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<http://www.emeraldinsight.com/doi/full/10.1108/DPM-10-2013-0192>

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Perspectives on Sustainability in Humanitarian Supply Chains

Gyöngyi Kovacs, Ira Haavisto

E-mail: gyongyi.kovacs@hanken.fi, ira.haavisto@hanken.fi

Department of Supply Chain Management and Social Responsibility
Hanken School of Economics
Helsinki

ABSTRACT

Purpose - The aim of this study is to develop a framework for analysing how humanitarian organisations address different expectations regarding sustainability.

Design/methodology/approach – Quantitative and qualitative content analysis is used to assess the annual reports of humanitarian organisations for their discussions on sustainability overall, and in relation to contextual expectations, subsystems and supply chains, organisational structure and strategy.

Findings – Humanitarian organisations address sustainability primarily from the perspective of contextual expectations from society and beneficiaries. Some fits between supply chain design and societal expectations are attended to, but fits between programmes and contextual expectations are not discussed explicitly.

Research limitations/implications – Annual reports express what organisations want to portray of their activities rather than being direct reflections of what occurs in the field, hence the use of annual reports for the study delimits its findings. However, humanitarian organisations rarely publish sustainability reports.

Practical implications – Even though there is a general pursuit of the elusive aim of aid effectiveness, organisational structures need to be further aligned with societal aims as to support these.

Social implications - Beneficiaries are still seen as external to the humanitarian supply chain and humanitarian programmes, though their role may change with the introduction of more cash components in aid, voucher systems, and ultimately, their empowerment through these.

Originality/value – The suggested conceptual framework combines elements of contingency theory with a prior four perspectives model on sustainability expectations. The framework helps to highlight fits between the humanitarian context, operations and programmes as well as misalignments between these.

Category: Research paper

Keywords: humanitarian organisation, disaster relief, sustainability, humanitarian supply chain, contingency theory

INTRODUCTION

The rationale underlying humanitarian aid is to help people in need, the beneficiaries. Two principles guiding humanitarian operations are: “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” (SPHERE, 2011). However, humanitarian aid has been criticised for its ineffectiveness at a macro-economic level (Burnside and Dollar, 2000; Rajan and Subramanian, 2008; Doucouliagos and Paldam, 2009) and even condemned for constraining development (Moyo, 2009). Conversely, other investigations demonstrate that aid can contribute to economic development (Burnside and Dollar, 2000; Hansen and Tarp, 2004), although results differ according to geographical location (Clemens et al., 2004) and policy (Dalgaard et al., 2004).

In both theory and practice, the aid effectiveness discussion has ultimately filtered down to the operational level as well, leading humanitarian organisations to focus on cost and time efficiency in addition to transparency. However, there has been additional criticism for overlooking equity (Balcik et al., 2010), customer service (Oloruntoba and Gray, 2009) and sustainability (Haavisto and Kovács, 2012). All these aspects are essential for aligning the operational with the longer-term objectives of humanitarian aid. Simultaneously, several large donors (ECHO, 2010; World Bank, 2011; USAID, 2012) have incorporated long-term objectives into their requirements of humanitarian organisations (HOs), obliging them to consider the persistence of their impact in programme planning. A further increase in the awareness of long-term impacts has been pioneered by the United Nations Development Programme’s (UNDP, 2013) climate change adaptation agenda. Nonetheless, the long-term impacts of aid are difficult to monitor and evaluate. Neither is it clear which impacts should be included in such an assessment, for instance ecological, nor how exactly HOs should consider them. HOs have been criticised for short-sightedness in supply chain design (Kovács et al., 2010), though have started to overcome some of that criticism by for example using local suppliers to empower local communities. Conversely, donor requirements, which otherwise are used to drive standards of accountability, efficiency and effectiveness (ALNAP, 2007), are yet to pay more attention to also sustainability (Haavisto and Kovács, 2012).

The aim of this study is to develop a framework for analysing how humanitarian organisations address different expectations regarding sustainability. According to contingency theory, contextual expectations are an important aspect for organisations to consider and to attempt to “fit” with also in terms of developing their performance objectives (Tosi and Slocum, 1984). In order to do so, we analyse HO annual reports.

The article is structured as follows. First we present insights from previous literature on performance, and sustainability expectations in the humanitarian context. We then develop a coding scheme for the content analysis of annual reports on the basis of existing frameworks. Findings from the analysis are presented next, before drawing conclusions for the understanding of sustainability in the humanitarian context.

Assessing the impact of humanitarian aid

The main performance expectation on HOs can be derived from their very aim to save lives (Beamon 2004, Kovács and Spens 2007), decrease human suffering (ICRC 2010) and contribute to development (UNDP 2010). Donors are interested in the performance of the programmes they support as well as their societal impact. Overall, expectations vary from a beneficiary and programme focus to macro-economic aspects of aid effectiveness and development. But while aid effectiveness is the mantra of all humanitarian and development activity, assessing the macro-economic impact of humanitarian aid is tricky from an organisational and even a supply chain perspective. After all, aid effectiveness lies at the convergence of the parallel efforts of several HOs and their supply chains.

If performance was to be defined how it is measured, it would commonly be assessed as financial performance, or time and volume-related performance, with indicators such as lead times and filtrates (Blecken et al., 2009). In the humanitarian context, performance has been suggested to be measured as output, resources, flexibility (Beamon and Balcik, 2008) or as customer service, financial control and process adherence (Schulz and Heigh, 2009), whilst Blecken et al. (2009) argue for measuring donation-to-delivery time, output and resources. Other performance measures to add are equity in aid (Balcik et al., 2010), impact on the local economy (Tomasini and van Wassenhove, 2004; Listou, 2008) and even the cultural appropriateness of items (Long and Wood, 1995; Pardasani, 2006).

At the same time, the humanitarian context, and especially disaster relief, is characterised by high complexity (van Wassenhove, 2006; Kovács and Spens, 2007), and a high degree of uncertainty (Long and Wood 1995; Beamon 2004). Complexity makes the definition of performance measures an onerous task (Shepherd and Günter, 2006). Setting performance objectives in an HO is the more difficult due to the different expectations of various stakeholders. Performance measurements can though not capture all these expectations. When Beamon and Balcik (2008) refer to output, their suggested measurements are population coverage and order fulfilment rate. These do not reflect the overall impact of aid, though are important contributors to this impact. Importantly, there is a link between some operational performance expectations and the long-term impact of aid. For example, access to beneficiaries facilitates a positive impact of a programme, and a positive impact on the community of these beneficiaries. Reversely, access to aid is a defining factor on whether aid can reach certain communities at all. Equity is another good example of social implications of aid, as it indicates whether the most vulnerable population has been reached (cf. Balcik et al., 2010). Such performance expectations feed into the longevity and sustainability of aid.

Performance is an important consideration also from the angle of humanitarian supply chains. Humanitarian supply chain management encompasses the planning and management of all activities involved in sourcing and procurement, conversion, and all logistics management activities. Importantly, it also includes coordination and collaboration with actors, which can be suppliers, intermediaries, third party service providers, donors, implementing partners and beneficiaries. In essence, humanitarian supply chain management integrates supply management and needs assessment within and across humanitarian organizations and other actors. The link between supply chain performance, with the usual performance foci of lead times, cost and time efficiencies, flexibility and dependability, and the impact of humanitarian aid overall, is, however, not always clear. Whilst a mission may have been completed and its aims achieved in terms of full and on-time deliveries, its contribution to the local economy, to equity, or sustainability, may be questionable. Also sustainability expectations are defined differently whether seen from a societal or a supply chain perspective.

Sustainability expectations as contextual factors of humanitarian organisations

First and foremost, humanitarian aid adheres to the Hippocratic tenet of “ὠφελέειν ἢ μὴ βλάπτειν”, i.e. “Help, or do no harm”, which in medicine has been encapsulated in the Hippocratic Oath. Anderson (1999) extended this thinking to the humanitarian context when it comes to the underlying processes of delivering aid in a manner that supports peace processes, acknowledging that the way aid is delivered, and the supply chain behind it, is instrumental to supporting or hindering bigger societal developments. The principle of “do no harm” is still used in this interpretation by the Global Protection Cluster. A different interpretation of this principle could see it in the light of humanitarian aid supporting or hampering development, or as a precept for not harming the natural environment.

Many of the performance expectations on humanitarian aid can also be understood as sustainability expectations. Saving lives and decreasing suffering correspond with social responsibility, while contributing to development resonates with the longer-term aims of sustainability, especially if combined with ecological aspects of sustainable development. Literature often differentiates between the economic, ecological and social dimensions of sustainability following the triple bottom line model (e.g. Carter and Rogers, 2008; Seuring and Müller, 2008), though Weerawardena et al. (2009, p.347), for example, define sustainability in the non-profit sector as “being able to survive so that it [the organisation] can continue to serve its constituency”, in other words, as maintaining operations. ALNAP (2007), on the other hand, defines sustainability as “measuring whether an activity or impact is likely to continue after donor funding has been withdrawn”. This definition highlights the long-term (social) impact of humanitarian interventions. To broaden the scope, we will adhere to the broader definition of sustainable development as “meeting the needs of present without compromising the ability of future generations to meet their own needs” (WCED, 1987). This is to denote a rather embedded overall positioning that embraces many different expectations on sustainability. Various sustainability expectations have been categorised by Haavisto and Kovács (2013) into four perspectives: societal, beneficiary, supply chain, and programme perspectives.

These four perspectives can be approached through contingency theory, which extends organisational theory by stating that it is not only the organisational structure and strategy that influence organisational performance but also the context (Lawrence and

Lorsch, 1967; Perrow 1979; Thomson, 2003). Contingency theory has been used in management and organization research in contexts where uncertainty in the environment played a role. Furthermore, research on temporary organizations and organizations conducting project work, such as consultancy firms (Morgan 1997), has found explanatory power in Burns and Stalker's (1961) original notion that contingency theory affirms that organic structures fit best with uncertain environments. Humanitarian work can be seen to operate in a uncertain setting and humanitarian operations are of the of ad-hoc nature or project nature.

Further embedded in contingency theory is the construct of "fit", where improving the fit between an organisation and its environment leads to improved performance (Tosi and Slocum, 1984). When it comes to sustainability expectations, the fit between the societal perspective as the context is stressed for the understanding of internal perspectives. For example, the organisational and programme objectives of efficiency relate to contextual objectives of improving livelihoods. Putting the four perspectives into a contingency theoretical framework helps to illustrate not only the perspectives but also the needs for fit between these (see Figure 1).

But while contingency theory is a theory of the firm, it can also incorporate the supply chain if the supply chain is perceived as an organisational subsystem. In the humanitarian context, supply chains are either perceived as organisational-internal ones, in which case the focus is on joint procurement at headquarters supplying various country and field units of the same organisation, or seen as the combination of an ad hoc network of organisations involved in the relief operations of the same disaster with the complex end-to-end supply chain of each individual humanitarian organisation that contributes with materials and services to the programmes of these HOs (Tatham and Pettit, 2010). In either case, the focus is on the support of the HOs programmes, hence we include the supply chain in the organisation's subsystem in Figure 1, in line with Choi and Hong's (2002) observation that the supply chain can be seen as an internal contingency factor.

<Take in Figure 1 about here>

The first, societal perspective in Haavisto and Kovács (2013) framework makes a macro-economic assessment of aid effectiveness (see Table 1 for a list of aspects under the various perspectives). Overall, societal expectations are external contingency factors beyond mere contextual change. For example, climate change risk is an important aspect of demand uncertainty, both from the aspect of what constitutes demand as well as how such demand will develop in the future.

<Take in Table 1 about here>

It is a bit ambiguous whether the second, beneficiary perspective, should be included into the organisational context, subsystem, structure, or strategy. One of the aspects Haavisto and Kovács (2013) include here is that of needs fulfilment, in essence how well the needs of beneficiaries have been met. The very idea of needs fulfilment can though be debated. Oloruntoba and Gray (2009), for example, rather talk about customer service. Yet the notion of beneficiaries as customers remains disputed due to the lack of their purchasing power (van der Laan et al., 2009). Therefore, and in spite of some community-based approaches incorporating beneficiaries in the humanitarian supply chain (Kovács et al., 2010), we included the beneficiary perspective in the organisational context rather than the programme or supply chain perspectives, albeit seeking fits with the latter two. Consequently, also demand uncertainty is seen as an external contingency factor, though if beneficiaries were integrated in the humanitarian supply chain, it could be seen as an internal one.

Sustainable expectations from the supply chain perspective, on the other hand, follow sustainable supply chain management overall, in that they combine considerations of products, services, as well as processes in the supply chain. Other aspects, such as preparedness, and the emphasis on local sourcing, stem from humanitarian logistics. At large, it is expected that preparedness activities would improve the time efficiency of disaster relief if not mitigate the need for it overall. Local sourcing, on the other hand, can have a positive impact on the economic situation in the region and can be seen as an action of community empowerment (Kovács and Spens, 2011) with a positive impact on regional economic development. Therefore, the current trend is towards favouring local sourcing wherever possible (Jahre and Spens, 2007). Interestingly, the supply

chain perspective can be seen as an internal contingency factor (Choi and Hong, 2002), notwithstanding the expectations of governments and communities on the supply chain.

The final perspective portrays sustainability from the viewpoint of a defined aid programme. The programme perspective is important as humanitarian organisations typically structure their activities under various programmes. Also donors grant funding for specific programmes (projects or disasters). Programme-related expectations are a mix of internal and external contingency factors as they refer to, *inter alia*, structural differentiation and decentralisation (Donaldson, 2001), which, in turn, affects how programmes are managed and set up to have a long-term impact. From a sustainability perspective, one should keep in mind what effects (and possible harms) any action in disaster relief can have on recovery and the long-term development of the society.

Research design and methods

Content analysis has often been used in sustainability research, and on the cross-roads of sustainability and supply chain management – see e.g. Srivastava (2007), Seuring and Müller (2008), or Seuring et al. (2010), as well as to evaluate the skills requirements of humanitarian logisticians (Kovács et al., 2012), and to analyse current humanitarian logistics literature (Kunz and Reiner, 2012).

As Krippendorff (2004) and also Saldaña (2011) argue, content analysis can focus on the manifest or also latent content, and be either quantitative or qualitative, or both. Seuring and Gold (2012) describe the four steps of content analysis to consist of material collection, descriptive analysis, category selection, and material evaluation. First, we sampled large organisations by the total sums in 2010 they appealed from donors based on UN OCHA's Financial Tracking Services (see Table 2). Appeals were selected as the sampling criterion in order to be able to capture disaster relief-related activities even though many organisations are active both in relief and development. Of course, appeals do not reflect resultant funding or the overall budgets that would include the permanent funding of an organisation; rather, they indicate planned activities during disasters. However, appeals reduce the UN bias of looking at budgets only. Narrowing it down, we selected those organisations that issued a general annual report (in contrast to a theme-based or country-specific one) and exceeded the amount of 100 million USD of committed/contributed appeals in 2010. Though this may seem

arbitrary, this cut-off point left us with a good spread of organisations (four UN agencies, three organisations of the Red Cross movement, and four international NGOs) that have large enough operations to report on in detail. The annual reports in the resultant sample are noted with an asterix in Table 2.

<Take in Table 2 about here>

While the annual reports are not necessarily a direct reflection of what occurs in the field, they express what organisations want to portray to external stakeholders and reflect the strategies humanitarian organisations use to respond to the contingency factors of sustainability expectations. Annual reports were chosen since the humanitarian sector has not, as of yet, embraced sustainability standards nor certificates. For example, out of 2032 Global Reporting Initiative (GRI) reports in the year 2010, only 57 were from non-profit organisations and only three from humanitarian organisations, Oxfam GB, Caritas del Peru, and World Vision Australia. Similarly, a recent Ecorys study (2012) shows that also donors place little emphasis on sustainability so far (see Appendix 1). On the other hand, annual reports are not appeal-specific, and therefore, depending on organisational mandate, may include both humanitarian interventions as well as development assistance. This was seen as a benefit as this way we could assess the link between the two, if there was any.

Our material collection and first descriptive analysis was conducted as a keyword search including terms such as “sustainab*” and similar Boolean searches. However, the keyword searches resulted in few hits (see Table 3), and also, keywords were used in alternative meanings as well, therefore the analysis of latent content became necessary. Saldaña (2013) suggests a number of different coding techniques for the assessment of latent content in a content analysis, from values coding to pattern coding. Due to the lack of hits through keyword searchers, we used structural coding for the identification of broader texts on a given topic, and analysed then these more in detail for their latent meanings. Still, we used the labels from the Haavisto and Kovács (2013) four perspectives framework as the basis for identifying the structures.

<Take in Table 3 about here>

The quality of a quantitative content analysis is typically assessed via inter-coder reliability. However, qualitative content analyses (such as ours) rather use the approach of a discursive alignment of interpretation, during which coders are not independently assessing the material at hand but rather continuously debate issues as they arise through the coding (Seuring and Gold, 2012). Using two coders helps eliminating in what Berger (2013) calls “unconscious editing” in the analysis, suggesting the consulting of another research throughout the analysis as a way of “triangulation by comparison” in order to secure the data to be a trustworthy representation of the categories that were analysed. We therefore used two coders, but still, existing conceptual frameworks to deductively develop main categories and a clear coding scheme. The use of such a coding scheme and clear decision rules for categorisation improves both the objectivity and transparency of the content analysis (Krippendorff, 2004; Spens and Kovács, 2006). We first analysed each document separately for each category before proceeding to a category-based cross-document and thus, cross-case analysis.

Findings from the content analysis

The annual reports of the selected organisations varied in structure, length and depth. The length of a report obviously influences the number of times a keyword is mentioned. As shown in Appendix 1, the number of hits per keyword varied from “access” (823 times) and “local” (524 times) to keywords that weren’t mentioned at all. A more in-depth, latent content analysis was needed to overcome these shortcomings and unearth perspectives that the keyword search could not capture. Hence we analysed each document through searching for text on the topic of each category, first through using the terms of the category (e.g. “community”, “empowerment” for the category of community empowerment) but then also reading through the text once more to discover further related latent content (e.g. women’s empowerment, capacity building).

Sustainability was explicitly addressed in 8 out of 11 analysed reports. The reports of CRS, ARC and STC did not mention the term sustainability directly, though the latent content analysis found that aspects of sustainability are brought up also in these

reports. Most often, organisations used the term sustainability in relation with long-term development. IFRC for example state that their work in Haiti not only strives for a healthier future but a more sustainable one. ICRC's report refers to sustainability most often (63 hits), defining it as (p.27) "taking into account longer-term impact and looking for lasting solutions to the needs or problems encountered", and accentuating sustainability as a goal alongside with feasibility, relevance and appropriateness. They further discuss sustainability from a societal perspective: "the priority is to support and strengthen existing structures through initiatives taken in conjunction with the authorities and/or through specific programmes that meet the needs of the population in a viable, sustainable manner". UNDP also highlights sustainability as an important theme, most likely due to the fact that sustainability is one of the four pillars in their mandate. UNDP suggests an ecological or "green" understanding of the term, stating that one of their core areas is to "manage energy and environment for sustainable development", and further listing projects with a sustainability focus, such as "sustainable micro-hydro" projects and the establishment of "organic model farms". UNICEF follows UNDP's understanding of sustainability and discusses it mostly from an ecological perspective, e.g. in "sustainable land management" (UNICEF, p.40). Other organisations discuss sustainability in a fairly vague manner, but the latent content analysis helped to reveal more details to their understanding.

The societal perspective on sustainability

Annual reports are written for a variety of stakeholders, which for humanitarian organisations includes society overall. The annual reports reflected on the aspects of social welfare, livelihood, economic development, and climate change mitigation to varying degrees. Social welfare was addressed in terms of social justice (social exclusion vs. inclusion), social advancement (WFP) and positive social change (UNICEF). On the aggregate level, social welfare was discussed in relation to child welfare, for which life expectancy was indeed a measure, as well as welfare systems overall. Rather than an individual measure, social welfare came up in conjunction with economic development and equity considerations, indicating a "fit" between these. For example, the following is stated in UNICEF's annual report (p.5): "promoting equitable development is integral to sustainable economic and social recovery". Interestingly, MSF (p.107) accounts for part of their funding other funds used for their "social mission", which they define as "all costs related to operations on the field (direct costs) as well as all the

medical and operational support from the headquarters directly allocated to the field (indirect costs).”

The concept of resilience was often represented in relation to livelihoods, whether to “protect livelihood” or resilient buildings to support livelihoods (examples from ICRC) or to “strengthen resilience to shocks and preserve livelihoods” (WFP, p.38). This conjunction is not surprising given that the concept of livelihoods refers to the society’s or individual’s ability to support themselves, and due to the negative impact disasters have on livelihood (Young et al., 2001). Interesting conjunctions were made between sustainability and livelihood, for example Oxfam talking about “a right to a sustainable livelihood” as one of its aims. Sustainable livelihood further refers to maintaining or even enhancing capabilities now and in the future (Régnier et al., 2008), which is expressed as “building back better” in several annual reports. The UN agencies discuss in their annual reports livelihoods as part of a larger UN goal, where OCHA state (OCHA, p.25) that they “contributed to UN policy coherence on issues such as protection and livelihood interventions.”

Economic development was discussed as but one aspect of many that are needed to meet the goals of an HO. Several organisations (UNDP, OCHA, CRS and UNICEF) state that economic development alone is not enough. “Economic growth alone has not been enough to sweep away the deeply rooted social and economic inequities that make some children more at risk” (UNICEF, p.4) or “[we] came to understand that it was not enough to work on economic development but to place such work in a broader context of human development” (CRS, p.28). Conversely, classical measures of economic development were not represented in the annual reports, neither as GDP nor schematic poverty measures such as the percentage of the population living on a dollar or less a day; only MSF reflects over the potential of “economic growth” when discussing countries in which they operate.

Then again, economic development was portrayed as interconnected with climate change mitigation: “Climate change has enormous economic repercussions for developing countries, through its impact on agriculture and livelihoods, and through increased natural disasters. Economic justice will not be achieved without addressing climate change” (Oxfam, p.8). Overall, climate change mitigation was the most discussed aspect of the societal perspective. The discussion is not one of reducing greenhouse gas emissions (as in the UNISDR definition, though IFRC and WFP have both launched initiatives to offset transportation emissions) but rather, focusing on

adapting agriculture (Oxfam) and food security (OCHA). Climate change is also problematised as a cause of migration, leading to questions of climate justice. UNDP, IFRC and UNICEF further address changing disaster patterns due to climate change as something the humanitarian community needs to prepare for.

The beneficiary perspective on sustainability

The access of organisations to an area and the access of beneficiaries to aid are preconditions for the success of any humanitarian operation (Mancini-Roth and Picot, 2004). Access is considered from two main perspectives in the annual reports: (a) differences in disaster vulnerabilities across beneficiary groups (e.g. children, women, HIV patients), and (b) differences in the access to aid dependent on the geographical (mostly rural vs. urban) location of beneficiary groups. Local partnerships are mentioned as a factor to ensure access both to beneficiaries and implementing partners. For example, OCHA (p.50) negotiates with local governments to “improve humanitarian access” and UNDP (p.1) describes that “long-term in-country presence is critical for building trust with and access to national partners”. UNICEF (p.5) focuses on equity for facilitating access, stating that “[e]quity-focused strategies are being developed to improve the provision and use of services by reducing barriers that result from factors such as geographical location, income poverty and lack of awareness.” They further improve access by assisting in procurement, using purchasing economies to improve the financial accessibility of health care products; just as WFP does for food and agricultural products through their programme called “purchase for progress”. UNDP (p.11) considers access to services, such as microloans: “UNDP also worked with local authorities to encourage male family members to grant inheritance rights to women, enabling women to leverage property rights for access to microloans.” But also transport infrastructure facilitates or inhibits on access, e.g. leading to air freight and air drops as modal choice: “Close to 3,500 missions were flown in total, transporting more than 12,200 metric tons of food and other emergency humanitarian goods for almost 20 different organizations, providing supplies to an estimated one million people who were inaccessible other than by air” (WFP, p.11).

Targeting and equity are often used synonymously as both imply addressing gaps in aid deliveries and helping the most vulnerable first. Some organisations’ target groups are defined in their mandates, e.g. UNICEF targeting children, or WFP’s nutrition focus on children under 1000 days and on pregnant women. Other targets can be

geographical areas, specific programmes, or, in the case of advocacy, different stakeholders (authorities, gender, donors). For example, WFP targets “areas where the harvest hadn’t yet come in” (p.24), UNICEF countries with high mortality rates and communities with high refugee rates, and MSF working populations around industrial centres in a TB programme. On the other hand, UNDP in Armenia targets “water, sanitation, electricity, gas, job creating, microfinance and environmental renewal”.

Every annual report reflected over the needs of beneficiaries, but few discussed *needs fulfilment* as a function of meeting the needs that were assessed. The IFRC annual report specifically focuses on meeting the needs of beneficiaries and on fulfilling missions - but not on needs fulfilment. This goes to show that the overall focus is on the programme, and even though the various needs of beneficiaries are targeted, in the end it is the mission, or programme, on which level deliveries and fulfilment are assessed. Then again, annual reports fulfil the function of donor communications (amongst others), and funds are for given programmes, whilst, beneficiaries typically lack purchasing power – which is something cash transfers, vouchers, and electronic coupons aim to reinstate.

The supply chain perspective on sustainability

We found though very little in the annual reports that would have related to ethical/green products, services, or supply chains. ICRC (p.24) mentions the ethical responsibility organisations have when making service and product choices for beneficiaries: “People benefiting from humanitarian action depend on the quality of the service they get from organizations that they cannot really choose for themselves. Those organizations therefore have an ethical responsibility to take into account local capacities, culture and vulnerabilities”. WFP planted trees to offset transportation emissions, UNICEF included the combat of unethical marketing in a programme – but apart from such minor details, issues of ethics and/or greening were not discussed in relation to neither products and services, nor to programme, nor to supply chain design.

Preparedness, on the other hand, was integral to not just particular programmes but to the activities of all humanitarian organisations overall. This category included efforts to strengthen of governments for preparedness on the national level (Oxfam), the incorporation of preparedness and disaster risk reduction measures in all programmes (UNICEF), to the use of satellite imagery for mapping upcoming food deficits as part of

preparedness for famines (WFP). Interestingly, as envisaged in the Haavisto and Kovács (2013) framework, many preparedness activities relate to supply chain management, whether it is to prepare legal systems of various countries to facilitate a potential influx of aid (IFRC), or the development of risk assessment methods for advance planning (WFP). Interestingly, OCHA's "Strategic partnership for preparedness project", or STC's and CRS' first-aid training and education relate preparedness to capacity building for disaster risk reduction. Missing from the reports were the supply chain-related preparedness activities such as prepositioning of supplies and other resources.

Local sourcing came up in different ways as well. Local chapters of humanitarian organisations helped in organising and distributing disaster relief, reducing response times as predicted by Gatignon et al. (2010). Local HOs and even companies were used as implementing partners. STC (p.10) state that their strategy is "based on partnerships with local communities that mobilise resources to support children and families in need". WFP's voucher system was employed to restate the purchasing power of beneficiaries in a way that they would buy local food items from local stores, in essence strengthening local capacity and agricultural production. WFP further informs on establishing local production for therapeutic food products. The conjunction to sustainability is made throughout, as the aim of engaging local partners is to "stimulat[e] the local commercial sector" (WFP, p.12).

The programme perspective on sustainability

In spite of almost no keyword hits, the programme perspective is emphasised in the annual reports through short sections on particular programmes an organisation got funding for during the fiscal year. For example, financial continuity often refers to programmes that have been continued over several years and addresses the need for their further continuation as well as the challenge of finding continuous funding for such programmes, or the challenge to continue a programme under financial constraints. Most interesting is the discussion on discontinuing a programme, for example WFP problematising how they will continue to support a country after handing over a school feeding programme to the government, or MSF handing over medical supplies to hospitals at the end of their operations. Another much discussed problem is the impact of the financial crisis on humanitarian aid.

Effective resource utilisation is hence the more important though seldom directly addressed. UNICEF's report on resource utilisation is the exception in that it reports on the pooling of funds and activities, and even how they expect a new ERP system to improve the tracking and utilisation of resources. Sharing resources with other organisations comes up in other ways as well, through reflections on the cluster system (and in particular, the WFP-led Logistics Cluster). Sharing through joint programmes is rather novel and the more interesting as it constitutes a great effort to break down organisational boundaries for "own" operating methods and goals (cf. Long and Wood, 1995). However, other issues such as asset maintenance and disposal cannot be found in the analysed annual reports.

The persistence of programme impact is surprisingly little addressed. Lasting impacts seem to be more a question of training beneficiaries directly (through educational programmes, agricultural training), and of moving from handing out materials to micro-financing systems. MSF briefly states measuring how many patients continue treatment after the discontinuation of a programme as a way of assessing longer-term programme impact, as well as measure their impact in terms of reduced mortality rates. Only Oxfam explicitly discusses the impact of joint programmes and the impact of programmes of livelihoods in the long run. That said, the persistence of programme impact is problematised through linking relief to rehabilitation and development (LRRD) albeit LRRD as such is not mentioned in the reports. For example, MSF questions the impact of reduced global funds for HIV programmes due to the financial crisis. More often, the transition from relief to development is expressed as "growing into development programmes". The nexus of disaster relief and development is dealt with through existing programmes and staff in a region facilitating quick disaster response, and in terms of building back better – in essence, closing the loop from preparedness to relief to reconstruction, and preparedness again. WFP (p.4) reflects over a relief programme as follows: "Not all of that food was employed for emergency relief. Some was used to support a wide array of programmes helping communities build better futures by bridging the gap between immediate relief and longer term recovery." Due to overlaps between relief and development, instead than assessing the impact of particular programmes, phasing out relief and handing over to development was rather discussed. Therefore, we would suggest merging the categories of "persistence of programme impact" and LRRD in further research.

Community empowerment, the last category under the programme perspective, is intrinsically related with handing over programmes and with capacity building. A myriad of other issues were though also reported under this category, e.g. the use of local (community-based) chapters in the organisation of a humanitarian supply chain (IFRC), using community members as employees, as well as WFP's electronic coupons to improve the purchasing power of beneficiaries. OCHA (p.51) presents vouchers as a mechanism to empower beneficiaries: "families receive vouchers to purchase commodities, empowering them to make decisions instead of receiving".

CONCLUSIONS

Both the concept of sustainability, and sustainability-related expectations are highly diffuse in the humanitarian setting. Yet sustainability can be seen as a performance objective parallel to efficiency, quality and flexibility. Sustainability has been treated as such a performance objective in companies and their supply chains (Carter and Rogers, 2008). In the humanitarian setting, donors have set sustainability as a goal (Haavisto and Kovács, 2012). We studied sustainability expectations through further developing Haavisto and Kovács (2013) four perspectives into a contingency theoretical framework (Figure 1). This framework helps not only to separate between various perspectives on sustainability, and sustainability-related expectations, but also, to seek a fit between these perspectives.

Generally, whilst society expects economic development, or at least a “back to track” from humanitarian aid, HOs can only evaluate whether their missions have been accomplished and approach the success of a programme from this perspective. Humanitarian programmes are though not set up in a vacuum, rather, they should support the development of society at large. Hence the fit between the organisation and its strategy with its organisational context is not a matter of corporate survival but essential for the alignment of humanitarian interventions with larger societal aims. The fit between context, organisational subsystems, strategies and structures is therefore the more important.

Our findings indicate that some of the aspects from various perspectives on sustainability support each other, and are discussed in conjunction with each other in the annual reports. For example, social welfare considerations were combined with sustainable economic development and also equity. At the same time, also climate change mitigation was juxtaposed with economic development, and even local sourcing was addressed from the perspective of supporting local economic growth as well as to contribute to equity. Therefore, we conclude that albeit sustainability expectations stem from different perspectives, some fits between these are evident. Through local sourcing, both the societal and beneficiary perspectives of contextual expectations are supported, and vice versa, the societal expectation of social welfare contributes to also the beneficiary expectation of equity. Similarly, if local sourcing includes beneficiaries into a programme, their empowerment can be supported, linking the organisational

structure with the subsystem. Local partnerships have also been seen as facilitating access, which is a further fit between the organisational subsystem and context.

Other fits are surprisingly lacking from being addressed in the annual reports. Such is the missing discussion of needs fulfilment, turning to the fulfilment of programmes or missions instead. Ideally, fulfilling a programme of course contributes to needs fulfilment as well, though this alignment would need to be studied further. Generally, whilst we found some fits between the various expectations, further research is needed to develop also performance indicators that would support the fit between context, subsystem and structure. This would also further the understanding how the fit between the organisational setup both in terms of structure and strategy fit with the humanitarian context that is characterised by uncertainty.

ICRC and UNPD bring up sustainability itself as a performance objective. Both organisations seem to have a societal perspective on sustainability discussing it through the natural environment and long-term development. Overall, the contextual expectations from the beneficiary and societal perspectives were addressed the most, whilst there was a relative lack of representation of aspects of the programme perspective, including aspects of resource utilisation and LRRD. The supply chain perspective representing the operational aspects such as preparedness and greening did not come up much except for local sourcing. The contextual focus is very visible in how HOs address the ecological dimension of sustainability: Whilst little attention is paid to greening products, services, or operations, climate change adaptation is considered for the livelihoods of beneficiaries and in the search of coping and mitigation strategies. This is in line with Sarkis et al.'s (2011) finding that the goal of HOs is to help people, with the environment considered second at best. Further research is though needed to identify greening initiatives, since annual reports may not have captured all that have taken place in the studied organisations.

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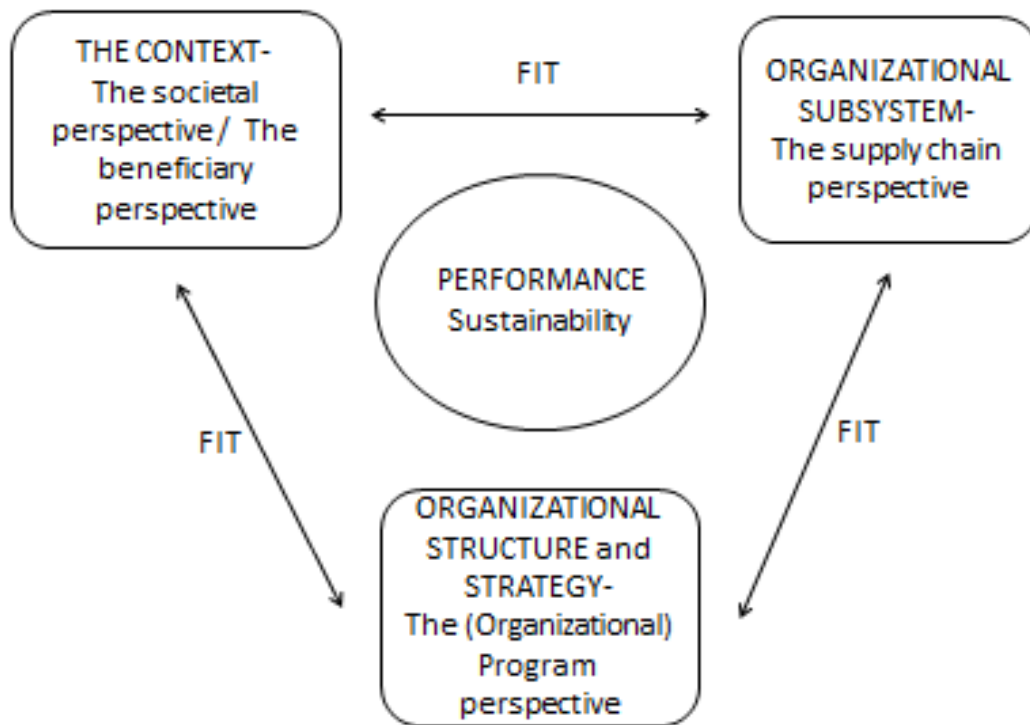
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(based on the contingency theoretical approach of Tosi and Slocum, 1984, p.18)

Figure 1 A contingency theoretical framework of essential fits between sustainability expectations

Table 1 Sustainability expectations and their various aspects

	Perspective	Aspect¹	Expressed as
Context	Societal	Social welfare	Either a function of the individual's welfare, or aggregated measures such as life expectancy and income per capita.
		Livelihood	The society's, individual household's or individual's ability to support themselves. ²
		Economic development	Expressed through GDP, or the percentage of a population living in poverty vs. in extreme poverty
		Climate change	The society's or organisation's capability to reduce their impact on climate change, and to adapt to living in a changing (ecological) climate. Climate change mitigation can result in hazard-resistant construction as well as improved environmental policies. ³
	Beneficiary	Access	The opportunity for supplies to meet the beneficiary, more precisely, the right supplies meeting the beneficiaries need with the right supplies or services at the right time in the right place. ⁴
		Targeting and equity	Correctness of the needs assessment (who is in need?) and the even coverage of that target group.
		Needs fulfilment	Function of how well beneficiary needs have been served overall.
Organisational subsystem	Supply chain	Ethical and green products/services	The actual items or services delivered to the beneficiary where for example a non-disposable product might cause more harm than do good.
		Ethical and green operations	Expressed and supported by supply chain design.
		Preparedness	Mitigation of effects of disasters from the governmental perspective ⁵ , as well as prepositioning items and developing preparedness capabilities ⁶
		Local sourcing	The incorporation of local resources, materials, and people.
Organisational structure and strategy	Programme	Financial continuity	The possibility of a programme to continue serving the beneficiaries in need.
		Resource utilisation	Asset maintenance and disposal as well as the sharing of resources across programmes and organisations.
		Persistence of programme impact	The persistence of activities, services and interventions, or the persistence of resulting changes for individuals or the aided society. ⁷
		Linking relief to rehabilitation and development (LRRD)	Addressing the gap between disaster relief and development activities and programmes through e.g. handovers and capacity building.
		Empowerment	Community involvement (active role in planning and decision making) or capacity building.

¹summarised from Haavisto and Kovács (2013); ²Régnier *et al.* (2008), ³UNISDR (2013), ⁴Kovács *et al.* (2010), ⁵Tatham *et al.* (2012),⁶Gatignon *et al.* (2010), ⁷Schröter (2010)

Table 2 Study sampling and sources

Organisation	Acronym	USD committed / contributed to appeals in 2010¹	Annual report
World Food Programme	WFP	4 288 770 520,00	General AR 2010*
United Nations High Commissioner for Refugees	UNHCR	1 472 434 648,00	Country- and theme-based AR
United Nations Children's Fund	UNICEF	1 023 749 781,00	General AR 2010*
International Committee of the Red Cross	ICRC	586 931 430,00	General AR 2010*
International Organization for Migration	IOM	305 696 877,00	Country- and theme-based AR
Food & Agriculture Organization of the United Nations	FAO	296 534 320,00	Theme-based AR
United Nations Relief and Works Agency for Palestine Refugees in the Near East	UNRWA	272 314 139,00	Theme-based AR
Catholic Relief Services	CRS	255 308 740,00	General AR 2010*
American Red Cross	ARC	244 036 254,00	General AR 2010*
Save the Children	STC	242 969 905,00	General AR 2010/11*
Office for the Coordination of Humanitarian Affairs	OCHA	239 031 613,00	General AR 2010*
International Federation of Red Cross and Red Crescent Societies	IFRC	204 958 389,00	General AR 2010*
World Health Organization	WHO	203 410 696,00	Theme-based AR
Médecins sans Frontières	MSF	150 865 837,00	General AR 2010*
Emergency Response Fund (OCHA)	OCHA (ERF)	137 847 025,00	Included in OCHA annual report
United Nations Development Programme Total	UNDP	127 685 075,00	General AR 2010/11*
OXFAM GB Total	OXFAM	119 243 321,00	General AR 2009/10*

¹FTS data, accessed through ReliefWeb Nov 18, 2011, eliminating bilateral, various recipients etc.

*Annual reports included in the sample, with the top 10 general reports being selected.

Table 3 Quantitative results from the content analysis

Organisation Year Keyword	WFP 2010	UNICEF 2010	ICRC 2010	CRS 2010	ARC 2010	STC 2010/1 1	OCHA 2010	IFRC 2010	MSF 2010	UNDP 2010/1 1	OXFAM 2010	Total
sustainab*	1	7	63	0	0	0	2	2	4	18	3	100
<i>Societal perspective</i>												
welfare	0	4	21	2	0	0	1	0	1	5	0	34
livelihood	6	1	126	0	4	7	6	6	4	10	15	185
economic development	0	3	3	1	0	0	1	0	1	5	0	14
climate change	0	2	4	0	0	0	10	5	0	18	31	70
<i>Beneficiary perspective</i>												
access	3	31	593	1	1	4	69	5	76	28	12	823
targeting	1	3	16	0	0	2	10	0	3	6	1	42
equity	0	36	2	2	0	0	7	0	0	1	0	48
needs fulfilment	0	0	0	0	4	0	0	0	0	0	0	4
<i>Supply chain perspective</i>												
ethic*	0	1	20	0	0	0	0	0	2	1	0	24
green	4	0	3	6	0	0	0	0	0	0	1	14
preparedness	4	5	38	1	16	5	96	10	3	4	1	183
local	14	22	312	11	14	12	35	6	45	42	11	524
<i>Programme perspective</i>												
financial continuity	0	0	0	0	0	0	0	0	0	0	0	0
resource utilisation	0	0	0	3	1	0	0	0	0	0	0	4
programme impact	0	0	0	0	0	0	0	0	0	0	0	0
LRRD	0	0	0	0	0	0	0	0	0	0	0	0
empowerment	0	2	4	1	0	0	1	0	1	3	1	13

APPENDIX 1 ENVIRONMENTAL INDICATORS (ECORYS, 2012, P.6)

UN (UNSD)	World Bank	World Bank	Global Footprint Network	OECD	UN (UNEP)
System of Environmental-Economic Accounts (SEEA)	Adjusted Net Savings (ANS) – World Bank	WAVES -World Bank	Ecological Footprint - Global Footprint Network	OECD green growth indicators	UNEP Green Economy Initiative (GEI)
A methodology to incorporate the environment into national economic accounts.	A measure that attempts to better reflect the sustainability of a national economy by looking at depletion and investment in capital, including natural resource capital.	Awareness-raising to introduce the practice of ecosystem valuation into national accounts at scale so that better management of natural environments becomes business as usual.	A resource accounting tool which measures how much land and water area a human population requires to produce the resource it consumes.	Indicator system consisting of four indicator groups (approx. 25 indicators) with the aim of sending clear messages to policy makers and the public at large.	A framework for environmental indicators to identify key (sectoral) indicators of air, water, land and biodiversity.