

Hope for the best



Halabja Memorial, Iraqi Kurdistan

Prepare for the worst

How humanitarian organisations can organise to respond to
weapons of mass destruction

Programme for Evidence-based Humanitarian Aid

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The possibility that the world will face the terrible need to assist victims of biological or chemical weapons looms larger in this New Year than at any time in the recent past, and humanitarian organisations have begun to examine, with increasing unease, their own practical capacity to respond.^{1,2,3}

Bound by the humanitarian imperative, humanitarian organisations are required to take “all possible steps...to prevent or alleviate suffering arising out of conflict or calamity”, and act with sufficient independence to ensure that the humanitarian principle of impartiality – assistance solely on the basis of need – is fulfilled.⁴ To achieve this in ‘normal’ disasters can be difficult enough; to do it in a highly militarized context where accurate information and specialised knowledge are critical, and where assessing need may well involve uncommon risk, will require ingenuity, bravery and, most importantly, preparation.

Many NGOs are experienced in receiving and providing services to large and sudden numbers of displaced. But just how prepared their frontline field staff are to deal with issues such as decontamination, hazard control, quarantine and barrier nursing, even with diagnosis of the clinical signs of an weaponised agent, is an alarming question. Few health workers have ever seen a case of anthrax or pneumonic plague, yet early recognition of it may be critical to the chance of stemming mass infection. The same goes for many of the clinical consequences of the most accepted weapon candidates.

Gathering together the right combination of human resources to cope with the potential mass anxiety of victims, who may not know whether they have been exposed or not, will also be a major challenge for humanitarian organisations, while lack of preparation in terms of the professional and public information needed to manage this fear, both among the fleeing and within host communities, could paralyse an assistance effort at a critical moment for care and containment.

Critical window for preparation

Humanitarian commentators have also been looking with alarm at how un-inclusive planning for current concerns with Iraq has been by UN agencies, which might be expected to lead humanitarian activity in the field.⁵ Although contingency planning has been taking place in Geneva and New York for some months, it has been discrete and *in camera* for fear of suggesting lack of confidence in the arms inspection process. But a critical window for creating what may be life-saving preparedness among all parties is being lost.

Another major concern is how humanitarian workers themselves are to be protected, whether they are assessing need at or near an attack site, or providing care and assistance to people fleeing from suspected areas of contamination.

On top of all this, a strike or an accidental release of a weapon of mass destruction (WMD^a) could involve humanitarian, military and political actors having to work more closely than they have ever done before – not least because currently most of the specialist knowledge and capacity needed to respond to such an emergency resides outside the humanitarian community. But the ability of humanitarians to reach all those needing assistance, and to be allowed to do so by all factions, relies on the fundamental humanitarian principles of neutrality and impartiality, and this proximity will create critical ethical dilemmas if positions are not thought through carefully in advance.

So, in the worst case scenario, what options do agencies have in the face of weapons of mass destruction? Is it feasible, for example, for humanitarian organisations to assess, independently, the risk of entering an area, or of receiving the potentially contaminated? Is it possible to carry out assistance activities independently? What preparations can be made? This paper aims to introduce a practical slant to what has so far been largely a philosophical debate by helping humanitarian organisations quantify some of the risks and potentials for action and to suggest some immediate and feasible actions to raise preparedness. It also hopes to help agencies clarify ethical and practical positions both among the humanitarian community and with regard to other actors.

Three scenarios

Three scenarios appear most relevant to NGO response after the belligerent use of chemical, biological or nuclear weapons, or 'accidental' release through military strikes on stores or production plants. Firstly, organisations may want to respond to the humanitarian imperative of helping exposed populations at the actual site of a WMD attack. Secondly, they may be called on to reach populations who have not been exposed, the route to whom leads through potentially contaminated areas. And thirdly, and perhaps most likely, they may want to assist fleeing populations who may or may not have been exposed to WMD.^b

Each scenario raises individual questions, which can be grouped into three key technical issues:

- Risk assessment: how can humanitarian organisations know when it is 'safe' to enter an area?
- Protection: how can humanitarian organisations decrease the risk of contamination for their staff and offer effective assistance to exposed and unexposed populations?
- Preparation to assist: what can reasonably be done now to prepare for action?

^a In this paper the term 'weapon of mass destruction' has been used to denote a chemical, biological or nuclear weapon. However, while several of the recommendations have value for all three scenarios, we have focussed more on attacks or accidental release of chemical and biological agents.

^b In the case of Iraq, NGOs are likely to have to provide assistance near or just inside the border since neighbouring states have indicated they will seal their borders and only offer help to fleeing Iraqis within Iraq. In this setting, it is important to remember that NGOs may also be needed to reach victims of attack in other parts of the Middle East. Randa Habib. *Iraq's neighbours prepare for war refugees*. Agence France Press; 28 November 2002.

Underlying these technical issues, however, is the critical question of how NGOs are going relate to the military forces in these very particular circumstances, given that humanitarian action relies on the fundamental principle of being, and being seen to be, impartial, that is giving assistance solely on the basis of need without discrimination and not to further any political, military or other objectives. To do this agencies cannot take, or appear to take, sides in a conflict for if they do their trustworthiness will be in doubt and their access to all people in need jeopardised.⁶

The difficulties of sustaining these principles while working proximately to military forces during a conflict continue to be keenly debated, and the involvement of WMD further complicates the issue given the highly specialised knowledge needed to respond. But these principles would also be breached by receiving funds, and guidance as to where they should be spent, from donors who are also belligerent parties.

Against this background, several possible positions can be identified for individual humanitarian organisations attempting to frame a mode of response. Some NGOs may opt out of any involvement with humanitarian assistance in the crisis on the grounds that it is not possible to act independently or safely without collaborating with military and political forces, with the consequent damage to humanitarian reputation. Others may decide to accept donor money and try to build their own capacity without any collaboration with the military. Others may accept some practical collaboration with the military and belligerent donors in the hope that they will be able to fulfil their own mandate. Still other organisations will enter the arena only well after the event as guided by their donor governments.

It is unlikely that all humanitarian organisations will coalesce around one of these stances. But it is critical that agencies do take a stance, both as individual organisations and subsequently in collaborative communities, if they are to prepare themselves to respond or to justify absence. Effective action will not be possible in the face of weapons of mass destruction by individual agencies.

Risk assessment: how will we know when it's 'safe'?

To assess risk and plan subsequent action independently in any of the three scenarios, it will be necessary to know the type of agent used, how it was dispersed, the likely duration of activity in the environment, and the effect of meteorological conditions. Some agents are short acting and/or non-transmissible (eg. hydrogen cyanide gas or lysergic acid diethylamide [LSD]) meaning that areas can be safely approached relatively soon after an attack. Others are longer-acting: anthrax spores for example may remain present in soil and capable of causing infections for decades. Still others, such as VX nerve gas, may be weaponised as a 'persistent' agent, meaning that the substance remains hidden in areas such as screw holes and continues to give off gas over long periods. Finally some weaponised agents have secondary transmission

capability through disturbed dusts (eg Agent BZ), through food or atmosphere (eg. botulinum toxin, anthrax^c) or via person to person transmission (eg. smallpox or pneumonic plague).

While some advice regarding different agents is in the public domain, realistically it is unlikely that NGOs will be able to independently gather or analyse real-time information for field decisions. Instruments to detect chemical weapons are available commercially but costs are prohibitive and specialist knowledge is required to use them properly. Rapidly identifying whether a biological weapon has been used (ie. before symptoms become visible) is extremely difficult and while some equipment is available, it too is beyond the scope of humanitarian agencies.

The only tool that civilian agencies have feasibly in their hands to provide them with independent information is epidemiological surveillance of those leaving contaminated areas and eye-witness accounts. But while this makes planning of co-ordinated collection and analysis of NGO surveillance material a matter of some urgency, the information given by even a well-embedded health information system adapted to be sensitive to outcomes of weaponised agents (which don't always behave as their natural counterparts do), will not alone be sufficient, nor timely enough.

A tactical approach to the military?

Practically, then, this would seem to mean that if organisations want to respond in the first hours or days after an attack, they will have to rely on the military for specialist information on agents, which in turn would mean establishing reliable access points to military information structures.

For organisations which see this as acceptable, forging such an information channel would need a concerted approach at Ministry of Defence level now, to permit access to the next two critical military co-ordination points, the Permanent Joint Headquarters,(the strategic operational hub in the UK) and the Joint Forces headquarters in the field. Working through the military's hierarchy would increase the likelihood that information would be made available in the field and commanders would be more receptive to, for example, giving logistic support to move victims to places of assistance, or offering specialist medical expertise.

But developing this kind of information channel and contacts will not solve all problems of decision-making and, as outlined above, comes accompanied by significant ethical issues in terms of humanitarian principles.

Focussing first on the practical: even if samples are taken for testing by the military, and it is clearly possible given the penchant for air wars that the military may not be any closer to the site than NGOs themselves, results take time and decisions regarding response or protection may need to be taken without full knowledge. In addition, experience from other occasions of suspected chemical weapon strike suggests that both the military and the UN proceed with a slowness and caution in their investigations that is incompatible with humanitarian activities.^d

^c Records of an outbreak of inhalation anthrax in the USSR in 1979 showed infection of sheep and cattle 50km down-wind of the source. WHO 2002 . http://www.who.int/emc/book_2nd_edition.htm

^d Merlin, personal communication

Secondly, there may be instances, either in ongoing conflict or afterwards, when it is not in the interests of the military parties to reveal the nature of the agent/s that have been released. It may also be politically expedient for governments to describe events in such a way as to, for instance, emphasise the evil-doing of the adversary, or dissuade non-military witnesses from entering an area.

Finally, military commanders, for litigious, political and/or well-meaning reasons, may well be over-cautious and want to keep civilians at a distance for maximum safety – which may be too far to allow useful assistance. To counter this and gain access, humanitarian organisations may well need to convince the security forces that they are sufficiently apprised of and prepared for the level of risk they wish to undertake.

Weighing all these concerns, it becomes clear that, even putting ethical considerations aside, the NGO community would be well advised to try to have as little dependence on military resources as possible once any conflict begins. One possible way to achieve this would be for a donor, or group of donors, to support an NGO or representative group of NGOs, to take the lead and set up a neutral and independent assessment group to be deployed for humanitarian reasons alone with full back up. This route could bring not only significant benefits to victims, but also international respect for supporting governments for making possible humanitarian force able to function on both sides of a conflict.

If this truly neutral response capacity cannot be created, however, then some humanitarian organisations may feel themselves unable to respond to the imperative of humanitarian need, or to requests from donors to assist, either for reasons of inadequate self-protection or because of the risk to the principles of impartiality and neutrality. If this occurs, it will be crucial for NGOs to be able to explain clearly and with precision the reasons for their absence if they are not to lose public, and potentially donor, support. The humanitarian community will only be able to do this if it has fully investigated, and demanded access to, all possible means of independent protection and information.

Protection: what options to reduce risk of contamination?

As anyone recalling television footage from the Gulf War will remember, equipment is available that can potentially protect against exposure to biological or chemical agents. Similarly there has been much discussion of 'cocktails' of preventive drugs, vaccines and antidotes. But what is feasible for non-military personnel and those outside the high risk zone needs considerable review.

Individual protection

Specialist clothing and equipment such as respirators and filters are prohibitively expensive, largely single use, and require repeated specialised training for safe use – putting them beyond reach for most humanitarian organisations as individual organisations. For the reasons given above, however, it may not be unreasonable to ask governments to instruct their military forces to

provide selected humanitarian workers with appropriate training and equipment to facilitate the development of an multi-agency humanitarian assessment team. Obviously this would necessitate acceptance of a certain level of contact between NGOs and the military outside the theatre of war and on the clear understanding that the goal is to enable an independent humanitarian presence in affected areas.

That such training and equipping is possible is not in doubt. The US government is offering chemical, biological, radiological and nuclear training through the Centers for Disease Control and Prevention (CDC), and in the past, individuals from the British humanitarian community have taken part in practical exercises related to WMD response with the military.

For most humanitarian agencies, however, protecting frontline workers outside this special team with individual equipment will be out of the question. Even if donors were willing to support it, there are significant difficulties in working in protective suits: communication is difficult, performing anything beyond very simple first aid is almost impossible without extensive training, not to mention the visual effect of suits and masks on frightened patients. In addition, some conditions, notably desert environments, create physical dangers for the wearer, dangers which gain in significance if suits are being employed 'just in case' rather than as a response to known threat.

The ability to protect staff and provide assistance may be more feasible in the scenario which sees victims of the attack congregating beyond the danger zone, where it is also more likely humanitarian effort would be focused in the first instance. This is because, if organisations are well prepared, risks of exposure to biological agents can be reduced through more familiar public health measures, such as disease control, prophylaxis and treatment. There is also a greater chance of being able to create effective decontamination facilities for chemical agents. However, although decontamination for most chemical agents requires little more than a weak hypochlorite solution or soap and water, the whole process is much more complex, and issues such as personal and cultural dignity, showers, fresh clothing, and the time (15-20 minutes per person) and staff required need to be taken into account. Careful planning, and understanding, will be crucial if NGOs are to adapt their skills to this new challenge.

Prophylaxis and pre-treatment

While mass prophylaxis is not possible for potential victims, the level to which humanitarian staff can be protected to facilitate their work has to be considered. According to the World Health Organisation (WHO), "it is neither possible or necessary to prepare specifically for attack by all possible...agents... Knowledge of a representative group of agents will enable measures to be taken against virtually any other agent."⁷ WHO names 17 biological/toxin and 16 chemical agents considered to be the most likely weapon candidates.⁸ Pre-exposure vaccines for five of these (anthrax, smallpox, plague^{9e}, Venezuelan equine encephalomyelitis,¹⁰ botulism type A¹¹) and antidotes for some chemical nerve agents such as VX and sarin are 'available'. However, the term is misleading in the extent to which these could be accessed, in time, within budget and in

^e The UK Ministry of Defence says no efficacy data against pneumonic plague has been reported as yet.

sufficient quantity, and administered with safety. It is also important to note that some of these vaccines are, for example, not licensed in Britain.

All vaccines except smallpox require more than a single dose to provide adequate protection – four doses over a period of seven months for anthrax, four weeks for bubonic plague – meaning considerable advance planning is needed. It is also important to note that the level of immunity and coverage achieved varies, and massive unnatural exposure can overcome vaccine-conferred immunity.¹²

Post-exposure vaccination is only of proven value for smallpox. It is also the only form of prevention with potential benefit to exposed mass populations but must be used within a 4 day window¹³ and again will require considerable pre-planning including adequate on-site cold chain.

A number of readily available broad spectrum antibiotics can be used as pre-treatment or post exposure prophylaxis against many biological agents (including anthrax, pneumonic plague^{14f}, brucellosis, glanders, melioidosis, Q Fever, typhus fever) with minimal side effects. These are effective if started promptly and continued long enough, though the possibility of successful treatment is raised substantially if the agent is known.¹⁵ Anti-toxins where they exist, however, are experimental and can cause serious adverse reaction with repeated use carrying greater risk of reaction.¹⁶

Cocktails of concern

Pre-treatments for chemical weapons are few and can have adverse effects. Nerve agent pre-treatment sets (NAPS) containing pyridostigmine bromide tablets were found in one study, to have caused significant gastrointestinal problems in 50% of users.¹⁷ Other studies,

Agents of war

BIOLOGICAL

Bacteria

| | |
|------------|--------------|
| Anthrax | Brucellosis |
| Glanders | Melioidosis |
| Tuleraemia | Q fever |
| Plague | Typhus fever |

Fungi

Coccidioidomycosis

Viruses

Venezuelan equine encephalomyelitis
Smallpox

Toxins

Staphylococcal enterotoxins
Botulinal neurotoxins (botulism)
Fungal toxins (aflatoxins, trichothecenes)
Algal/plant toxins (saxitoxin, ricin,

CHEMICAL

Lung irritants

Phosgene
Chloropicrin
Perfluoroisbutene

Blood gases

Hydrogen cyanide
Cyanogen chloride

Vesicants

Mustard gas, Lewisite

Nerve gases

Sarin, VX

Disabling chemicals

Incapacitants: Lysergide (LSD), Agent BZ
Harassing agents: Adamsite, Agent CN, Agent CS, Agent CR, Agent OC (pepper spray)

Of the 17 biological and toxic agents listed, only four are considered to produce illness requiring isolation, and three to need barrier nursing. Decontamination is not generally needed in the aftermath of biological weapons, but is required for 10 of the 16 chemical agents listed.

Public Health response to biological and chemical weapons: WHO guidance, 2nd edition (Prepublication draft)

^f Biological Antibiotic Treatment Sets (BATS) given during the Gulf War consisted of a powerful antibiotic (doxycycline 100mg) to be taken twice daily for 5 days as a self-administered response post-attack with anthrax or plague. The UK MoD, however, subsequently described BATS only as providing "some unquantified protection in the event of exposure".

however, indicate only minor adverse effects. 'Combopen' self injectors containing atropine, pralidoxime mesylate and avizafone (which were supplied to British troops during the Gulf War) are for use only after exposure and when suffering specific symptoms, and can be dangerous if used when not indicated. Some researchers also believe pre- and post-exposure treatments, and/or interactions between 'cocktails' of vaccines given troops, are implicated in what has become known as "Gulf War Syndrome".^{18,19,20,21} However, this is vigorously refuted by others.^{22,23,24,25}

The World Health Organization recommends that personnel likely to come into contact with smallpox infected patients should be vaccinated, advice which the UK Government is following with an initiative to immunise key staff. Beyond this however, given the likelihood that threat agents will not be known, deciding to take pre-exposure prophylaxis means accepting a combination of drugs and vaccines, the long term effects of which are yet to be clearly understood.

Available options for protection, then, appear to complicate rather than clarify assessment of acceptable risk for humanitarian workers, and organisations will need to review their informed consent procedures.

Knowledge and skills

One 'safe' way to reduce risk to staff, as well as having potentially enormous benefit to victims, would be to instigate training to increase the early recognition and disease management skills of frontline health personnel for the conditions caused by WMD.

With treatment for the primary effects of chemical weapons usually needed within minutes, humanitarian workers are most likely to have to deal with secondary effects such as wounds, injuries (internal and external) infection and mental trauma. For some biological weapons, treatment can still be effective in preventing illness and controlling transmission several days after exposure. However, lack of familiarity and the potential abnormal presentation of weaponised agents raises the risk of missing critical clinical signs unless organisations prepare their clinical staff in differential diagnosis. Important elements of this training will be knowledge of early clinical signs, management protocols, disease control, sample handling, surveillance and data collection systems, techniques of barrier nursing and management of mass casualties. Ensuring staff have access to clinical protocols adapted for field situations and immediate access to appropriate drug therapies will be critical.⁹

Training staff and ensuring they have on-site access to treatment protocols were key recommendations to emerge from examination of health facility response to the 1995 sarin nerve

⁹ Common antibiotics are effective for many biological agents while chemical and toxin-based agents require therapies such as systemic antihistamines, corticosteroids, bronchodilators, sedatives, calamine and skin 'creams', anticholinergic drugs, anticonvulsants and neuroleptics. WHO's standard and supplementary emergency drug kits contain some but not all of the drugs required, and quantities are likely to be insufficient for the specific circumstances of an attack. For example, clinicians responding to the sarin gas attack in Japan needed to use up to 10 times the normal dose of atropine to save some patients.

gas attack in Tokyo,²⁶ conclusions that were confirmed after the use of a gas to end the Moscow theatre siege last year.

Although the treatment environment will be significantly different for aid workers, some of the lessons from these evaluations are valuable, including the recognition that knowledge of treatment protocols for response to chemical weapons "cannot be left to military specialists as it is the local hospitals (*or, in this case, NGO clinics*) that will be the first to receive the casualties."*(italics added)* Additionally, while military medical facilities may be able to offer some assistance, it may well be required elsewhere. It was also noted that pre-planned systems for tapping the expert knowledge of experienced toxicologists, poison information centres and chemical warfare specialists would have been of major assistance to the receiving medical facilities.

Japanese health workers had no immediate access to treatment protocols nor training in the care of casualties caused by chemical weapons, but they did have the back-up of a sophisticated hospital system with access to laboratories and a wide range of treatments. NGO staff will have only themselves and the supplies they have to hand to rely on in the first instance.

The head of one international relief organisation noted recently that "antibiotics and other antidotes are not part of the stockpiles,...but we can easily mobilise."²⁷ However, as always, the key to rapid mobilisation will be knowing exactly where stocks are, in what quantity, what authority is needed to release them, how they can be transported and how quickly, and what conditions (such as cold chain) will be needed to maintain quality. Given the likelihood that time-scales will be short, consideration could be given to pre-positioning at least some WMD-specific kits at close range. The NATO military medical units have developed such kits.

Another critical area will be the capacity to intubate and give oxygen on site. This is a level of care not normally possible, nor attempted, in a relief setting. However, both will be life-saving responses particularly after chemical attack, and it is essential for the sake of both patients and staff to consider in advance if and how such care can be provided and by whom.

Recruiting staff for the frontline who are skilled in psycho-social care will also be crucial to countering the potentially immense fear and anxiety both among 'victims', who may not know whether they have been exposed or not, and the host communities which receive those affected. NGOs may need to, or may become by default, a buffer between a fearful host population/government and an influx of terrified and potentially 'contaminated' victims. Skilled people will be needed to work at a population level to help the different communities prevent or deal with what could become a dire situation of panic, rumours, discrimination and aggression.

Information for action

The importance of obtaining accurate information for risk assessment for humanitarian intervention has already been mentioned. Among humanitarian health agencies, a common system for collecting, collating and analysing epidemiological data will be essential. Biological and chemical agents may be released covertly rather than overtly and it may take time to realise

there has been a release. Surveillance will need to be more than routine, sensitive not just to unusually high rates but also to unusual conditions, and as near 'real-time' as possible.^{28,29} Good coverage and common reporting methods to spot anything unusual as soon as possible.

NGOs in areas of potential threat, or likely to receive patients would be advised to look closely at the efficiency of their data collection systems now. It may also be valuable to establish a small group of experts (for example a biologist, toxicologist, physician and public health specialist, forensic psychologist familiar with threat agents) for the NGO community as a whole who can assist with data interpretation by telephone or internet link.

NGO data may also be critical to following up and providing assistance for long term clinical conditions, and for supporting human rights activities. One group of experts has noted that "preservation of evidence maximises the possibility of the perpetrators being punished. The perception that justice is ultimately served can have a very positive psychological impact on those exposed and society."³⁰ Indeed, the fact that NGOs may be present to collect valid evidence of use of a WMD may deter some usage.

Equally importantly, there is urgent need to plan how information on risk, evacuation, protection and self help will be disseminated to communities at risk whether they are potential victims or as potential hosts to the displaced. As mentioned before, the humanitarian community, if it is well prepared, will have a critical role in helping to contain and reduce the fear and uncertainty likely to engulf individuals and communities after an attack.

Unfortunately if humanitarians and others are not well prepared, they could well have the opposite effect, with multiple foreign organisations, overlapping agendas and conflicting messages increasing confusion and anxiety, rather than decreasing it. As a recent commentary in the Lancet noted, getting it wrong often means more than just a failure in communications channels; "it can create misunderstanding, suspicion and resistance that can ultimately inhibit relief efforts"³¹ Pre-planning collection, collation, interpretation and sharing of all kinds of information, not only surveillance data, is vital.

Who will co-ordinate?

Currently with regard to Iraq, humanitarian organisations large and small are already reconnoitring the situation in and around the region on their own account. Similarly UN organisations and donors are preparing contingency plans; in December 2002 the UN asked donor countries for \$37 million in their "first phase assessment" of the potential humanitarian needs of refugees and civilian populations in the immediate aftermath of military intervention.³² To our knowledge, however, the NGO community in Britain and Europe are, at best, on the periphery of these discussions.

Even more than in other types of emergency, co-ordinated action is likely to be the key to protecting and saving the lives of both beneficiaries and relief workers if weapons of mass destruction are released deliberately or through war damage. But while there is reassurance in finally hearing the UN's humanitarian voice in public, it is vital that the UN and non-governmental

humanitarian organisations start working together to develop the appropriate counterweight to military and political power. For this, the most urgent need, is for humanitarian organisations to decide how they will collaborate among themselves, to ensure that it is the humanitarian community who lead the relief response, not the military or belligerent governments.

NGOs are traditionally loath to be represented as a body, but there is an influence – and safety – in numbers that cannot be ignored in these circumstances. Existing NGO coordinating bodies, such as the International Council of Voluntary Agencies, however, currently have little capacity to act as pragmatic operational leaders. While for some NGOs, this leaves the UN as the most obvious co-ordinating body for humanitarian response. Others either doubt the competence of the UN in this regard, or point out that in sanctioning a war, the UN becomes an aggressor itself, removing its credibility as the co-ordinator of neutral and impartial humanitarian activity. Attempts by the UN to ignore this have had significant effects on humanitarian response, most recently in Kosovo and Afghanistan.

It is clear that working out how the NGO community will effectively co-ordinate within itself in the face of a WMD emergency is as urgent as how it will co-ordinate and relate to other actors.

Preparation to assist: what can NGOs reasonably do now?

The following recommendations by no means answer all the questions. Exactly how much risk relief workers will be taking with their own lives to facilitate assistance to beneficiaries will be hard to quantify, for example, and will in the end be a personal and individual decision. The following actions could, however, on one hand increase the information available to make an informed decision, and on the other, offer a way forward for humanitarians to prepare themselves, far more than they are now, for the worst to happen.

1. Create a multi-sector assessment team

For the humanitarian community to have independent access to primary information, it will need to be on the ground in potentially hazardous terrain. One way to achieve this would be to train and equip a small multi-sectoral, multi-agency taskforce which would undertake needs assessment for the whole humanitarian community in contaminated areas.

The UK has recently announced it will vaccinate against smallpox key health personnel likely to be involved in response to the deliberate release of WMD in the UK. Similar plans have been voiced in the United States. It seems reasonable, given that donor governments are already scoping agency capacity for providing humanitarian assistance in a post-conflict Iraq, to suggest that a team representing the humanitarian community should be included in these initiatives. The team would also need access to and training in all other forms of protection currently available to military personnel.

Some might suggest that this kind of needs assessment service could, and should, be provided by the military who are anyway required to be in the areas of concern. But, given the potential for military and political agendas to influence the delivery of aid in such circumstances, it is important

for the humanitarian community to inform its decisions with its own first-hand assessments. However, expert knowledge in protection from and response to WMD currently lies almost solely with the military, and agencies will need to decide whether they feel able to create a relationship that will allow a transfer of that knowledge to enable them to move independently of warring parties, should conflict take place.

2. Initiate available protection for frontline staff

Front-line humanitarian workers should consider vaccination against smallpox if available, and possibly against anthrax bearing in mind the time required for immunity (7 months). The balance between risk and benefit from other forms of prophylaxis appears, at best, uncertain for civilian relief workers, and organisations and individuals will need to make difficult decisions regarding whether or not to pursue these. Organisations may need to review their systems of pre-departure advice and informed consent for their staff.

A more effective way of protecting humanitarian workers may be to investigate the possibility of creating independent NGO capacity to carry out decontamination with small multi-agency teams of front-line workers equipped to work facilities. If there is a lack of precise information, agencies providing assistance will have to assume that everyone emerging from a suspected attack area poses a contamination risk. But without this independent capacity (and it is likely training would still need to be sourced from the military), the only alternative humanitarian organisations will have to effect decontamination will be to negotiate with the military for forces personnel to take on decontamination in the field, with the attendant problems of working closely with a combatant party.

In either scenario, patients could feasibly be discharged to a 'clean' area where the humanitarian agencies take over the traditional assistance role. Either approach, however, will need substantial advance planning and the building of new relationships.

3. Create operational guidelines and carry out training

While humanitarian agencies may be 'forgiven' an inadequate response actually at the site of a WMD attack given the dangers and difficulty of protecting their staff, society may be less forgiving of victims dying in the camps to which they have fled due to a poorly equipped and co-ordinated response, especially since the negotiation process appears to be giving humanitarians an opportunity to plan and prepare.

Operational guidelines and clinical protocols which bring together existing information in an adapted and accessible form for grounding humanitarian action in the field are critical, as is training of frontline staff in the essential elements of recognition and response discussed above.

4. Pre-plan heightened information systems

A heightened system of epidemiological surveillance needs to be planned in detail. Protocols mentioned above should also cover common data collection systems and forms (these already exist for the UK but could be adapted for external use), and guidance for the analysis and dissemination of this information. Specific arrangements might also be developed between

agencies for collection of longitudinal epidemiological data and witness statements, which will be invaluable as an advocacy tool, an aid to determining appropriate local responses, for later International Court investigations, and for medical investigations into the consequences of WMD use. Planning also needs to include the availability of appropriately skilled staff in the field for this level of epidemiological surveillance.

5. Adapt relief supplies and equipment

Emergency drug and equipment kits need to be reviewed, adapted to include materials essential to the care of victims of chemical or biological warfare, and pre-positioned for rapid deployment. Donors need to be made aware that equipment (such as oxygen) and staff skilled beyond the normal requirements of relief work may be required and should be funded before the event.

6. Establish a standby team of technical experts

Establishing a standby team comprising technical expertise in biology, toxicology, threat-agent specific clinical management, public health and forensic psychology with clearly established accessibility by telephone, radio or internet link would enable NGO field staff to obtain immediate support in interpreting data, clinical management, protection and control methods. Together with adapted protocols, this would give the NGO community as whole a knowledge base which is not currently rapidly or easily available.

7. Develop effective, principled channels of communication with the military

Humanitarian principles demand as little contact with armed forces as possible in the field. But it is clear that if NGOs are to prepare for the consequences of WMD, they will need to develop some form of contact with the military to enable the sharing of specialist knowledge and training prior to any conflict. It will also be necessary to establish clear channels for communication of essential information in the field during conflict, if only to prevent the kind of ad hoc communications that can compromise both parties. To do this in the UK a representative group of NGOs would need to approach the MoD as soon as possible to discuss ways of proceeding in this that do not compromise the integrity of either party.

8. Contribute to host country/in country preparedness

Making information – on issues such as medical response, self help, evacuation planning - available to communities inside and outside the affected country is one of the most valuable activities for preparedness that NGOs can offer. Plans for how information will be provided to the public, and to the extent possible, outlines of what will be presented, need to be drawn up in advance. The logistics of achieving this, without creating panic and with the essential support of local ministries of health and international donors will require imagination, innovation and collaboration.

From current experience, however, some donors appear reluctant to support any emergency preparedness, even such at-risk and accessible areas as Kurdistan, for fear that it may be seen as an indication that war is inevitable. According to Human Rights Watch there is almost no preparation for a humanitarian crisis or WMD attack in Iraqi Kurdistan despite the presence of the

UN and humanitarian NGOs, while in the South and Central regions of Iraq the safety of civilians will be greatly complicated by the limited humanitarian presence, it adds.³³ All countries liable to be involved in a conflict need to actively assist humanitarian organisations to be present in their territory as independent actors, that is with their own international staff, logistics and means of communication, so as to facilitate the provision of neutral humanitarian aid if it is necessary.

9. Advocate for preparedness and a humanitarian voice at political levels

An inter-agency interest group should be developed with the aim of voicing key humanitarian concerns at higher political levels, such as national and European parliaments and the UN Assembly. This would give the non-governmental, non-UN humanitarian organisations an instrument through which to try and influence the international response to WMD crises. It would also enhance practical co-ordination by providing other entities with a clear interface point with the humanitarian community.

High expectations?

What then can, and should, be expected of humanitarian organisations in face of weapons of mass destruction? The humanitarian imperative demands that every effort must be made to provide assistance to those in need. Just as in any other crisis situation, the ability to deliver that assistance has to be weighed up against the risks involved, and the degree to which access is possible. Any response should also aim to be prompt, appropriate and effective.

However, in seeking to achieve this humanitarian organisations and those who claim to support independent humanitarian action, will have to make some stark choices. We identify four key alternatives:

1. Co-operate with military forces in the field of battle and accept the implications of this for access to civilians on the other side and on the humanitarian principles of neutrality, independence and impartiality.
2. Demand support from donors and governments to develop, before any event, a genuinely independent humanitarian capacity to respond to WMD, free from political and military control. Given that the military is the repository of knowledge on WMD, this is likely to still require the development of a training relationship with the armed services prior to any conflict, though on the clear understanding that the ultimate aim is to enable humanitarian organisations to act effectively, safely and independently during a conflict.
3. Develop a specialist capacity to respond to WMD, without the support of any external parties including donors and the military.
4. Decide not to respond on the basis that humanitarian aid cannot be delivered in a principled and safe way when weapons of mass destruction are involved.

Humanitarian organisations must confront these questions urgently. If agencies chose to develop their capacity alone, how will they achieve it – and in time? If tapping into the military's expertise is unacceptable in these circumstances, what consequences will this have for the aid community

and its relevance in 21st century warfare? If it is acceptable within certain boundaries, how can this be done ethically, practically, and now?

Currently, humanitarian agencies have limited knowledge of how to respond to a WMD crisis, and the UN a poor track record of co-ordination even in 'normal' crises. 'Co-operation' with the military, which does have useful technical know-how, during a war is undoubtedly counter to humanitarian principles. We do not believe, however, that either of these statements are good enough reason to abandon all attempts to proffer humanitarian response in the face of weapons of mass destruction. Humanitarian agencies are constantly faced with new challenges. What is needed is concerted action to mobilise the information, training and resources needed to provide effective and principled assistance.

The very least that can be expected of all humanitarian agencies is that they confront the issues of preparation, co-ordination and action described in this paper head on and develop a clear, coordinated and principled stance. This is not the time for deal-making or muddling through. Openly debating the role of humanitarian actors and the dilemmas that will surround them in a WMD crisis should also garner public support to help NGOs rise to what will be, even in the best case scenario, a terrible challenge. It may also go some way towards countering what could be perceived as negation of humanitarian responsibility if, lacking real support in all fields, organisations decide the risks of responding are too great.

One can argue that all the time, energy and money needed to build this foundation for response could be wasted if war is averted. To us, it seems a small forfeit in return for preparation if the worst happens. The humanitarian community needs to learn new skills, to confront the ethical, organisational and practical challenges that such a crisis will bring, to be bold and principled in working with new partners, and to be supported to so. If the worst does not happen now, we will be euphoric. We will also be prepared, for next time.

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