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Chapter 27

Sustainability in Humanitarian Organisations

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Introduction

The raison d'être for humanitarian aid is to help people in need, the beneficiaries. The two beliefs guiding humanitarian operations are, first, that "*those affected by disaster or conflict have a right to life with dignity and, therefore, a right to assistance*"; and second, that "*all possible steps should be taken to alleviate human suffering*".¹ Although the objective of humanitarian operations is to provide aid to a society, relatively little attention has been paid to the sustainability of humanitarian operations. The focus in humanitarian operations has rather been on (the lack of) aid effectiveness.² Facing this criticism and trying to please donors, humanitarian organisations are striving to improve their operational efficiency through a focus on cost and time efficiency and by increasing the transparency of their operations. Some aspects of sustainability, such as environmental responsibility, ethics and longevity, have not been in focus in the humanitarian context on the operational level, but this is slowly changing as humanitarian organisations embrace the agenda of climate change adaptation pioneered by the United Nations Development Programme (UNDP).³

Several large donors (USAID, ECHO and DFID⁴) nowadays require humanitarian organisations to consider the longevity of programmes and the persistence of their impact. However, other aspects of sustainability have not yet been emphasised from the donor side, nor in the strategy or operational planning of humanitarian organisations. In spite of this attention to longevity and impact persistence from the donor side, disaster relief operations have been criticised for not expanding their view to encompass the overall supply chain design⁵ and for not considering the long-term implications of delivering aid. Important supply chain design questions in terms of sustainability could be, for example, the choice between using local or global suppliers, or choice of modes of transportation.

Sustainability, particularly in terms of social impact, for instance the restoration of livelihoods, is part of the overall raison d'être of humanitarian aid and the organisations involved with providing it. Humanitarianism builds on the principles of humanity, neutrality and impartiality, which together are sometimes seen as the cornerstones to define the "humanitarian space", and amongst which humanity is aimed at relieving suffering wherever it is found.⁶ There are, of course, different schools and perspectives on humanitarian aid, and overall, humanitarian aid is a highly politicised issue. Nonetheless, the principle of humanity to relieve suffering can be seen as coming with an objective of

positive social impact, which is an important aspect of sustainability. Yet little attention has been paid to other aspects of sustainability in humanitarian operations. At the same time, different aspects of sustainability have serious implications on the long-term effectiveness of aid. It is little understood how humanitarian organisations consider various aspects of sustainability in their operations. The aim of this chapter is therefore to increase the understanding of sustainability in humanitarian organisations. Particular attention is paid to how sustainability is operationalised in the humanitarian context, hence the operational focus on logistics and supply chain management in the analysis.

Annual reports of the largest humanitarian organisations are analysed to capture different aspects of sustainability. The operational focus of the analysis helps in identifying not just how sustainability aspects are discussed but also, how they are implemented. On the other hand, this also restricts the analysis to disaster relief, albeit questions of development aid are taken up to the extent to which they impact on sustainability in humanitarian organisations. Due to the operational focus, much attention is paid to performance measurement and also to supply chain design.

Sustainability in Humanitarian Organisations

Weerawardena et al.⁷ define sustainability in the non-profit sector overall as maintaining operations, or more precisely “being able to survive so that it can continue to serve its constituency”. On the other hand sustainable development is defined by the United Nations as “meeting the needs of present without compromising the ability of future generations to meet their own needs”.⁸ In this study we adopt the United Nations definition of sustainability.

The main difference between humanitarian organisations and companies is their very *raison d’être*. While a company’s goal is to make profit for its shareholders, the goal of humanitarian organisations is most often to save lives,⁹ decrease human suffering¹⁰ and contribute to development.¹¹ All of these goals have a link to longevity. Yet in spite of recent donor requirements to consider the long-term implications of humanitarian programmes, humanitarian organisations have not yet experienced much stakeholder pressure in other aspects of sustainability such as electricity usage, fuel consumption, or even supplier selection criteria.

The lack of corresponding stakeholder pressure can be identified when studying the strategies of humanitarian and development organisations through the lens of the Global Reporting Initiative

(GRI). The GRI promotes economic, environmental and social sustainability and provides a reporting framework to manage and monitor sustainability aspects in the operations of an organisation. The GRI and other environmental standards such as ISO (e.g. standard 14031 of the International Organization for Standardization) can be used by companies and other types of organisations. However, when looking at GRI reports from 2010, it appears that there is a lack of implementation of this sustainability standard in the non-profit sector. Out of 2,032 GRI reports in the year 2010, only 57 were from non-profit organisations, of which only three were published by humanitarian organisations. Oxfam GB, Caritas del Peru and World Vision Australia reported on their operations according to the GRI standard, which means by default that environmental aspects are considered in the organisations and that there is an environmental strategy in place in the organisation.¹²

Though few, the recent GRI reports of humanitarian organisations indicate a slight change towards the incorporation of various aspects of sustainability in the agendas of humanitarian organisations. In 2005 no humanitarian organisation reported according to GRI, compared to three in 2010.¹³ Furthermore, organisations are encouraged to integrate the causes and consequences of climate change in their agenda¹⁴ pioneered by the UNDP.¹⁵ Humanitarian organisations are starting to take some aspects of sustainability into consideration but have yet to also embrace the challenge of “greening” in their operations, and more specifically in their supply chains,¹⁶ and hence extend their view on sustainability beyond the principle of humanity.

Aspects of Sustainability in Supply Chain Management

Two views stand out when it comes to sustainability in the humanitarian context.¹⁷ First, questions of longevity and long-term development raise a *holistic view* of humanitarian supply chains. Such a view would require taking a view beyond the mission, organisation or even the supply chain and on to society. Approaching the impact of aid on the societal level is embedded in the very concept of aid effectiveness that is often used in the macro-economic sense to measure the effect of aid overall on livelihoods and economic growth.¹⁸ The second view also extends the focus beyond the humanitarian organisation to its supply chain, and in particular, to supply chain strategy and *supply chain design*. Investigating these two views, Kovács and Spens¹⁹ cite five aspects related to the sustainability of aid:

- 1) bridging the gap between disaster relief and long-term development and managing the transitions

between these; 2) supply chain design for preparedness, and with an exit strategy; 3) community-based supply chain design; 4) greening humanitarian supply chains; 5) and local, regional vs. global sourcing and capacity building. Thus overall, there are multiple aspects of sustainability to consider in the humanitarian context²⁰: for example, the concept of sustainability can be applied in relation to sustaining an operation, i.e. maintaining aid through continuous funding (financial continuity) and/or coordinating it with development activities (long-term development). Interestingly, humanitarian and development activities are usually considered in isolation, even though disasters often take place in countries in which development organisations, and development aid, is already present (e.g. the 2008 cholera outbreak in Zimbabwe, the 2010 Haiti earthquake). Therefore it is crucial to view (humanitarian) disaster relief activities as interlinked with development ones. But the longevity of aid, i.e. its long-term effects on society, is of importance even if disaster relief is not delivered on top of development activities (e.g. the 2011 Japan earthquake).

Taking the holistic view, the limited link between disaster relief and development programmes becomes apparent. This is due to the involvement of different organisations in humanitarian as opposed to development programmes, which pursue different mandates and have diverging operational scopes. There are, however, good examples as well; for example the International Alliance Against Hunger between the World Food Programme, the Food and Agriculture Organisation and the International Fund for Agricultural Development has been established precisely to consider the long-term effects of aid and the interrelations between humanitarian and development activities. The idea of this alliance is to contribute to food security overall and to continue development through the distribution of seeds along with (emergency) food aid. The alliance supports an extension of the view of humanitarian aid as being short term to linking it with longer-term development activities, hence considering the longevity and long-lasting effects aspects of sustainability.

Such a more long-term perspective also links disaster relief to reconstruction and rehabilitation – in the humanitarian sector known as the concept of LRRD, linking relief, rehabilitation and development – as well as to prevention through learning, and preparedness for further disasters to come, as embodied in the disaster relief cycle proposed by UN/ISDR in 2003²¹ that was later adopted

across humanitarian organisations. Learning and preparedness can occur on the regional level, in particular for cyclical disasters such as cyclones (a good example is how Bangladesh has reduced the number of people killed by cyclones over the years²²), or within an organisation. As for the latter, Gatignon et al. evaluate the learning of the International Federation of Red Cross and Red Crescent Societies (IFRC) over a series of disasters in terms of key performance indicators related to the effectiveness of a programme (e.g. average number of families served per day), time efficiency (e.g. order lead time) as well as operational costs.²³ The case is directly linked to the preparedness of the IFRC through regional pre-positioning.

Preparing for future challenges is another aspect of preparedness. Global challenges for humanitarian supply chains extend to the preparedness for the effects of climate change, urbanisation and security issues.²⁴ Climate change adaptation requires a different set of approaches in preparedness than the actual response to a disaster, requiring a change of lifestyles but also changing support systems to facilitate adaptation mechanisms. Urbanisation, on the other hand, increases the vulnerability of people to disasters as it exposes them to disasters while reducing their coping strategies.²⁵ What is more, urbanisation has been linked to climate change as a result of climate change-related migration, but also discussed as a trigger of climate change.²⁶

The other view focuses on supply chain strategy and *supply chain design*. Supply chain design can consider sustainability from the angle of community development through local sourcing, capacity building and engagement of beneficiaries. Thus, Kovács et al. present a case of community-based supply chain design where beneficiaries become active members of the reconstruction supply chain.²⁷ Community-based supply chain design can even incorporate aspects of peace-building,²⁸ but more generally, it contributes to beneficiary empowerment, helping to ensure community ownership of the reconstruction process, as well as to the local economy in general. This approach not only sources materials locally but also involves beneficiaries in decision-making and even as a workforce in the humanitarian supply chain.²⁹

One way to empower the beneficiary in decision-making is through vouchers and cash components. This approach allows beneficiaries to purchase their own items, thus reducing the need for imports that would impact negatively on the local economy, cost more to organise and contribute

to transportation emissions. Generally, if feasible, the more local solution seems to combine aspects of sustaining the local economy with cost-efficiencies as well as eco-efficiency. Overall, community-based approaches to supply chain design enable humanitarian organisations to hand over a programme to the community. Hence sustainability can also be understood as designing the humanitarian supply chain in a way that facilitates its continuation in the region after humanitarian organisations have left (in other words, a sustainable exit strategy).³⁰

Researchers have begun to pay more attention to effects on the sustainability of the supply chain by looking at supply network design.³¹ If a network is built in a way where hubs are geographically far apart, the supply chain automatically requires emission-intense transportation and the choice of transportation mode becomes secondary from a sustainability perspective. To transform a supply chain into being more sustainable might require some redesigning.

Ways to re-plan the supply chain are geographical decisions such as where to locate manufacturing, warehouses with pre-positioned goods and distribution centres.³² Humanitarian hub systems exist at national and also international level. Apart from typical network analysis for locating hubs that focuses on the aspects of closeness to supply vs. demand, routing possibilities and intermodal possibilities, facility location decisions in humanitarian aid also need to consider the disaster proneness of a hub location.³³ The locations of current hub systems (e.g. the global United Nations Humanitarian Response Depots, UNHRDs, or IFRC's regional logistics units) are based on these principles and enable humanitarian organisations to pre-position stock, ranging from water purification tablets and high energy biscuits to shelter equipment, which can then quickly be moved into disaster areas. However, such pre-positioning does not take the overall effect (e.g. on transportation emissions) into account, even though it emphasises closeness to beneficiaries.

Access to the beneficiary is an important problem in the humanitarian sector which has to do with the urgency of the disaster.³⁴ Actually, a precondition for the success of any kind of humanitarian operation is access of aid and relief to the affected area and to the beneficiaries.³⁵ Under conditions where the beneficiaries are not accessible (because of damage to the infrastructure, for example), the only possible mode of transportation might be air transportation, i.e. aeroplanes or helicopters. Neither of these is very environmentally friendly, nor are they cost-efficient.

From a supply chain strategy perspective, humanitarian supply chains have traditionally been viewed as highly agile.³⁶ However, a combination of lean and agile supply chain strategies can be found in IFRC's supply chain design with a decentralised structure of regional warehouses that decrease the distance to beneficiaries (with a focus on the lean concept of time efficiency while preparing for an agile response) and an emphasis on regional if not local sourcing (focusing on the economic sustainability of the community whilst reducing transportation costs and emissions).³⁷ The example shows not just a combination of lean with agile performance measures but also the impact on economic, social and environmental sustainability. Lean and green have often been mentioned in combination;³⁸ here, though, closeness translates also into sustaining the local economy through local sourcing.³⁹ What is more, Vinodh found an existing relationship between agile manufacturing and sustainability⁴⁰ – something to consider for humanitarian supply chains as well. (Even though humanitarian organisations typically act as logistics service providers⁴¹ without their own manufacturing, there are examples in which they actually set up manufacturing sites, e.g. for winterised tents for victims of the Pakistan earthquake.)

A lack of consideration of sustainability is not unique to humanitarian supply chains. Carter and Easton criticise supply chain management overall for a tradition of stand-alone thinking without considering larger, more long-term aspects of sustainability.⁴² Interestingly, while environmental and social aspects of “logistics social responsibility” have been operationalised, according to Carter and Easton, it is the economic aspect that has been neglected.⁴³ The missing link is thus between ecological and social aspects of sustainability and the impact on supply chain performance – sustainability being conceptualised as a space that considers all three aspects (social, economic and environmental) from a triple bottom line perspective.

Sustainability in Operational Performance

The performance of a humanitarian operation is bound to the aid effectiveness requirements of donors.⁴⁴ Effectiveness here does not refer to the organisation alone but needs to consider aid effectiveness in terms of social welfare, livelihoods and economic growth.⁴⁵ Several large donors require performance reporting from their implementing humanitarian organisations.⁴⁶ The reporting consists of programme assessment of on-going programmes and of monitoring and evaluation

requirements at the end of a programme. The required reporting does not only entail operational data but also other measurements on the societal level. For example, a common measurement of the overall success of a humanitarian operation is a decrease of the crude mortality rate of beneficiaries in the receiving society. That said, such impact is difficult to measure and even more difficult to attribute to a particular programme or organisation. Other, more programme-related indicators depend on the scope of the programme itself but can be, for example, the overall amount of delivered supplies.

Whilst donors require more holistic performance reporting of humanitarian operations, supply chain performance in the humanitarian sector is still often defined as financial and volume-related performance.⁴⁷ Operational performance could refer to final output and operational impact, but this holistic perspective is not much considered in performance measurement of humanitarian operations. Previous research on performance in a humanitarian setting suggested measuring it as *output, resources, flexibility*⁴⁸ or as *customer service, financial control and process adherence*,⁴⁹ whilst Blecken et al. argue that in relief supply chains donation-to-delivery time, the output and resources should be measured.⁵⁰ Although Beamon and Balcik refer to output as well,⁵¹ their suggested measurements of *population coverage* and *order fulfilment rate* are fairly narrow and do not reflect the overall impact of aid. None of the above suggested performance indicators take any aspects of sustainability into consideration.

Just as sustainability and performance can, for humanitarian organisations, be interpreted and measured in multiple ways. Figure 27.1 summarises the various aspects of sustainability into four perspectives:

1. Societal perspective (overall aid impact)
2. Programme perspective
3. Beneficiary perspective
4. Supply chain perspective

In doing so, Figure 27.1 portrays how the sustainability aspects could be accounted for in the performance of humanitarian response.

Figure 27.1 Four perspectives on sustainability

The first, *societal perspective*, makes a macro-economic assessment of the overall impact of aid. Important sustainability aspects that belong to this perspective are social welfare, livelihoods, economic development and climate change mitigation. Social welfare can be measured as a function of an individual welfare or as an aggregated measurement, such as life expectancy or income per capita. Livelihoods again refer to the societies, individual households or the individual's ability to support themselves. The aspect of livelihood further comprises the capabilities, assets and activities required for a means of living, and is seen as sustainable when it can cope with and recover from stress, such as emergency or other external disturbance.⁵² Furthermore, the aspect of livelihood is seen as sustainable when it can maintain (or enhance) its capabilities now and in the future.⁵³

The third aspect in the societal perspective is economic development, which is a traditional measurement of the development of a society or country, and can be measured, for example, as GDP. Poverty measures are also included here, such as the percentage of the population living on a dollar or less a day. The fourth aspect, climate change mitigation, is often used as a term for the reduction of greenhouse gas emissions that are the source of climate change.⁵⁴ Climate change itself is a change in the state of climate due to "natural internal processes or external forcings, or to persistent anthropogenic changes in the composition of the atmosphere or in land use" as defined by the IPCC.⁵⁵ The aspect of climate change mitigation in Figure 27.1 is used as a more comprehensive term and refers to a country's or a society's capability to lessen their own impact on climate change and to be prepared and to therefore have the prospect of preventing the impact of possible hazards resulting from climate change. Mitigation can be measured as, for example, hazard-resistant construction as well as improved environmental policies and public awareness.⁵⁶

The second perspective portrays sustainability from the viewpoint of a defined aid programme. This *programme perspective* is important, as humanitarian organisations typically organise their activities under various programmes. Also funding is often granted for specific programmes (projects or disasters); rarely do organisations receive overall funding to run their operations. Sustainability aspects included in this perspective are financial continuity, effective resource utilisation, persistence of programme impact, LRRD (linking relief, rehabilitation and development) and community empowerment.

The aspect of financial continuity refers to the possibility of a programme continuing to serve the society or beneficiaries in need. If a programme's funding is cut or is short lived, the long-term objectives of a programme might not be met. Effective resource utilisation again can be measured as social or environmental responsibility, as a programme should not use resources such as workforce in a manner that does harm to the local market in the long run, and neither should resources such as supplies or assets be deployed without appropriate usability rates. Resource utilisation furthermore includes asset maintenance and asset disposal. The aspect further consists of coordination and resource sharing amongst organisations, which according to Long and Wood takes a great deal of effort, not least because each organisation has its own operating methods and goals.⁵⁷

The persistence of programme impact refers to the long-term impact of a programme. Can the objectives of a programme be met even after the actual end of the programme? Is, for example, a medical clinic able to continue serving the society even after the programme has ended? From a sustainability perspective the aspect refers to the persistence of a programme and its activities, services or interventions, and the persistence of resulting changes for individuals or the aided society.⁵⁸ The aspect further refers to well-planned exit strategies and hand-over of programme activities to the local community (or other).

The aspect of LRRD is an acknowledgment of the gap between humanitarian response and development aid. If long-term effects of aid (not only lifesaving effects) are sought for with humanitarian relief supplies, the continuation of humanitarian aid projects is much needed.⁵⁹ From a sustainability perspective, any action taken in the immediate response phase of disaster relief should furthermore keep in mind what effects (and possible harms) the actions have for recovery and the long-term development of the society. Since the main priority in an immediate relief phase is to save lives, sustainability aspects might easily be overlooked.

Community empowerment is an aspect of sustainability in the sense that programmes with deep community involvement (active role in planning and decision-making) are seen to have a positive result on the long-term impact of the programme. Community involvement can also be seen through the sustainability sense, as beneficiaries can be hired as a workforce in active programmes, which might subsequently boost economic development in the local community. The effects of community

empowerment on programme impact are nevertheless not always positive. The effects depend on the type of programme and the type of involvement.⁶⁰

The third perspective, the *beneficiary perspective*, includes the sustainability aspects of access, targeting and equity, and needs fulfilment. Access refers to the opportunity for supplies to meet the beneficiary, or more precisely, to meet the beneficiaries' need with the right supplies or services at the right time in the right place.⁶¹ Without this match there cannot be any impact of the humanitarian response.⁶² Targeting and equity again refers to the correctness of the needs assessment (who is in need?) and the even coverage of that target group.⁶³ Needs fulfilment here is a function of how well the beneficiary needs have been served overall. Olorunfoba and Gray⁶⁴ have questioned the aspect of needs fulfilment and rather talk about customer service; however, the notion of beneficiaries as customers remains disputed due to the lack of purchasing power of beneficiaries.⁶⁵

The last perspective on sustainability in Figure 27.1 is the *supply chain perspective*, with the aspects of ethical and green product or service, ethical and green supply chain, preparedness, and local sourcing. The aspect of ethical and green product or service refers to the actual items or services delivered to the beneficiary where, for example, a non-disposable product might cause more harm than good. On the other hand, the aspect of ethical and green supply chains is related to supply chain (and network) design. This aspect includes questions on how long the transportation routes are, where hubs and warehouses are located, which transportation mode is used, and also social responsibility questions such as how labour issues and health and safety questions are considered throughout the supply chain.

Local sourcing is also an aspect of both social and environmental responsibility. Local sourcing can have a positive impact on the economic situation in the region and can be seen as an action of community empowerment⁶⁶ and consequently as mentioned above have a positive impact on the long-term impact of humanitarian response. Other positive implications of local sourcing are that it reduces the response time⁶⁷ and can contribute to cost decrease in the supply chain. Shortened response time has, however, a direct effect on transportation emissions, hence becoming a question of sustainability. Due to a potential positive impact of local sourcing on the long-term impact of a programme, the current trend in humanitarian logistics is towards favouring local sourcing whenever possible.⁶⁸

Method

A content analysis of humanitarian organisations' annual reports was conducted to increase the understanding of the various aspects of "sustainability" in these organisations. Content analysis is mostly used to assess websites, annual reports or corporate responsibility reports⁶⁹ but has also been used in supply chain management research to look at issues such as modal choice,⁷⁰ logistics education,⁷¹ research approaches in logistics,⁷² the content of journals⁷³ and job advertisements.⁷⁴ The unit of analysis of content analysis in supply chain management research varies from an article to a job advertisement. Our content analysis uses annual reports as the unit of analysis. The annual reports were chosen as the source of data since they often include missions and goal statements and descriptions of current and previous programmes and operations. The annual reports are used as the source in understanding whether the organisations view logistics and/or sustainable operations as an important part of the total operations. While the annual reports are not necessarily a direct reflection of what occurs in the field, they do express the view of the organisations want to portray to external stakeholders.

The sampling strategy was to identify large humanitarian organisations for the content analysis. Large organisations were identified by the total sums in emergency donations they raised from donors through appeals in 2010. As the sampling followed funding appeals for humanitarian relief operations (not long-term development aid programme funding appeals), the resultant sample mainly included organisations with a focus on disaster relief. Nonetheless, one needs to keep in mind that the mandates of humanitarian organisations vary, and that several of them are active in disaster relief as well as in development aid.

The final sample consisted of 12 humanitarian organisations (in order of total raised from appeals in 2010) and one UN agency:

- CARE USA
- Caritas
- Disasters Emergency Committee (DEC)⁷⁵
- International Federation of Red Cross and Red Crescent Societies (IFRC)

- International Rescue Committee (IRC)
- Mercy Corps
- Médecins sans Frontières (MSF)
- Oxfam GB
- Save the Children (annual report of 2009)
- United Nations Children’s Fund (UNICEF)
- World Food Programme (WFP)
- World Vision International (WVI)⁷⁶

Other UN agencies were not included because many of them did not have any annual report. The 2009/10 income of the selected organisations ranged from €2,880 million (UNICEF) to £3.5 million (Disasters Emergency Committee).

Content analysis can be used to classify latent as well as explicit content, and to analyse textual data on a qualitative as well as quantitative basis.⁷⁷ Keyword searches (with the keywords “logistic*”, “supply chain”, “sustainab*”, “green”, “climate change”) were used to identify and quantify relevant data. Boolean characters were used to extend the search, e.g. “logistic*” was used to find “logistics” as well as “logistical”, “sustainab*” to find both “sustainability” and “sustainable”. Since the study is exploratory, keywords were chosen to get an overall understanding of whether the concept of sustainability was at all represented in the annual reports. To use the terminology from Figure 27.1 would have limited the results since the performance categories are too specific.

However, a further analysis of latent content was necessary even for the quantification, as some keywords were used for alternative meanings as well, e.g. when the term “green” was used as for the colour of green, not relating to ecological values. Keywords that were found several times in the same sentence were only counted as one. A rigid coding scheme was applied with definite, independent, and mutually exclusive categories in the coding, so as to ensure objectivity and transparency. Independent and mutually exhaustive coding categories are also important for the validity of the content analysis.⁷⁸ However, only one coder was used, hence inter-coder reliabilities cannot be

computed. On the other hand, keyword searches in content analysis do not result in coding discrepancies, hence there was no need to use several coders.

Findings

The annual reports of the selected organisations varied in structure and depth. What is noteworthy is that the annual reports (also sometimes called annual reviews) vary in length from 3 pages (WVI) to 112 pages (MSF). The length of the report thus impacts on the number of times a keyword is mentioned in the content analysis. Nevertheless, the very appearance or non-appearance of some keywords in the annual reports (see Table 27.1) lends to the interpretation of their importance to the organisation.

Table 27.1 Results from the content analysis

Organisation	“logistic*”	“supply chain”	“sustainab*”	“green”	“climate change”
CARE USA	0	0	0	0	4
Caritas	1	0	1	1	9
DEC	3	0	0	0	0
IFRC	4	1	2	0	3
IRC	0	0	0	0	0
Mercy Corps	0	0	0	0	0
MSF	9	0	4	0	0
OXFAM	2	0	3	1	26
Save the Children	0	0	0	0	0
UNICEF	1	2	4	0	2
WFP	7	0	1	1	0
WVI	0	0	0	0	0
Number of times mentioned	27	3	15	3	44
Number (and %) of organisations mentioning	7 (58.3%)	2 (16.7%)	6 (50%)	3 (25%)	5 (42%)

From a supply chain perspective, it is quite revealing how few organisations talk about their supply chain in their annual reports, even if they discuss logistics. This may reflect their operational view on the discipline. At the same time, even though climate change adaptation has been on the humanitarian agenda since 2008/9, only 42% of organisations discuss climate change at all. Sustainability and greening are talked about even less, which again may reflect the importance of the climate change agenda over any other sustainability dimensions.

The analysis of latent content sheds some light on the interpretations of these statistics. “Logistics” was most discussed in the light of partnerships with logistics service providers, logistical

training, in relation to transportation, but also in terms of pre-positioning in hubs. Logistical challenges were mentioned in relation to particular disasters such as flash floods and earthquakes. “Supply chain” was discussed in fewer dimensions, related to sharing expertise (e.g. in training or capacity building) and the integrity of the organisation. Pre-positioning and training (especially capacity building) are related to a holistic view on sustainability, with the ideal to reduce and mitigate the impacts of disasters. At the same time, they are also linked to sustainable supply chain design and contribute to the speed and effectiveness of disaster relief.

“Sustainability”, when mentioned, was related to very diverse aspects of the concept, surprisingly including even the aspect of financial continuity of development programmes. Mostly, sustainability was used to denote long-term economic, equitable and social recovery and development, the long-term assurance of livelihoods, and even sustainable health care. The following quote serves to illustrate this point: “A sustainable and safer future has also been the focus in rebuilding houses” (Caritas). All this can be summed up under the umbrella of long-term development, and the long-term impact of aid. UNICEF made explicit links between recovery and the Millennium Development Goals; other links were made to equity but also to gender and resilience: “It also means recognising the critical role women play in producing and preparing food, and investing in their capacity to claim their rights to develop equitable, sustainable and resilient solutions” (Oxfam).

WFP viewed greening as an essential strategy to ensure food security: “At the same time, poor rural families in Tajikistan needed help achieving household food security, which led to a happy marriage between WFP’s new green initiative and the agency’s long-standing food-for-training programmes” (WFP), which indirectly refers to activities of the International Alliance Against Hunger. Apart from this view, however, greening was rarely discussed, and usually referred to greenhouse gases and climate change. Thus one could see UNDP’s climate change agenda as an important driver of greening initiatives in humanitarian organisations.

Climate change was, however, also linked to the increasing number of disasters: “The focus on preparedness reflects the reality that natural disasters are on the rise, in many cases linked to climate change” (UNICEF), to the extent that climate change modules were introduced in disaster risk reduction programmes. There is some consensus around the following statement: “Climate change has

enormous economic repercussions for developing countries, through its impact on agriculture and livelihoods, and through increased natural disasters” (here by Oxfam); but even the EU is warned of climate change-related disasters in the future: “Climate change is altering disaster patterns and EU member states need to consider the possibility that they too may need to call on outside assistance in the future” (IFRC). Climate change adaptation is also highlighted: “Mitigating the impact of climate change on vulnerable communities has long been central to our work” (IFRC). Whilst this shows a strong community focus, it does not relate to community-based supply chain design.

On the other hand, climate change adaptation shapes the disaster relief landscape towards strategies to mitigate the potential impact of disasters, as expressed in the following quote: “The next phase of the campaign brings together the on-going challenge of climate change with the need to invest more in small-scale agriculture in developing countries” (Oxfam). Also, Caritas has started to reorientate its focus to main challenges in the humanitarian context: “The United Nations says the economic cost of natural disasters in 2010 was \$109 billion, three times that of the previous year. It warned that this may come to look benign unless we tackle climate change, environmental degradation and the growth of slums in cities” (Caritas).

The challenges mentioned here reiterate Suarez’ focus on coping strategies for climate change⁷⁹ as well as the double challenge of climate change and urbanisation.⁸⁰ Out of the sample organisations, five organisations directly mention climate change in their annual reports. Three of these five discuss climate change mitigation.

Other aspects of sustainability (Table 27.1) covered in the annual reports were financial continuity and persistence of programme impact that were part of the programme dimension. Sustainability as an LRRD aspect was discussed by one organisation. Sustainability as an aspect of livelihoods was also discussed by one organisation. Furthermore, sustainability from an environmental aspect was discussed by the WFP.

Regardless of a relatively good coverage of operational aspects in the annual reports (logistics were mentioned by almost 60% of the organisations), sustainability as a supply chain dimension with aspects such as ethical and green products, ethical and green supply chains and local sourcing was not discussed in any of the reports.

Conclusions

The concept of sustainability is highly diffuse, especially in the humanitarian sector where the mission of sustainable development of societies has not yet translated into sustainability aspects considered in humanitarian operations. In the corporate sector, too, supply chain management has been criticised for a lack of holistic thinking in terms of its possible negative impacts.⁸¹ The same applies to humanitarian supply chains – where arguably, holistic thinking is even more necessary. Overall, a first perspective on sustainability relates to the embeddedness of humanitarian supply chains in society and nature. Taking this perspective, it is of essence that the long-term effects of aid are considered on local economies, the society and the environment, which were all related to the holistic view on sustainability in humanitarian operations.

Our analysis shows that humanitarian organisations are indeed concerned about the long-term sustainability of their operations, and discuss their impact on livelihoods, social recovery, sustainable health care and development overall. That said, little attention has been paid to greening their operations, even though climate change adaptation is on their agenda. In other words, climate change adaptation is considered for the livelihoods of beneficiaries, in the search of coping and mitigation strategies, but there is no direct link to green supply chain management on behalf of humanitarian organisations. Sarkis et al. list a number of barriers to greening the humanitarian supply chain, which can be summed up in the notion that “[The] goal [is] to help people, [the] environment [comes] second at best”.⁸² The stakeholders of humanitarian organisations have also not put greening on the agenda, in spite of all the debate about climate change and even the Copenhagen summit. Such a lack of environmental considerations could be seen already in the lack of GRI reports of humanitarian organisations.

Also, in spite of repeated considerations of the livelihood and the community of beneficiaries, there was no link to supply chain design that would build on this community. Local sourcing was, however, mentioned, and there was considerable training and capacity building in the field. Pre-positioning addresses closeness to beneficiaries – closeness can be more effective and improve time and cost-efficiencies – and reduces environmental impact.

In summary, humanitarian organisations could implement more sustainability strategies but as long as stakeholders do not identify them as important it is unlikely that humanitarian organisations will consider them in their supply chain design.

Limitations and Further Research

This chapter aimed to increase the understanding of sustainability in humanitarian organisations. Even though sustainability was discussed and categorised at the operational level and linked to performance, the limited results of the content analysis make it necessary to extend the research to use other methods in order to assess the performance measures related to each aspect of sustainability more in detail. For example, interviews with humanitarian organisations, and also with donors, could enhance the understanding of sustainability in the humanitarian context. Extending the content analysis to include documents other than annual reports may also lead to further findings. Furthermore, a focus on different stakeholders' (donor, organisation, beneficiary) perspectives on sustainability could be valuable. Further research could also focus on the possibility of measuring the sustainability aspect of the humanitarian operational performance.

Humanitarian organisations will have to consider sustainability aspects in all levels of their actions, from mission to operations. This will be challenging unless they recognise and understand different aspects of sustainability. An understanding of how to translate overall missions and strategies of sustainability into operations and how to measure the sustainability of operations will be needed. The performance framework summarising the sustainability aspects presented in this chapter strives to portray categories of overall missions related to operational performance. This categorisation should be helpful to understanding not only the various aspects of sustainability but also their interrelation and impact. This understanding is useful for humanitarian organisations in the planning and implementation of their operations but also for donors in policy planning, programme execution, and in programme monitoring and evaluation.

References

¹ SPHERE (2011), *Humanitarian Charter and Minimum Standard in Humanitarian Response, 3rd edn.*, The Sphere Project, Practical Action Publishing, Bourton on Dunsmore, UK.

² Burnside, C. & Dollar, D. (2000), “Aid, policies and growth”, *American Economic Review*, Vol. 90 No. 4, pp. 847–868; Moyo, D. (2009), *Dead Aid: Why Aid Is Not Working and How There Is a Better Way for Africa*, Allen Lane, London; Rajan, R.G. & Subramanian, A. (2008), “Aid and growth: What does the cross-country evidence really show?”, *The Review of Economics and Statistics*, Vol. 90 No. 4, pp. 643–665.

³ United Nations Development Programme (UNDP, 2010), “UNDP in action 2009/2010: Delivering on commitments”, at www.undp.org/publications/UNDPaction2010/pdf/wUNDPinAction-E-full.pdf, accessed November 2010.

⁴ USAID (2012), *Compliance & Oversight of Partner Performance*, U.S. Agency for International Development, at www.usaid.gov/compliance, accessed May 2012; Humanitarian Aid and Civil Protection Department of the European Commission, (ECHO 2010), “Rules and procedures applicable to property, supply, works and service contracts awarded within the framework of humanitarian actions Financed by the European union”, Version October 2010; EuropeAid (2012), “Practical Guide to Contract procedures for EU external actions”, at <http://ec.europa.eu/europeaid/prag/document.do>, accessed January 2012.

⁵ Kovács, G., Matopoulos, A. & Hayes, O. (2010), “A community-based approach to supply chain design”, *International Journal of Logistics Research and Applications*, Vol. 13 No. 5, pp. 411–422.

⁶ Tomasini, R. & van Wassenhove, L. (2009), *Humanitarian Logistics*, Palgrave Macmillan, UK.

⁷ Weerawardena J., McDonald R. & Mort G. (2009), “Sustainability of nonprofit organizations: An empirical investigation”, *Journal of World Business*, Vol. 45, pp. 346–356, *cit. from* p.347.

⁸ WCED (1987), “Report of the World Commission on Environment and Development” (The Brundtland Report), United Nations World Commission on Environment and Development, UN publication A/42/427.

⁹ Beamon, B.M. (2004), “Humanitarian relief chains: Issues and challenges”, *Proceedings of the 34th International Conference on Computers and Industrial Engineering*, San Francisco, CA;

Kovács, G. & Spens, K.M. (2007), “Humanitarian logistics in disaster relief operations”, *International Journal of Physical Distribution and Logistics Management*, Vol. 37 No. 2, pp. 99–114.

¹⁰ International Committee of the Red Cross (ICRC, 2010), “The ICRC: Its mission and work”, at www.icrc.org/eng/assets/files/other/icrc_002_0963.pdf, accessed November 2010.

¹¹ UNDP, *op. cit.*

¹² Global Reporting Initiative, “Sustainability Disclosure database”, at <http://database.globalreporting.org/search>, accessed May 2012.

¹³ *Ibid.*

¹⁴ Haavisto, I. & Kovács, G. (2012), “Measuring sustainability in humanitarian operations”, *Proceedings of the Joint EUROMA / P&OM World Conference 2012*, Amsterdam.

¹⁵ UNDP, *op. cit.*

¹⁶ Eng Larsson, F. & Vega, D. (2011), “Green logistics in temporary organizations: A paradox? Learnings from the humanitarian context”, *Supply Chain Forum: An International Journal*, Vol. 12 No. 1, pp. 128–139; Sarkis, J., Spens, K.M. & Kovács, G. (2012), “A study of barriers to greening the relief supply chain”. In: G. Kovács & K.M. Spens (eds.), *Relief Supply Chain Management for Disasters: Humanitarian, Aid, and Emergency Logistics*, IGI Global, Hershey, PA.

¹⁷ Kovács, G. (2011), “So where next? Developments in humanitarian logistics”. In: M. Christopher & P. Tatham, P. (eds.), *Humanitarian Logistics*, Kogan, London, UK, pp. 249-263.

¹⁸ Doucouliagos, H. & Paldam, M. (2005), “The aid effectiveness literature. The sad result of 40 years of research”, Denmark: University of Aarhus, Working Paper No. 2005–15.

¹⁹ Kovács, G. & Spens, K.M. (2011a), “Humanitarian logistics and supply chain management: The start of a new journal”, *Journal of Humanitarian Logistics and Supply Chain Management*, Vol. 1 No. 1, pp. 5–14.

²⁰ Kovács, *op. cit.*

²¹ Safran, P. (2003), “A strategic approach for disaster and emergency assistance,” *5th Asian Disaster Reduction Center International Meeting and the 2nd UN-ISDR Asian Meeting*, Kobe, Japan.

²² Tatham, P.H., Oloruntoba, R. & Spens, K. (2012), “Cyclone preparedness and response: An analysis of lessons identified using an adapted military planning framework”, *Disasters*, Vol. 36 No. 1, pp. 54–82.

²³ Gatignon, A., van Wassenhove, L.N. & Charles, A. (2010), “The Yogyakarta earthquake: Humanitarian relief through IFRC’s decentralized supply chain”, *International Journal of Production Economics*, Vol. 126 No. 1, pp. 102–110.

²⁴ Kovács, G. & Spens, K.M. (2011b), “Trends and developments in humanitarian logistics: A gap analysis”, *International Journal of Physical Distribution and Logistics Management*, Vol. 41 No. 1, pp. 32–45.

²⁵ Suarez, P. (2009), “Linking climate knowledge and decisions: Humanitarian challenges”, *The Pardee Papers No. 7* (December 2009).

²⁶ IPCC (2007), “Climate change 2007: Impacts, adaptation and vulnerability”, at www.meteotrentiNo.it/clima/pdf/rapporti_meteo/IPCC_Impacts_Adaptation_and_Vulnerability.pdf, accessed October 1, 2010;

Kalnay, E. & Cai, M. (2003), “Impact of urbanization and land use of climate change”, *Nature*, No. 423, pp. 528–531; Ziska, L.H., Gebhard, D.E., Frenz, D.A., Faulkner, S., Singer, B.D. & Straka, J.G. (2003), “Cities as harbingers of climate change: Common ragweed, urbanization, and public health”, *Journal of Allergy and Clinical Immunology*, Vol. 111 No. 2, pp. 290–295.

²⁷ Kovács, Matopoulos & Hayes, *op. cit.*

²⁸ Anderson, M.B. (1996), *Do no Harm: Supporting Local Capacities for Peace through Aid*, Collaborative for Development Action, Inc., Cambridge, MA.

²⁹ Kovács, Matopoulos & Hayes, *op. cit.*

³⁰ *Ibid.*

³¹ Mangan, J., Lalwani, C. & Butcher, T. (2008), *Global Logistics and Supply Chain Management*, John Willy and Sons, Ltd, Wiltshire.

³² *Ibid.*

³³ cf. Balcik, B. & Beamon, B. (2008), "Facility location in humanitarian relief", *International Journal of Logistics: Research and Applications*, Vol. 11 No. 2, pp. 101–121; Rawls, C.G. & Turnquist, M.A. (2010), "Pre-positioning of emergency supplies for disaster response", *Transportation Research Part B: Methodological*, Vol. 44 No. 4, pp. 521–534.

³⁴ cf. Tatham, P., Haavisto, I., Kovács; G., Beresford, A. & Pettit, S. (2010), "The logistic cost drivers of disaster relief". In: T. Whiteing (ed.), *Towards the Sustainable Supply Chain: Balancing the Needs of Business, Economy and the Environment, LRN 2010 Conference Proceedings*, Leeds/Harrogate, UK, pp. 650–659.

³⁵ Mancini-Roth, D. & Picot, A. (2004), "*Humanitarian Negotiation: A Handbook for Securing Access, Assistance and Protection for Civilians in Armed Conflict*", Henri Dunant Centre for Humanitarian Dialogue, Geneva. At: <http://hdcenter.org/publications/>; accessed April 4, 2010.

³⁶ Oloruntoba, R. & Gray, R. (2006), "Humanitarian aid: An agile supply chain?" *Supply Chain Management: An International Journal*, Vol. 11 No. 2, pp. 115–120.

³⁷ Gatignon, van Wassenhove & Charles, *op. cit.*

³⁸ cf. King, A.A. & Lenox, M.J. (2001), "Lean and green? An empirical examination of the relationship between lean production and environmental performance", *Production and Operations Management*, Vol. 10 No. 3, pp. 244–256.

³⁹ cf. Jahre, M. & Spens, K. (2007), "Buy global or go local – that's the question". In: P. Tatham (ed.), *CD-ROM Proceedings of the International Humanitarian Logistics Symposium*, 19–20 November 2007, Faringdon, UK.

⁴⁰ Vinodh, S. (2010), "Improvement of agility and sustainability: A case study in an Indian rotary switches manufacturing organization", *Journal of Cleaner Production*, Vol. 18 No. 10/11, pp. 1015–1020.

⁴¹ Jensen, L-M. (forthcoming), "Humanitarian cluster leads: Lessons from 4PLs", *Journal of Humanitarian Logistics and Supply Chain Management*, Vol. 2 No. 2.

⁴² Carter, C.R. & Easton, P.L. (2011), "Sustainable supply chain management: Evolution and future directions", *International Journal of Physical Distribution and Logistics Management*, Vol. 41 No. 1, pp. 46–62.

⁴³ *Ibid.*

⁴⁴ Haavisto & Kovács, *op.cit.*

⁴⁵ Doucouliagos, H. & Paldam, M. (2005), "The aid effectiveness literature. The sad result of 40 years of research", University of Aarhus, Denmark, Working Paper No. 2005–15.

⁴⁶ Haavisto & Kovács, *op. cit.*

⁴⁷ Blecken, A., Hellingrath, B., Dangelmaier, W. & Schulz, S.F. (2009). "A humanitarian supply chain process reference model", *International Journal of Services Technology and Management*, Vol. 12 No. 4., pp. 391–413; Beamon, B.M. & Balcik, B. (2008), "Performance measurement in humanitarian relief chains", *International Journal of Public Sector Management*, Vol. 21 No. 1, pp. 4–25.

⁴⁸ Beamon & Balcik, *op. cit.*

⁴⁹ Schulz, S.F. & Heigh, I. (2009), "Logistics performance management in action within a humanitarian organization", *Management Research News*, Vol. 32 No. 11, pp. 1038–1049.

⁵⁰ Blecken et al., *op. cit.*

⁵¹ Beamon & Balcik, *op.cit.*

⁵² Youn, H., Jaspars, S., Brown, R., Frize, J. & Khogali, H. (2001), "Food-security assessments in emergencies: A livelihoods approach", HPN paper No. 36.

⁵³ Régnier, P., Neri, B., Scuteri, S. & Miniati, S. (2008), "From emergency relief to livelihood recovery: Lessons learned from post-tsunami experiences in Indonesia and India", *Disaster Prevention and Management*, Vol. 17 No. 3, pp. 410–429.

⁵⁴ United Nations Office for Disaster Risk Reduction (UNISDR). at http://www.unisdr.org/files/7817_UNISDRTerminologyEnglish.pdf, accessed 19 Mar 2013, p.6.

⁵⁵ Intergovernmental Panel on Climate Change (IPCC, 2012) [Field. C.B., Barros. V., Stocker. T.F., Qin. D., Dokken. D.J., Ebi. K.L., Mastrandrea. M.D., Mach. K.J., Plattner. G.K., Allen. S.K., Tignor. M. & Midgley. P.M.], *Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation*, Cambridge University Press, Cambridge, p. 5.

⁵⁶ UNISDR, *op. cit.*

⁵⁷ Long, D.C. & Wood, D.F. (1995), "The logistics of famine relief", *Journal of Business Logistics*, Vol. 16 No. 1, pp. 213–229.

⁵⁸ Schröter, D., (2010), "Sustainability evaluation checklist", at www.wmich.edu/evalctr/wp-content/uploads/2010/06/SEC-revised1.pdf, accessed June 2012.

⁵⁹ Voluntary Organisations in Cooperation in Emergencies (VOICE, 2006), "Focus: Linking Relief, Rehabilitation and Development (LRRD)", *VOICE out loud* No. 4, December 2006.

⁶⁰ Hughes, K. (2009), "The evolution of fully flexible supply chains". In: J. Gattorna and friends (eds.), *Dynamic Supply Chain Alignment. A New Business Model for Peak Performance in Enterprise Supply Chains Across All Geographies*, Gower Publishing Ltd, Farnham, Surrey, UK, pp. 85–95; Davidson, C.H., Johnson, C., Lizarralde, G., Dikmen, N. & Sliwinski, A. (2007), "Truths and myths about community participation in post-disaster housing projects." *Habitat International*, Vol. 31 No. 1, pp. 100–115.

⁶¹ Kovács, Matopoulos & Hayes, *op. cit.*

⁶² Tatham, P., Haavisto, I., Kovács, G., Beresford, A. & Pettit, S., *op. cit.*

⁶³ Balcik, B., Iravani, S. & Smilowitz, K. (2010), "A review of equity in nonprofit and public sector: A vehicle routing perspective", *Wiley Encyclopedia of Operations Research and Management Science*, JohnWiley & Sons.

⁶⁴ Oloruntoba, R. & Gray, R. (2009), "Customer service in emergency relief chains", *International Journal of Physical Distribution and Logistics Management*, Vol. 39 No. 6, pp. 486–505.

⁶⁵ Pettit, S. & Taylor, D. (2007), "Humanitarian aid supply chain assessment: A preliminary consideration of the relevance of lean supply chain concepts to humanitarian aid supply chains".

In: Á. Halldórsson & G. Stefánsson (eds.), *Proceedings of the 19th Annual Conference for Nordic Researchers in Logistics*, NOFOMA 2007, 7–8 June 2007, Reykjavík, Iceland, pp. 881–894.

⁶⁶ cf. Long & Wood; Jahre & Spens *op. cit.*

⁶⁷ cf. Gatignon, van Wassenhove & Charles; Balcik, Iravani & Smilowitz

⁶⁸ Jahre & Spens, *op. cit.*; Kovács & Spens (2011b), *op. cit.*

⁶⁹ Jose, A. & Lee, S.-M. (2006), “Environmental reporting of global corporations: A content analysis based on website disclosures”, *Journal of Business Ethics*, Vol. 72 No. 4, pp. 307–321.

⁷⁰ Cullinane, K. & Toy, N. (2000), “Identifying influential attributes in freight route/mode choice decisions: A content analysis”, *Transportation Research Part E*, Vol. 36 No. 1, pp. 41–53.

⁷¹ Gravier, M.J. & Farris, T.M. (2008), “An analysis of logistics pedagogical literature: Past and future trends in curriculum, content, and pedagogy”, *International Journal of Logistics Management* Vol. 19 No. 2, pp. 233–253.

⁷² Craighead, C.W., Hanna, J.B., Gibson, B.J. & Meredith, J.R. (2007), “Research approaches in logistics: Trends and alternative future directions”, *International Journal of Logistics Management* Vol. 18 No. 1, pp. 22–40; Spens, K.M. & Kovács, G. (2006), “A content analysis of research approaches to logistics research”, *International Journal of Physical Distribution and Logistics Management* Vol. 36 No. 5, pp. 374–390.

⁷³ Miyazaki, A.D., Phillips, J.K. & Phillips, D.M. (1999), “Twenty years of JBL: An analysis of published research”, *Journal of Business Logistics*, Vol. 20 No. 2, pp. 1–20.

⁷⁴ Rossetti, C.L. & Dooley, K.J. (2010), “Job types in the supply chain management profession”, *Journal of Supply Chain Management*, Vol. 46 No. 3, pp. 40–56; Kovács, G., Tatham, P. & Larson, P.D. (2012), “What skills are needed to be a humanitarian logistician?” *Journal of Business Logistics*, Vol. 33 No. 3, pp. 245–258.

⁷⁵ Disaster Emergency Committee (DEC) is an umbrella organizations for Actionaid, Age UK, British Red Cross, Cafod, Care International UK, Christian aid, Concern Worldwide, Islamic Relief, Merlin, Oxfam, Save the Children, Tearfund and World Vision.

⁷⁶ CARE (2011), “Live, Learn, Earn, Lead – Care USA Annual Report 2010”, www.care.org/newsroom/publications/annualreports/index.asp, accessed January 2012; Caritas (2011), “Caritas Internationalis Annual Report 2010”, www.caritas.org/resources/CaritasAnnualReport10.html, accessed January 2012; Disasters Emergency Committee (2011), “DEC Annual Report and Accounts 2010–11”, www.dec.org.uk/sites/default/files/files/Annual%20Reports/DEC_AR_2010%E2%80%9311_v6.pdf, accessed January 2012; International Federation of Red Cross and Red Crescent Societies (IFRC, 2011), “International Federation of Red Cross and Red Crescent Societies Annual Report 2010”, www.ifrcmedia.org/assets/pages/annual-report/resources/IFRC-Annual-report-2010-English.pdf, accessed January 2012; International Rescue Committee (IRC, 2011), “International Rescue Committee – From Harm To Home – Annual Report 2010”, www.rescue.org/sites/default/files/resource-file/2010/annual-report_us.pdf, accessed January 2012; Oxfam International (2011), “Oxfam Annual Report 2009–2010”, www.oxfam.org/sites/www.oxfam.org/files/oxfam-international-annual-report-2009-2010.pdf, accessed January 2012; Médecins sans Frontières (2011), “MSF Activity Report 2010”, www.doctorswithoutborders.org/publications/ar/MSF-Activity-Report-2010.pdf, accessed January 2012; Mercy Corps (2011), “2010 Annual Report A Crisis Is Just The Beginning”, www.mercycorps.org/sites/default/files/2010_annual_report.pdf, accessed January 2012; Save the Children (2011), “Save the Children Annual Report 2009 – Revitalizing Newborn and Child Survival”, www.savethechildren.org/atf/cf/%7B9def2ebe-10ae-432c-9bd0-df91d2eba74a%7D/stc-annual-report-2009.pdf, accessed January 2012; United Nations Children's Fund (UNICEF, 2011), “Annual Report 2010 – United for Children”, www.unicef.org/lac/UNICEF_Annual_Report_2010_EN_052711.pdf, accessed January 2012; World Food Programme (WFP, 2011), “Fighting Hunger Worldwide”, <http://documents.wfp.org/stellent/groups/public/documents/communications/wfp220666.pdf>, accessed January 2012; World Vision International (WVI, 2011), “World Vision International 2010 Review”,

[www.wvi.org/wvi/wviweb.nsf/8D286BEE77C06222882578D50018B69C/\\$file/World_Vision_International_2010_Annual_Review_-_English.pdf](http://www.wvi.org/wvi/wviweb.nsf/8D286BEE77C06222882578D50018B69C/$file/World_Vision_International_2010_Annual_Review_-_English.pdf), accessed January 2012.

⁷⁷ Guthrie J., Petty, R., Yongvanich, K. & Ricceri, F. (2004), “Using content analysis as a research method to inquire into intellectual capital reporting”, *Journal of Intellectual Capital*, Vol. 5 No. 2, pp. 282-293.; Krippendorff, K. (2004), *Content Analysis: An Introduction to its Methodology*, 2nd edn. Sage Publications Ltd.: Newbury Park, CA.

⁷⁸ Krippendorff, *op. cit.*

⁷⁹ Suarez, *op. cit.*

⁸⁰ Kalnay & Cai, *op. cit.*

⁸¹ Carter & Easton, *op. cit.*

⁸² Sarkis, Spens & Kovács, p. 204.