress and water scarcity**: although the precise definition of these terms is the subject of considerable international debate[1], the most widely used quantitative measure is the Falkenmark indicator which considers water availability in relation to population. Water stress and water scarcity are defined as the conditions in which the annual availability of renewable fresh water is less than 1,700 and less than 1,000 cubic meters per person in the population, respectively. These levels should be considered rough benchmarks, not precise thresholds as the exact level at which water stress sets in varies from region to region, and is a function of climate, level of economic development and other factors[2]. Nevertheless, these concepts are useful for considering how changes in population can affect per capita water supply. Globally, growth rates indicate that by 2025, almost 3 billion people will live in countries which suffer from water stress or scarcity,[3] the majority of which are in West Asia, North Africa and Sub-Saharan Africa[4]. Climatic change is a major contributing factor and recent changes in climate variability have adversely affected patterns of drought (and flooding) events in several regions. This tendency is likely to continue[5]. Absolute increases in population combined with increased vulnerability of the poorest will inevitably lead to greater impact of these more frequent events.

35. **Livelihoods and water**: access to and control of water can often provide the means for social, political and economic power. Productive uses of water must be considered in context. In some pastoralist societies, watering of livestock is absolutely central to sustaining households and communities. However, where water is scarce and livelihoods diverse, competing interests can escalate into social conflict and marginalised and vulnerable people are often those most affected[6]. For example, in agro-pastoralist communities where there is limited supply of water, powerful cattle owners can 'hijack' water sources reducing the availability and access for domestic or agricultural users. Emergency water supply interventions have the potential to alter migration patterns and change traditional coping capacities, which can further exacerbate local conflict as well as lead to harmful environmental damage.

36. **Conflict**: Water plays a central role in a wide range of conflicts around the world. Although often described as an ethnic or political conflict, one of the root causes of the crisis in the Darfur region of Sudan is the scarcity of water resources. Countless smaller scale conflicts are simmering across the world, most notably in the Horn of Africa and the Sahel, carrying with them the potential to erupt into full-scale crises.

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[1] **Water Scarcity; Len Abrams.**
[2] **Sustaining Water: Population and the Future of Renewable Water Supplies, Population Action International.**
[3] **World Water Vision: Making Water Everyone's Business., World Water Council 2000.**
[4] **UNEP: Vital Water Graphics website.**
[5] **Climate Changes the Water Rules, Cooperative Programme on Water and Climate.**
[6] **House, S., Social conflict and water; lessons from north-east Tanzania. WaterAid Discussion Paper, 2003.**

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There have been conflicts where water sources have been deliberately polluted and others where armed groups or political factions have misappropriated water supplies for illegal drug cultivation using the profits to finance further illegal actions. Many believe water will be the main source of conflict between nations in the twenty-first century, related very much to the fact that 40% of the world's population live in 250 river basins shared by more than one country. On the other hand, some research suggests that the threat of "water wars" has been overstated and likely to occur only in a very narrow set of circumstances[1]. One strategic region where these conditions are present, however, is in the Middle East, where competition for water is so intense that lasting peace in the region appears unlikely in the absence of an agreement over shared water use.

37. **Sustainability**: in the past three decades there has been an unacceptably high number of water and sanitation projects which have broken down soon after the departure of the implementing agency. Aid organisations, including those involved in humanitarian relief, are now recognising this as a major impediment to progress in the sector and are under mounting pressure to ensure their activities, wherever possible, provide lasting benefits. In most acute emergency situations, this is not a realistic option, but there is growing acceptance that the provision of immediate relief, especially in protracted situations, and addressing the issue of sustainability are not mutually exclusive.

2.3 Major Actors in the Provision of Emergency Water and Sanitation

38. A typical emergency response is characterised by a wide range of agencies working alongside each other, but not necessarily in a collaborative or coordinated manner. While a number of aid agencies specialise in the provision of medical services in emergencies, there are no agencies which specialise primarily in water and sanitation. Having said that, many major multi-sectoral humanitarian agencies have recognised its central importance and developed considerable capacity to execute emergency water and sanitation projects. International NGOs such as Oxfam, ACF, MSF, and IRC are recognised as the more prominent and experienced agencies in the sector. Many NGOs do not restrict themselves to humanitarian crises, but also work on rehabilitation and development programmes, as well as in broader policy and advocacy areas.

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[1] **Thomas Homer-Dixon, The Myth of Global Water War in War and Water, ICRC publication.**

2 Review of Key External Issues, Trends and Actors

2.3 Major Actors in the Provision of Emergency Water and Sanitation

39. UNICEF is the leading <u>UN agency</u> in water and sanitation activities, and often the *de facto* sectoral coordination agency in many emergencies. UNHCR is involved in the provision of watsan services to refugees, the internally displaced and at times, returnees. Both these UN agencies often sub-contract the provision of services to other organisations due to their limited operational capacity. WHO and PAHO are two other notable multilateral institutions active in the sector, the former specialising in water quality issues and the latter in disaster preparedness, as well as water and sanitation as part of public health service delivery in the Americas.

40. The two <u>Red Cross-Red Crescent</u> agencies, the ICRC and IFRC, both have large emergency water and sanitation programmes. ICRC is mandated as the lead agency in areas of conflict and is one of the few agencies with in-depth experience of working in urban environments. They are also very active in areas where water is a key source of conflict[1]. IFRC on the other hand takes the lead in natural disasters and have particular expertise in the quick deployment of Emergency Response Units (ERUs), which consist of pre-trained teams of specialists and pre-packed sets of standardised watsan equipment ready for immediate use.

41. Increasingly, <u>local actors</u> now play a much more prominent role in emergency responses. These can include local NGOs, National Red Cross-Red Crescent Societies, the domestic private sector and central and local government authorities. This trend offers foreign agencies the opportunity to benefit from working with organisations that have greater levels of local knowledge, experience and legitimacy. But the trend also brings challenges; these include ensuring better, more inclusive coordination; working with local agencies that may have limited capacity; and guarding against the potential for local agendas or political influence to jeopardise the neutrality of the humanitarian response.

42. The presence of both local and international <u>military</u> forces is increasingly challenging many aid agencies. The blurring of the line between military and humanitarian actors and the push for "integrated missions" is seen as potentially increasing security risks and jeopardising the fundamental humanitarian principles of neutrality and independence.[2] In spite of these threats, both foreign and local military capacity has been used effectively to respond to water and sanitation needs in recent emergencies.

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[1] **For some excellent case study material see the ICRC publication Forum: War and Water (undated).**
[2] **ECHO Aid Strategy 2005.**

2 Review of Key External Issues, Trends and Actors

2.3 Major Actors in the Provision of Emergency Water and Sanitation

43. Although many <u>bilateral and multilateral donors</u> provide financing earmarked for water and sanitation in emergencies, very few maintain in-house operational capacity to work in the sector.   The limited sectoral expertise there is among donor agencies is typically spread thinly across large regions.   Most is utilised to assess proposals, monitor projects and occasionally assist with needs assessments.

44. Although less active in the water and sanitation sector, <u>civilian protection units</u> (e.g. search and rescue teams or specialist water technicians) have also been involved in humanitarian responses. Under the European Commission's Civil Protection Mechanism, these can operate both inside and outside the EU. The Rapid Reaction Mechanism (RRM) was established by the E.C. in 2001 to respond urgently to the needs of countries undergoing crises.   Although most of the actions focus on conflict prevention, it also has the mandate to carry out post-conflict rehabilitation work. The only time this RRM was engaged in activities related to water, however, was during the escalation of a dispute over water resources in the Middle East .[1]

[1] **The Rapid Reaction Mechanism supports the EU's policy objectives in conflict prevention and crisis management, European Commission, Directorate General for External Relations.**

3 Review of Policy Issues and Trends Within DG ECHO

3.1 DG ECHO Policies and Strategies which Impact on Watsan Interventions

3.1 DG ECHO Policies and Strategies which Impact on Watsan Interventions

45. ECHO has a number of priorities and policies which influence the type and range of water and sanitation projects that it funds. It is important to understand how these policies impact on funding decisions and what is required of partners when executing activities within this policy framework. The main policies which impact on water and sanitation provision are described below, in rough order from those applied at the global level down to those more relevant at a project level[1].

46. **Needs-based approaches**: ECHO's policy is to identify and intervene in areas of greatest humanitarian need, both at the global and local levels. For chronic situations, needs are assessed and compared based on global indicators and comprehensive field-level assessments. Resources are measured and directed to the specific sectors (i.e. health, shelter, food or watsan) and to the affected populations most in need. For quick-onset emergencies, decisions are based on rapid, multi-sectoral assessments prioritising both sector-specific needs and geographic locations. Resources are allocated to areas of highest need, where others are unlikely to respond, and to those partners able to engage rapidly and effectively. Both absolute and relative needs are considered (i.e. needs compared to the "normal" service levels and needs compared to other regions) when making these resource allocation decisions.

47. **Forgotten crisis policy**: ECHO pays special attention to "forgotten" crises and humanitarian needs worldwide. The application of the policy has important implications for funding water and sanitation projects. Firstly, forgotten crises often occur in countries which are characterised by high rates of structural poverty, low levels of physical, social and institutional infrastructure and where water and sanitation needs are critical and widespread. Secondly, this policy has historically shifted the emphasis of ECHO funding towards more protracted, chronic situations. Finally, forgotten crises, by their very definition, tend to lack other significant donor involvement, so partners are inevitably more reliant on ECHO for their watsan funding.

48. **Disaster preparedness**: There is a recognition that this element of humanitarian aid needs to be strengthened as it can often be a more cost effective way of working, particularly in chronic situations. But this also calls for different approaches, adapting planning mechanisms and the application of different skills. ECHO is already addressing disaster preparedness at the local level in high disaster-prone areas through its DIPECHO programme, including mitigation interventions.

[1] **The Rapid Reaction Mechanism supports the EU's policy objectives in conflict prevention and crisis management,** European Commission, Directorate General for External Relations.

3 Review of Policy Issues and Trends Within DG ECHO

3.1 DG ECHO Policies and Strategies which Impact on Watsan Interventions

However, as a recent evaluation of ECHO's disaster reduction strategy points out, there is still much to be done in terms of mainstreaming risk reduction, both across other EC instruments, but also within ECHO itself[1].

49. **Results-based focus**: ECHO's Framework Partnership Agreements stress the need for partners to focus on results in determining the success of interventions. While adopting a results-based approach can provide a more meaningful measure of the effectiveness of aid, the impacts of water, sanitation and hygiene interventions are notoriously difficult and costly to measure[2]. Harder still is attributing any measurable change to a particular intervention or input, such as a water project, given the number of confounding factors which could influence the changes. A focus on results also has the potential to detract from the importance of *processes* such as participation and consideration of gender. Furthermore, strict adherence to results-based approaches may inadvertently encourage the submission of proposals for activities which are easily measured (for which the chances of funding are perceived to be greater), but which may not necessarily be the most appropriate or most needed.

50. **Cost-recovery**: in order to prevent the misuse of ECHO-donated equipment and funds, ECHO has developed detailed guidelines and procedures for project cost recovery[3]. As a general rule, cost-recovery and income-generation schemes should not be considered for urgent or emergency operations. In chronic situations, however, ECHO partners are obliged to ensure that proceeds from the sale of items (e.g. water) produced with ECHO-funded inputs, remain with the intermediate beneficiary (i.e. the owner of the donated resource) "in order to guarantee the sustainability of the project"; further, the subsidy cannot have the objective or the effect of leading to a profit for the recipient[4]. Not addressing these issues can lead to serious problems; for example, funds generated from the sale of water being diverted for personal, inappropriate or even illegal uses. The ECHO guideline notes describes this procedure as "onerous" and requiring skilled facilitation and post project interaction with the recipient communities. For chronic situations, ECHO policy on cost recovery is broadly in-line with that of current sector thinking, which strongly advocates for the principle that users should cover a proportion of both investment and recurrent costs[5].

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[1] Overall Evaluation of ECHO's Strategic Orientation to Disaster Reduction, Final Report December 2003.
[2] Billig P., *et al* Water and Sanitation Indicators Measurement Guide, Food and Nutrition Technical Assistance, USAID, June 1999
[3] Procedures for the inclusion of cost-recovery, income generation and remunerative schemes in humanitarian operations: Guidance note for staff, Dec 2002.
[4] Article 109(2) of the Financial Regulation
[5] For more details of financing and cost recovery issues see the IRC website: www.irc.nl/page/113

3 Review of Policy Issues and Trends Within DG ECHO

3.2 Cross-Cutting Issues

3.2 Cross-Cutting Issues

51. ECHO has identified a number of cross-cutting issues, which it considers to be of primary importance for humanitarian interventions[1]. The most relevant of these cross-cutting issues for water and sanitation interventions are highlighted below. The *Model Guidelines* provide further details of how these cross-cutting issues can be mainstreamed in water and sanitation projects and indicates good practice interventions to account for thematic concerns or vulnerable groups.

   ▲ **Participation**: underlines the principle that affected populations, including vulnerable groups, should actively participate in the assessment, design, implementation and monitoring of water and sanitation programmes.

   ▲ **Gender**: experience has shown that understanding the gender dynamics among affected populations is a crucial element for effective relief delivery. Water and sanitation programmes should be planned and implemented based on a sound understanding of the differences in the roles, responsibilities and needs of women, men, girls and boys.

   ▲ **Environment**: it is critical to protect the environment which, in the humanitarian context, is defined as the physical, chemical and biological surroundings in which disaster-affected and local communities live and develop their livelihoods[2]. In terms of water and sanitation projects, this implies that they are implemented in a way which prevents long term over-exploitation, pollution and degradation of environmental conditions, both at the local level (e.g. by addressing solid waste management, or drainage from water points) and at the macro-level (e.g. by avoiding over-abstraction of aquifers)[3].

   ▲ **Focus on the Most Vulnerable**:

      ▲ *People with HIV/AIDS*: reasonable access to safe water and sanitation is indispensable for people living with HIV/AIDS and for the provision of home-based care to AIDS patients. The importance of this is enhanced during a crisis situation, when the risk of opportunistic infections (diarrhoea and skin diseases are among the most common) is greater and health care support is often disrupted[4].

      ▲ *Elderly*: elderly people make up a large proportion of the most vulnerable in disaster affected populations; they also have key contributions to make in survival and rehabilitation[5]. The elderly may have restricted mobility, may not be able to carry water for long distances, or may be too weak to dig their own latrines or participate in other construction activities. Special consideration should be given to ensuring that the elderly receive an equitable service in spite of these limitations.

[1] For a complete review of ECHO's cross-cutting issue see: *A Review of Core Cross-Cutting Issues and Key Objectives Affecting Person in Humanitarian Crises, Concept Paper and Model Guidelines, 2005.*
[2] Sphere Handbook, pg 13.
[3] For more details see: "Towards Sustainable Water Resource Management: A Strategic Approach", EC, 1998
[4] HIV/AIDS and water, sanitation and hygiene: Thematic Overview Paper, IRC, 2003. Also see A Review of DG ECHO's Approach to HIV/AIDS, Concept Paper and Model Guidelines, 2004.
[5] Sphere Handbook, pg. 11.

3 Review of Policy Issues and Trends Within DG ECHO

3.2 Cross-Cutting Issues
3.3 Linking Relief, Rehabilitation and Development (LRRD)

▲ *Disabled*: disabled people are routinely excluded by water and sanitation projects, due primarily to external barriers (environment, infrastructure, and institutional practices) rather than disabled people's own limitations. Accessibility should always be considered in infrastructure projects from the outset of the planning and design stages[1].

▲ *Children*: in crisis situations, children are particularly vulnerable and can often form a large part of the affected population. Special measures must be taken to ensure their equitable access to basic services[2]. Particular emphasis should be given to children under five. The principal objective should be to contain mortality, morbidity and malnutrition below the emergency thresholds[3].

▲ **Protection**: Water and sanitation facilities should be made as safe and accessible as possible. Given that water plays a critical role in so many conflicts around the world it is imperative that aid organisations and individuals are mindful of human rights and protection issues when implementing water and sanitation projects, as well as how the security situation may affect an intervention. For example, a simple intervention such as installing a water point, if not designed and managed appropriately, can inadvertently provide resources or leverage for armed groups and so further fuel a water-related conflict.

3.3 Linking Relief, Rehabilitation and Development (LRRD)

52. The transition from relief intervention to long-term development is a strongly held policy position within ECHO, although it is also recognised that LRRD may not be not applicable in every emergency situation. While there are clear operational issues regarding LRRD in the water and sanitation sector, most of the policy focus within the EC has been on the potential for transition to other financing instruments of the EC, and to a lesser extent to other donors. In theory, there are a number of specialised sectoral or long-term geographical instruments which are available for transitional relief, some of which can be accessed for water and sanitation activities[4].

53. However, the reality is that these budget lines are not easily accessible to, nor necessarily appropriate for, organisations working in emergency or transitional situations[5]. One simple reason for this is the exacting procedural and administrative requirements of these funding instruments which require significant lead time for, among other things, consultation with EC Member States, before funds can be approved and released. If partners do apply for EC funding subsequent to an ECHO contract, they may be faced with sizeable funding gaps which they cannot bridge

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[1] WEDC, "Delivering WATSAN services to disabled people". H. Jones, et all. October 2003.
[2] Sphere Handbook, pg 10.
[3] ECHO Policy guidelines regarding children affected by humanitarian crises, 2004.
[4] Examples include the Rehabilitation and Reconstruction budget line (Council Regulation (EC) No 2258/96) and the Food Security Budget line (council regulation (EC) No 1292/96)
[5] Evaluation of ECHO's reaction to serious drought situations, GFE Consulting, Oct 2002.

3 Review of Policy Issues and Trends Within DG ECHO

3.3 Linking Relief, Rehabilitation and Development (LRRD)

without recourse to other funds. Moreover, obtaining EC funding is a highly competitive process and as there are no guarantees of securing funding, it makes it more difficult to plan transitional projects[1].

54. A more fundamental problem, however, and one of which the lengthy timeframe is a symptom, relates to the differing nature of the aid instruments. Development cooperation is planned in partnership with the host government, usually through an extensive and often lengthy process of negotiation, leading to the development of multi-year funding agreements and programming. It requires alignment with the host government's own priorities, some of which may be exposed to political influences, or which may not always coincide with the most urgent humanitarian needs on the ground. Furthermore, sector-wide approaches and direct budgetary support are increasingly being used instead of discrete, stand-alone projects and programmes. This stands in sharp contrast to the nature of humanitarian aid, which often demands responsive mechanisms, shorter lead times and is frequently planned without extensive involvement of the host government.

55. The EC Rehabilitation budget line has been used in the past to fund transitional situations, but has largely proved unsuccessful at closing the LRRD gaps[2]. The piloting of new innovative funding instruments, such as the Humanitarian Plus initiative, offer some potential, but will also face the same challenges as the Rehabilitation budget line. Given the contextual differences and the practical challenges, it is not surprising that there is no mainstream financial mechanism to uphold the policy directives promoting the principles of LRRD[3].

56. In terms of sectoral instruments, the recently launched EU Water Facility (March 2005) will inject a one-off allocation of €500m into the water and sanitation sector in ACP countries. A small allocation (€15m) from the fund has been earmarked for proposal for activities related to post-conflict and post-disaster rehabilitation assistance, although it is still not clear how this would be administered. However, unless the Water Facility is adopted as a permanent funding instrument, and larger allocations are directed towards transitional situations, then it is unlikely to offer a lasting solution to the funding gaps and other constraints associated with LRRD.

57. One important way forward is to improve the level of collaboration between the Commission services, which has reportedly been weak in the past[4], in spite of requirements which oblige a certain level of collaboration; for example participation

[1] A similar problem is created due to partner uncertainty about subsequent ECHO project funding.
[2] Based on comments on an earlier draft by ECHO Head of Sector Policy and Planning.
[3] See for example: Report and operational conclusions of the LRRD/DPP Inter Service Group, Oct 2003.
[4] Synthesis of findings on ECHO policy. Jan 2004, J Cosgrove, Channel Research Ltd.

3 Review of Policy Issues and Trends Within DG ECHO

3.3 Linking Relief, Rehabilitation and Development (LRRD)

by ECHO in the development of Country Strategy Papers. Another possibility is for ECHO partners to concentrate more on working with specific EU Member States, or non-EU actors, such as UNICEF or USAID's Office for Foreign Disaster Assistance (OFDA), whose humanitarian aid programmes are more closely integrated with their development activities.

58. Ultimately, poor links between relief and development cause a high level of frustration for humanitarian aid and development workers alike, not to mention the impacts on millions of people struggling to stabilise their lives following disaster or conflict. Until a practical, multi-sectoral solution to the complex problem of LRRD can be found, ECHO can best protect the interests of beneficiaries by employing an *operational approach* to LRRD and ensuring that the water and sanitation projects it funds provide benefits which last as long as possible. These approaches are discussed in section 5.3 and detailed extensively in the ***Model Guidelines***.

4 Financing of Water and Sanitation Interventions

4.1 Cost-effectiveness and Unit Costs

4.2 Opportunity Costs

4.1 Cost-effectiveness and Unit Costs

59. There is no standard approach used by aid agencies to measure the cost-effectiveness of water and sanitation interventions. The most common methods include: comparing the unit cost of an intervention with standardised unit cost information; comparing the cost of a proposed intervention to similar projects completed in the past; and calculating cost per beneficiary of an intervention and comparing it to historical figures or similar projects executed by other agencies. The value of using these methods is limited to evaluating trends and crudely assessing cost effectiveness in similar situations.

60. Few of ECHO's partners compile or utilise any significant unit cost information for water and sanitation activities, and those that do caution against using it beyond the local context for which it was designed. As with the limited unit cost information produced by ECHO to date[1], most unit cost data remains either in draft form or is already relatively out-dated. If used locally, unit cost information can be a helpful tool to keep track of the costs of typical inputs and may provide a rudimentary measure of the efficiency of a project.

61. Unit cost information can be a useful benchmark for desk officers or partners who appraise project budgets, especially when used as a guideline, instead of as a strict budget ceiling or pricelist. On the other hand, it can be dangerous to apply unit cost information too widely across regions or countries without real care. There are simply too many variables that can affect local costs (e.g. cost of local materials and labour, type of operating environment, security issues, transport logistics, etc.) for cost estimates to be applied accurately across different counties. Scarce time and resources are required in order to keep unit cost information up-to-date. More fundamentally, taking a cost per beneficiary approach does not accurately take into account the *duration of the benefits*. A simple illustration is that of a water supply system, which lasts for four years having a cost per beneficiary per year of half that which lasts for only two years.

4.2 Opportunity Costs

62. The opportunity cost of an intervention is extremely pertinent with respect to ECHO's global resource allocation decisions, as spending money on one crisis reduces the amount available for other crises, given a static budget envelope. Opportunity cost is also relevant at the sectoral level. It is difficult to generalise about the value of investing donor funding in one humanitarian aid sector versus another, without considering the multitude of organisational imperatives which drive such decisions.

[1] ECHO has produced two papers with unit cost information, both with sections on water and sanitation. The first was produced in 2001 by the ECHO Nairobi office for use in sub-Saharan Africa *(The Unit Cost Approach of Humanitarian Activities: First Draft)* and the second in late 2004 for the Middle East *(Unit Cost of Humanitarian Interventions in the Middle East Cluster)*. Both papers contain very useful data although they remain in working paper form. The papers also include the necessary caveats about the limitations of using unit cost information too prescriptively.

4 Financing of Water and Sanitation Interventions

4.2 Opportunity Costs
4.3 Funding and Timing Issues

Clearly, the specific attributes of a particular crisis and comparative costs of different sectoral interventions – for which comprehensive local needs information and coordination is essential – must be considered. The cost of *not intervening* in one sector when intervening in another is virtually impossible to measure. That being said, given the catalytic, multiplier effect of a water and sanitation intervention, and its primary importance to public health, there remains a very strong case for significant levels of investment as compared to other sectors.

63. Opportunity cost considerations are also relevant to water and sanitation at the <u>project</u> level. For emergency water and sanitation projects, as in other sectors, there are operational choices and tradeoffs involved. These tradeoffs generally involve the quality of the service provided, the number of people served, the speed of the response and the cost of the intervention. And although humanitarian aid is not a "zero sum game" (i.e. there is room for efficiencies or better or faster services at the same cost), generally speaking improving the quality of an intervention, the speed of response, or the numbers served will require additional financial resources.

64. For ECHO this suggests that together with the increased expectations placed on its implementing partners for higher quality interventions - for example, the capacity to adequately address cross-cutting issues - comes the responsibility to provide adequate, and in some cases additional, resources to enable this to happen without negatively impacting on other desirable objectives such as the numbers of people served or the timeliness of interventions.

4.3 Funding and Timing Issues

65. ECHO allocates funding through four different types of financial decisions[1], as follows:
   ▲ **Primary Emergency** Decisions – used to respond to acute and immediate needs, for operations up to €3 million, which must be completed within 3 months.
   ▲ **Emergency** Decisions – for operations that must be started within 3 months and completed within 6 months of the start of a crisis.
   ▲ **Ad Hoc** Decisions and **Global Plans** – used most often in situations which allow for advance planning, are prepared on the basis of country needs assessments and consultation with partners. Operations can be no longer than 12 months and must be completed within the maximum 18-month duration of the decision.

66. While the primary emergency and emergency interventions are designed to facilitate a rapid response, they have stipulations and restrictions related to the total contract amounts, the timeframe and the reporting deadlines. Contracts under these

[1] **Not including DIPECHO funding.**

4 Financing of Water and Sanitation Interventions

4.3 Funding and Timing Issues

decisions are therefore less attractive to aid agencies unless they intend to limit their activities to interventions which can be completed relatively quickly.

67. In reality, a surprisingly high percentage of ECHO's funding decisions are made through Ad Hoc Decision or Global Plans; for example, between 2002 and 2004 an average of 93% of ECHO's funding was allocated through these two types of Decisions[1]. This reflects ECHO's overall global portfolio which comprises a large number of countries facing long-lasting crisis situations.

68. Article 1 of the ECHO mandate states that aid should be provided "*for the time needed to meet the humanitarian requirements*". This is open to interpretation. But given the imperative for urgency in humanitarian aid and the constraints imposed on public sector financing, ECHO has drawn the line at a **one year** maximum contract duration (although they can be frequently shorter) for implementation within a maximum 18 month timeframe. One year is more than sufficient time to implement a water and sanitation response to an acute emergency where speed of response is imperative. However, this timeframe is a much more critical project parameter when intervening in non-acute situations.

69. ECHO's mandate covers "*short-term rehabilitation and reconstruction work, especially on infrastructure and equipment, in close association with local structures…to help those affected regain a minimum level of self-sufficiency, taking long-term development objectives into account where possible*"[2]. Under current financing patterns, ECHO is increasingly working in situations where it is possible to meet immediate needs and take long-term objectives into account. This scenario is common to chronic situations, but can also be found in the latter stages of an acute emergency and even in protracted displaced population settings, where there is a need to provide more durable solutions.

70. It is in these situations that the one-year timeframe is much more restrictive for water and sanitation projects. The challenges of incorporating developmental-type approaches within the one-year limit are articulated very strongly by ECHO's partners, as well as its own field staff[3]. Recent evaluations of various ECHO-funded water and sanitation projects draw direct correlations between the results of an intervention and the duration of the project, supporting the notion that time limitations are a critical factor[4].

[1] **Statistics generated from ECHO office, Brussels, April 2005.**
[2] **Council Regulation (EC) No 1257/96, Article 2 June 1996.**
[3] **Views expressed in meetings during interviews in preparation of this report.**
[4] **Evaluation of Hurricane Mitch, May 2001; Evaluation of watsan operations in Zimbabwe, 2003.**

4   Financing of Water and Sanitation Interventions

4.3 Funding and Timing Issues

71. It is common practice for ECHO partners to attempt to manage the one year limit; for instance, by securing multiple, back-to-back, one-year contracts, which then finance what is essentially one continuous project[1]. This is only practical in situations where the likelihood of future funding is reasonably well-known, which is something ECHO communicates, as much as possible, to implementing partners in advance. Although steps are taken to predict likely funding, this is not always possible, or changes are communicated at short notice, for a number of (very justifiable) reasons beyond the local context. This situation therefore highlights the importance for partners to have a diversified donor funding base and not becoming overly reliant on ECHO funding. Given the vast scale of humanitarian needs in many situations and the relatively limited financial resources available, especially in forgotten crises, this is a significant challenge for many actors in the field.

72. While the limited contractual timeframe is an issue which has important implications for water and sanitation projects, it is also clearly something ECHO confronts in other sectors. A radical way of overcoming this problem would be for ECHO to limit the funding of projects to those situations which can only be described as *acute emergencies*. Doing this, however, would in many ways be contrary to ECHO's "forgotten crises" policy and disregard a significant component of ECHO's legal mandate. If ECHO were to impose this limitation, it would also be forced to disengage from a huge number of post-emergency and chronic situations, resulting in a much smaller portfolio of programmes.

73. Another solution could be to restrict the types of water and sanitation projects which qualify for ECHO funding. This is in fact commonly practiced on an *ad hoc* basis throughout ECHO, when a specific type of activity, say training of water technicians, is not accepted in a funding proposal because it is considered "not something ECHO funds". However, each situation requires a different, tailor-made solution, assessed on its own merits. Restricting the range of possible interventions, or the type of activities, would go against ECHO's needs-based and context-specific strategies, whereby a given situation or need is neglected because ECHO "does not fund" the particular type of response required, even if, based on local assessments, it is considered the most appropriate.

[1] **Personal experience of authors and interviews conducted during field visits.**

5 Design and Selection of Water and Sanitation Interventions

5.1 The Range of Possible Water, Sanitation and Hygiene Interventions

5.1 The Range of Possible Water, Sanitation and Hygiene Interventions

74. The ECHO mandate covers a wide spectrum of possible humanitarian interventions, including the provision of relief and assistance to people affected by both acute emergencies and long-lasting crises. The mandate also offers considerable latitude in terms of possible approaches ranging from ensuring "*preparedness* for risks of natural disasters" to "*relief operations*" to "*short-term rehabilitation and reconstruction work*" and even taking "*long-term development objectives into account where possible*"[1].

75. The breadth and range of possible responses provided for under ECHO's legal mandate upholds the notion that **different approaches** are required in response to different situations; i.e. one-size does not fit all. This is particularly pertinent in the water and sanitation sector. Implementing a project in an acute emergency, for example, calls for a vastly different approach than that used in a recurrent drought, or a post-conflict recovery situation. These differences in *approach* apply, even though the physical infrastructure provided in the end may be the same in each case (e.g. a borehole or communal waste disposal site).

76. This does however raise questions about the consistency of approach in different situations as well as the selection of interventions. Ideally, ECHO and its partners would have a prioritised list of specific interventions which are matched to different emergency scenarios, enabling them, to some extent, to pre-determine the likely response. Such a prioritised list could also help clarify what types of water and sanitation interventions are most appropriate, and provide guidance to partners on what is eligible for ECHO funding in any given situation.

77. In reality however, it is not possible to compile such a list. The suitability of a water and sanitation intervention depends on a wide range of factors - technical, social, and economic, as well as the specificity of the emergency event itself - and differences in one variable can change the suitability of a particular response. The choice of water supply interventions can be influenced *inter alia* by the type and availability of water (groundwater levels, rainfall patterns, surface water quality etc.), locally acceptable technologies, procurement opportunities, population densities, security concerns and existing social, economic and institutional capacities.

[1] **Council Regulation (EC) No 1257/96, Article 2 June 1996.**

5 Design and Selection of Water and Sanitation Interventions

78. The range of interventions is as wide as the range of possible scenarios (see Box 4). Therefore it is impractical to have pre-determined or standardised checklists for any given situation. What is possible, however, is to identify certain interventions and *common approaches* that are associated more with a particular emergency scenario than with others, and which can be categorised in order to help with the design of interventions (see section 6).

5.2 Selecting a Specific Intervention

79. The decision about what intervention to choose in any given situation may be limited or obvious, while in other situations there may be a host of possible options. Clearly, making the right choice will significantly influence the quality and effectiveness of the response. Deciding on the most appropriate water and sanitation intervention involves many of the same criteria which are applied when ECHO decides whether to engage in a particular crisis situation in general[1]. A needs assessment must be conducted prior to any intervention, although the requirement to act quickly may influence how comprehensive this can be in the initial stages of an acute crisis. Needs assessments should include, *but not be limited to*, the specific local needs and vulnerabilities of the affected population (including gender disaggregated data); the local resources available (including natural, financial, social, etc); the pre-event levels of service, and other issues which might influence the nature of the interventions (e.g. environmental concerns, tensions within the community, etc.).

80. A critical component of the needs assessment is *consultation* with the local community in order to ensure the delivery of services is acceptable and appropriate. This will provide better-targeted responses and increase the potential for involvement and ownership during the latter stages of relief and transition to development. A thorough needs assessment will also provide essential baseline information against which post-intervention results can be measured.

> **Box 4 – Examples illustrating the range of ECHO-funded interventions in water, sanitation and hygiene**
>
> **Water** - water trucking, water treatment, drilling of boreholes, rehabilitation of boreholes, cleaning wells, provision of hand pumps, provision of generators and electrical pumps, provision of diesel for pumps, installing piped distribution systems, digging hand-dug wells, spring capping, distributing water purification tablets, training water management committees, provision of spare parts, mapping of water points, provision of drinking troughs for livestock, provision of household rainwater tanks.
>
> **Sanitation** – constructing household latrines, constructing communal latrines (public places, schools, medical centres, etc), digging pits, "sanplat" construction, training of local artisans, latrine emptying, distribution of buckets, collecting refuse, mosquito and fly control measures, constructing showers, digging drains.
>
> **Hygiene** – hygiene education sessions, hygiene promotion training, provision of incentive for local hygiene promoters, provision of soap, provision of wash stands/showers.

[1] See "DG ECHO's Review of Cross-cutting issues for Entry and Exit Strategies"

5 Design and Selection of Water and Sanitation Interventions

81. Lastly, decisions about specific interventions also require the judgement of experienced professionals. It is critical, for instance, that the most appropriate technology is selected and that new water points are not constructed unnecessarily when simple rehabilitation of existing ones can provide sufficient and more cost-effective solutions. To complement or back-up this expert judgement (or indeed, in some unavoidable cases, to substitute for it), the use of detailed sector specific guidelines is important. There are a number of excellent technical guidelines available for the water and sanitation sector[1]. As long as they are used as tools, and not applied too prescriptively, they can be extremely valuable in assisting humanitarian aid workers to reflect on the relevant issues and assess different options. The **Model Guidelines**, which draw on existing technical materials already available in the sector, have been developed specifically to outline the manner in which ECHO expects its partners to implement water and sanitation projects.

5.3 The Case for Sustainable Humanitarian Water and Sanitation Projects

82. Partly by a conscious policy of supporting forgotten crises, which tend to be protracted in nature, and partly by default, ECHO finds itself embedded in more and more situations where focussing *only* on the immediate water and sanitation needs is insufficient and inappropriate, and where interventions providing benefits beyond the life of the project are required. In some situations ECHO may have a preference to hand over responsibility to other donors but options to do this are often limited. The question is therefore, how can ECHO ensure its partner agencies implement water and sanitation projects most effectively within existing time limitations and given all the other logistical and security constraints associated with operating in these often difficult environments?

83. The most reasonable way forward is for ECHO to encourage and facilitate its partners to utilise *adapted* development-type approaches in order to improve the sustainability and therefore the impact of its water and sanitation interventions. By doing so, ECHO will promote a much more effective, *operational* approach to LRRD, something essential in the absence of realistic transitional funding alternatives. However, for these approaches to be successful, they cannot be simply "add-ons", but must be made integral from the start of the project cycle.

84. Some may consider this as a radical shift in the way of working and expose ECHO to assertions that it is operating outside its mandate and funding "non-emergency" interventions. What is very often the case, however, is that the most appropriate, context-specific approach in response to an emergency will have *similar characteristics* to development approaches. ECHO is simply taking advantage of its broad mandate to fund a wide variety of water and sanitation projects, some of

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[1] See list of key resource institutions in Annex 2 of the *Model Guidelines*.

5 Design and Selection of Water and Sanitation Interventions

5.3 The Case for Sustainable Humanitarian Water and Sanitation Projects

which use approaches which overlap with, or are adapted from, development approaches. By applying different approaches in different situations, ECHO is, in most cases, being true to its context-specific, needs-driven principles while operating within its mandate.

85. Furthermore, many ECHO-funded projects already include approaches such as capacity building, community training, establishing water management committees, liaising with local government, all of which are aimed at improving sustainability. Outside ECHO there are a growing number of examples of excellent initiatives aimed at integrating developmental and traditional humanitarian water and sanitation tools and approaches[1].

86. There now is significant evidence to suggest that the duration, or sustainability, of physical infrastructure is closely associated with the quality of the software aspects (e.g. management capacity, financing, adequate O&M, external support mechanisms etc.)[2]. The additional resources required to address such software issues are often a fraction of the cost of the water and sanitation "hardware" and negligible when considering the potential value of the benefits which could accrue to the end users of a project which as a result may last for many more years. There is also considerable overlap between addressing issues related to sustainability and addressing ECHO's cross-cutting issues. Increased involvement and consultation with women, for example, is desirable in its own right but can also considerably improve the sustainability of a project, which can in turn affect the level of self-sufficiency achieved following a crisis.

87. Perhaps most importantly, in many chronic situations a short-term project focussing only on immediate needs can easily do a disservice to the local population in the longer term. In some cases, short-term interventions can even undermine internal coping capacities, worsen environmental conditions or cause conflict, exacerbating the effects of a short-term crisis.

[1] A good practical example of adapting a development approach is IFRC's efforts to adapt the Participatory Hygiene and Sanitation Transformation (PHAST) methodology to the humanitarian context ("PHASTer"). The Environmental Health Project has also developed an integrated approach to water supply, sanitation and hygiene promotion that has been proven to be practical under emergency conditions; see www.phishare.org/documents/EnvironmentalHealthProject/2113/

[2] Harvey, P. and Reed, B. Rural Water Supply in Africa: Building Blocks for Handpump Sustainability, WEDC, 2004; Lockwood H., "Institutional Support Mechanisms for Community-managed Rural Water Supply and Sanitation Systems in Latin America". EHP Strategic Report no. 6. Environmental Health Project, January 2001; Schouten, T. and Moriarty P. Community Water, Community Management: From System to Service in Rural Areas IRC International Water and Sanitation Centre; ITDG Publications, 2003.

5 Design and Selection of Water and Sanitation Interventions

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88. Ultimately, addressing immediate needs without due recognition of the longer-term context can make it much harder for development-oriented organisations to engage in a given situation when conditions eventually improve. Such approaches could be implemented within the one one-year project cycle, and should not detract from ECHO's overall ability to respond rapidly to more acute emergencies, in other regions or countries. As one of ECHO's most experienced NGO emergency watsan providers has boldly stated "*it would seem irresponsible to implement systems and ignore the potential that these systems have to improve the quality of life for people beyond the crisis period.*"[1] Even with a limited time period of one year, the foundations of sustainable projects can still be laid, based on good assessments, participation and the careful design of interventions.

[1] **Sustainable Water Supply and Community Management in Emergencies: Briefing Document Draft, Oxfam 2005.**

6. Categorising Emergency Water and Sanitation Interventions

89. Although it may not be possible, or even desirable, to limit the potential interventions for different relief scenarios, there are **common characteristics** which can be helpful in the categorisation of water and sanitation approaches and interventions. Among the main considerations influencing the approaches to service delivery are the following:

▲ The **nature of the crisis** – whether the crisis is an **acute** emergency, a recurring flare-up, or a **chronic** situation – will influence the **speed** of response and the **permanency** of the infrastructure required.

▲ The different **causes of a crisis** can impact on a population in very different ways. For example, flooding can lead to contaminated water supplies as well as physical damage to infrastructure, whereas droughts often reduce, or deny completely, access to safe water supplies[1].

▲ The **level of displacement** of the affected population, as well as the likely duration of the displacement (even though this may be unknown) will also influence the permanency of the infrastructure required.

▲ The **setting** can be an important distinguishing feature; interventions in **rural areas**, tend to have smaller-scale, more decentralised water systems than in **urban centres** which have much greater population densities and generally more centralised management systems.

▲ The **dynamic** of a situation can also be a key determinant of the type of intervention. Emergencies are not static and very often move from one **stage of a crisis** to another; acute emergencies stabilise or turn into chronic situations before being resolved, and many chronic situations have localised flare-ups which may require immediate responses.

90. No theoretical framework can capture all possible scenarios, but considering the above factors ECHO considers that the most useful and practical way of classifying water and sanitation interventions is to establish **categories under which similar approaches are used**. Along these lines, there are two broad humanitarian situational categories:
▲ **ACUTE EMERGENCIES**; and
▲ **CHRONIC** or **PROTRACTED EMERGENCIES**.

[1] **WHO, Environmental Health in Emergencies and Disasters: A Practical Guide., 2002.**

6. Categorising Emergency Water and Sanitation Interventions

91. These two categories, which are also the two main categories defined under ECHO's mandate, can be further divided into three **sub-categories** based on the cause, or nature, of the crisis:
    ▲ Natural disasters; (both rapid onset events, such as flash flooding, tsunami and earthquakes, as well as slow onset events such as drought)
    ▲ Man-made or conflict-induced disasters; and
    ▲ Disasters resulting in population displacement.

92. It is important to stress that none of these categories are mutually exclusive, and there is clear overlap between them; as crises evolve or retreat they can move from one category to another. ECHO considers two additional situations which deserve special consideration; one is the **post-acute emergency phase** which naturally follows on from acute emergencies and when short-term solutions are often not sufficient to address the needs of affected populations (this phase is also sometimes referred to as the *recovery and rehabilitation* phase). The second is in situations which warrant **emergency** or **disaster preparedness** activities, which relate most closely to recurring natural disasters.

93. The principle objectives and key issues for each of the main categories are presented in Annex 2. The detailed water, sanitation and hygiene interventions that are likely to be considered under these scenarios are addressed in much more detail in the *Model Guidelines*.

7. Conclusions

C.1 Improved access to safe water, adequate sanitation and improved hygiene practices are of fundamental importance to public health, especially that of children, in emergency situations. Watsan interventions are important multipliers of humanitarian aid, easing the way for other humanitarian needs, such as shelter and nutrition, to be addressed more effectively. ECHO fulfils an extremely valuable role in funding water supply, sanitation and hygiene interventions, both in acute emergencies and chronic situations.

C.2 Combining sanitation and hygiene interventions with water supply can result in a much greater impact on the health status of the population than implementing any of these interventions in isolation. Focussing on a limited number of *high-risk behaviours* is one of the most effective ways to break disease transmission routes, reduce the risk of outbreaks, and reduce morbidity and mortality rates.

C.3 Participation of the affected population, including during acute emergencies, is an important factor in determining the overall quality and appropriateness of the water and sanitation services delivered. Responses which focus primarily on technological solutions, without taking into consideration local priorities and preferences, can often deliver poor results.

C.4 There are no standard solutions in the water and sanitation sector; each intervention must be tailored-made based on the nature of the crisis and the local context. While guidelines can assist in decision-making there is no substitute for the judgement of experienced professionals.

C.5 However, the characteristics of responses for water supply, sanitation and hygiene can be broadly classified into two main categories: **acute emergencies** and **chronic situations**. For each broad category of approach there are tradeoffs between the quality of service, the number of people served, the speed of the response and the costs.

C.6 Sustainability of water and sanitation facilities is not the primary objective of ECHO. However, in many post-acute emergency and chronic situations ECHO has a duty to find ways of ensuring that infrastructure lasts as long as possible, and does not negatively impact on future developmental efforts. This may mean accepting higher costs for better quality interventions, thereby contributing to enhanced sustainability.

7. Conclusions

C.7 Emergency water and sanitation projects which take into account long-term issues at *the early stages* of an intervention can smooth the transition to rehabilitation and development; relief projects which do not consider longer-term interventions can often undermine this transition and negatively affect local coping capacity.

C.8 The Sphere Standards are widely accepted, and to a lesser extent applied, by the global humanitarian aid community as *the* benchmark standards for water and sanitation in emergencies. There is continued lack of clarity concerning the flexible application of Sphere in practice.

C.9 Projects that successfully integrate ECHO's strategic priorities and address the full range of cross-cutting issues require greater implementation resources and a higher level of competence and experience from field staff and managers.

C.10 Unit cost information can be a useful tool for local application and as a guideline, but can be misleading if not kept up-to-date or if used outside the region for which they were designed. It is relatively costly to establish and maintain a useful database of unit costs.

C.11 Apart from the support provided by ECHO for chronic emergencies, most EC funding instruments are unresponsive and inappropriate for LRRD. There are often few opportunities for ECHO partners to secure funding from other donors, especially in "forgotten crises". These funding gaps can jeopardise efforts to link relief with development for water and sanitation projects.

C.12 Disaster preparedness measures for water, sanitation and hygiene can represent cost-effective investments in mitigating the impacts of future disasters. However, mainstream ECHO funding mechanisms are not suitable for effective water and sanitation disaster preparedness operations, especially in drought prone areas.

8. Recommendations

R.1   Within the context of its needs-based approach, ECHO will continue to prioritise funding of water, sanitation and hygiene improvement interventions, for both acute and chronic emergencies. The implications of climate change, environmental concerns and water scarcity, together with the ever increasing dangers of water related conflicts, will also be taken into consideration when making these decisions.

R.2   ECHO considers that water supply projects should normally be integrated with sanitation and hygiene promotion interventions, whether completed under the same project or not. The "software" aspects of ECHO-funded projects, particularly hygiene promotion programmes, will be given a high priority where appropriate and with commensurate levels of financial resources.   ECHO-funded hygiene and sanitation interventions place a high priority on locally assessed risks, bearing in mind the three hygiene behaviours which have the most impact on health: i) hand washing at critical times, ii) safe disposal of human faeces; and iii) safe collection and storage of water.

R.3   ECHO takes the view that emergency response interventions should be driven by people-centred approaches, in addition to the selection of appropriate technologies and designs. The participation and input of the affected population, especially women and vulnerable groups, is mandatory for any ECHO-funded water and sanitation project, although ECHO recognises that the level of such participation will vary according to the type of emergency and specific context.

R.4   ECHO considers that the design of every water and sanitation response should be informed by locally collected data and qualitative information on the needs, priorities and local capacities of the affected population; wherever possible this information should be disaggregated by gender.

R.5   In general terms in **acute emergencies** ECHO places a priority on the speed and quality of the response; in many cases temporary facilities will be necessary and costs may be higher. In **chronic situations** ECHO places a priority on cost-effectiveness, the quality of response and seeks more durable solutions, based on a greater level of participation, laying the groundwork for long-term developmental efforts.

R.6   ECHO recognises that approaches required in post-acute emergency and chronic situations are different from those required in acute emergencies. In the former two cases, ECHO encourages partners to adapt development-type approaches to fit the one-year project cycle in order to address sustainability and links with developmental efforts.

8. Recommendations

R.7   Wherever feasible, all ECHO-funded water and sanitation interventions will place a high priority on addressing long-term issues as soon as possible, including those concerning management capacity, financing of operation and maintenance costs, local standards and norms and linkages with external support mechanisms.

R.8   ECHO fully endorses the Sphere Standards in principle and considers them as a universally recognised set of benchmarks. However, ECHO considers that they must always be applied flexibly in practice, and that partners must take into consideration context, local norms and standards. It should *not be mandatory* for an ECHO-funded project to meet these standards, as there are clearly situations where this is not feasible. In such cases, ECHO expects project indicators to be adapted based on the local context, competing humanitarian needs, and the cost of achieving a certain level of service.

R.9   ECHO places a high priority on the competency and skills of its implementing partner staff and expects that partners will seek to continuously upgrade expertise and to improve the retention of senior staff in particular. ECHO will consider sharing some of the investment costs in further developing a cadre of sector professionals experienced in emergency water and sanitation, including the provision of technical sector support through its regional support offices and support for training initiatives where appropriate and feasible.

R.10 ECHO considers that unit cost information should be used with caution. Cost per beneficiary figures should only be used in a flexible way and as a relative indicator, to compare costs of similar projects over time, or compare the costs of similar projects implemented by different agencies in the same geographic and operating environments.

R.11 ECHO will strive to work more closely with other EC Directorates to develop practical, appropriate and institutionalised funding instruments to enable their partners to put into practice the policies of LRRD. ECHO considers LRRD to be a continuous process, and endorses an *operational approach* by striving, as far as possible, for higher levels of self-sufficiency following its project interventions.

R.12 ECHO continues to place a priority on support to sector-specific *disaster preparedness* interventions for water supply, sanitation and hygiene promotion. ECHO strongly believes that *mitigation measures* to better protect physical infrastructure should be incorporated in all phases of a response wherever possible.

Annex 1 Standards and Indicators

Introduction

Terminology

Introduction

The UN, Red Cross and major NGOs have established a number of benchmarks, indicators and best practice guidelines for water and sanitation activities. The purpose of this annex is to analyse the standards that exist and determine their suitability and pertinence for potential use by ECHO, given the needs-based and context-driven approaches that form the basis of its mandate. This annex is also intended to clarify terminology and perceptions around the appropriate and effective use of standards and indicators for water, sanitation and hygiene promotion.

Terminology

Historically, the English-language word standard has emerged from two distinct origins and there is still considerable ambiguity as to how the concept of standards is understood. A scientific origin has led to an understanding that a standard is a unit of measure. For example, household electricity is provided at 220 volts in Europe, and it is possible to measure quantitatively in any house if electricity provided has met this standard. At the same time, debate on health care in Europe often revolves around standards, although this is as much about whether patients feel they are respected and listened to as it is about quantitative measures such as waiting times. Much contemporary dialogue about humanitarian work uses the word "standards", although the word "benchmark" probably more accurately expresses the intent of these discussions.

In addition, there is a difference between "standards" and "standardisation". Standardisation implies that the same template is used in every context. Water and sanitation infrastructure and equipment are usually "standardised" on certain technical measures such as pipe diameters. In some instances standardisation provides advantages such as enabling pipes made by different manufactures or in different places to work together in the same water system. However, in other instances standardisation is inappropriate. For example, different people need to drink different volumes of water during the day, depending on physiology, levels of activity, and climate. It would be unwise to attempt to standardise how much water everyone requires. Given the fact that every disaster context is different, it is equally inappropriate to attempt to standardise humanitarian assistance projects.

ECHO understands that standards are tools for humanitarian work that should be applied flexibly according to context. This guide will therefore promote an understanding of standards as flexible reference points rather than narrow or prescriptive measurements. This guide will not promote standardisation.

Annex 1 Standards and Indicators

An overview of indicators
Overview of standards

An overview of indicators

Indicators are signs or signals that are used to illustrate direction, or describe and measure progress toward a goal. In the context of standards, indicators are often used to measure whether a standard has been attained or not. Indicators can be qualitative or quantitative. Qualitative indicators are more subjective and descriptive, whereas quantitative indicators can be more precisely measured. Indicators can also be used to illustrate process or the results of a process. For example, indicators about the extent of beneficiary participation in sanitation activities measure aspects of a process, whereas indicators about numbers of latrines constructed measure the results of that process. Note in this example the extent of beneficiary participation will most likely be a qualitative description, whereas numbers of latrines will be a quantitative one. Other indicators might describe further the qualitative aspects of the latrines, such as the strength of materials used in its construction, location, ease of use, or even sustainability issues such as environmental impact or ownership by the household.

Indicators therefore are used at multiple levels to help monitor or evaluate progress towards goals. These levels correspond to the 'results hierarchy' found in any humanitarian project. Input indicators are used to illustrate how resources are provided for a project. Activity indicators describe the work that is implemented and the processes used. Output indicators describe the immediate results of those activities. Outcome indicators and impact indicators describe the longer-term results that are achieved when the outputs are delivered.

Overview of standards

Clearly there are different ways to interpret the meaning of standards and indicators. In addition, there will be different sets of standards that are relevant to a particular context. The domain of validity of a set of standards will describe the range of contexts for which the standards are designed. It is possible that domains overlap, and that it would be possible for more than one set of standards to be applicable to a particular context.

National standards:

Almost all countries will have national standards that should be referred to when designing water and sanitation interventions. These national standards will be critical when providing assistance to settled populations or in urban areas, and less critical when providing assistance in temporary settlements. Sustainability will be enhanced if the water and sanitation intervention is coherent with national standards. Many national standards will include precise quantitative technical specifications, and this is due largely to the ability of national authorities to be more specific for their particular context.

Annex 1 Standards and Indicators

Overview of standards

Standards of United Nations specialised agencies:
United Nations specialised agencies such as UNHCR, WFP or WHO have policies and procedures that could be understood as standards, although few have adopted the language and terminology of standards. Many have created standardised indicators. By definition, UN agency policies and procedures are created after a lengthy process of consultation with national governments, with the domain of validity a function of their agency mandate. For example, some degree of standards for water and sanitation can be obtained from UNHCR, WHO and PAHO. All three have created standards that are particular to their mandate, with UNHCR creating standards for refugee situations, and WHO creating standards that can be adopted by national Ministries of Health.

Non-emergency standards:
The Millennium Development Goals (UN) come from the Millennium Declaration, signed in 2000 by 189 countries which "commit the international community to an expanded vision of development, one that vigorously promotes human development as the key to sustaining social and economic progress in all countries, and recognizes the importance of creating a global partnership for development. The goals have been commonly accepted as a framework for measuring development progress"[1]. There are eight goals, each containing a number of targets, (there are 18 targets in total) and for each target a series of indicators (there are just less than 50 indicators), including those for water supply and sanitation.

Humanitarian sector standards:
ECHO is a financial donor to initiatives that are designed to improve quality and accountability in the humanitarian sector. One is called the Sphere Humanitarian Charter and Minimum Standards in Disaster Response (see **www.sphereproject.org**) which emerged in 1997. Governed by a Management Board (on which sit the Red Cross Red Crescent Movement and all major international NGO networks) and funded by over a dozen bilateral donors including ECHO, a small Secretariat facilitated a multi-year process to develop the Sphere standards. Now in its third edition, the Sphere handbook was written by committees of technical experts in the four main life-sustaining sectors (food, water, shelter and health). A substantial peer review process was adopted to ensure broad consultation on the standards which eventually reached many thousands of aid workers from over 400 organisations (including ECHO), working in 80 countries and achieved widespread consensus.

Another ECHO funded effort is called the Quality COMPAS (see **www.urd.org**) which is not described as a set of standards but rather as a set of questions to guide self-reflection on a humanitarian project. Developed by the NGO Groupe URD, the method is built around a quality assurance reference system called the "Compass Rose" that is composed

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[1] **www.worldbank.org**

Annex 1 Standards and Indicators

Overview of standards
Analysis of the Sphere standards and their pertinence to ECHO

of twelve criteria that are "centred on the crisis-affected populations and their environment". For project management, these twelve quality criteria have been subdivided into key questions to help aid workers and their agencies reflect upon critical points in the project cycle.

Comparing and contrasting different sets of standards:
The application of emergency standards in non-emergency settings is not well studied (nor is the reverse). There is little substantive difference between the Sphere standards and corresponding policies or standards from the UN. In fact, rationales from WHO were used to justify Sphere's basic human needs standards such as levels of water consumption. There are a few cases where UN standards differ from Sphere, but these are rare and usually with good justification. For example, the UNHCR indicator for water points is 250m from the dwelling (whereas the Sphere Key Indicator is 500m) because most refugee camp environments are congested and this standard is more appropriate for their typical operating context.

The Quality COMPAS can be used alongside the Sphere Minimum Standards, and in fact many of the Minimum Standards and COMPAS criteria are the same. Both systems provide sets of questions for agency reflection, although the Sphere Minimum Standards are significantly more detailed at a technical level. The Quality COMPAS more strongly emphasises wider project impact, such as anticipating and alleviating negative impacts of humanitarian projects, maximising positive impacts, integrating the project into its environment in an optimal manner, as well as its emphasis on optimising resources and learning from experience.

Analysis of the Sphere standards and their pertinence to ECHO
Invariably ECHO partners will be familiar with the Sphere Humanitarian Charter and Minimum Standards in Disaster response, and most actively support their promulgation and use. As a multilateral donor agency with a global mandate, it is relevant for ECHO that the Sphere standards were designed to be universally applicable.

Difference between the Sphere Minimum Standards and Key Indicators, however, is often misunderstood and a common source of confusion. For example, many believe that the Sphere standard for water is 15 litres per person per day (pppd). In fact, it is not. 15 litres pppd is simply one of the five Key Indicators for that particular Minimum Standard which reads: "All people have safe and equitable access to a sufficient quantity of water for drinking, cooking and personal and domestic hygiene…"

Annex 1 Standards and Indicators

Analysis of the Sphere standards and their pertinence to ECHO

The <u>Minimum Standards</u> are meant to be universal – that is, they would apply to a refugee camp in Africa as well as to a city in Europe.   The qualitative nature of the standards makes them relatively indisputable, although it should be recognised that their realisation suggests very different things in different parts of the world.   The <u>Key Indicators</u> are the tools in the realisation of the Minimum Standards, and they help measure whether the standards have been reached. There is therefore a clear difference between standards and indicators. In the Sphere handbook <u>guidance notes</u> are provided to help the practitioner adjust indicators to the local context.

Reconciling a needs-based approach with human rights:
ECHO is concerned to keep a field-driven perspective and needs-based approach to its response to humanitarian crisis situations. Some view the Sphere standards as purely a rights-based instrument.   Yet the Sphere Humanitarian Charter is founded on international legal instruments and humanitarian principles, central to which is the concept of preserving human dignity. These are the same humanitarian principles and law to which ECHO unambiguously subscribes. Clearly, human dignity is consistent with ECHO's mandate[1]. The Minimum Standards cannot be considered legal rights per se, but can be viewed as consistent with international legal instruments that apply in times of disaster.

However, many of the Key Indicators have been developed using a combination of needs-based and "best-practice" approaches. For example, the amount of water pppd has been set at a rate which is needed in order to avoid disease outbreaks. This is not a random figure, but it is based on qualitative research[2]. It indicates that if people consume less than 15 litres pppd for any length of time it will significantly increase the risk of disease outbreaks and other public health problems.

Other Key indicators, as well as the Common Process Minimum Standards, are less conducive to scientific justification, so a best practice approach was used in their creation. An example is the process Standard of participation.   Experienced humanitarian professionals, based on their shared lessons and cumulative experience, have agreed that this is a fundamental process which is *needed* in order to provide effective relief. The standard and indicator for participation is therefore needs-based and wholly consistent with ECHO's needs based philosophy.

Adapting the Sphere standards in different contexts:
Some agencies have taken the Sphere approach to mean that these standards must be reached immediately and at all costs. An example would be an agency refusing to assist a group of disaster affected people because they would be unable to attain the key indicator. The extreme case of this is that an agency with resources only sufficient for half

[1] This is noted, for example, in the ECHO strategy 2005 which reinforces "the need to preserve the dignity of populations in extreme humanitarian situations".
[2] For example see World Health Organisations, Domestic Quantity, Service, Level and Health, 2003.

Annex 1 Standards and Indicators

Analysis of the Sphere standards and their pertinence to ECHO

a refugee camp provides 15 litres per person per day to half the population in order to reach the indicator, instead of supplying half that amount for the entire population. These examples are in breach of the humanitarian imperative principle, and would not be consistent with the Sphere standards. When there are insufficient resources, the relevant key indicators should be adjusted accordingly. When this happens, it is imperative that a transparent explanation be provided for the gap between the original and the adjusted indicator based on an assessment of need and available resources.

The Minimum Standards can be applied in both acute and chronic contexts. In <u>acute crises</u>, the time to attain the minimum standards will depend on the resources available. It may take months before the Minimum Standards are met, and this itself will depend on how the indicators are adjusted to the context. The Sphere handbook introduction states: "The timeframe in which the handbook is used depends largely on the context. It may take days, weeks or even months before agencies are able to achieve the Minimum Standards and indicators specified in a particular sector."

In <u>chronic crises</u>, obviously more time is available to meet the Minimum Standards, but the potential for unintended negative consequences of the application of standards is greater, and it may be advisable to adjust indicators accordingly. The timeframe in which the standards are to be reached is also highly context-specific. Moreover, it may be dependent on factors external to the implementing agency, such as funding restrictions or access problems.

In <u>temporary human settlements</u>, such as IDP camps, the Minimum Standards can be applied. It is important to consider the host populations and it may be necessary to adjust indicators to avoid major discrepancies between the IDPs in camps and host populations. When a camp is first created however, people may be sick and weak from being displaced from their homes, and it may be necessary to provide higher levels of assistance in order to restore their health. Regardless of the condition of the camp based population it would be important to avoid negative impacts on the host population.

In contexts where displaced people are located with host families, the standards are relevant, although an analysis of the capacities of the host population is required before deciding upon how to adjust the indicators.

The standards are relevant to <u>urban and rural environments</u>, although in urban environments more consideration will have to be given to infrastructure and existing service provision than that which is presented in the Sphere handbook.

Annex 1 Standards and Indicators

Analysis of the Sphere standards and their pertinence to ECHO

The standards are "minimum" and can be exceeded. This could be the situation in middle-income countries or in some urban environments where the affected population enjoyed services which exceeded the Minimum Standards before the disaster event or conflict situation. If this is the case, the indicators should be adjusted accordingly. In this instance, prior to adjusting the indicators, national standards should be consulted.

As with chronic contexts, the Sphere standards can be applied in post-conflict environments and other transitional situations. Targeting criteria may differ from those identified in the common process standards. Moreover, particular programmatic strategies such as capacity building or institutional strengthening would need to be carefully considered. The Sphere standards will be more relevant to disaster response situations, and some indicators may not be appropriate.

In conclusion, the key to maximising the potential of the Sphere standards, and minimising their limitations, is in applying them appropriately. The Sphere standards are designed to be flexible. They must be used appropriately for the context. Consequently their application requires judgement. Comprehensive guidance notes are included in the Sphere Handbook to aid the adjustment of the Key Indicators to the local context and to account for national standards. The *ECHO Model Guidelines* also provide more specific details about adjusting water and sanitation sector standards.

Annex 2 Summary of Approaches to Emergency Water and Sanitation Interventions

A2.1   Acute Emergencies

A2.1   Acute Emergencies

The **main objective** in acute emergency scenarios is to save and preserve lives during a crisis and in the immediate aftermath. The approach should focus on a quick response which may involve the construction of temporary facilities. Although cost is a concern, timeliness of interventions is of primary importance, where these are typically required in days and weeks.

Priority interventions in acute emergencies:

▲   *Water* - in an acute emergency, water supply interventions should focus on provision of a *reasonably clean* water supply, in *sufficient quantities* in the *fastest possible time*. If water supply is limited then it may be necessary for people to use an untreated water source for laundry and bathing. If may also be necessary to ration water to ensure that basic needs are met (at least 7 litres per person per day).

Water should be disinfected if necessary to ensure that residual disinfection capacity is sufficient to reduce the likelihood of disease. Disinfection is best carried out at the level of the water supply system, rather than at the point of use. Water supply improvements should be made as quickly as possible, so that a minimum of 15 litres per person per day is provided. Physical access to water supplies should be such to ensure equity of supply to all groups[1].

▲   *Environmental Sanitation* – immediate and safe excreta disposal is the key aim; temporary communal toilets or defecation fields should be constructed, and include dedicated handwashing facilities. Priority should be given to protecting drinking water sources from possible contamination from human excreta. Measures should be taken to manage solid waste disposal either through burial or burning and vector control measures should seek to limit the transmission of diseases.

▲   *Hygiene Promotion* - hygiene messages should focus on those immediate interventions most likely to reduce the risk of disease outbreaks, increasing resilience and mitigating the impacts of the crisis on the health status of the population. Hygiene promotion during an acute emergency should focus on a limited number of the most important interventions (i.e. hand washing and the safe disposal of excreta).

[1] **WHO, Environmental Health in Emergencies and Disasters: A Practical Guide., 2002.**

Annex 2 Summary of Approaches to Emergency Water and Sanitation Interventions

A2.1 Acute Emergencies

Priority approaches in acute emergencies:

▲ Response to acute emergencies will often require **temporary water and sanitation infrastructure**, until more permanent solutions can be found, either constructed locally or flown in and erected immediately using pre-fabricated or modular materials.

▲ Areas hit by fast onset natural disasters or sudden conflict are also likely to be areas which have poor water and sanitation infrastructure in the first place, so the needs are often far greater than the combined efforts of aid agencies ability to respond. In these cases careful **targeting** of water and sanitation resources to the most affected areas is crucial.

▲ While **participation of beneficiaries** is always to be encouraged, there may be less opportunity to fully engage affected populations due to the requirement for speed of response.

▲ Initial **assessments** and data collection should provide the basis for delivering any immediate assistance and also identify areas on which a more detailed assessment should focus[1].

Important considerations in acute emergencies:

▲ Women and girl children can become more vulnerable to abuse during and immediately after an acute event, especially when affected populations are forced into shelters or camps; therefore protection issues, such as **privacy and security** must be carefully considered in any water and sanitation intervention (e.g. decisions about location of facilities).

▲ Because of the requirement for rapid intervention, the **technology** selection or design may be different, or higher than, locally recognised norms and standards.

▲ Likewise, where an acute emergency results in **displaced populations** the water and sanitation services may initially need to be of a higher standard than that of the local host population to offset the increased risk of disease outbreaks associated with high density and mobile populations.

▲ It is important to ensure that drinking water provided in emergencies is **acceptable** to the consumers, or they may resort to water from unprotected or untreated sources. **Vessels** that are hygienic and appropriate to local needs and habits are needed for the collection and storage of water to be used for washing, cooking and bathing[2].

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[1] **Sphere Handbook.**
[2] **WHO, Guidelines for Drinking Water Quality, 3rd Edition, 2005.**

Annex 2 Summary of Approaches to Emergency Water and Sanitation Interventions

A2.2   Post-acute Emergency Phase

A2.3   Chronic Situations

A2.2   Post-acute Emergency Phase

The "critical" phase of an acute emergency which requires fast, often temporary, solutions is very often quite short, usually a matter of weeks or even days. This initial period quickly evolves into a more stable phase requiring more permanent and durable interventions. Even situations involving displaced populations can easily turn into protracted situations, requiring a level of care and maintenance which goes beyond the provision of temporary facilities.

In post-acute scenarios, such as the period following the devastating earthquake in Bam in 2003, or the Asian Tsunami in 2004, many aspects of water and sanitation interventions and approaches share characteristics common to those of **chronic situations**.

A2.3   Chronic Situations

The **main objectives** in chronic situations are to identify and respond to acute needs, prevent the impact of crises from worsening, carry-out short-term rehabilitation work, assist those most affected to regain a certain degree of self-sufficiency, and ultimately lay the basis for development efforts.

Priority interventions in chronic situations:

▲   *Water* - water supply interventions should be planned and designed to be more permanent in nature than in acute scenarios. Water supply should focus on the provision of a *safe* water supply, in *sufficient quantities* to meet the needs of the affected population. If water supply is limited then it may be necessary for people to use an untreated water source for laundry and bathing. Disinfection or treatment of water may be done on a system or household (point of use) basis depending on the context. Priority should be given to appropriate, affordable technologies which have low operation and maintenance requirements. Rehabilitation of existing infrastructure should always be considered prior to building new infrastructure. Consideration should be given to competing demands for domestic water supply, especially from local livestock, agricultural or industrial users.

▲   *Environmental Sanitation* – excreta disposal systems should be more durable, normally based on household level facilities and appropriate to the local area; users should provide the bulk of the contribution towards construction. Sanitation solutions should be designed to have an impact beyond the immediate crisis, and prevent further emergencies from occurring (i.e. by helping to reduce the incidence of transmissible diseases). For interventions serving static populations, due care and consideration must be given to the final location and processes for disposal of excreta (e.g. emptying of latrines).

Annex 2 Summary of Approaches to Emergency Water and Sanitation Interventions

A2.3   Chronic Situations

▲   *Hygiene Promotion* - hygiene messages should be focused with the objective of achieving *long-term behaviour change* in key areas known to reduce the risk of disease transmission (i.e. hand-washing, safe excreta disposal and safe handling and storage of water). Efforts should be made to increase long-term capacity for sustained behaviour change at all levels; i.e. community mobilisation, social marketing, training of health workers, etc.

Priority approaches in chronic situations:

▲   The focus in chronic emergencies should be on projects which are **appropriate, cost-effective** and where possible, lay the basis for long-term, **sustainable** service delivery. Particular focus should be given to vulnerable groups. Management systems in rural areas should be community-based, but wherever possible linked with local institutions for back-up support. Local standards and norms should be considered.

▲   Community **participation** is a key ingredient in the delivery of appropriate and sustainable water and sanitation services; wherever possible vulnerable groups within the community should be represented to ensure their needs are being met.

▲   Chronic emergencies, which include recurring natural disaster events such as annual flooding, cyclones or prolonged drought, can be effectively addressed by pre-crisis, **disaster preparedness** interventions (see A2.4 over page).

▲   With greater opportunity for participation, beneficiaries can take on a greater share of costs under chronic emergency scenarios; there is therefore increased scope for **cost-sharing**; wherever possible, household-level **subsidies** should be avoided (i.e. for latrine construction or purchase of hand-washing agents).

Important considerations in chronic situations:

▲   Man-made or conflict-induced crises are potentially the most common example of the situation ECHO funds (i.e. complex humanitarian emergencies such as DRC, Sudan, Liberia, Burundi, Columbia, Palestinian Territories etc.). These chronic emergencies closely overlap with situations resulting from structural weaknesses, such as poor governance and failed states. Interventions in this category are dynamic and often move quickly to and from acute situations if, for example, security deteriorates or there is an outbreak of a water-borne disease.

▲   Many chronic emergencies involve the protracted displacement of populations over many years or even decades in IDP or refugee camps. In such cases, temporary water and sanitation solutions are no longer appropriate and wherever possible, interventions should be based on existing systems, technologies and capacities and service levels should be commensurate with the normal levels to be found in the local area or region; technical standards should comply with national norms.

Annex 2 Summary of Approaches to Emergency Water and Sanitation Interventions

A2.4   Disaster Preparedness

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A2.4   Disaster Preparedness

The **main objectives** for interventions in support of disaster preparedness are to mitigate the impacts of a (recurrent) disaster event on access to adequate levels of water and sanitation service, and to reduce the likelihood of increased incidence of water and excreta-related disease, both during and following the disaster itself. Mitigation measures should be considered both as elements of a disaster preparedness programme and in the course of responding to an emergency, specifically in the post-emergency phase.

Priority interventions for disaster preparedness:
The range of planned interventions will be determined by the nature of the likely disaster event (e.g. flooding, hurricanes, drought etc.); however in broad terms the following priorities apply:

▲   *Water* – interventions should focus on increasing the capacity to store, treat and safely distribute adequate quantities of safe water during and following disaster events. This may require household level storage and treatment, and/or the provision of disaster-resistant communal facilities (e.g. handpumps installed on raised platforms against flooding, construction of sub-surface collection chambers in drought prone areas, or the provision of coagulant and disinfectant agents at key periods in the year). Further examples of mitigation measures include the siting of water supply system components, protection works and construction quality.

▲   *Environmental sanitation* – focussing on systems that allow for safe excreta storage and/or disposal during and following an event, including construction and maintenance of communal latrines where (socially and culturally) appropriate. Mitigation measures for sanitation infrastructure focus on the safe siting of facilities, and lining or raising of latrine pits.

▲   *Hygiene promotion* - hygiene messages and capacity-building for recurrent events should focus on those immediate interventions most likely to reduce the risk of disease outbreaks, especially where it is anticipated that population displacement may result in temporary, high-density shelter scenarios. Preparedness measures can also be developed for drought situations.

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