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Pool Sharing in Humanitarian Logistics

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Pool Sharing in Humanitarian Logistics

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Preface

This thesis deals with pool sharing in humanitarian logistics. Pool sharing is the capability of pool members to share capacity in any form like information, human resources, inventory space, distribution, and relief goods and equipment. All kinds of actors – civil, public, and private - can be part of such a pool. This thesis, however, focuses on civil actors like non-governmental organizations (NGO) and UN agencies. Pool sharing – defined as process innovation – is analysed on both the conceptual, and the theoretical levels. On the former level the fundamentals of a pool sharing relationship and its different designs are presented. On the latter level the thesis summarizes the status quo and presents the United Nations Office for the Coordination of Humanitarian Affairs (OCHA), the United Nations Joint Logistics Centre (UNJLC), and the Humanitarian Logistics Association (HLA). With help of this structure's findings it can be concluded that the main benefits of pool sharing are a decrease of cost, a decrease of risk, an increase of service level, and an increase of income. However, pool sharing is found to be mainly conceptual as the number of organizations that thoroughly apply it is supposedly very low. Existing obstacles to the implementation of pool sharing turned out to be donor orientation, competition, organizational culture, and lack of strategic thinking.

Abbreviations

AIMS	Afghanistan Information Management Service
BMZ	German Ministry for Economic Co-operation and Development
CAP	Coordinated Aid Programme
CAR	Central African Republic
CARE	Cooperative for Assistance and Relief Everywhere
CERF	Central Emergency Response Fund
CHL	Certification in Humanitarian Logistics
CIG	Custom Information Guide
CMCS	UN Civil-Military Coordination Section
CRS	Catholic Relief Services
CSF	Critical Success Factor
CTS	Commodity Tracking System
DAC	Development Assistance Committee
DARA	Development Assistance Research Associates
DWHH	German Agro Action
EC	European Commission
ECHO	European Commission Humanitarian Office
ERC	UN Emergency Relief Coordinator
FACT	Field Assessment and Coordination Team
FAO	Food and Agriculture Organization
FEMA	Federal Emergency Agency
GIS	Geographic Information Systems
HA	Humanitarian Aid
HDPT	Humanitarian and Development Partnership Team
HIC	UN Humanitarian Information Centre
HLA	Humanitarian Logistics Association
HRO	Humanitarian Relief Organization
HUG	Helios User Group
IASC	Inter-Agency Standing Committee
IASC-WG	Inter-Agency Standing Committee Working Group

IAWG	Inter Agency Working Group
ICRC	International Committee of the Red Cross
IFRC	International Federation of Red Cross and Red Crescent Societies
IMC	International Medical Corps
INGO	International Non-Governmental Organization
IOM	International Organization for Migration
JST	Joint Supply Tracking
NATO	North Atlantic Treaty Organisation
NGDO	Non-Governmental Development Organization
NGO	Non-Governmental Organization
OCHA	United Nations Office for the Coordination of Humanitarian Affairs
ODA	Official Development Assistance
OECD	Organisation for Economic Cooperation and Development
PAHO	Pan-American Health Organization
SCM	Supply Chain Management
TAF	The Asia Foundation
UN	United Nations
UNAMA	United Nations Assistance Mission in Afghanistan
UNDP	United Nations Development Program
UNHCR	United Nations High Commissioner for Refugees
UNHRD	UN Humanitarian Response Depot
UNICEF	United Nations Children Fund
UNJLC	United Nations Joint Logistics Centre
USAID	United States Aid Agency for International Development
WFP	World Food Programme
WHO	World Health Organization
WWII	World War Second

1. Introduction

This thesis deals with pool sharing in humanitarian logistics. Pool sharing is the capability of pool members to share capacity in any form like information, human resources, inventory space, distribution, and relief goods and equipment. Generally pool sharing should be regarded as essential for the emergency supply chain's reduction of cost and increase of service level. As this supposedly leads to more reputation and thus an increase of funds, several actors involved in humanitarian relief consequently use or start to use this recent approach. Despite the importance of pool sharing conceptual as well as empiric literature on the issue is very scarce. Thus it would be opportune to scrutinise the status quo and any form of development in this matter. As this constitutes a diploma thesis rather than an entire research project the scope will be limited and exclusively includes civil humanitarian actors like non-governmental organizations (NGO) and UN agencies. After this introduction a brief research outline is presented in chapter two. The thesis itself starts with chapter three about humanitarian aid and development assistance. It describes principles, triggers, and actors of the humanitarian sector and further explains the distinct characteristics of logistics in an emergency environment and accompanying coordination and cooperation problems. All these points are accompanied by many praxis examples like the 2004 Asian tsunami relief efforts or crisis relief in the Central African Republic. Chapter 4 is the heart of this thesis and delivers a thorough analysis of the pool sharing concept's possibilities. On the conceptual level it defines the fundamentals of a pool sharing relationship and its different designs. On the practical level it summarizes the status quo and presents the United Nations Office for the Coordination of Humanitarian Affairs (OCHA), the United Nations Joint Logistics Centre (UNJLC), and the Humanitarian Logistics Association (HLA). To conclude chapter four both conceptual and practical findings are used in order to specify the costs and benefits of as well as the obstacles to pool sharing. The thesis ends with conclusion and outlook. Research questions are answered and factors that promote pool sharing presented.

2. Research Outline

This chapter provides basic information about the relevance of pool sharing for the field, the status of current research, the research questions, and research methodology.

Relevance for the field

Pool sharing constitutes the capability of pool members to share capacity in any form like information, knowledge, human resources, inventory space, distribution, and relief goods and equipment. All kinds of actors – civil, public, and private - can be part of such a pool. As this constitutes a diploma thesis rather than an entire research project the scope will be limited and exclusively includes civil humanitarian actors like NGOs and UN agencies. And: no distinction is made between organizations involved in short-term relief and those active in medium- to long-term development as these activities are more and more intertwined. A practical example of pool sharing would be the UN Joint Logistics Centre (UNJLC). It acts as an information platform for UN agencies and major NGOs in order to enhance the pool partners' decision-making capabilities. Another service of the UNJLC is its broker function that brings together agencies demanding capacity – like inventory space – and agencies with excess capacity (Kaatrud et. al. 2003: 13). Pool sharing services thus should be regarded as essential for the emergency supply chain's reduction of cost and increase of service level. As this supposedly leads to more reputation and thus to an increase of funding, several actors involved in humanitarian relief should use this approach.

Status of current research

Despite the importance of pool sharing theoretical as well as empiric literature on the issue is very scarce. With regard to humanitarian logistics the term pool sharing is not even defined yet. Literature that covers – in the humanitarian context - elements of pool sharing often runs under the name of 'coordination' or 'cooperation/collaboration'. This is valid for Oloruntoba and Gray (2009), who

work on customer service in emergency relief chains, Pettit and Beresford (2009), who define critical success factors in the context of humanitarian aid supply chains, Kovacs and Spens (2007; 2009), whose object of research is humanitarian logistics in general, Mayr (2006), who deals with supply pipeline logistics, Perry (2007), who scrutinized the 2004 Asian tsunami relief efforts, Thomas and Kopczak (2005), who led the way for a supply chain perspective in humanitarian logistics, and Tomasini and Van Wassenhove, who work on partnerships in humanitarian logistics and in their case studies portray UNJLC missions. Hence it could be argued that current research lacks to incorporate these thoughts on coordination and cooperation into a concrete concept. In this thesis a concept is elaborated that has the name pool sharing.

Research questions

The primal research question is ‘What is pool sharing’. Due to the current status of research it is intentionally vague and further classified into sub-questions. They all refer to the context of humanitarian relief.

What is ‘pool sharing’?

- Q1: Why do organizations cooperate?
- Q2: What are the fundamentals of a pool sharing relationship?
- Q3: Which designs of pool sharing exist?
- Q4: What are the benefits of pool sharing?
- Q5: What are the obstacles to pool sharing?

Methodology

The diploma thesis is based on a literature review and uses a qualitative approach. Thereby elements of literature on partnerships and cooperation in humanitarian logistics are brought together in order to define the concept pool sharing. The outcome of this thesis should be a better conceptualization and understanding of pool sharing and should help getting aid supply chains more effective and efficient.

3. Humanitarian Aid and Development Assistance

Simply spoken these forms of humanitarianism deal with giving aid respectively assistance to people who are in need of it. The difference between the former and the latter is time and scope. Whereas humanitarian aid is about giving immediate relief after disasters or during violent conflicts, development assistance¹ is about avoiding another of these crises in future. Thus the former deals with goods and services like nutrition, shelter, emergency health care or psychological assistance, the latter with general health care, reconstruction work (infrastructure, schools etc.), education and the like. The Organisation for Economic Cooperation and Development (OECD), for example, defines humanitarian aid as goods and services like material and technical aid or measures for protecting the human rights of the civilian population (OECD 1999: 10; quoted in McGuire 2006: 4). Development assistance on the other hand is defined as “the international transfer of public funds in the form of loans or grants, either directly from one government to another (bilateral aid), or indirectly through nongovernmental organizations or a multilateral agency (multilateral aid) such as the WHO” (WHO 2009). These definitions are used by the author throughout this thesis.

Whereas humanitarian aid is about giving immediate relief after disasters or during violent conflicts, development assistance is about avoiding another of these crises in future.

Figure 1: Humanitarian Aid and Development Assistance

Furthermore humanitarian aid and development assistance have a significant economic importance. Official development assistance amounted to US\$ 119.8 billion in 2008 (OECD 2009), private donors not included. Apparently the humanitarian sector involves considerable investment and is worth to scrutinise. Thus the following subchapters deal with the cognitive basis for pool sharing in humanitarian logistics. It starts with 3.1 which ought to explain the main principles of humanitarian aid as well as the framework build by them – the so-

¹ Names for similar concepts are *development cooperation* and *development aid*

called humanitarian space. In addition 3.2 covers the actual relief-to-development debate and should explain why both types of aid mentioned above - and consequently organizations active in both of these areas - fall into the category of pool sharing. Then it is elaborated what triggers humanitarian aid and development assistance. These triggers, namely natural and man-made disasters, violent conflicts as well as complex emergencies are introduced to the reader in subchapter 3.3. Thereby questions will be put like ‘What is a disaster?’, ‘What is a complex emergency?’, or ‘Is there any crisis lifecycle?’ After this definition of terms, humanitarian actors like the United Nations, NGOs, governments, military and business are briefly presented in chapter 3.4. Thereby the focus lies on NGOs as – together with the UN - primal actors in the humanitarian sector. Facts and figures, principles and ideologies, dependencies as well as location decisions of NGOs are analysed. The last part of chapter 3, 3.5, constitutes an introduction to humanitarian logistics. As there is a lot of work on the humanitarian supply chain in general, it will be a mixture of a brief general structure and a detailed status quo of an inherent problem in the humanitarian sector – the organizational coordination and cooperation problem which is shown in brief crisis examples of the Central African Republic, Angola, Mozambique, and the 2004 Southeast-Asian tsunami and which leads directly to its remedy – pool sharing – which constitutes the heart of this thesis.

3.1. Humanitarian Principles

Following Princeton University a principle is “a basic generalization that is accepted as true and that can be used as a basis for reasoning or conduct” (2009). There are three acknowledged principles that make aid truly humanitarian, namely humanity, neutrality, and impartiality. They were introduced by the business man Henry Dunant after the battle of Solferino (1859), have been part of the Geneva Convention since 1864 and were the basis for the Red Cross Movement (Tomasini and Van Wassenhove 2009b: 20-21). Today they constitute the main guiding principles in humanitarian aid and development

assistance and thus not only set the “parameters for action”, but also delineate “the roles of agencies” (Tomasini and Van Wassenhove 2009b: 21). The humanitarian principles are now briefly presented:

- **Humanity:** Humanity is about relieving suffering wherever possible. Tomasini and Van Wassenhove call it “the very reason why humanitarian organizations are deployed” (2009b: 21). Thereby scarce resources are brought into societies that are not only affected by disaster, but commonly also by conflicts resulting from social change (Keen 1998; quoted in Tomasini and Van Wassenhove 2009b: 21).
- **Neutrality:** This principle is a manifesto for relief “without bias or affiliation to a party in the conflict” and consequently leads to an agency’s potential decision “not to participate in local issues if there is an eminent risk of getting trapped by political agendas” (Tomasini and Van Wassenhove 2009b: 22).
- **Impartiality:** This principle aims not only at non-discrimination, but also at giving priority to the most urgent needs. It can be evaluated in terms of non-discrimination between groups, proportionality in relation to need, and non-subjective recognition of needs as identified by the community (Pictet 1979; quoted in Tomasini and Van Wassenhove 2009b: 23).

Together they define the so-called humanitarian space. In the psychological sense, it defines the ‘space’ someone has when it comes to decision-making in humanitarian action. In the physical one Tomasini and Van Wassenhove call it “a zone where civilians, non-combatants and aid workers are protected from violence and attack and can move and operate freely” (2009b: 26). Thereby the main challenge to a proper humanitarian space is the fact that it is determined and – sometimes – confined by non-humanitarian actors like governments, combatants and the military. Thus conflict between humanitarian and non-humanitarian actors is always lurking as the latter’s decision-making criteria are

often not motivated by the humanitarian principles (Tomasini and Van Wassenhove 2009b: 25). In order to provide accountability in this matter, NGOs strive for independence, especially from the military. In every kind of cooperation with the latter, the humanitarian space – framed by the principles – has to be guaranteed (Von Pilar 1999; quoted in Mayr 2006: 20). Complementary NGOs worked on international “guidelines for ‘operational’ disaster response to determine minimum standards in regard to quality and accountability” (Mayr 2006: 11). Such standards are part of the ‘Sphere Project’ mentioned above, ‘People in Aid Code’, ‘Humanitarian Logistics Association (HLA)’ or the ‘Code of Conduct of the International Federation of Red Cross and Red Crescent Societies’.

There are three acknowledged principles that make aid truly humanitarian, namely humanity, neutrality, and impartiality.

Figure 2: Humanitarian Principles

3.2. The Relief-to-Development Debate

Historically there has been a distinction between immediate humanitarian aid – called relief - and development assistance. Consequently Kovacs and Spens (2007: 101) talk about the “two main streams of humanitarian logistics”. But today it seems increasingly difficult to separate these activities – especially from an organizational perspective. More and more actors in the humanitarian sector do both - relief and development. Authors like Appel (2009: 98) mention that relief is getting more and more important for organizations traditionally involved in development. Likewise Smillie (2000: 25; quoted in Appel 2009: 98) argues that NGOs that have the capacity and expertise for both – relief and development – would have a competitive advantage over other NGOs. This development has several reasons. First more and more relief is privatised by governments, meaning that state authorities assign these activities to NGOs (Roth 2005: 117; quoted in Appel 2009: 98). Another example would be the budgetary shift away

from development assistance to emergency relief of big international organizations like the World Food Programme (WFP) between the 1980s and the 1990s (Feldbrügge 2001: 1). This bears resemblance to the shift of governmental funding to refugee and emergency aid by the German Ministry for Economic Co-operation and Development (BMZ) in the 1990s (Feldbrügge 2001: 1).

The idea behind these developments is the relief-to-development model that acknowledges the need for a continuum between relief, rehabilitation and development. Although these activities have distinct characteristics with regard to implementation, time, scope and the like, they must be ‘thought-together’ and engaged in at the same time (Smillie 2000: 17; quoted in Appel 2009: 99). Following Feldbrügge it is all about transition and derived from “the idea that deficiencies resulting from the separation of relief aid and development aid might be reduced by linking the two areas” (2001: 87). Consequently the relief-to-development concept deals with the incorporation of long-term aspects in every activity of the humanitarian sector. Arguably this is not always possible, especially in violent conflicts (Feldbrügge 2001: 88). Nevertheless, the model has been favoured by the UN and the EU (Commission of the European Communities 1996; quoted in Feldbrügge 2001: 90).

A counter-argument against the trend of treating relief and development as intertwined would be the decision of the International Federation of Red Cross and Red Crescent Societies (IFRC) to clearly separate humanitarian aid and development assistance in 2000 (Chomilier, Samii and Van Wassenhove 2003: 15). Anyway, this restructuring exercise may be necessary due to the fragmented organizational structure of the IFRC.

3.3. Crises: Trigger of Humanitarian Aid and Development Assistance

The distinction between humanitarian aid and development assistance overcome, it is opportune to specify their triggers. This thesis distinguishes three types of

triggers, namely disasters, violent conflicts and complex emergencies. Thereby it follows the thoughts of Quarantelli and Feldbrügge on this topic. The former differentiates between disasters and violent conflicts as distinct categories of crisis situations (Quarantelli 1998a: 238-242). The latter adds the third trigger complex emergency, an intersection between disaster and violent conflict (Feldbrügge 2001: 6). What can be said already at this point is that these three phenomena are costly “in terms of human suffering and well being for the population affected, costly to economic performance and development efforts, and costly to social interplay” (Feldbrügge 2001: 36). Significantly, Thomas speaks of an estimated 150,000 deaths caused by and 200 million people affected by natural disasters and other humanitarian crises every year (2003: 3).

3.3.1. Disaster

This subchapter includes the sections ‘What is a disaster?’ - which defines this term - and ‘Facts and figures’ – which provides background information.

What is a disaster?

Easily deductible classifications of disasters would be natural vs. man-made respectively slow- vs. sudden-onset disasters. Anyway, a lot of researchers - most of them apply a sociological perspective - deal with the definition of disaster. Some of these attempts are presented below:

- “A unique type of social problem.” (Drabek 2003: Xix)
- “A breakdown in the normal functioning of a community.” (PAHO 2001; quoted in Mayr 2006: 4)
- “Many people trying to do quickly what they do not ordinarily do, in an environment with which they are not familiar.” (Tierney 1985a: 77; quoted in Auf der Heide 1989: 52)

- “An event, natural or man-made, sudden or progressive, which impacts with such severity that the affected community has to respond by taking exceptional measures.” (Carter 1991: SXVII)
- “An occurrence of a severity and magnitude that normally results in deaths, injuries, and property damage and that cannot be managed through the routine procedures and resources of government.” (FEMA 1984c: I-3; quoted in Auf der Heide 1989: 51)
- “A serious disruption of the functioning of society, posing a significant, widespread threat to human life, health, property or the environment, whether caused by accident, nature or human activity, and whether developing suddenly or as a result of complex, long-term processes.” (UN/ISDR 2004: 3; quoted on Kovacs and Spens 2009: 508)

What we have seen is a wide variety of attempts, ranging from rather abstract to more concrete definitions. Anyway, what they all have in common is their sociological perspective. Thereby Claude Gilbert distinguishes three main historical paradigms, namely disasters as duplication of war (external agent), as expressions of social vulnerabilities (social process) and as an entrance into a state of uncertainty (1998: 3). The most interesting and now dominant paradigm is the second one. It abandoned the dominant notion of agent. Disaster agents are inter alia earthquake, tornado, flood, drought, extreme cold, avalanches or landslide. On the contrary, disasters are seen as “process tightly tied to social vulnerability” and thus analysed in their social context (Gilbert 1998: 6). This notion is based on works of authors like Carr and Feldbrügge who stated:

“Not every windstorm, earth-tremor, or rush of water is a catastrophe. A catastrophe is known by its works; that is, to say, by the occurrence of disaster. So long as the ship rides out the storm, so long as the city resists the earth-shocks, so long as the levees hold, there is no disaster. It is the collapse of the cultural protections that constitutes the disaster proper.” (1932: 211; quoted in Dombrowsky 1998: 18-19)

“First, events such as earthquakes and droughts may be mistaken for the disaster. However, not the quaking of the earth is the disaster, but its interaction with a society that is structured and organised in a specific way (e.g. necessity to reside in a flood-prone area; benefits from volcanic eruptions for cultivating etc.). Second, disasters appear to be singular, independent events. A lack of clarifying concepts results in an insufficient integration of interactions of various disasters with each other (e.g. within a country) or over time.” (Feldbrügge 2001: 34)

Sometimes authors like Kreps reach out radically to define disasters as “*systemic events and social catalysts*”, as “*social constructions*” (1998: 25). But even when we do not go that far, it can be argued that a categorization according to disaster agent is often not appropriate. Similarly Feldbrügge states that other classifications have proved better like sudden-onset and slow-onset, predictability, controllability, length of possible forewarning duration, scope of impact (number and type of affected persons and required relief needs), destructive potential and the like (2001: 35). Eventually it is also important to include the environment in any disaster definition, the “interaction and mutual constitution of society and environment” (Ingold 1992: 51; quoted in Oliver-Smith 1998: 180). These arguments have convinced the author to use a more concrete sociological definition of disaster in this thesis, namely:

A disaster is “a serious disruption of the functioning of society, posing a significant, widespread threat to human life, health, property or the environment, whether caused by accident, nature or human activity, and whether developing suddenly or as a result of complex, long-term processes.” (UN/ISDR 2004: 3; quoted on Kovacs and Spens 2009: 508)

Figure 3: Definition of Disaster

To conclude this subchapter it has to be said that the presented sociological perspective generally helps when it comes to disaster response. As the reactivity of our systems is challenged, it is all about the capacity of actors like government, military, civil society and humanitarian organizations to work together (Tomasini and Van Wassenhove 2009a: 549).

Facts and Figures

This section provides some essential information about the impact of disasters to capital in any form. Albala-Bertrand, for example, distinguishes human-, physical and social capital (1993; quoted in Feldbrügge 2001: 37). The differentiation is made as these levels are differently affected by disasters. Hence “losses of capital stocks are much higher in earthquakes, losses of production and indirect losses higher in cases of floods and droughts” (Feldbrügge 2001: 41).

Disasters also mainly occur in poor countries. Following the World Bank 94% of the biggest disasters worldwide affect developing countries (2001; quoted in Lipok 2007: 6). Likewise 97% of all deaths caused by natural disasters occur in these parts of the globe (Engelmann 2005; quoted in Lipok 2007: 6). Many of these countries are underdeveloped and overpopulated. Because of the fact that continuous disasters cause not only human casualties, but also “economic and social loss, these populations are facing repeated setbacks and are often not able to reach a higher stage of development” (Carter 1991: 5). This vicious cycle could be fuelled by the forecast that both natural and man-made disasters will increase another five-fold until the midst of this century due to environmental degradation, rapid urbanization and the spread of HIV/AIDS in the developing world (Thomas and Kopczak 2005: 1).

However, it should be noted that natural disasters account only for 3% of relief operations, but man-made ones for 97% (Van Wassenhove 2005: 476). Again, we should not forget that man-made disasters do not include wars, but phenomena like industrial accidents, floods/drought due to mal-constructed embankment dams and the like. Furthermore disasters are responsible for extraordinary economic losses. Thomas and Kopczak, for example, refer to the Munich Reinsurance group and speak of annual US\$ 659.9 billion in the 1990s (2005: 1). Last, but not least people are affected by this type of crisis². Thereby it

² Natural disasters alone “result in the temporary displacement of approximately five million people” (Thomas 2003: 3).

is interesting that the number of casualties poses more problems than the severity of injuries (Auf der Heide 1989: 107). This leads to the reason for the huge logistical challenges in disaster relief. As usually all three of the above mentioned types of capital – human, physical and social – are affected, there are some common tasks relief managers must conduct. Feldbrügge states:

“The six most common generic functions are warnings, evacuations, sheltering, emergency medical care, search and rescue, and protection of property. Others include the assessment of damage, the restoration of essential public services, task delegation and division of labour. The last includes the integration of emergent groups, i.e. newly established groups that carry out new disaster-related tasks, such as handling of mass casualties, large search and rescue as well as other activities.” (2001: 90)

These facts form the main reason for the huge logistical challenges faced by humanitarian actors. After the Asian Tsunami in 2004, for example, more than 200 humanitarian organizations and 3,000 military personnel from a dozen countries gave aid to the population (Mayr 2006: 10).

Disasters affect human, physical, and social capital. 94% of worldwide disasters and 97% of the associated casualties occur in developing countries. 97% of disasters are man-made. The annual economic loss of disasters in the 1990s is estimated to be US\$ 659.9 billion.

Figure 4: Disaster Facts

3.3.2. *Violent Conflict*

Violent conflicts played an important role in history and continue to do so. The OECD defines a conflict environment as one “in which there is significant and sustained fighting between two or more factions or one in which remains significant potential for the resumption of conflict” (1998: 3). Violent conflicts alone account for “an average of 13 million refugees and 20 million internally displaced people each year” (Thomas 2003: 3). The reasons for violent conflicts are manifold, but horizontal inequality supposedly is a bigger trigger than

vertical income inequality of individuals (Feldbrügge 2001: 21). Harbom and Wallensteen globally record 228 armed conflicts in 148 locations since the end of WWII (2005: 623). 118 of them occurred within a period of 16 years after the end of the Cold War (Harbom and Wallensteen 2005: 623). Anyway, the total number of armed conflicts has decreased considerable 40% since 1992 (Human Security Centre 2005).

Another fact that is important when we talk about violent conflicts are so-called 'intra-state conflicts'. Today this type is dominant as less than 5% of all armed conflicts take place between countries (Human Security Centre 2005). In 2005 all of the 24 global high intensity conflicts, inter alia two wars, as well as 74 crises with violent force occurred not between, but rather within states (HIIK 2005: 1; quoted in McGuire 2006: 1). The big difference between inter-state and intra-state conflicts such as civil wars – conflict environments with more than one thousand deaths - can be explained by the immense multitude of diverse actors in the latter case (Mack 2005: 131; quoted in McGuire 2006: 4). Often this leads to a situation where the official authorities, if still existing, are not able to exercise power over the territory of the state. Then this void “is filled by a multitude of (illegitimate) actors such as paramilitaries, separatists, insurgents, rebels, vigilantes, militias, mercenaries, warlords, irregular fighters and criminal gangs” (McGuire 2006: 38). Consequently, this often leads to a situation where contractual agreements can not be enforced. Important stipulations in the humanitarian sector covering activities like renting of warehouses, purchasing of goods or employment of staff, are thus concluded at the risk of the humanitarian actors (McGuire 2006: 38).

Today's dominant violent conflicts are intrastate conflicts. More than 95% of all armed conflicts take place within countries. This causes situations where the official authorities are not able to exercise power and contractual agreements can not be enforced. Important activities like purchasing of goods or employment of staff are thus concluded at the risk of the humanitarian actors.

Figure 5: Violent Conflict Facts

3.3.3. Complex Emergency

Complex emergencies are common and show elements of both disaster and violent conflict. Thereby the public may recognize only one type of crisis, as it is often the case when we hear about famine. The latter is regularly classified as natural disaster; actually it should be subsumed under the category complex emergency as often civil conflict, drought, and political instability combine to famine (Feldbrügge 2001: 35). The main reason for this misclassification may be the stronger commitment towards crisis relief than towards crisis avoidance (Feldbrügge 2001: 34). One possible explanation of the existence of complex humanitarian emergencies is delivered by Beamon and Kotleba who trace them back to situations characterised by racially and/or ethnically and/or religiously charged warfare (2006b: 3). The same authors show a specific characteristic of complex emergencies, namely the blurred dividing line between civilians and combatants:

“The disturbing trend with complex humanitarian emergencies is that when conflicts erupt within the borders of a country, the dividing line between civilians and combatants is frequently blurred. Militant or rebellious groups are usually the same civilians living and socialising in and around the villages they attack. This type of warfare commonly resorts to the use of insidious tactics where humanitarian agencies are denied access to groups of people in need of assistance. Also, at the centre of these shocking developments is the emergence of civilians, including woman, children and humanitarian workers, as the deliberate targets of warfare rather than its incidental victims.” (Beamon and Kotleba 2006b: 3)

Indeed, 90% of today’s war victims are civilians, moreover women are disproportionately affected by violent conflicts (Human Security Centre 2005). In addition, this type of crisis usually has a very long duration, which “imposes not only financial hurdles, but also legal, moral and political dilemmas on those attempting to provide relief” (Beamon and Kotleba 2006b: 3). Sudan’s civil war is a crisis that incorporates all the elements listed above. This crisis basically has last now for more than 20 years and has left over two million people dead as well as over four million displaced (US Committee for Refugees and Immigrants:

2004). To respond politically it would be important to address the underlying problems that contribute to the crisis such as economic instability/social problems or human rights violations (OECD 1998: 5). The resulting long-term perspective together with limitations in infrastructure, political system and the like make humanitarian logistics a challenging task in this type of crisis.

Complex emergencies show elements of both disaster and violent conflict. Their duration is very long as the underlying problems are usually very complex.

Figure 6: Complex Emergency Facts

3.3.4. Crisis Lifecycle

Every type of crisis has a similar lifecycle that includes the period of time before a crisis, immediately after its outbreak and in the aftermath. In their work *Humanitarian Logistics* Rolando Tomasini and Luk van Wassenhove distinguish between mitigation, preparedness, response and rehabilitation (2009b: 44). Other authors name it preparation-, immediate response-, and reconstruction phase (Kovacs and Spens 2007: 101). Consequently many emergency preparedness plans build upon this scheme. Nevertheless, they often do not cover humanitarian logistics (Chaikin 2003; quoted in Kovacs and Spens 2007: 102). This lack of relief logistics is also mirrored by the academic literature's focus on the preparation phase (Auf der Heide 1989; Carter 2001; Drabek 1986, 2003). Researchers assume particular scenarios and work with already existing nodes of supply and demand, thereby neglecting the dynamics of the immediate response phase (Özdamar et al. 2004). Consequently many decision support systems and technologies developed for specific disaster scenarios are inadequate. (Kovacs and Spens 2007: 102).

Furthermore it is able to distinguish three types of coordination occurring in the response and rehabilitation phases. They mirror not only the crisis lifecycle – the need to ramp up, to sustain, and to ramp down the relief efforts - but also the task intensity (Tomasini and Van Wassenhove 2009b: 80). These types of

coordination are termed coordination by command, coordination by consensus and coordination by default (Donini 1996: 14).

- Coordination by command is a centralized tool where one coordinator controls resources, delegates tasks, and collects and disseminates information (Tomasini and Van Wassenhove 2009b: 81). Thereby the underlying responsibilities and objectives are clearly defined. Issues that fall into this category constitute obtaining visas, negotiating landing rights, getting customs clearance, arranging licenses for vehicles, signing agreements with the military on accessible corridors and the like (Tomasini and Van Wassenhove 2009b: 81).
- Coordination by consensus is characterised by joint planning and decision-making. This form of coordination is often accompanied by joint access to shared communications equipment, liaison and inter-agency meetings, pre-mission assessments and so on (Tomasini and Van Wassenhove 2009b: 81).
- Coordination by default is full of frequent, routine contact between the different humanitarian actors and is often described as ‘light coordination’ (Tomasini and Van Wassenhove 2009b: 82).

Every type of crisis has a similar lifecycle that includes the period of time before a crisis, immediately after its outbreak and in the aftermath. The latter two – response and rehabilitation – are characterised by three types of coordination that usually occur in chronological order: coordination by command, coordination by consensus and coordination by default.

Figure 7: Disaster Lifecycle

To conclude this chapter it has to be said that researchers like Feldbrügge (2001: 1) and Thomas and Kopczak (2005: 1) expect the impact of crises – disasters, violent conflicts and complex emergencies - to rise globally, especially in developing countries. Thereby the harm to children is of extraordinary severity as

it is estimated that the violent conflicts of the last decade have resulted in two million children killed, four to five million seriously injured or disabled, 12 million homeless and more than one million either orphaned or separated from their families (Feldbrügge 2001: 44). Another figure speaks of ten million children traumatised (UNICEF 1996; quoted in Feldbrügge 2001: 45).

These facts lead to the introduction of the main actors in humanitarian aid, organizations whose primal purpose is it to reduce suffering.

3.4. Actors in Humanitarian Aid

There are manifold types of actors directly or indirectly involved in humanitarian aid, inter alia host and neighbouring governments, the military, the United Nations (UN), NGOs as well as not-for-profit initiatives of private businesses like logistics service providers (Kaatrud, Samii and Van Wassenhove 2003; European Commission 1998a: 36; quoted in McGuire 2006: 18). A prerequisite for classifying an organization to be humanitarian is the not-for-profit principle:

“Unlike the private sector where the bottom line motivates the constant need to measure performance and invest in improving it, the humanitarian sector operates without the market forces of demand and supply regulated through price.” (Van Wassenhove 2005: 477)

In addition these actors can be classified as civil, private, or public:

Civil actors	Private actors	Public actors
NGOs	Private business	Government agencies
Certain UN organizations		Military

Figure 8: Humanitarian Actors

Most of these organizations concentrate on sectors such as food, non-food, medicines and general healthcare, logistics, security and the like. Some of them even apply a multisector approach and operate in many fields, making operations

very complex as “each sector requires different technology, materials and information” (University of Wisconsin 2005; quoted in Mayr 2006: 29).

In addition since the beginning of the 1980s there has been a significant growth of the humanitarian sector (European Commission 1998a: 36; quoted in McGuire 2006: 18). In 2004, for example, the budget of the ten biggest aid agencies topped \$14 billion (Thomas and Kopczak 2005: 3)³. As these organizations do not charge money for their services, they are dependent on funds from governments, business, foundations and private individuals. From governments aid agencies receive “\$6 billion in annual aid targeted at alleviating suffering caused by natural and manmade disasters” (Thomas and Kopczak 2005: 3).

However, this growth in income has not been accompanied by some form of regulation with regard to services or information technology. Thus Buchanan-Smith considers the humanitarian sector as “one of the largest unregulated industries in the world” (2002: 40; quoted in McGuire 2006: 28), which means that it lacks “common standards and mechanisms for evaluation” (European Commission 1998b: 42; quoted in McGuire 2006: 28). However, there are some efforts to change this like the Sphere Project or People in Aid, initiatives which aim to share and diffuse best practices on organizational level. In addition there are also other endeavours, like the Humanitarian Logistics Association (HLA), which works on the individual level and will be presented in 4.2.3. The Sphere Project, for instance, builds upon International Humanitarian-, Human Rights-, and Refugee Law as well as upon the Code of Conduct of the IFRC, publishes an own handbook and represents a voluntary community of NGOs, the IFRC, UN organizations, donor agencies, governments as well as delegates of affected populations (Sphere Project 2009a)⁴. Specific efforts of the Sphere Project are to

³ The figures of Thomas and Kopczak base on three categories of international aid agencies, namely UN organizations like the World Health Organization (WHO), the IFRC that is “auxiliary to country governments”, and global NGOs such as CARE and World Vision (2005: 4). Thus Thomas and Kopczak separate IFRC and NGOs, a practice widely applied by researchers.

⁴ Its board is comprised of delegates of NGOs like ActionAid, CARE International, Caritas Internationalis, International Council of Voluntary Agencies, International Federation of Red Cross and

connect relief efforts of NGOs and UN organizations as well as to set up and supervise minimum standards in sectors like water and sanitation, nutrition, housing, shelter, warehousing and health care (Sphere Project 2004; quoted in Lipok 2007: 40).

Adding to the regulation issue, there are also big differences in “local presence, size, and mandate” as well as organizational structure of humanitarian actors (Kovacs and Spens 2009: 511). Governments of affected countries, for instance, have the mandate to implement national contingency plans by directing, organizing, and coordinating national disaster response units such as fire brigades, ambulances, police and the national army (Mayr 2006: 27). Beyond that, they should guarantee that international emergency assistance is “fully integrated into the disaster management plans and priorities of recipient countries” (Mayr 2006: 22). On the other side authorities of donating countries may attempt to relief suffering by channelling aid through humanitarian organizations. Thereby demand is often assessed by aid agencies themselves (Long and Wood 1995).

When we go to the military, the mandate and structure differs from that of NGOs and it is a recent development that armed forces are part of humanitarian operations. Consequently Mayr states that besides the UN and single-country missions, the NATO “becomes increasingly involved in humanitarian operations, both in natural disasters and complex emergencies” (2006: 20)⁵.

On the other side, there are big differences in mandate and structure even between non-governmental bodies. The International Committee of the Red Cross (ICRC), for example, is a non-governmental, but sovereign entity which

Red Crescent Societies, Lutheran World Federation, Oxfam International, World Vision International as well as Save the Children (Sphere 2009b).

⁵ This was, for example, the case in Kosovo 1999 during the first ‘humanitarian intervention’ ever. The military’s interventions showed positive elements – regarding logistics NATO was essential – as well as negative ones – it took over the responsibilities of the UNHCR “without mandate to do so” (Mayr 2006: 21).

derives its legal mandate directly from the Geneva Conventions of 1949. The national societies of the ICRC are thus organizations regulated by international humanitarian law (Lanord 2000). The major share of NGOs is not sovereign though. Furthermore some of these types of humanitarian actors may have a kind of ‘loose’ connection between national sections, usually combined with an international coordinating committee, whereas others, like UN organizations, “have no national presence per definition” (Kovacs and Spens 2009: 511).

Humanitarian actors show big differences in operational- and geographical range, size, and mandate as well as organizational structure. Furthermore some of them may have a kind of ‘loose’ connection between national sections, usually combined with an international coordinating committee, whereas others, like UN organizations, are centralized per definition.

Figure 9: Humanitarian Actors Facts

UN organizations and NGOs are of primal interest in this thesis. The United Nations is maybe the most important actor in the humanitarian sector. As its structure is very complex it will not be presented in detail. Reference is here given to the works of Mayr (2006) and Gscheidmayr (2002). Nevertheless, it is now elaborated what the UN humanitarianly does in general and some of its aid agencies – Kovacs and Spens call them supranational (2009: 511) – are introduced to the reader. After this brief description of the UN (3.4.1), there is a detailed analysis of NGOs in the following subchapters that cover facts and figures (3.4.2), ideologies (3.4.3), dependencies (3.4.4) as well as location decisions of NGOs (3.4.5).

3.4.1. UN Agencies as Primal Actors

International emergency assistance is not free of borders. It constitutes the sovereignty of the affected country to accept foreign help or not⁶. This is the first point where the United Nations acts “on behalf of the humanitarian community with the affected country the terms and conditions for international relief work” (Mayr 2006: 17). Likewise in complex emergencies the UN negotiate standards with the often high number of warring parties before the relief activities can start (Mayr 2006: 19). Consequently many individuals involved in international humanitarian work argue like Tomasini and Van Wassenhove:

“Even though the humanitarian ecosystem is certainly not restricted to the UN and its agencies, many field workers would claim informally that it is not until the UN arrives in a country or region that the gates truly open for aid to flow. Other humanitarian agencies can, and do, go into countries or regions on their own before the UN arrives, but often they lack the political support and recognition of the UN system.” (2009b: 66)

Another interesting fact is the specialization of UN organizations. Since the creation of the UN humanitarian system these aid agencies have special mandates. The titles of them resemble their specific mandate like World Food Programme (WFP), United Nations High Commissioner for Refugees (UNHCR), United Nations Children Fund (UNICEF) or the World Health Organization (WHO). Anyway, as a crisis usually shows elements of intertwined needs like ‘food-health’ or ‘shelter for children-health’ they coordinate their efforts and collaborate on a wide area of agendas. Often they also work together with international and local NGOs. Consequently Tomasini and Van Wassenhove state that “the majority of the UN programs are actually implemented through NGO partners with the support and blessing of the local communities and governments, so these other stakeholders need to be included in the coordination game” (2009b: 66). Furthermore, as working together is key, UN bodies exist that are specialized on coordination like the Office for the Coordination of

⁶ With regard to humanitarian aid only in certain circumstances – for example when world peace is endangered – this principle of sovereignty is no longer valid (Gareis and Varwick 2006: 38).

Humanitarian Affairs (OCHA), directed by the Emergency Relief Coordinator, and the United Nations Joint Logistics Centre (UNJLC). Both organizations are made up of staff from the specialized agencies mentioned before. They are portrayed in detail in 4.2.1 (OCHA) respectively 4.2.2 (UNJLC).

The United Nations is a primal actor in international crisis relief. Its aid agencies have a specific mandate like food or health care and its coordinating organizations negotiate with the affected country about the terms and conditions of relief as well as coordinate the work of manifold actors. Thereby many UN programs are channelled through NGOs.

Figure 10: The United Nations as Primal Actor of International Crisis Relief

3.4.2. NGOs as Primal Actors

This subchapter comprises facts and figures, principles and ideologies, dependencies, and location decisions of NGOs.

3.4.2.1. Facts and Figures

This subchapter is divided into definition, reasons for existence, environment, historical development, figures, and trends of NGOs.

Definition

This work uses the definition of Salamon et al. (1999: 9; quoted in Appel 2009: 32-34) who state that NGOs are characterised by:

- formal structure and a public agenda,
- private ownership and thus neither part of state authorities, nor dependent on governments,
- acting autonomously by nature,
- being subject to the *non-distribution-constraint*, which means that they do not distribute funds to their members
- voluntary membership as well as transfer of resources

Figure 11: Characteristics of a Non-Governmental Organization (NGO)

Moreover, Drucker argues that NGOs do not have a bottom line, but nevertheless are more money-conscious than profit-oriented enterprises (Drucker 1989: 89; quoted in McGuire 2006: 28). Complementary to these fundamental 'ways' there exist also several methods how to walk on them. Consequently, "NGOs can be large or small...externally funded or driven by volunteers, charitable and paternalistic or radical and 'empowerment'-based" (Lewis 2007: 13). Another important point is the fact that there are many different types of NGOs which constantly question their roles. Likewise non-governmental development organizations (NGDOs), for instance, debate about what "'development' means and how problems of poverty and social justice can be addressed" (Lewis 2007: 15). Eventually it is also interesting that there are so-called 'third-party NGOs' like Global Impact, AidMatrix and Charitic.fr – charities that match private funds with needs recorded by aid agencies (Stapleton et al. 2008; quoted in Tomasini and Van Wassenhove 2009a: 555). Global Impact, for example, has raised - since its 1956 founding – more than US\$ 1 billion dedicated to relief and development projects (Global Impact 2009).

Existence: since when and why

It is not possible to specify since when NGOs do exist as elements of NGOs may have existed in a wide variety of organizations since the ancient world. International organizations that resemble NGOs are known since the midst of the 19th century (Davies 2008: 7). Anyway, the term NGO was created in the environment of the United Nations after WWII as "there was provision made for certain international citizen organizations that were independent from UN member governments, to observe and participate in UN affairs" (Lewis 2007: 7). Another important question is why NGOs do exist. Thus the author would like to present two explanations, one that includes economic reasons only (Yaziji and Doh), and one that includes social, economic, political and cultural arguments (Lewis). Following Yaziji and Doh there are three reasons for NGO emergence, *social desirability*, *externalization* and *imperfect competition* (2009: 19-20):

- *Social desirability* occurs when people either do not have the economic means to buy goods or not even the possibility as products which ought to be not profitable are not produced by the market (e.g. vaccines needed in the least-developed-countries).
- *Externalization* means that the price of a good or service does not reflect the real costs as it is the case when we talk about pollution, genetically-modified organisms or CO² emissions.
- *Imperfect competition* includes structures full of monopolistic manifestations or asymmetric information.

Yaziji and Doh argue that organizations that do not adhere to market principles can help to avoid respectively mitigate these market failures. The notion that there is a ‘public agenda niche’ where NGOs do have an advantage over governments is also postulated by Lewis who classifies them to be independent from government, equipped by value-driven resources, more cost-effective, less vulnerable to political upheaval than governments, and more sensitive to local needs (Lewis 2007: 96).

Environment

Following Lewis there are three layers of NGO environment, each characterised by a different influence potential, namely *control*, *influence* and *appreciate* (2007: 165). The control area lies within the boundaries of the own organization and allows an NGO to ‘control’ staff, budget and objectives. Influence, on the other side, includes the wider area on an organizational basis like government agencies, other NGOs, donors, private business, media, community groups and the like. Appreciate constitutes the wider environment on a cultural basis like national political structures, macro-economic system, legal framework, ecological factors, socio-economic context and so on (Lewis 2007: 165). These layers of environment play an important role in chapter four too as they

constitute a theoretical ‘proof-of-concept’ of pool sharing in the sense of ‘as influence is possible working together is possible’. To conclude this Lewis states:

“The boundaries around these three areas are neither permanent nor clear-cut, but will change from time to time as an organization gains more influence over parts of an environment, such as when the NGO increases its lobbying work, manages to attract more funds or when it enters a new coalition with other organizational actors.” (2007: 166)

Historical development

About the historical development of NGOs there is a lot of literature; facts are now presented from researchers like Beamon and Kotleba, Lewis and Woods. The first one to start is Woods as this researcher in 2000 delivered the most comprehensive survey about European NGOs to date. For her OECD publication *Facts about European NGOs Active in International Development* she used a survey population of 4436 NGOS from 26 European countries. Because of the big survey population derived from four databases (EU, Council of Europe, UN) and the considerably high response rate of app. 50% (Woods 2000: 10), this study allows very significant conclusions and will accompany the remaining subchapter.

Regarding the historical development of NGOs Woods revealed that “an acceleration in NGO formation began in the 1960s and early 1970s, gained momentum in the late 1970s and peaked in the 1980s, when 40 per cent of the survey population were established” (2000: 11). This is also confirmed by the findings of Lindenberg and Bryant who recorded the greatest period of international NGO growth in the late 70s and early 80s of the last century (2001; quoted in Beamon and Kotleba 2006a: 188). Also Lewis’ findings answer in the affirmative (2007: 74). Following Woods this development correlates with the “creation by many Western European governments of NGO co-financing programmes for development co-operation in the 1960s and early 1970s, and subsequent large increases in the availability of government funding for NGO activities in the 1980s” (2000: 11). Lewis argues similarly and further speaks

about a “rise of ‘global civil society’” (2007: 66). As the reasons behind government-NGO instead of government-government channelling of funds he identifies the shift from geopolitical interests to the role of “northerners as supporters, volunteers and contributors” as well as the governments’ then recent view of NGOs being “more effective as concerns engaging with citizens in developing countries” like minorities or women (2007: 74). Anyway a donor-receiver view has remained, something also evidenced in the roles of Northern and Southern NGOs: also here the role model of donor-receiver respectively project planner–implementer has endured (Lewis 2007: 74-77). More important developments in the NGO sector – that in the 1990s grew too (Woods 2000: 9) – have been the evidence of more competition as well as the resulting professionalization with regard to human resources, fundraising, marketing as well as public relations (Appel 2009: 106).

Figures

This section starts with an approximation of the ‘Number of NGOs that are internationally active’ and some facts about official development assistance (ODA) channelled through NGOs. Then the structure of Woods’ work on European NGOs is followed and figures are presented that cover aspects such as ‘Resources’, ‘Income Concentration (among NGOs)’, ‘Personnel’, ‘Location of personnel’, ‘Distribution by NGO size’, ‘Development Co-operation Activities’ and ‘Regional Distribution of Support’.

Regarding the number of international NGOs many diverging figures exist due to differences in registration and geographic scope. The *Yearbook of International Organizations*, for example, speaks of approximately 6,000 internationally active NGOs in 2000 (Appel 2009: 126). The United Nations Development Program (UNDP), on the other side, in 1993 identified 50,000 NGOs worldwide (Kellow 1999; quoted in Yaziji and Doh 2009: 15). A third figure comes from Koch who states that “umbrella organizations of international NGOs in the OECD countries had more than 2,500 members in 2008” (2009: 1). Whatever figure is right, it is

likely that the total number of NGOs continues to increase in future. Yaziji, for instance, used recent statistics to back up this trend by indicating a 400 per cent increase in numbers (2004a; quoted in Yaziji and Doh 2009: xiii). On a more qualitative level, Yaziji speaks of a twenty-fold rise in citations of ‘NGOs’ or ‘nongovernmental organizations’ in the newspapers Wall Street Journal and Financial Times over the period of the last ten years (2004b; quoted in Yaziji and Doh 2009: xiii), another indicator for more NGO presence in future.

Official development assistance (ODA) is public sector financing with the aim to enhance the economic development of specific target countries. ODA to developing countries reached US\$ 78.6 billion in 2004 (OECD 2005), US\$ 103.7 billion in 2007 (OECD 2008; quoted in Kovacs and Spens 2009: 507), and US\$ 119.8 billion in 2008 (OECD 2009).

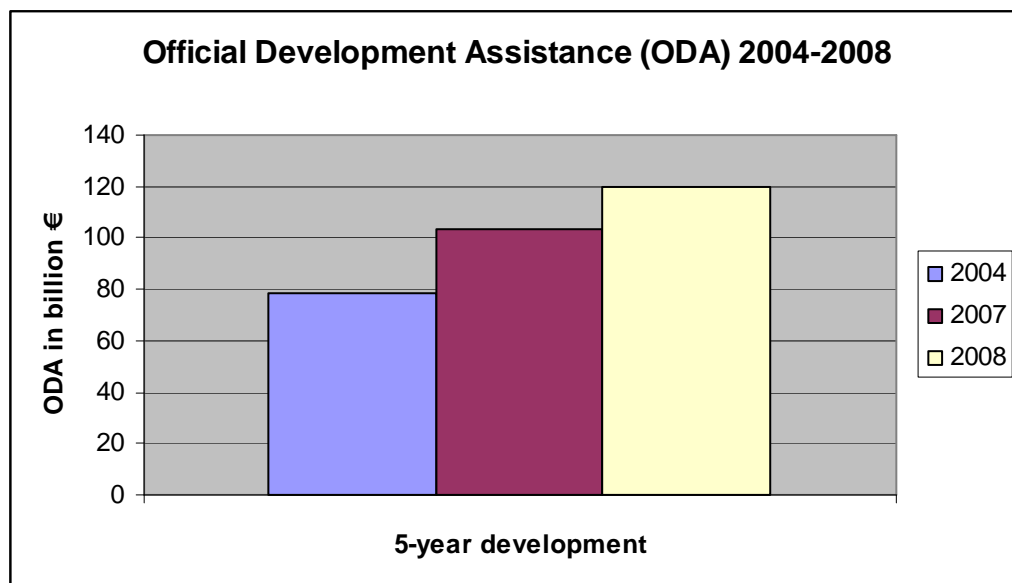


Figure 12: Official Development Assistance (ODA) 2004-2008

Thereby it is of interest how much ODA is channelled through NGOs. Yaziji and Doh estimate this figure to be over 15 per cent (2009: 15), whereas Koch speaks about 10 per cent for the OECD countries in 2005-6 (2009: 17).

Resources are of extraordinary importance for any type of organization. Income necessary comes from either official and private funding as well as self-financing (Woods 2000: 15). Woods conservatively estimates the total resources mobilised by European NGOs to be US\$ 7.3 billion in 1993 (2000: 12). In addition she estimates the total resources mobilised in all DAC countries⁷, including the EU-15, Japan and the US, to be US\$ 15.5 billion in 1993 (2000: 13). A more recent figure comes from Gatignon who estimated the 2005 annual budget of international NGOs to be US\$ 26.9 billion (2007; quoted in Koch 2009: 1). To underpin these impressive figures it should be said that the “annual budget of World Vision International exceeds the official foreign-aid budget of Italy” (Koch 2009: 1).

International NGOs have an estimated annual budget of US\$ 26.9 billion.
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Figure 13: International NGO Budget

Income concentration is an issue that is noticed in both profit- and non-profit worlds. Consequently in her OECD paper Woods states that “the largest 20 per cent of them (in terms of 1993 income) receive 90.5 per cent of the sector’s total income”⁸ (2000: 17). Using Wood’s conservative figures (4436 European NGOs with a total income of US\$ 7.3 billion) this would mean that approx. 900 organizations account for US\$ 6.6 billion and that every of these organizations accounts for resources of approximately US\$ 7.3 million on average. But as the income of these 20 per cent is not evenly distributed, Woods also recorded the financial resources of the ten biggest European NGOs and found out that these organizations receive 21 per cent of the sector’s total financial resources (2000:

⁷ The DAC countries, the abbreviation stands for Development Assistance Committee, include Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Japan, Luxembourg, Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, United Kingdom, United States, Commission of the European Communities (OECD n.d.).

⁸ Even if there are some variations – the data for Greece and Slovakia are only 67 percent, but for Poland 96 per cent – the vast majority of country figures is between 85.5 and 91.5 per cent (Woods 2000: 18).

17)⁹. If these funds – approx. US\$ 1.5 billion - would have been distributed evenly, this would mean around US\$ 150 million per NGO.

20 per cent of European NGOs receive 90.5 per cent of the sector's total income. The ten biggest NGOs receive 21 per cent – evenly distributed this would mean US\$ 150 million per NGO.

Figure 14: Income Concentration of European NGOs

Another interesting point is the *personnel* of European NGOs. In 1993 a total number of 1983 European NGOs employed 913,000 people, of whom 91 per cent were volunteers and 9 per cent salaried personnel¹⁰ (Woods 2000: 18). Thereby the majority of volunteers recorded France (590,237) and Germany (175,721), the majority of salaried personnel the U.K. (21,227), Austria (13,490) and Switzerland (11,222) (Woods 2000: 19). In only four out of 22 countries scrutinised - Switzerland, Norway, Ireland and Austria – did volunteers account for less than 50 per cent of the total (Woods 2000: 19). In France, for instance, salaried employees constitute only 1 per cent of total personnel.

900,000 people work for European NGOs - 91 per cent of them voluntarily.

Figure 15: Number of Employees of European NGOs

The *location of personnel* is also of interest, namely the proportion of personnel in Europe or in developing countries. 55% of salaried personnel work in Europe, whereas 45% per cent are active in developing countries. The ratio would be even higher without the predominantly 'foreign-based' NGOs from the United Kingdom, Switzerland and Ireland as in the vast majority "the percentage of salaried employees in home countries considerably exceeds that abroad" (Woods

⁹ The ten organizations are Caritas Italiana (ITA), Misereor – Bishops' Relief Fund (BRD), SOS Childrens' Village International (AUT), Save the Children Fund (UK), Friedrich Ebert Foundation (BRD), Caritas France (FRA), Association Nationale pour le Développement Agricole (ANDA) (FRA), Hermann-Gmeiner-Fonds Deutschland (BRD), Oxfam (UK), International Planned Parenthood Federation (UK) (Woods 2000: 18).

¹⁰ 826,819 volunteers and 86,344 salaried personnel

2000: 20). In Germany and France, for instance, the ratio is around 75:25 (Woods 2000: 21). With regard to voluntary personnel the figures are not that skewed. Following Woods the vast majority - 94 per cent - are located in Europe and in 16 out of the 22 countries analysed – especially the big ones – more than 75 per cent of volunteers are active within the boundaries of Europe (2000: 21).

The next step would be to analyse if the income concentration elaborated above bears a resemblance with the indicator *Personnel distribution by NGO size*. The latter shows even more concentration as “95 per cent of all NGO personnel are employed by 10 per cent of NGOs” (Woods 2000: 22). The biggest NGOs thus employ thousands and thousands of people, a fact commented by Woods as being traceable to the popularity and image of the big NGOs (2000: 22). Anyway, a slim majority has a rather small staff. Woods states that “61 per cent employ ten or fewer salaried workers and 51 per cent ten or fewer volunteers” (Woods 2000: 22).

10 per cent of European NGOs employ 95 per cent of all NGO personnel.

Figure 16: Personnel Concentration of European NGOs

The agenda of NGOs constitutes the core of NGO activities. Woods calls them *Development Co-operation Activities* and analysed the main conceptual activities of European NGOs. Thereby the ranking is not based on resource transfers, but only on the number of NGOs addressing a specific topic. The outcome speaks for more than 50 per cent of European NGOs supporting Education (1), Health (2), and Rural Development (3), whereas only 37 per cent support emergency relief and only 34% are engaged in environment activities (Woods 2000: 24-25).

The last indicator of Woods is *Regional Distribution of Support*. Woods divided the world into five spheres, asked the survey population for a ‘Yes, active!’ or a ‘No, not active!’ and registered “prevailing support” for Sub-Saharan Africa (78%), followed by Central & South Asia (42%), North Africa & Middle East

(36%), Latin America & Caribbean (27%) and South East Asia, East Asia & Oceania (24%) (2000: 26). This means that 78% of all European NGOs operate in Sub-Saharan Africa, but only 24% in South East Asia, East Asia & Oceania. Anyway, Woods did not include resource transfers. This constitutes a fact that makes these figures not really significant.

Another OECD publication, on the other side, works with other regional areas, but with transfers of funds and traced 37.1% of NGO aid going to Africa, 30.5% to Latin America, 28.2% to Asia, 2.3% to Europe and 1.8% to the Middle East (OECD 2007; quoted in Koch 2009: 180). It is also interesting to compare these figures with bilateral aid – funds channelled from governments through governments. Following the OECD 45.7% of bilateral aid goes to Africa, 25.8% to Asia, 13.3% to Latin America, 7.8% to the Middle East and 7.3% to Europe (OECD 2007; quoted in Koch 2009: 180). Evidently, there are big discrepancies regarding Latin America, Europe and the Middle East. This may be due to political reasons on the government side as well as organizational reasons like path dependence¹¹ on the NGO side.

Region	Transfers of NGO in %	Transfers of GOV in %
Africa	37.1	45.7
Latin America	30.5	13.3
Asia	28.2	25.8
Europe	2.3	7.3
Middle East	1.8	7.8

Figure 17: Geographical Distribution of NGO and Government Aid

To conclude the figures section, Yaziji and Doh award the NGO sector an intellectual touch as "half the employees of the largest, most influential NGOs have master's or law degrees, and 10-20 percent have doctorates" (2009: 129).

¹¹ The phenomenon that a system evolves out of its history. Regarding NGO location a manifestation of path dependence would be the self-reinforcing networks of international NGO staff (Koch 2009: 74).

Trends

As any industry, the NGO sector shows *trends*. As elaborated above, the non-profit and non-governmental sphere has recorded immense growth in the last 30 years. For the organizations themselves the question has remained how to change organizational structures within this period of growth. Koenig registered two main trends, namely the emergence of international (INGOs) and transnational NGOs (1996; quoted in Lewis 2007: 204). Lewis further elaborated the thoughts of Koenig and stated:

“There are two main trends: there are INGOs which began in one country but which have expanded to new ones in a process of ‘going international’ (such as ActionAid); and there are new transnational NGOs specifically formed with representatives from more than one country (such as CIVICUS). This brings a distinctive set of organizational problems, and two structural forms are emerging: ‘ethnocentric’ structures based on tight control of subsidiary offices by centralized headquarters, and ‘polycentric’ structures with a high degree of decentralized local control and interconnectedness.” (Lewis 2007: 2004)

Another trend in the NGO sector is service provision. Today more and more NGOs act as service provider and consult governments on policy or NGO clients on specific issues (Lewis 2007: 83). Donors increasingly see NGOs not only as implementers of a specific policy, but as important source of information for the policies themselves. In addition NGOs provide “training services to other organizations or to government, or offer research or conflict resolution services to other agencies” (Lewis 2007: 132).

3.4.2.2. Ideologies of NGOs Active in Humanitarian Aid

This is a subchapter dealing with a general description of NGO ideologies. Following Princeton University an ideology is a “political orientation: an orientation that characterizes the thinking of a group or nation” (2009). Adapted to the humanitarian world, it can be said that organizations incorporate different types of ideologies, but all adhere the humanitarian principles. The outcome of their efforts is supposed to be the same, but the impetus is different. In

comparison with the United Nations, for instance, NGOs are more diverse with regard to ideology. To better understand this issue three types of ideologies are now introduced, namely *faith-based organizations*, *dunantists* and *wilsonians* (Tomasini and Van Wassenhove 2009b: 24). These are now briefly presented:

1. *Faith-based organizations* in their work combine “religious values with social goals” though being ecumenical and not imposing “their values on the beneficiaries they serve” (Tomasini and van Wassenhove 2009b: 24). Typical actors of this kind are Caritas and Catholic Relief Services (CRS).

2. *Dunantists* solely adhere to the humanitarian principles and do not use them in order to live religious values. Their beliefs are “firmly rooted in the principles advocated by Henry Dunant” and they “advocate a non-interventionist strategy in conflict” (Tomasini and van Wassenhove 2009b: 24). Organizations that form this group include the Red Cross and Red Crescent Movement, Save the Children, Oxfam, Action Contre la Faim (Action Against Hunger), and Médecins Sans Frontières (Doctors Without Borders) (Tomasini and van Wassenhove 2009b: 24).

3. *Wilsonians* have a more political agenda. Following Tomasini and van Wassenhove “they encompass former President Woodrow Wilson’s ambitions to project US values and influence as a force for good in the world” (2009b: 24). Today it spans the whole political spectrum and includes organizations like CARE (Cooperative for Assistance and Relief Everywhere).

Regarding the types one and three – faith-based organizations and wilsonians – it can be said that they may have a “built-in conflict of interest depending on how much their ideologies influence their agenda (political or religious)” (Tomasini and van Wassenhove 2009b: 25).

To conclude this subchapter, it should be noted that the adherence to this combination of principles and ideologies of NGOs “can prove to be very

expensive (e.g., Southern Africa), or controversial (e.g., the Balkans)” (Tomasini and van Wassenhove 2009b: 39). This is especially difficult as – following Tomasini and van Wassenhove – “humanitarian operations are not judged by their speed or costs, but rather by their impact” (2009b: 39).

3.4.2.3. Dependencies of NGOs

As mentioned before NGOs have three sources of income: official funding, private funding and self-financing (Woods 2000: 15). Predominantly are the first two sources as – although the NGO industry becomes more and more professional – they are value-based and thus usually dependent on public and private donations as well as voluntarism (Mayr 2006: 19). NGOs are usually involved in partnerships with different donors. On the official side, many NGOs apply for “internationally announced projects that are either undertaken by a UN agency or are sponsored by large donor institutions such as ECHO¹² (Mayr 2006: 19). On the private side, organizations like the World Food Programme (WFP) also work with donations from businesses¹³ (Mayr 2006: 37). Apparently it is of interest if there are any dependencies towards one of these sources as in recent years – in addition to official funding – “foundations, individual donors and the private sector have become important sources of funds for aid agencies” (Kovacs and Spens 2007: 107).

Anyway – due to the scarce literature on private funding - the main focus lies on a potential dependency towards official donors. Following Thomas and Kopczak in recent years the United States and the European Union alone have accounted for approximately 33 respectively 10 per cent of total humanitarian aid (2005: 3). Other major governmental donors are the remaining European countries as well as Canada, Japan and Australia (Thomas and Kopczak 2005: 3). Official funds

¹² ECHO stands for European Commission Humanitarian Office and is further explained in 4.2.3.

¹³ After the 2004 South-East-Asian tsunami, for example, American companies alone donated “more than \$565 million: about \$273 million in cash contributions; \$79 million in employee matching contributions; \$140 million in in-kind donations; and \$73 million in customer donations” (Thomas and Fritz 2006: 114).

account for approximately 40 per cent of NGO income (Woods 2000: 15). Koch, for instance, reports that due to the increasing channelling of official aid through these humanitarian actors the majority of NGOs now receives more than 50 per cent of its budget from official sources (2009: 2). This situation challenges a NGO's independence. Koch comes to the conclusion that it is unclear "whether they have become the executing subcontracting agencies of Northern governments or whether they are still able to make autonomous policy and country choices" (2009: 2).

The same thoughts are expressed by Woods:

"Of particular interest is: whether NGOs are being increasingly used as 'sub-contractors' for government-initiated projects rather than as recipients of official funds for NGO-initiated projects; and whether the funding received by NGOs for their own projects is being accompanied by increased conditionality." (2000: 16)

It is the concern that NGOs become 'donor-driven', resource-led instead of socially-responsive organizations that shift their accountability away from the beneficiaries and towards governments (Woods 2000: 15)¹⁴. And eventually it is also questionable if NGOs are still non-governmental then.

The majority of NGOs receives more than 50% of its budget from official sources. There is the concern that NGOs become 'donor-driven'.

Figure 18: The Dependency of NGOs on Official Sources

This problem and the accompanying anxiousness of NGO researchers are ubiquitous. Anyway, regarding this issue it is opportune to differentiate. If we assume that official back donors¹⁵ not only want to channel aid through NGOs, but also an imminent interest, we have to distinguish between an economic and a political interest.

¹⁴ For more information see 4.5.1 *Donor orientation*.

¹⁵ The prefix 'back' refers to the fact that many official donors do not directly engage in crisis relief, but indirectly via their implementing partners like NGOs or UN organizations.

Koch, for example, shows that the more trade occurs between countries, the more NGO aid is reduced (2009: 33). Thus it appears that NGO aid is “not affected by the economic interests of back donors” (Koch 2009: 34). Anyway, following Koch NGOs tend to focus “on those countries where their back donors are active” (Koch 2009).

What remains then is the possible political interest of governments, true to the motto “More aid, more influence”. Accordingly, Koch found that “with higher dependence rates of international NGOs on their government, they are increasingly mimicking the country choice priorities of their back donor” (2009: 123-124). Similarly McGuire argues that “donors may attach conditions such as utilizing funds for specific programmes, specific groups of recipients, using funds in a specific geographical area or country and spending the money by a certain deadline” (2006: 31).

The more dependent NGOs are on their governments, the more they imitate their back donor’s aid distribution patterns with regard to country choice.

Figure 19: The Impact of NGO Dependency on Country Choice

But anyway, following the Sphere Project, any type of humanitarian organization should avoid getting dependent of a single donor - regardless if official or private - in terms of goodwill and funds (2004: 318; quoted in McGuire 2006: 26). Woods found in her very comprehensive survey that on average 58 per cent of NGO budgets are filled by non-official sources (2000: 15). In addition she states that due to data mining difficulties¹⁶ it would be difficult to say whether there is some form of dependency or not (2000: 16). Although the distribution is unknown, Woods introduces some interesting country figures that are presented to the reader below. The country order follows the percentage of income derived from official sources. It can be expected that a similar pattern is valid for NGO funding sources in relation to donor institutions.

¹⁶ “The Development Centre’s database is unable to disaggregate the various possible components of each income source.” (Woods 2000: 16)

Country	Percentage of income from official sources	Percentage of income from private sources	Percentage of income from self-financing sources
Hungary	97.8	1.4	0.8
Greece	71	17	12
Denmark	65	10	25
Sweden	58	30	12
Belgium	53	38	9
Czech Republic	49	28	23
United Kingdom	47	36	17
Netherlands	47	22	31
Norway	46	25	29
Ireland	46	41	13
Switzerland	42	46	12
Luxembourg	41	45	14
Portugal	40	35	25
Spain	39	26	35
France	38	42	20
Finland	32	41	27
Germany	32	59	9
Italy	29	67	4
Turkey	29	11	60
Austria	23	66	11
Slovak Republic	20	55	25
Poland	6	93	1

Figure 20: Distribution of NGO Funding Sources in European Countries
(based on Woods 2000: 17)

3.4.2.4. Location Decisions of NGOs

Location decision is an important issue in NGO work with important consequences for pool sharing¹⁷. Of special interest, thereby, is the fact that there are so-called ‘donor darlings’ and ‘donor orphans’ – countries that receive disproportionately high respectively disproportionately low aid. Koch and Van Laan showed in their study of 50 of the largest development NGOs significant agency concentration in 2005 (2007: 2). The map below illustrates this pattern and displays the NGOs’ per country-per capita expenditures in euros.

¹⁷ For more information see 4.5.2 *Competition*.

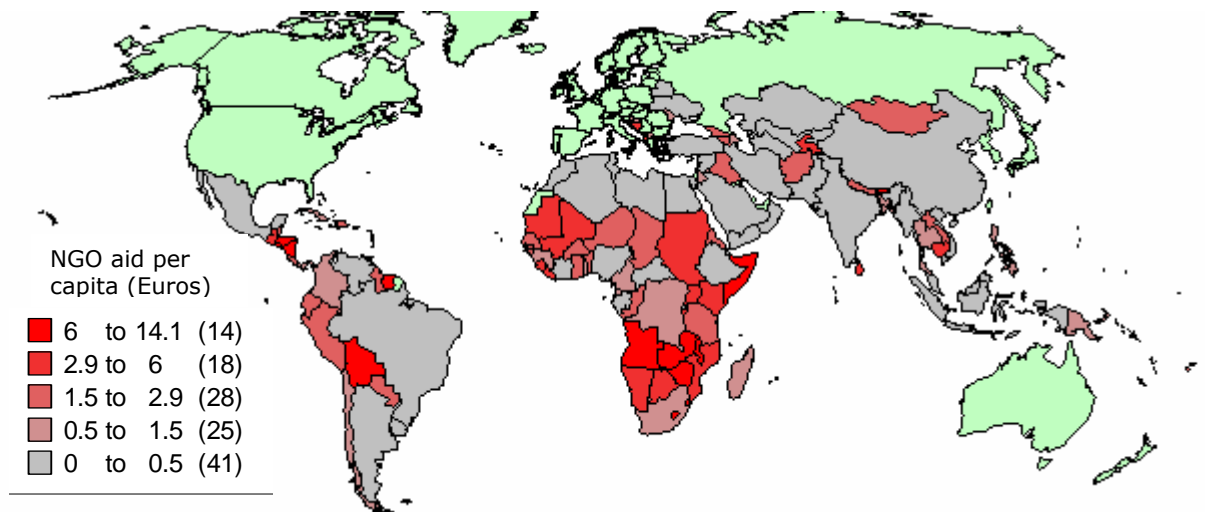


Figure 21: Agency Concentration in Development Aid (Source: Koch and Van Laan 2007: 2)

The figure highlights that there are darlings and orphans in country comparison. The aim of this subchapter is to explain the reasons behind this pattern. Regarding the Central African Republic (CAR) – a donor orphan (at that time) – Hidalgo states:

“The crisis in CAR is less visible because of the country’s relatively small population and the small number of people who are affected, scattered throughout the north, Chad, Cameroon, and Sudan. As a result, the population in need is dispersed, less visible, and harder to reach than people accommodated in camps. The international neglect can also be explained by the proximity and magnitude of other major crises, such as those in the Democratic Republic of the Congo, and, more recently, in Chad and Darfur....CAR lacks a champion on the international scene, such as the UK for Zimbabwe, the United States for Liberia, or Belgium for the DRC. France, the former colonial power, has a long list of more populated and troubled former colonies in which it has greater vested interests.” (2008: 143)

The most comprehensive work on location decisions from NGOs to date comes from Dirk-Jan Koch. In his work *Aid from International NGOs: Blind Spots on the Aid Allocation Map*, his PhD-thesis at Radboud University in Nijmegen, Koch not only confirmed spatial concentration of NGOs and the resulting existence of donor darlings and donor orphans, but also delivered some profound explanations. For his research he used data of 61 of the world’s biggest

international NGOs and applied for-profit concentration theories in the non-profit context (Koch 2009: 7). Now his research will be presented in detail.

There are so-called ‘donor darlings’ and ‘donor orphans’ – countries that receive disproportionately high respectively disproportionately low aid.

Figure 22: Donor Darlings and Donor Orphans

The sample NGOs of Koch show a diverse spectrum of agenda, but exclude organizations whose activities are “mainly triggered by exogenous shocks” like the Red Cross Movement or Medicines sans Frontières (2009: 26). In order to be representative, 61 of the largest international NGOs¹⁸ were chosen that together account for a budget of €6.9 billion in 2005. Per recipient country an average allocation of €30.4 million was recorded (Koch 2009: 7). Thereby big distribution discrepancies were registered by Koch who states that “the top recipients receive more than 20 times more on a per capita basis than the so-called donor orphans” (2009: 7). This phenomenon is already well-known regarding official donors – may they be bilateral or multilateral (Koch 2009: 24). Following Koch possible reasons in this sphere include common heritage (e.g. colonialism), common language or common faith (2009: 25). But what is with the other sphere – the NGO country choices? Do they show resemblance with the choices of back donors? If yes, why do they? If not, what can be other reasons for this behavior? Using the data of the humanitarian actors mentioned above Koch came to this initial conclusion (2009: 31):

“At the 1 per cent level¹⁹, NGOs are more likely to be active in countries (i) which receive higher levels of bilateral official aid from the donor country in which the NGO is based, (ii) where more other NGOs are engaged, (iii) which share the same religion, and (iv) which have larger populations.”

¹⁸ Inter alia CARE Canada, CARE, France, CARE Norway, CARE USA, Caritas Switzerland, ADRA (USA), Brot für die Welt (Germany), Broederlijk delen (Belgium), Church of Sweden Aid, Concern Worldwide (Ireland), German Agro Action / DWHH (Germany), Goal (Ireland), Hivos (Netherlands), Misereor (Germany), Norwegian Peoples Aid, Oxfam Australia, Oxfam Belgium, Oxfam Novib (Netherlands), Oxfam USA, PLAN International (UK), Save the Children USA, Swissaid (Switzerland), Terre des Hommes (Switzerland), World Vision Australia, World Vision Canada and World Vision USA were part of the sample (2009: 174).

¹⁹ 99 per cent of variance explained by factor

Thereby he interestingly identified the strongest factors to be (ii) and (iii) – namely the presence of other NGOs and shared faith (2009: 31).

The strongest promoters of NGO activities are the presence of other NGOs and shared faith.

Figure 23: Main Promoters of NGO Activities with Regard to Country Choice

In addition he recorded three phenomena on the 5 per cent level²⁰. First, the sample organizations supposedly preferred activities in more democratic environments (2009:31). Second, the more trade recorded between countries, the less bilateral NGO aid (2009: 34). And third, a voting of the United Nations General Assembly turned out to be important for the location decision of NGOs (Koch 2009: 34).

In this thesis point (ii), the concentration of NGOs, is of utmost importance²¹. In order to understand this phenomenon better Koch applied evolutionary economic geography. This approach and its findings are now presented to the reader.

First, we will make a short reminiscence to the Central African Republic (CAR) and further introduce Tanzania. The CAR is a country of four million inhabitants in Central Africa with 75% of the population living below the poverty line (3 million persons in total). Tanzania, on the other hand, lies in Central East Africa and has 38 million inhabitants with 29% of the population living below the poverty line (11 million persons in total) (Koch 2009: 67). Matching received funds with people in need of aid Koch discovered:

“Accordingly, one would expect Tanzania to receive greater support[...]in equivalent terms, about three times as much. The real difference, however, is much greater. 61 of the world’s largest non-governmental development organizations spend only around €1 million a year in the Central African Republic, compared with around €70 million a year in Tanzania.” (2009: 67)

²⁰ 95 per cent of variance explained by factor

²¹ For more information see 4.5.2 *Competition*.

On a per-capita basis, poor people in Tanzania get around 15.5 times more aid than their counterparts in the Central African Republic.

Figure 24: Central African Republic and Tanzania – Donor Orphan, Donor Darling

Field research of Koch in those countries (2009: 12) showed that 37 out of the 61 NGOs are present in Tanzania (€68 million or €6.18 per poor), but only four are active in the Central African Republic (€1.2 million or €0.40 per poor) (2009: 74-75). Another interesting finding is the strong concentration of aid agencies in Tanzania (2009: 75). In this context Van Laan discovered inter-regional differences: whereas some Tanzanian regions showed proportionally low NGO density, others – especially the Arusha region – record proportionally high NGO density (Van Laan 2007: 32). The following figure shows these inter-regional differences; thereby the numbers stand for ‘citizens per NGO’:

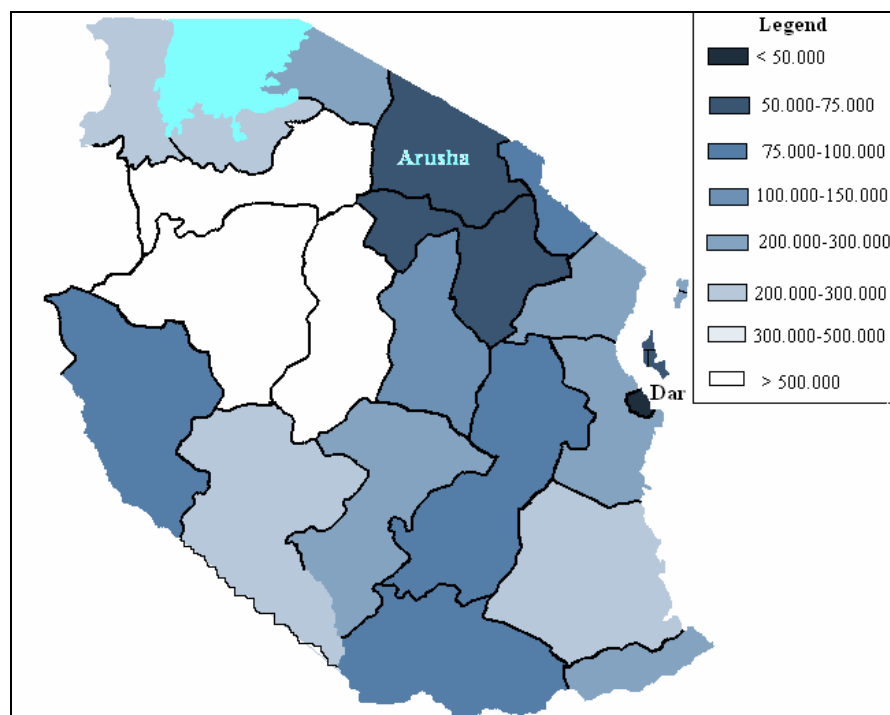


Figure 25: Regional NGO Density in Tanzania (Source: Van Laan 2007: 49)

Consequently Koch was looking for location theories that potentially could explain these patterns, namely the existence of donor orphans/darlings and agency concentration on country and region level. Thereby he found that current ‘non-profit location theories’ like supply and demand analysis are too static as

they “do not pay attention to dynamic processes at work in non-profit clustering” and as “they refrain from explaining current patterns of inequality” (2009: 68). Economic geography, on the other hand, is a promising field regarding dynamic location decisions. Koch was searching for an approach that fits to NGOs and accounts for “explicit choices with respect to underlying assumptions, the importance of contextual factors and the conceptualization of time”²² (2009: 69).

For-profit location theories are used to explain non-profit patterns.

Figure 26: Economic Geography in the Non-Profit World

Out of three basic approaches described by Boschma and Frenken, namely the neo-classical, the institutional and the evolutionary approach (2006), Koch choose the third one and adapted it for location decisions of NGOs (2009: 69). The basic determinants of this adapted evolutionary economic geography approach were taken from for-profit work of Arthur (1994) and Boschma and Frenken (2003), namely *increasing returns to scale* (1), *labour mobility* (2), and *path dependence* (3) (Koch 2009: 68). These determinants are now briefly presented:

1. *Increasing returns to scale* arise from two types of economies of scale, namely internal and external ones. The former is intra-organizational, whereas the latter is inter-organizational. Internal economies of scale emerge when it is reasonable – with respect to economics or service level – to cluster an organization’s activities. A practical example delivers Koch who argues that it would be efficient for a field-office running NGO to reduce the number of countries in which it operates as globally not only fewer initial investment is needed, but also fewer overhead costs are recorded (2009: 72). Additionally - from the author’s point of view – it should be mentioned that transaction costs²³ are reduced too. Altogether these cost reductions speak for concentration on specific target

²² Based on work of Koch and Van der Laan (2007: 3-4).

²³ Search and information costs, bargaining and decision costs, and policing and enforcement costs (Watkins 2009).

countries. External economies of scale, on the other hand, “arise when a group of organizations can achieve more of their aims when they combine their activities” (Koch 2009: 72). Bielefeld and Murdoch, two economic geographers, list some of these benefits:

“They include such factors as (a) shared infrastructure, which will reduce transportation, communication, and supply costs; (b) access to a pool of labor or specialized inputs; (c) knowledge spillovers between organizations as a result of contacts between firms and people; (d) information about demand or the feasibility of production at a particular location, which can be obtained by observing other successful organizations at that location; and (e) a reduction of consumer search costs, which will lead to increased demand at a particular location.” (2004: 224)

2. *Labour mobility* is another determinant of NGO location. Its influence is explained very well by Koch who reports that “labour mobility contributes in two ways to concentration of NGOs; (1) qualified labour tends to move towards incipient concentrations since salaries and living conditions are better and (2) labour tends to be more mobile between organizations within incipient concentrations” (2009: 73).

3. *Path dependence* constitutes the phenomenon that a system evolves out of its history. It is self-reproducing over time and past investments are honoured in the present/future. Regarding NGO location a manifestation of path dependence would be the self-reinforcing networks of international NGO staff that lead to spatial cluster-building (Koch 2009: 74). Country images also belong to this category. Koch, for instance, shows that the country images of the Central African Republic (CAR) and Tanzania considerably differ, the former being associated by individuals active in humanitarian aid as representing “all the vices of Africa”, while the latter standing for “all its virtues” (2009: 79). As Tanzania receives far more aid on a per-capita basis than CAR, its better country image may have its influence over this outcome.

Another example would be the funding pattern of (Northern-) governments. The U.K. and France are very illustrative in this matter, two countries that both predominantly support their former colonies but that show a very different funding pattern. The U.K. has historically channelled a high share of its aid through (local-) non-governmental organizations (Koch 2009: 79). Many NGOs have been geared to the choices of this back donor and consequently are active in target countries of the U.K. France, on the other side, has always channelled the major share of its aid through governments. These diverging patterns have led to the fact that “the ten largest international development NGOs all have their head offices in the Anglo-Saxon world, and eight of the ten largest recipients of aid from NGOs are former English colonies” (Koch 2009: 79)²⁴. Eventually coming back to our initial comparison of the Central African Republic and Tanzania – the latter receives around 15 times more aid on a per-capita basis than the former - it should be stated that following the determinant path dependence a possible reason would be the fact that Tanzania is a former British, while CAR is a former French colony.

The basic determinants of this adapted evolutionary economic geography approach were *increasing returns to scale*, *labour mobility*, and *path dependence*.

Figure 27: Determinants of Economic Geography Applied to NGO Location Decision

The résumé of these findings could be that increasing returns to scale, labour mobility and path dependence trigger NGO concentration. Anyway, Koch lists them not as the only possible explanation of NGO concentration (2009: 79). Other factors that could lead to this situation were mentioned before, namely sharing the same religion, large country populations, democratic country structures (Koch 2009: 31) or a voting of the United Nations General Assembly

²⁴ This is some evidence for NGO dependency as non-governmental organizations mimic the country choices of their back donor. Anyway, this is only valid for a high degree of dependency. The more competitive a NGO is, the more diverse their sources are, the more it is likely that they “do not shy away from operating in countries where few other actors are active, nor from intervening in the poorly performing countries” (Koch 2009: 123).

(2009: 34). Democratic country structures, for instance, are a potential reason for the differences in our example of Tanzania and the Central African Republic as in that sense the former outperformed the latter (Koch 2009: 87).

3.5. Humanitarian Logistics

A lot of background information has been introduced to the reader by now. It delineates a picture of humanitarian aid in general, its triggers and principles, its actors and NGOs as primal subject of analysis of this thesis. Now humanitarian logistics are scrutinized. To understand the special characteristics of this discipline is a prerequisite for pool sharing. Before presenting the structure of this chapter some basic information is delivered. Reasons why this discipline is central to emergency response are illustrated by Thomas and Kopczak:

“Humanitarian Logistics is central to disaster relief for several reasons. First, it is crucial to the effectiveness and speed of response for major humanitarian programs, such as health, food, shelter, water, and sanitation. Second, with procurement and transportation included in the function, it can be one of the most expensive parts of a relief effort. Third, since the logistics department handles tracking of goods through the supply chain, it is often the repository of data that can be analyzed to provide post-event learning. Logistics data reflects all aspects of execution, from the effectiveness of suppliers and transportation providers, to the cost and timeliness of response, to the appropriateness of donated goods and the management of information. Thus, it is critical to the performance of both current and future operations and programs.” (2005: 2)

Eventually it is necessary to state that Trunick estimates logistics to account for 80 per cent of the costs associated with emergency response (2005: 8). With this basic information in mind the author would like to present the agenda of this chapter: the general structure of humanitarian logistics will be explained briefly in 3.5.1. ‘Briefly’ because of the fact that there are many works that cover this craft in general like *Humanitarian Logistics* of Tomasini and Van Wassenhove (2009b) or *Logistics Management in humanitarian crisis – with a focus on supply pipeline logistics* of Mayr (2006). Other important papers are from Kovacs and Spens (2007 and 2009) as well as Thomas and Kopczak (2005). The topics

addressed by this subchapter can be divided into three categories. The first one delivers basic information about humanitarian logistics and includes the sections *definition* and *characteristics*. The second category is about obligatory logistical activities and includes *situation analysis*, *resource analysis*, *means of distribution* and *personnel*. The last one - *critical success factors* - also deals with logistical operations, but the portrayed types of activities are not obligatory, but make the difference between a goodish humanitarian supply chain and an outstanding one. Then, in 3.5.2, the direct switch to chapter four is introduced to the reader. With the help of literature and praxis examples of the coordination and cooperation problems in the Central African Republic, Angola, Mozambique and after the 2004 Asian Tsunami, challenges in this field are presented in order to lay the basis for their remedy, pool sharing, that is elaborated in the next chapter.

80 per cent of emergency response costs can be traced back to logistics.
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Figure 28: The Share of Logistics Costs in Total Costs of Crisis Relief

3.5.1. General Structure of Humanitarian Logistics

It is appropriate to start with a definition of humanitarian logistics and its characteristics. Then two very important parts of emergency logistics, situation- and resource analysis, are described. These aspects are followed by means of distribution, the dynamics of personnel and – eventually - critical success factors.

Definition

There are manifold definitions of humanitarian logistics. The author would like to present two of them, a very brief and a more detailed one:

- "It consists of all activities associated with procurement, storage, transport and distribution of relief goods and equipment." (Mayr 2006: 1)

- “Humanitarian Logistics is defined as the process of planning, implementing and controlling the efficient, cost-effective flow and storage of goods and materials, as well as related information, from the point of origin to the point of consumption for the purpose of alleviating the suffering of vulnerable people. The function encompasses a range of activities, including preparedness, planning, procurement, transport, warehousing, tracking and tracing, and customs clearance.” (Thomas and Kopczak 2005: 2)

Figure 29: Definition of Humanitarian Logistics (Thomas and Kopczak 2005: 2)

The latter is more comprehensive and supposedly the most often quoted definition of the scientific community dealing with emergency logistics. It is also the one used in this thesis. Additional interesting insights into the matter are delivered by Gustavsson and Mayr on the operational side as well as Thomas and Mizushima on the strategic side. Gustavsson, a practitioner, defines components of humanitarian logistics like “procurement, transportation, warehousing, inventory management, trace and tracking, bidding and reverse bidding, reporting and accountability” (2003: 7). Similarly, Mayr calls relief-specific logistical measures to be “evacuations, search & rescue, requirements/resource assessments, procurement, warehousing, transport and distribution” (2006: 27). Thomas and Mizushima on the other side argue logistics to be the “bridge between disaster preparedness and response, between procurement and distribution and between headquarters and the field” (2005; quoted in Van Wassenhove 2005: 476). But besides these superficial descriptions it is of interest to know more details about humanitarian logistics and its circumstances which will be presented in the following section.

Characteristics

This section is the core of this subchapter. It is all about what makes humanitarian logistics special and challenging. Before analysing the characteristics it is opportune to distinguish emergency logistics from business- and military logistics. Business logistics typically works with a stable network of

suppliers and manufacturing sites as well as predictable demand – all of which are not known to emergency logistics (Cassidy 2003). Likewise Balcik and Beamon identify inter alia unpredictability of demand, sudden occurrence of high demand combined with short lead times for a wide variety of goods and services, and lack of resources in terms of supply, people, technology, transportation capacity, and money as main differences to business logistics (2008: 102; quoted in Kovacs and Spens 2009: 507). With regard to the military it has to be said that this organisational form usually coordinates its efforts from one special and predetermined command post. This is not the case in emergency logistics as a high number of relief agencies are involved that usually coordinate their efforts from different command centres (Özdamar et al. 2004; Roosevelt 2005). Or as Kovacs and Spens put it: “The involvement of many different aid agencies in relief operations renders many distribution centre-based planning techniques obsolete.” (2007: 103)

Humanitarian logistics are different to business- and military logistics due to sudden occurrence of high demand respectively different coordination structures.
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Figure 30: Difference of Humanitarian Logistics to Business- and Military Logistics

The following categorisation of humanitarian logistics’ characteristics is obtained from Tomasini and Van Wassenhove (2009b: 9-11):

- *Ambiguous objectives* means that it is difficult to assess overall response capacity as the “level of commitment” of the various actors as well as “their relationship to one another” differs considerably (Tomasini and Van Wassenhove 2009b: 9). Following Tomasini and Van Wassenhove this is because of the “large numbers of stakeholders (donors, agencies, media, and beneficiaries)” and results in humanitarian actions often being “uncoordinated, spontaneous, unsolicited, and disparate” (2009b: 9).
- *Limited resources* are classified by Tomasini and Van Wassenhove as human, capital, and infrastructure (2009b: 9-10). Thereby human resources are

characterised by “high turnover, heavy physical and emotional demands” as well as a “limited pool of qualified and readily deployable personnel” (2009b: 9). Capital, on the other side, is also crucial when it comes to emergency logistics. Unfortunately field managers on the spot are often challenged by insufficient, delayed or cancelled funds. Thus “liquidity, as well as good credit terms for new suppliers, is an issue for managers on the ground” (Tomasini and Van Wassenhove 2009b: 9). Infrastructure is necessary too when it comes to logistical measures. Unfortunately it is normally damaged as well as typically insufficient and from time to time literally inexistent (Long and Wood 1995: 225). Tomasini and Van Wassenhove explain this by an extraordinary magnitude of demand that typically focuses on a relatively small area (2009b: 10). A classical example of limited resources with regard to infrastructure would be the necessity to use airplanes in the immediate after-phase of disasters as roads and harbours may be impassable, non utilizable or even destroyed (Bock 2006: 58).

In addition to Tomasini and Van Wassenhove, Auf der Heide mentions two other aspects of limited resources, namely their specificity (e.g. satellite communications, search & rescue units or field hospitals) and their atypical origin, the latter indicating that “resources in disasters arrive from many atypical sources...which...makes it difficult to tell what resources are present, where they are, what they are doing” (1989: 63). In that sense information about resources is limited. This kind of limitation is of extraordinary importance as there are situations where more resources are disposable than needed, a fact that possibly leads to communication and coordination problems between aid agencies (Quarantelli 1983: 78-80; quoted in Auf der Heide 1989: 104). Eventually a statement that defines the framework for resource use comes from Wood et al. who state that “in famine relief efforts, first- and third-world logistics meet” (2002: 389).

- *High uncertainty* is typical for management in catastrophes (Lipok 2007: 17) and consequently a major characteristic of humanitarian interventions. Supply chains have to be set up at times when information and knowledge is scarce (Long and Wood 1995; Tomasini and Van Wassenhove 2004: 437). This uncertainty manifests itself in abrupt, but necessary changes of organizational structures and responsibilities, the exigency to share tasks and capacity, the not-known number and spatial distribution of volunteers as well as unclear jurisdictional boundaries (Auf der Heide 1989: 53). Likewise Beamon and Kotleba call irregularity “in terms of size, timings and locations[...]a characteristic feature of demand patterns for relief items” (2006a: 187). Similar findings come from Cassidy (2003: 16) and Murray (2005; quoted in Kovacs and Spens 2007: 100). Consequently we talk about push supply chains in the aftermath of an emergency. Only later – as more information and knowledge is available – the supply chain is able to apply a pull-approach (Long and Wood 1995: 218).
- *Urgency*: The need for relief after or within a crisis is usually urgent. Consequently the intensity level is considerably high, measured by Tomasini and Van Wassenhove as being “the number of tasks to be executed divided by the product of time and available resources” (2009b: 10).
- *Politicized environment*: Internationally active humanitarian actors must respect national sovereignty and thus have to deal with the national government of the affected country. The result of this is humanitarian action being “highly political throughout the supply chain, from donations to distribution in the field” and an environment in which it is “quite difficult to maintain and protect a so-called humanitarian space in which humanitarians can do their relief job independently from outside pressures” (Tomasini and Van Wassenhove 2009b: 10). Consequently it is a big challenge to depoliticize humanitarian space (Tomasini and van Wassenhove 2004: 447).

- *Speed*: The abovementioned urgency requires a very short lead time. Thus its reduction is an important goal of humanitarian actors. As there are different types of agencies with different organizational structures the individual response time varies. Kovacs and Spens state that “national chapters are thus involved in the first wave of relief in the immediate response phase[...]while agencies with no presence in the affected country need to wait to be officially invited in order to enter the country” (Kovacs and Spens 2009: 511). In this matter aid agencies supposedly can learn a lot from private business due to the latter’s manifold experiences in supply chain operations (Tomasini and Van Wassenhove 2009b: 11).

Characteristics of humanitarian supply chains are ambiguous objectives, limited resources, high uncertainty, urgency, politicized environment, and speed.

Figure 31: Characteristics of the Humanitarian Supply Chain

Additionally communication²⁵ is an important issue not mentioned above. According to the crisis lifecycle there is a development from time-sensitive to routine operations. McGuire speaks of a cycle “from independent, simple, effective standalone and paper-based (emergency phase) to public, complex, efficient, integrated and electronic (development phase) communication and information infrastructure” (2006: 135). Eventually it also has to be said that the ‘last-mile’ of relief is usually gone by local partners of international NGOs. Thomas and Kopczak state that “in most cases, it is these partners closest to the affected population and of the same culture that provide the relief services to the affected populations” (2005: 4).

²⁵ “Exchange of information with a value statement equals communication.” (Tomasini and Van Wassenhove 2009b: 119)

Situation Analysis

Following Auf der Heide a proper situation analysis requires the elaboration of present conditions, expected conditions and the impact of expected conditions (1989: 117-118).

- *Present conditions* are defined by Auf der Heide as important information with regard to “location and severity of damage; existing threats (fires, explosions, chemical spills...); numbers, locations, types, and severities of[...]victims” (1989: 117). Similarly Mayr argues that “essential information include an estimation on the actual size of the disaster, the number of affected persons, their dispersion, data on the logistics infrastructure and basic country data” (Mayr 2006: 41).
- *Expected conditions* are influenced by and estimated with help of factors like “rate of fire spread; rate of river rise; seismic aftershocks; *tsunami* (tidal wave) or *seiche* (earthquake-generated wave in a lake or other closed body of water); hazardous spills due to earthquake; duration of the incident; weather influences; and downed power lines after storms” (Auf der Heide 1989: 118).
- *Impact of expected conditions*: it manifests itself in need for “evacuation areas; public shelter and feeding...need for replacement personnel and reinforcements; need for feeding, sleeping, and sanitation facilities; need for fuel; and vehicle and equipment maintenance or replacement” (Auf der Heide 1989: 118). The need for feeding, for instance, is calculated by multiplying the estimated number of nutrition-lacking persons with specific ration sizes which are based on “a) norms by WFP, b) logistical reasons and c) reasons of food aid history of the agency” (Feldbrügge 2001: 141)²⁶. In addition humanitarian actors must respect the documentation and labelling requirements of recipient countries. Long and Wood mention that “Ethiopia

²⁶ To avoid fraud even “non-nutrition related aspects such as possible selling of food rations are included into the determination of ration sizes” (Feldbrügge 2001: 142).

required a certificate of nonradioactivity after the Chernobyl incident. Moslem nations sometimes require proof that cargo meets their religious standards: no pork or alcohol in the shipment” (1995: 225). Thus an effective crisis response “requires an understanding of context – particularly the socio-economics of affected communities” (Mayr 2006: 41).

Situation analysis identifies present conditions, expected conditions and the impact of expected conditions.
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Figure 32: Situation Analysis

Resource Analysis

After the situation is assessed, this type of analysis takes place. In our example mentioned above – the need for nutrition – the humanitarian actors in question now have to scrutinise food providers and conduct procurement. Based on the calculated need – number of persons multiplied with a specific ration size – logistics personnel procures the goods and ships them to the recipients. Thereby it is important to know “what resources are present and/or assigned, and what resources are available” (Auf der Heide 1989: 118) as well as what packaging is needed.

Packaging is of utmost importance in humanitarian aid and stands for *protection*, *utility*, and *communication* (Robeson and Copacino 1994: 444). Regarding protection the World Food Programme (WFP) mentions the ability to mitigate respectively eliminate the risk of climatic hazards (humidity, light, temperature...), mechanical hazards (handling, transport, sampling...), biological hazards (insects, moulds, bacteria...) and other hazards (pilferage, customer appeal...) (2003; quoted in Mayr 2006: 51). Utility is another important function. Goods whose proportions, weight and materials fit with, inter alia, the requirements of trucks, aeroplanes, warehouses and people, directly benefit the productivity and efficiency of logistical activities (WFP 2003; quoted in Mayr 2006: 51). The last function of packaging – communication – provides the proper

identification and counting of goods (via name, brand, size, colour or code) as well as specific information regarding shipping and storing (WFP 2003; quoted in Mayr 2006: 51).

Generally resource sources can be classified as the own organisation, other organisations²⁷, donors or - local, regional and international – markets (Mayr 2006: 46). In addition Mayr gives some insight into the procurement strategy of globally active aid agencies:

“Due to their international presence, larger humanitarian organisations do not have a fully centralized or decentralized procurement strategy. They rather split the procurement function according to the type of relief items.” (2006: 49)

This splitting according to relief items results in frequent centralized purchasing of vehicles (plus fleet management and spare parts inventory) and office materials due to economies of scale (Mayr 2006: 49). Thereby the demand of different projects is pooled in order to enhance buying power. A praxis example of this strategy delivers the International Federation of Red Cross and Red Crescent Societies, where one National Section is responsible for the procurement of non-food items like vehicles for all Member Societies (Mayr 2006: 50). Decentralised purchasing, on the other hand, is often applied when food or other relief-specific needs are required. Therefore goods and services are usually faster at the end beneficiaries as well as more adapted to local needs, may they be cultural or religious (Mayr 2006: 49). Eventually there is a trend towards long lasting relationships as more and more framework agreements and even vendor-managed inventory projects are set up (Mayr 2006: 52). This is especially valid for humanitarian actors and commercial suppliers.

²⁷ Resources can be bought, borrowed or leased from other humanitarian actors (Mayr 2006: 46), depending on the type of resource in question.

Resource analysis identifies assigned and available resources as well as what packaging is needed. Sources can be classified as the own organisation, other aid organisations, donors or - local, regional and international – markets.

Figure 33: Resource Analysis

Means of distribution

As one can imagine, the means of distribution in humanitarian logistics are manifold and include sea, air, rail and road. Typical transport methods include vessels, aeroplanes, trains, trucks cars, motorcycles, bicycles and the like. In mountainous regions there are often pack animals used to transport goods necessary (Long and Wood 1995: 225). In coastal and flooded regions amphibious craft is used by aid agencies (Pettit and Beresford 2009: 457). In addition it is possible that immediately after a disaster the only transport method is by air as roads and harbours may be impassable, non utilizable or even destroyed (Bock 2006: 58). Thereby we can distinguish between transport via own aeroplanes or helicopters - as the WFP does - or charter, split charter and combined shipment (Kummer 2006: 84). Likewise it is important to use airplane space efficiently as its capacities are limited (Mayr 2006: 61). Additionally it is interesting to notice that containers are of minor importance to humanitarian logistics. Wood et al. trace this back “to the fact that containers require special infrastructure that is often not present/demolished in disaster-affected countries” (Wood et al. 2002; quoted in Mayr 2006: 52).

Personnel

Generally it has to be said that following a study presented by Oloruntoba and Gray only 45 out of 100 logisticians of humanitarian organizations have a university degree or any other formal qualification in areas like transport or logistics (2003:4; quoted in McGuire 2006: 33). Similarly Pettit and Beresford state that “the availability of trained logistics experts to facilitate effective HA responses is of paramount importance but there is often a shortage of people who have the relevant training” (2009: 459). In addition there is a lack of

organizational learning due to an emergency response environment characterised by high intensity, high employee turnover and perpetual crisis orientation (Thomas and Kopczak 2005: 6). Thus Pettit and Beresford state that oftentimes “the level of logistics expertise within aid agencies is low and those that are employed operate some way down the organisational structure” (2009: 459). Furthermore there may be a difference between large, usually globally operative aid agencies and small, predominantly local ones. Whereas actors like the World Health Organization (WHO), the military or the Red Cross and Red Crescent Societies have a lot of logistics staff or even a logistics department, small NGOs often do not even have personnel exclusively dedicated to logistics (Bock 2006: 18).

Critical success factors

The framework of critical success factors (CSF) is obtained from Pettit and Beresford (2009: 453-462). These researchers defined strategic planning, inventory management, transport and capacity planning, information management and technology utilisation, human resource management, continuous improvement and collaboration and supply chain strategy as essential for a well-conducted emergency operation. These CSF are now briefly presented.

- *Strategic planning*: A successful humanitarian aid operation in every aspect requires strategic planning. Thereby it must be long-term oriented and located at the highest level of an organisation, namely senior management (Pettit and Beresford 2009: 453). Following Pettit and Beresford strategic planning should include “corporate strategy (e.g. transport and warehousing), location of distribution centers (e.g. centralised or localised), outsourcing of non-core activities, the size of the business and budgets, acquiring capital, deployment of resources and the effective use of the organisations skills” (2009: 455). In addition they state that “the strategic sourcing and centralised purchasing of aid will also be fundamental to successful delivery” (2009: 455).

- *Inventory management*: Urgency is what makes humanitarian inventory management special. “The time values of commodities are much greater than the inventory carrying costs” (Long and Wood 1995: 221). Thus the concept of pre-positioning is of utmost importance and humanitarian depots are often set up near areas where crises regularly occur (Pettit and Beresford 2009: 456; Balcik and Beamon 2008; quoted in Kovacs and Spens 2009: 509)²⁸. These strategically located warehouses reduce lead time. Usually - the UN Humanitarian Resource Depot Network being an exemption - humanitarian actors run their own networks (Roh et al. 2008; quoted in Pettit and Beresford 2009: 456) and thus cause a certain duplication of efforts.
- *Transport and capacity planning* addresses means of distribution, “utilisation of capacity, scheduling, and maintenance in such circumstances” (Pettit and Beresford 2009: 457). In addition the mapping of logistical infrastructure is very important. Kovacs and Spens even mention the construction of transport infrastructure as part of disaster relief and list road constructions by UNJLC in South Sudan as example (2009: 509).
- *Information management and technology utilisation* are essential to humanitarian aid. Following Long information systems are “arguably the single most important factor in determining the success of an emergency logistical operation” (1997: 27-28). An example of a decision support system would be the International Food Aid Information System developed by the WFP that “tracks movements of food aid, including origin, destination and stockpiles, traffic lanes, and logistical infrastructure used” (Long and Wood 1995: 217).
- *Human resource management* is another topic of extraordinary importance. It tackles the problems elaborated above (in the personnel section) by goal-

²⁸ Thus “in a multi-echelon supply network the inventory control policy of the most downstream stock needs to be given the greatest attention as it generates the demand signal for the supply network and any distortion will adversely affect all of its upstream tiers” (McGuire 2006: 153).

oriented qualification schemes for employees. Furthermore it lays the institutional foundations for knowledge sharing of personnel and thus organizational learning.

- *Continuous improvement and collaboration* deals with issues like intra- and interorganizational cooperation or organizational learning. In general, “disasters often create the need for different organizations to share resources (personnel, vehicles, equipment, supplies, and facilities)” (Auf der Heide 1989: 63) and knowledge. It is an integral part of pool sharing and thus elaborated in chapter four.
- *Supply chain strategy* constitutes the conceptual framework of humanitarian logistics and is the advocate of the other critical success factors described above. In today’s literature researchers demand a proper supply chain strategy to be consumer-oriented, agile and lean (Pettit and Beresford 2009: 462).

At the end of the subchapter *General Structure* – after we have defined humanitarian logistics, and described its characteristics and analysed its activities - it has to be mentioned that this holistic view of logistics is still new. It was not until recently that aid agencies’ view of logistics centred on procurement. Chomilier, Samii and Van Wassenhove state:

“Traditionally IFRC's logistics and resource mobilisation unit's activities were centred on the purchasing function. Over recent years, however, the role of the unit expanded to include all relevant supply chain activities from planning and warehouse management to training and reporting” (2003: 15).

What remains, though, is insufficient coordination and cooperation between humanitarian actors. This problem is addressed in the following subchapter 3.5.2.

- *The fundamental problem of humanitarian logistics.*

3.5.2. The Fundamental Problem of Humanitarian Logistics

As it is today, humanitarian logistics will be an important topic in the future. Thereby the big challenge is to close the gap between tomorrow's crisis requirements – following Thomas and Kopczak “both natural and man-made disasters are expected to increase another five-fold over the next fifty years” (2005: 1) – and a state of humanitarian logistics that researchers compare to the commercial counterpart in the midst of the 1980s (Rickard 2003: 9; Thomas and Kopczak 2005: 7; Van Wassenhove 2005: 476). This part of the thesis elaborates why the assumption that humanitarian actors are cooperative by definition does not hold ground (Van Wassenhove 2005: 483). Significantly are two statements of McGuire and Long and Wood:

“Generally, a striking gap can be noted between academic literature, which rarely considers supply chain management of humanitarian assistance goods and humanitarian organizations, which rarely consider commercial supply chain management concepts which are well established in academic literature.” (2006: 11)

“Ironically, interorganizational relations are usually a challenge to the relief effort instead of a source of support. Each organization has its own operating methods and goals, and it is only with great effort that they coordinate their plans and share resources.” (1995: 216)

This subchapter deals with problems of humanitarian actors – such as NGOs or the UN – to coordinate and cooperate in crisis relief. It starts with the lack of supply chain thinking in the humanitarian world and describes the coordination and cooperation problems on a general level (3.5.2.1). Then in 3.5.2.2 the origins of this situation are elaborated. Section 3.5.2.3 follows with diverse country examples that should illustrate the abovementioned problems on a practical level. The subchapter closes with a presentation of recent developments in this matter (3.5.2.4) and thus constitutes the optimal transfer to the pool sharing concept in chapter four.

3.5.2.1. An Organizational Coordination and Cooperation Problem

As indicated in the statement of McGuire today's humanitarian actors lack supply chain thinking. Private business already converted logistics "from a peripheral to a strategic" function (Thomas and Kopczak 2005: 6). Hence Pettit and Beresford – based on Power et al. 2003 – argue that "collaboration"²⁹ is seen as being a key differentiator in supply chain best practice and in achieving integration and efficiency in logistics networks" (2009: 461). Actors in aid – on the other side - usually lack a certain holistic and continuous improvement perspective to fulfil end customer's³⁰ demand (Power et al. 2001; quoted in Pettit and Beresford 2009: 460). Consequently research of Thomas and Kopczak has evidenced the common assumption that only a very limited number of humanitarian agencies use the abovementioned approach in order to conduct outstanding logistical operations (2005: 1). This is especially true with regard to information technology as aid agencies still rely on a lot of manual processes in their logistical operations (Thomas and Kopczak 2005: 6). Thomas and Kopczak state:

"The inability of IT staff at headquarters to understand the imperatives of the field, the primacy of financial managers in decisions about software used in organizations, and the need to keep networks secure are the main reasons that humanitarian logisticians cite as the cause of the slow evolution of IT." (2005: 6)

Similarly argues Gustavsson who mentions that "very little capital[...]has been invested in the development and implementation of modern management information systems (MIS), information technology (IT) or logistics systems" (2003: 7). Furthermore – as mentioned in 3.4 - the humanitarian sector lacks any industry standard with regard to IT, a fact that not only tackles the own organization, but also cooperation with other actors in the field (Gustavsson 2003: 7). This all leads to a type of cooperation that manifests itself only after a crisis unfolds (Pettit and Beresford 2009: 461).

²⁹ Collaboration is a synonym for cooperation.

³⁰ In humanitarian logistics this end consumer is usually called end beneficiary.

Hence we can state that there is a coordination and cooperation problem in the humanitarian world. As we know, best practices of the private sector have not made their way into the humanitarian one. Now it would be of interest how these problems manifest themselves. They do this in a lack of joint information, joint logistics training, joint media relations, joint assessment as well as joint use of space in aeroplanes or trucks, and joint personnel. Tomasini and Van Wassenhove, for instance, conducted a study and came to the conclusion that “there is a lack of peer collaboration to jointly address the media” (2009b: 108) as well as no information sharing regarding cargo consolidation (2009b: 126). Thus aid agencies often miss important economies of scale as they use less-than-truckload capacity. Stephenson explains this by the observation that the involved actors show de-central structures and usually are driven by the fierce desire to be independent of other agencies (2005; quoted in Oloruntoba and Gray 2009: 496). What is also characteristic is the occurrence of individual attempts to get through customs clearance, a phenomenon recorded by Kovacs and Spens in Ghana (2009: 518). With regard to the lack of joint assessment Auf der Heide states:

“When assessment of the disaster situation is carried out, it is generally done independently by a number of individual organizations. Often each agency limits its assessment to those observations of direct consequence to that particular organization. In many cases, the information obtained by these individual organizations is not shared or pooled.” (1989: 63)

Similar to Wenger, Quarantelli and Dynes (1986: 24-33) Auf der Heide reports about the outcome of these coordination failures:

“Without this coordination, resources may not be shared or distributed according to need. Disaster-related activities, such as search and rescue, traffic control, medical care, and transportation of casualties, may be carried out in a loosely structured, spontaneous manner, with insufficient communication and control. The result can be duplication of efforts, omission of essential tasks, and even counterproductive activity.” (1989:74)

Proper planning and conduction of emergency responses thus needs an inter-organizational perspective that is “tied to resources, and is known and accepted

by the participants” (Auf der Heide 1989: 35). Following Auf der Heide a systems perspective is required (1989: 39). A prerequisite for this approach with manifold names (inter-organizational-, systems- and supply chain perspective) is inter-actor communication. Thereby the focus is on both communication hardware and communication procedures (Auf der Heide 1989: 64). Ideally “persons having information[...]know who needs it[...]how to get it there[...]use mutually understood terminology” (Auf der Heide 1989: 64).

Humanitarian actors lack supply chain thought and practice. But emergency responses need an inter-organizational perspective.

Figure 34: Lack of Supply Chain Thought and Practice

3.5.2.2. Origins

After this general description of coordination and cooperation problems it is opportune to state some reasons behind them, the most important being the characteristics of humanitarian supply chains. They are the reason behind an “industry” that is fragmented and characterised by an extraordinarily high number of unclear linkages between actors (Kovacs and Spens 2007: 107). Kovacs and Spens put it like that:

“Yet the mere knowledge of which other humanitarian organizations are present in a region poses a challenge to humanitarian logisticians. Regional maps of organizational presence have been developed for development aid, but who will respond to a particular sudden-onset disaster is less clear[...]Relating back to the phases of disaster relief, the question in the humanitarian aid supply network is not only which other organizations are present, but also in which of the phases of relief they are present.” (2009: 512)

It seems that because of the ubiquitous uncertainty and unpredictability of crises, the resulting high employee-turnover rates³¹, few organizational learning, the lack of regulation (services, IT) and the use of obsolete working methods (e.g. certain manual processes) humanitarian agencies do not work as efficient and

³¹ Regarding logistics field personnel Thomas and Kopczak speak of up to 80% (2005: 6).

effective as possible (Thomas and Kopczak 2005: 1). Other reasons may be time pressure – often resulting in congestions of hubs – or inadequate competitive behaviour – frequently the trigger of commodity and service price rises in the affected region (Thomas 2003: 6). Besides these fundamental challenges there are also home-grown failures:

“At their creation, the UN agencies lacked an effective mechanism to foster inter-agency dialogue or help coordinate operations, let alone a mechanism that could break down the silos that existed in field operations. Coordination, as such, became an orphan issue in the humanitarian system, leading to substantial inefficiencies, including the wasteful duplication of efforts.” (Tomasini and Van Wassenhove 2009b: 66)

In addition necessary homework with regard to complementarities is not done within the humanitarian sector. Even if today’s aid agencies are aware of the fact that project A influences project B, “much cost data that would be needed for valuing trade-offs between several potential projects is not collected” (Feldbrügge 2001: 84). Eventually these fundamental constraints have found their expression in the manifold logistics practices of humanitarian actors. Already in the 1980s aid agencies have developed their own frameworks, manuals and software (Beamon and Kotleba 2006a: 188). Examples would be the Pan American Health Organization (*Humanitarian Supply Management and Logistics in the Health Sector*) and Médecins Sans Frontières (*Freight and Transport Management, Logistic Guideline* with a focus on the cold chain; and *Warehouse and Stock Management, Logistic Guideline* with a focus on storage) (Beamon and Kotleba 2006a: 188-189). All these works have their merits – but they are rather organization-specific and thus always just the second-best solution for the end beneficiaries.

The fundamental characteristics of humanitarian logistics and home-grown failures of aid agencies lead to emergency responses that are not effective and efficient as possible.

Figure 35: Origins of the Fundamental Coordination and Cooperation Problem

3.5.2.3. Country Examples

This section now introduces some country examples. Thereby the ones of the Central African Republic (CAR), Mozambique and Angola will be very brief and presented in statements. The description of the 2004 Asian Tsunami emergency response, on the other side, will be elaborated in more, but reasonable detail. The main cause for the latter is on the one side that the tsunami was a disaster of extraordinary magnitude that even aggravated coordination and cooperation problems of actors and - on the other side – the very good documentation of the relief efforts by researchers as Fritz Institute (2005a), Mashni et al. (2005), Van Wassenhove (2005), Trunick (2005), Lipok (2007) and Perry (2007).

Central African Republic

The drought in the Central African Republic was already mentioned in subchapter 3.4.2.4. Lanzer, a senior UN official in CAR, reports:

“By the first quarter of 2008, aid agencies had carried out some 200 different assessments in the northwest and northeast of the country. A mass of information existed, but much of it was disconnected or difficult to process. There was no database or baseline to speak of, and the government’s ability to monitor the situation – for example, via disease surveillance systems – was very weak.” (2008: 109)

Mozambique

For the emergency response in Mozambique’s 1998 flooding Feldbrügge stated in his 2001 dissertation *Economics of emergency relief management in developing countries*:

“For example, one staff member felt uncomfortable with unclear orders of how to distribute the food aid and delayed its provision. A major information problem stated was the missing clarity on distribution procedures and registration of beneficiaries.” (2001: 123)

Angola

Angola's 1998 drought emergency response showed coordination and cooperation problems of two of the world's biggest humanitarian actors, namely the World Food Programme (WFP) and the Deutsche Welthungerhilfe (DWHH) or German Agro Action. The decision-basis and decision-procedures regarding the granting of nutrition relief considerably differed and led to a situation where the nutrition-provider (WFP) decided not to grant relief as immediate needs were questionable. Feldbrügge reports:

“In the case of the drought relief, the relief agency's³² information – derived from experience, personal communication with local key informants and direct observation – differed from the formalised information collection by WFP and did not meet their information needs. On the other hand, WFP's procedures of data collection (random sampling) were not well communicated to the emergency agency.” (2001: 143)

Consequently the WFP denied supply, a fact that leads Feldbrügge to the following consideration:

“If it is assumed that the drought had a major nutritional impact, then the costs of not collecting data (in the specified and requested form) consisted in the consequences of non-delivery of food aid by WFP to DWHH. The costs would then include the impact of acute under-provision of food, probably even acute malnutrition, in particular of children, and potentially the increased child mortality. These costs[...]could potentially be very high and their integration could greatly change a decision[...]WFP took the suspicious side of a principal that seeks control.” (2001: 144-145)

2004 South-East-Asian Tsunami

Due to the sheer magnitude of the natural disaster, coordination problems were more obviously evidenced. Needs assessment and planning, for instance, were insufficient – a fact that hindered a proper emergency response (Fritz Institute: 2005b; quoted in Pettit and Beresford 2009: 455; Beresford and Pettit: 2005: 329). Pettit and Beresford, for example, speak of “considerable inter-agency ‘squabbling’” in the immediate post-disaster phase (2009: 461). A possible

³² DWHH or German Agro Action

reason behind these coordination problems might be the organizational structure of humanitarian actors. Many of them are organised in a multi-country network. Thus first coordination efforts are geared towards its own network rather than towards other actors on the scene. Perry reports:

“Owing mainly to the magnitude of the tsunami damage and relief requirements, some of the responding organizations experienced an initial delay in involvement in the relief effort while they obtained information, determined priorities, negotiated with global parts of their networks and obtained appropriate supplies.[...]Following such initial delays, it is apparent that poor coordination amongst different parties was a major obstacle during the tsunami disaster.” (2007: 421)

An additional observation comes from Thomas and Kopczak who revealed in their survey of big humanitarian organizations that in 42% of the cases no logistician was part of the needs assessment team and that this lack of logistical perspectives results in situations where “some of the logistics bottlenecks are not anticipated and planned for causing unnecessary delays in delivering relief” (2005: 5). Another finding of this study is the lack of skilled logistics personnel in the emergency response triggered by the 2004 tsunami. Thomas and Kopczak:

“Also, as the operations of international humanitarian organizations expand to simultaneously include multiple geographies, organizations are struggling to find people who can manage the complex supply chains of relief. For example, in order to effectively respond to the Tsunami, 88% of large aid agencies surveyed had to pull their most qualified staff from the ongoing humanitarian operations in Darfur.” (2005: 5)

<p>In 42% of the cases no logistician was part of the needs assessment team. 88% of aid agencies had to temporarily withdraw senior logisticians from ongoing missions in Sudan in order to meet demands.</p>

Figure 36: Tsunami Crisis Relief: Lack of Logistics Expertise

The abovementioned lack of logistics personnel addresses a quantitative problem. As the 2004 South-East-Asian tsunami was an extraordinarily big disaster, one might speak of a temporary problem rather than of a constant one.

Anyway, other findings of Thomas and Kopczak’s study are qualitative ones and thus hold true for every crisis response. Regarding the use of software in operations they report that only 26% of the responding organizations used tracking and tracing programs, whereas the big majority still worked with Excel spreadsheets and/or manual records (2005: 6)³³. Another qualitative problem is a general lack of sense of coordination and cooperation. Following Thomas and Kopczak “just over half the logisticians (56%) reported working with other agencies in setting up their supply chains” (2005: 6). Thereby the roots of this problem can be found long before an actual relief effort. In this so-called preparedness phase the tendency of humanitarian actors to work on their own is even stronger. Thomas and Kopczak state:

“For example, we found that several of them were thinking of deploying a regional warehouse structure for faster response. Coincidentally, three were actually talking with warehouse providers in the same city. Similarly, two others had commissioned expensive analyses to select a fleet management system and three were wrestling with the idea of a training program for field logisticians. None knew that their counterparts had the same objectives and, therefore, there was little collaboration or resource sharing.” (2005: 6)

Only 56% of the logisticians involved in the Tsunami response worked together with other organizations’ crew. Only 26% use tracking & tracing programs.

Figure 37: Tsunami Crisis Relief: Lack of Cooperation and Use of Technology

In certain places of the tsunami relief effort this behaviour even culminated in a veritable chaos. An example would be Sumatra, where far too many actors intended to start operations. The result of that lack of regulation of both the Indonesian government and the UN was ensued chaos (Van Wassenhove 2005: 486). Information dissemination was a problem, especially in the severely affected province of Banda Aceh. Hubs were blockaded, warehouse space

³³ Thomas and Kopczak also speak of 58% of respondents stating that “they received accurate and timely information of what was in the pipeline”, but do not reveal the allocation between T&T software users and ‘old-school’ users (2005: 6).

occupied by the false goods and the like. In addition many efforts were undertaken twice like the needs assessment for a specific region (Lipok 2007: 78). On the other side, Perry speaks of “incoming agencies arriving at ‘hotspot’ locations across Southeast Asia were basing their initial assessments on uninformed guesses” (2007: 421). It is likely that organizations found themselves in a situation with manifold needs assessments for region A, but not even one for region B. Eventually one very positive aspect of the relief efforts should be mentioned, namely the quick setting up of internet-based communication structures. Pettit and Beresford state:

“During the early stages of the Asian Tsunami response, 83 percent of organisations communicated by cellular or satellite phone and it was not until a week into the crisis that 50 percent were using e-mail systems”. (2009: 459)

3.5.2.4. The Way to Pool Sharing

As research has shown the cooperation of different humanitarian actors – on the executive as well as one the field level - is of utmost importance for proper emergency relief (Kovacs and Spens 2007: 109; Kovacs and Spens 2009: 512). Anyway, as our examples in this subchapter have revealed, the degree of actual cooperation is low. The characteristics of humanitarian logistics and some historical origins may be the case for this. But research also shows a tendency towards management improvement and professionalization which constitute a basis for working together. Lewis, for instance, attaches development NGOs a strong interest “to improve management practices both within their agencies[...]and in the relationships which they pursue with other development actors” (2007: 23). Similar findings come from Mashni et al. who showed strong collaboration intentions of well-known NGOs in their multi-agency reports (2005; quoted in Perry 2007: 415). Manifestations of these intentions were recorded by Appel who reports that there is a trend in the British NGO sector to strategically cooperate with each other respectively with government institutions and companies (2009: 114). Tomasini and Van Wassenhove come to the same conclusion and add supply chain management as best practice to achieve high

performance in humanitarian logistics (2009b: 1). Pooling resources is an important aspect of this supply chain perspective. Also in that sense, research records agency initiatives “to pool resources, prevent operational overlap and boost efficiency” (Fenton 2003: 24). A minor step towards this goal would be, for example, the joint use of UN warehouses by UN organizations, NGOs and other humanitarian actors in Ghana (Kovacs and Spens 2009: 518). A major step in this direction may be ‘transport asset coordinating platforms’ like the United Nations Joint Logistics Centre (UNJLC) (Oloruntoba and Gray 2009: 496), further elaborated in chapter four.

Regarding the handbooks mentioned in the origins section, it can be argued that major institutions like the PAHO and the UNDP now ask for more standardization, a situation that has led to more comprehensive publications like Davis and Lambert’ *Engineering in Emergencies, A Practical Guide for Relief Workers* (2002), and the Office of United States Foreign Disaster Assistance (OFDA/AID)’ *Field Operations Guide for Disaster Assessments and Response* (Beamon and Kotleba 2006a: 189). In addition minimum standards have been developed by Sphere Project and Humanitarian Logistics Association (HLA).

There is a tendency towards management improvement and professionalization which constitutes a basis for working together. Pooling resources is an important aspect of this perspective.

Figure 38: Recent Developments in Humanitarian Logistics

At the beginning we have outlined that the state of humanitarian logistics resemblances the state of commercial logistics in the 1980s. Thus it could be possible that the humanitarian sector will undergo the same changes the private sector has experienced: more cooperation, more outsourcing, and more concentration on core competencies. Whereas the latter two are not addressed by this thesis, cooperation is its heart and further elaborated in the following chapters. The next chapter is about pool sharing, the sharing of capacity in any form like information, personnel, equipment and the like.

4. Pool Sharing

This constitutes an attempt to define pool sharing of civil actors. Thereby it is important to state that with ‘civil’ neither private (business) nor public (government/military) actors are included. It is called ‘attempt’ as basically there is no common definition of it yet.

When we talk about humanitarian actors in the remainder of this thesis always civil actors are meant. The same is valid for pool sharing – only pool sharing of civil actors is addressed in the following chapters.

Figure 39: Limitation on Pool Sharing of Civil Actors

Pool sharing addresses the influence sphere of an organization and belongs to the general term cooperation which delineates a “joint operation or action” (Princeton University 2009)³⁴. Cooperation usually involves the sharing of capacity like information, human resources, inventory space, distribution, and relief goods and equipment. The term pool sharing should fulfil two purposes. On the one side it indicates a form of cooperation where capacity is always shared in some form and on the other side the word ‘pool’ stands for capacity that is available to all members of that pool.

Pool sharing is the capability of pool members to share capacity in any form like information, human resources, inventory space, distribution, and relief goods and equipment.

Figure 40: Definition of Pool Sharing

This should guarantee a distinction to cooperation in general. Whereas actions like joint fundraising or joint training centres for staff belong to cooperation, they do not directly constitute pool sharing. Pool sharing rather provides the fundamental structure on which these activities are based upon. In our case of

³⁴ Another definition would be: “Collaboration is when knowledge is equally shared and the parties are able to align their incentives to produce action.” (Tomasini and Van Wassenhove 2009b: 120) As mentioned before collaboration is a synonym for cooperation.

joint training centres it is the shared capacity of information, personnel and space that constitutes the basis for joint action. Nevertheless, when we speak of pool sharing these activities will always be mentioned as they constitute this concept's outcome. Scrutinising pool sharing from an entrepreneurial perspective it could be seen a process rather than a product innovation.

Pool sharing can be seen as process innovation and is the fundamental structure on which joint activities are based.

Figure 41: Pool Sharing as Process Innovation

Up-to-now this topic is scarcely researched and hence no works exist about a specific type of pool sharing like a relief goods pool or an equipment pool. Consequently there is hardly any information about system specifics, standards or a pool regulator. Similarly this thesis follows an explanatory approach to pool sharing. In 4.1 thoughts about and types of cooperation as well as pool sharing approaches with regard to information, human resources, inventory space, distribution, and relief goods and equipment are presented. In 4.2 practical examples of institutions that apply the pool sharing concept – namely the United Nations Office for the Coordination of Humanitarian Affairs (OCHA), the United Nations Joint Logistics Centre (UNJLC) and the Humanitarian Logistics Association (HLA) - are introduced to the reader. The remaining chapters deal with pool sharing on a very general basis. Subchapter 4.3 deals with the costs and 4.4 with the benefits of pool sharing. The latter are categorised into decrease of costs, decrease of risk, increase of service level, and increase of income. 4.5 names obstacles to pool sharing that fall into categories like donor orientation, competition, organizational culture, and lack of strategic thinking.

4.1. Pool Sharing of Civil Actors

The subchapter deals with thoughts on cooperation and five areas of pool sharing that mirror the types of capacity mentioned above: information, human resources, inventory space, distribution, and relief goods and equipment. Thereby general

thoughts are subdivided into the sections Why do organizations cooperate?, levels of cooperation, and fundamentals of a pool sharing relationship.

4.1.1. Why do Organizations Cooperate?

Cooperation - joint operation or action (Princeton University 2009) – stems out of a certain relationship between actors. Before defining this relationship (section *fundamentals of a pool sharing relationship*) it is opportune to explain the reasons behind cooperation, namely interdependence, supply chain management and donor requirements. Interdependence is a very important issue. It denotes that humanitarian actors are dependent on others with regard to capacity or specialisation. McGuire states with regard to complex emergencies:

“Finally, the scope of many complex political emergencies clearly exceeds the capacity, resources and expertise of any single humanitarian organization. The increasing complexity of humanitarian assistance and developed technologies encourages specialization by humanitarian organizations on certain services. This in turn requires coordination and cooperation with other humanitarian organizations to provide people in need with the whole range of required goods and services.” (2006: 27)

Capacity problems have their origins in the ever-increasing number of crises. At the end of September 2009, for instance, three large natural disasters occurred in South East Asia within a couple of days³⁵. Thomas and Kopczak state:

“Two main external factors impinge on the growth and operations of international humanitarian relief organizations. First, the number of disasters and the number of simultaneous operations around the world are increasing, stretching the existing resources of the humanitarian community. It is clear that the sector as a whole has to find ways to become more efficient in order to be able to respond to the needs of ever-increasing numbers of people.” (2005: 4)

The World Food Programme (WFP), for example, delegates distribution often to other UN organizations, NGOs or government institutions (Mayr 2006: 38). The other factor that creates interdependence is specialisation. Due to their origins

³⁵ A typhoon hit the Philippines, a tsunami the island of Samoa and an earthquake hit Indonesia (Sumatra)

humanitarian actors are usually specialised in “different types of disasters, relief phases, or items they deliver” (Kovacs and Spens 2009: 519). The WFP, for instance, is specialized in providing nutrition, whereas Medicines Sans Frontières have their core competence in providing basic healthcare services and goods. Similarly within the International Federation of Red Cross and Red Crescent Societies (IFRC) there are member societies specialised in specific areas. The Austrian Red Cross, for example, in international disaster relief regularly deals with water & sanitation, telecommunications and search & rescue (Lipok 2007: 47). Within the IFRC these special tasks are standardised and thus a Finnish field hospital fits with an Austrian drinking water purification station (Österreichisches Rotes Kreuz 2005; quoted in Lipok 2007: 54). These specialisations may lead to a situation of ‘sequential interdependence’ in which one agency’s capacity to fulfil its assigned mission depends on another agency’s execution of a prior mission (Drabek 1986: 178; quoted in Auf der Heide 1989: 123).

The next influence factor of humanitarian cooperation is supply chain management. As already mentioned in 3.5.1 *General structure of humanitarian logistics*, today’s state of humanitarian logistics shows parallels with the one of commercial logistics 20 years ago. Parker states:

“Increasingly a world with fewer boundaries calls for organizations able to transcend vertical and horizontal boundaries and create hybrids that are both cost effective and responsible to local, regional, domestic, international and global communities of interest.” (Parker 1998: x; quoted in Lewis 2007: 132)

These fewer boundaries combined with a higher number of crises and NGOs “have highlighted the need for NGOs to coordinate more effectively with each other” (Lewis 2007: 183). The supply chain perspective is likely to get momentum in present times. Managers of humanitarian organizations thereby study authors like Bowersox, Closs and Cooper who state:

“Supply chain management consists of firms collaborating to leverage strategic positioning and to improve operating efficiency. For each firm involved, the supply chain relationship reflects a strategic choice.” (2007: 4)

The supply chain perspective increases the pressure on aid agencies to cooperate. Oxfam’s former head of logistics, Donald Chaikin, states:

“Even in unexpected emergencies, Oxfam can activate charter flights within 24 hours and get emergency equipment from its warehouse near Oxford to any location within 2-3 days. If necessary, however, could agencies make use of the prepositioning units of WFP, IFRC and World Vision, for example?” (2003: 10)

Chaikin describes the fundamental idea behind cooperation in a supply chain sense: You can share investment costs and operating costs, thus decrease the cost of each NGO while enhancing the response’s service level. This new paradigm also has influenced the third influence factor, donor requirements. Several supply chain studies³⁶ have convinced donors of encouraging aid agencies to cooperate.

Thomas and Kopczak report:

“Further, donors are becoming less tolerant of obvious and expensive duplication of effort and are strongly encouraging aid agencies to collaborate around the creation of common services. As a consequence, aid agencies have become more aware of the need to strategically use their resources.” (2005: 4)

The importance of donor requirements is further shown in chapter five, *Conclusion and outlook*.

Cooperation is triggered by interdependence, supply chain management and donor requirements.
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Figure 42: Triggers of Cooperation

³⁶ Tomasini and Van Wassenhove, for example, report that in disaster relief “significant amounts of time and resources (sometimes up to 95%) are wasted waiting for goods to arrive on the scene (at customs, in warehouses, etc.)” (2009b: 49).

4.1.2. Levels of Cooperation

The now presented classification scheme was created by Koch and helps us to understand which benefits organizations address with cooperation. Koch defined three levels of cooperation (2009: 130):

- Level 1 cooperation is characterised by high selective benefits for individual NGOs, but not for the target group (end beneficiaries). A classic example of this level would be cooperation that aims at the funding supply constraint like joint fundraising via websites, joint project proposals or joint appeal for funding by mechanisms like the United Nations Central Emergency Response Fund (CERF). Another example would be joint bargaining respectively purchasing where negotiations/orders are conducted for several humanitarian actors from a common body.
- Level 2 cooperation stands for general benefits for both individual NGOs and the target group. It usually aims at operational quality like joint training centres for staff or a mutual quality control system. Koch describes an example where “organizations that provide training to individuals may lose them to other organizations, but quality rises among all the organizations as a group, not just for their own” (2009: 130)³⁷.
- Level 3 cooperation delineates high benefits for the target group, but not for the individual NGOs. Activities like the coordination of regional and thematic priorities fall into this level. Following Koch “these types of activities are good for the target group because the overlap between organizations is reduced and resources are more equitably distributed” (2009: 130).

³⁷ Following Koch and Van der Laan a vast majority (90%) of 47 questioned NGOs “claim to benefit from personnel that previously worked for another NGO and now work for them” (2007: 8). Consequently it is likely that the dynamics of joint training would reinforce cooperation as processes are enhanced by the capabilities of more than one single organization. Nevertheless, only 19% of Koch and Van der Laans’ sample conducted joint training (2007: 8).

In his work *Where Do You Get Your Orphans? The Clustering of NGOs in the Arusha Region, Tanzania* Van Laan conducted a survey of 47 structured interviews with local NGOs in the Arusha region of Tanzania. Thereby 69% of respondents state to cooperate on level 1, 57% on level 2 and only 9% on level 3 (2007: 39). These facts and the levels of cooperation in general will be reviewed in 4.5.2 *Competition*. As we will see the degree of agency concentration in a specific area constitutes an important influence factor.

4.1.3. Fundamentals of a Pool Sharing Relationship

Following the author of this thesis pool sharing is characterised by the sharing of risk, the free exchange of information and process integration. Thereby these characteristics are obtained from literature on partnerships. Lewis, for instance, defines risk sharing and free information exchange between cooperating partners as prerequisites for efficiency, innovation and creativity as well as for learning within the partnership (2007: 185-186). In addition Pettit and Beresford - who state continuous improvement and collaboration as a critical success factor of the humanitarian aid supply chain - define successful cooperation to be characterised by “a vested interest in sharing benefits and costs through process integration” (2009: 461-462). Process integration is at the heart of a pool sharing relationship as capacity is shared. In the ideal case organization A - which has more inventory capacity than needed, but that lacks air assets - and organization B - which has more air assets than needed, but is in need of inventory capacity - come together to create a pool. Hence pool partner A is able to use air assets from B and B is able to use inventory capacity from A. The pool sharing agreement thereby has to include the number and characteristics of resources as well as the processes by which resources are transferred from resource-owning partners to resource-inquiring partners. Herborg, for instance, who elaborated similar thoughts for crisis management (2001: 27), names heuristics like shortest path algorithms as resource allocation procedure (2001: 96).

In addition a pool sharing relationship can be temporary – e.g. the first 3-9 months after a crisis occurs – or stable. Today’s pool sharing relationships like the OCHA’s Humanitarian Information Centres (HIC) and the UNJLC are rather temporary. Others – like the Humanitarian Logistics Association – have a longer time horizon. All these examples are further elaborated in the next subchapter.

Pool sharing is characterised by the sharing of risk, the free exchange of information, and process integration.

Figure 43: Fundamentals of a Pool Sharing Relationship

Based on these fundamental requirements – sharing of risk, free exchange of information and process integration – pool sharing relationships are characterised by a part-standardized organizational structure. This thought is obtained from Auf der Heide’s *Disaster Response, Principles of Preparation and Coordination* which deals with the needs of public disaster relief. It is thus analogously seen as essential for pool sharing by the author of this thesis. Following Auf der Heide “the organizational structure must be adaptable to a wide variety of emergencies (i.e., fire, flood, earthquake, rescue)” but simultaneously “must have basic common elements in organization, terminology³⁸, and procedures³⁹” (1989: 137). Eventually it is opportune to secure a pool sharing relationship with memoranda of understanding (MoU) or legally-binding documents.

4.1.4. Information

This section deals with the sharing of information. Basically it would be correct to distinguish between data, information and knowledge. Data is a symbol or fact without comment or relational connection (‘It snows’). Information is edited data – it has a relational connection and thus meaning like ‘The temperature dropped

³⁸ An example of standardized terminology constitutes colour-coding for relief goods like red for nutrition and blue for clothing (Murray 2005; quoted in Kovacs and Spens 2007: 103).

³⁹ Like standard deployment procedures in human resource sharing (Scott-Bowden 2003: 18).

under zero degrees and it started to snow’ (Ackoff 1989; quoted in Bellinger, Castro and Mills 2004). And information becomes knowledge “when know-how and staff expertise have been used to interpret it and make decisions” (Tomasini and Van Wassenhove 2009b: 120). Hence knowledge is the meaningful collection of information (Ackoff 1989; quoted in Bellinger, Castro, and Mills 2004). In our example it would be ‘In the mountains due to cold temperatures precipitation occurs in the form of snow’ (Birkeland and Mock 1996).

<i>Type</i>	Data	Information	Knowledge
<i>Definition</i>	Fact without relational connection	Fact with relational connection	Meaningful collection of information
<i>Example</i>	‘It snows’	‘The temperature dropped under zero degrees and it started to snow’	‘In the mountains due to cold temperatures precipitation occurs in the form of snow’

Figure 44: Data, Information and Knowledge (based on Bellinger, Castro, and Mills 2004)

However, data, information, and knowledge are subsumed under the term information as many authors do not distinguish between them.

Pool sharing of information is the pool partners’ sharing of data, information and knowledge. Due to conceptual differences of researchers these types of facts are subsumed under the term information.

Figure 45: Pool Sharing of Information

The sharing of information is essential due to the importance of information and its network effect. The importance of information is postulated by a lot of researchers in the (humanitarian-) field. Tomasini and Van Wassenhove – active

in humanitarian logistics research - state that “information is the foundation upon which the humanitarian supply chain is designed, formed, and managed” (2009b: 90). Wood et al. – active in commercial logistics research - call the management of information “the single greatest determinant of success” during a crisis operation (2002: 394). Similarly argues King with regard to disaster management. The researcher argues that the effectiveness of an emergency response depends on the velocity with which critical information is elaborated and distributed by humanitarian actors (King 2005; quoted in Perry 2007: 412).

The second trigger of information sharing is its network effect. It is common sense that coordination and cooperation respectively the prevention of duplication of effort rely “on information sharing, knowing who will be involved in the disaster response, in what capacity (lead agency, implementing partner, inter-agency coordinator, etc.)” (Tomasini and Van Wassenhove 2009b: 49). The same researchers state that “sharing data is difficult and yet essential” (2009b: 105). The reasons for these statements address the network effect of information sharing. Similar to the division of labour the sharing of information provides a surplus value. Tomasini and Van Wassenhove report:

“Knowledge is created not only within the organization, but also between organizations as they interact in the field. In fact, the maximum value of knowledge is produced only when it is captured and shared among the different stakeholders.” (2009b: 115)

The sharing of information is essential due to the importance of information and its network effect.
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Figure 46: Triggers of Information Sharing

The management discipline that addresses the sharing of information is called information management and ought to reduce a supply chain’s uncertainty and thus complexity (Tomasini and Van Wassenhove 2009a: 556). Feldbrügge lists:

“Information management includes the collection and assessment or interpretation of information, decision-making and the dissemination of decisions.[...]The basic role of information in emergency relief management is[...]problem identification, prioritisation and allocation of relief aid.” (2001: 64)

In praxis information systems collect data, information, and knowledge with regard to - inter alia - country disaster profile, national policies, objectives and standards, government disaster structures, other relief organizations, disaster-area base-line data (e.g. local food habits, climatic conditions), material and human resources to be mobilised in-country, and logistics systems and facilities (Feldbrügge 2001: 171-172). The pool sharing principle adds a surplus to this information as pool partner 1 profits from information of pool partner 2 and vice versa. Basically it can be said that the following approaches to pool sharing start where pool sharing of information ends. The latter being a prerequisite for the former, cooperation enters a new stage.

4.1.5. Human Resources

Manifestations of this approach are common projects where persons from different agencies come together in order to work on a specific topic, or even the sharing of persons in the sense of an agency for temporary work. Whereas the former type is about working together on a joint project, the latter is about sharing human resources exclusively for an organization’s own purposes. In praxis the former type – persons coming together from different actors to work on common projects – is the rule. Mashni et al. – for example – postulate multi-agency human resources solutions that comprise cooperating “centers of expertise” made up of logistics experts (2005: xii; quoted in Perry 2007: 413). An example of the latter would be the World Food Programme (WFP). To augment its logistics performance it uses stand-by partners like governmental entities, NGOs or private donors that contribute with cadres of specialists to

logistical operations (Scott-Bowden 2003: 18)⁴⁰. The IFRC runs a similar approach with its Field Assessment and Coordination Teams (FACT):

“In order to build and maintain a core pool of about 200 experts from which FACT staff can be drawn, IFRC conducts FACT training sessions around the world. These sessions aim to impart a consistent methodology and build team spirit and a common pool of expertise. The training programmes are supported by on-the-job training.” (Chomilier, Samii and Van Wassenhove 2003: 16)

Several organizations profit from a single person’s efforts.
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Figure 47: Main Benefit of Pool Sharing of Human Resources

The outcome of pool sharing in human resources can be manifold. An inter-agency working group of players like the UN Office for the Coordination of Humanitarian Affairs (OCHA) and the UN High Commissioner for Refugees (UNHCR) created a camp management toolkit that incorporates a holistic approach to camp management and is more than just minimum standards (Birkeland 2003: 54). A possible project would be the joint generation of a transport module in order to enhance standardization and lower costs of handling respectively gaining economies of scale. Another would be the joint branding of relief goods or the elaboration of a manual that specifies how different means of distribution are optimally used. For distribution by air, for instance, this register would include specifications and ‘how-to-pile-up-the-plane’ instructions for many types of aircraft. The participating organizations could reduce the time spent on the loading procedure and thus save costs respectively enhance service level.

4.1.6. Inventory Space

Pool sharing of inventory has already been introduced in *fundamentals of a pool sharing relationship*. It is about sharing storage volume where relief goods and

⁴⁰ Examples of these partners would be the Swiss Foundation for Mine Action – with whom WFP worked together in Iraq - and CARE Canada – which in Afghanistan kept mountainous supply routes free of avalanches (Scott-Bowden 2003: 18).

equipment can be stored. Either organizations provide it to other agencies in exchange of another form of capacity like distribution or pool partners set up an inventory centre together and thus share investment- and operating costs. Regarding the former type of inventory pool sharing Bock recommends an online platform that allocates free space to other humanitarian actors in a fast and efficient way (2006: 57). Whereas this is still unrealized, joint inventory centres are already established. The UN Humanitarian Response Depot (UNHRD) in Southern Italy, for instance, is commonly operated by the UN, the Italian government and diverse partner agencies⁴¹ (Mayr 2006: 54). Eventually both types of pool sharing reduce costs (e.g. due to simplified customs procedures) and make global pre-positioning⁴² – important with regard to an agency’s emergency response time – more reasonable.

4.1.7. Distribution

Pool sharing of distribution has already been mentioned in *fundamentals of a pool sharing relationship*. It is about sharing distribution capacity in the form of free volume in aircrafts, trucks, ships, trains, cars, and the like. With the help of this approach excess capacity can be avoided and thus costs reduced respectively end beneficiaries faster served. Analogous to the former section it would be opportune to set up an information system that works like a distribution capacity exchange. Following Bock all major national and international NGOs should be part of this exchange that works with resource providers - that state specifics of the means of distribution in question like dimensions and suitability – and resource enquirers – whose demand is based on specific needs like preservation of the cold chain (Bock 2006: 59).

⁴¹ In this case also a public actor – the Italian government - forms part of the enterprise. Its actor with general responsibility is the WFP (Mayr 2006: 54). The mentioned partner agencies include international NGOs like Cooperazione Italiana, WVI (World Vision International), Intersos, the IFRC, and Oxfam as well as diverse national NGOs (Mayr 2006: 54-55)

⁴² “Global pre-positioning is a relatively new approach, and currently only a few NGOs can support the large expense of operating a warehouse that serves the international community.” (Beamon and Kotleba 2006b: 4)

4.1.8. Relief Goods and Equipment

Eventually also relief goods and general equipment can be shared. Relief goods include a wide variety of products like medicines, shelter materials, nutrition and the like. General equipment refers to things like special tools that are necessary to set up a camp or repair a generator. The WFP again uses this approach with its standby partners that deploy service packages which - inter alia - comprise relief goods and equipment (Scott-Bowden 2003: 18).

All these pool sharing approaches are accompanied by the extensive development and use of information technology. Thereby it is self-evident that investment costs are likely to be shared by pool partners. Eventually it is important to mention that the pool sharing concept deals per definition with the critical success factors of Pettit and Beresford. These researchers defined strategic planning, inventory management, transport and capacity planning, information management and technology utilisation, human resource management, continuous improvement and collaboration and supply chain strategy as essential for a well-conducted emergency operation (2009: 454). All these critical success factors are tackled by pool sharing.

4.2. Status Quo – Types of Relationships and Practical Examples

This subchapter presents an insight into pool sharing praxis. After an introduction OCHA, the UN Office for the Coordination of Humanitarian Affairs (4.2.1), UNJLC, the United Nations Joint Logistics Centre (4.2.2), and the HLA – the Humanitarian Logistics Association (HLA) (4.2.3) are introduced to the reader. Before switching to these organizations the author would like to illustrate the basic context of pool sharing initiatives. As already mentioned in 4.1 (section *fundamentals of a pool sharing relationship*) pool sharing is characterised by the sharing of risk, free exchange of information, and process integration. As there is neither a specified definition of pool sharing nor a defined framework of its characteristics, the author has applied thoughts of business partnership literature

as well as his own thoughts on pool sharing in order to close this gap. Pool Sharing is defined by the author as being a partnership – a specific form of relationship within a supply chain. Thereby the degree of cooperation with regard to activities, time horizon, and scope of activities can be very diverse. Activities range from longer-term contracts to the exchange of information and even to joint planning and supply chain integration (Harrison and Van Hoek 2002: 226). The time horizon can be short- or long-term. The scope of activities includes a single functional area, multiple functional areas and even the whole functional spectrum of the member firms (Harrison and Van Hoek 2002: 226). Regarding the establishment of a partnership it is essential to first “determine where the most appropriate point along this path is for your relationship with another company” (Harrison and Van Hoek 2002: 235). In addition it is important for humanitarian actors to make this decision at headquarters in order to be free of bias and the short-term perspective commonly applied in ongoing emergency responses.

4.2.1. UN Office for the Coordination of Humanitarian Affairs (OCHA)

In this subchapter, structure, tasks and services, as well as a country mission (Central African Republic) of the UN Office for the Coordination of Humanitarian Affairs are presented. The OCHA is based in Geneva and has the mission to coordinate humanitarian relief provided by a high number of actors.

4.2.1.1. Structure

The OCHA has its headquarters in Geneva, Switzerland, and employs an estimated 860 people in New York, Geneva, and in the field (Tomasini and Van Wassenhove 2009b: 68). In 2006 its budget was US\$ 128 million – thereby the regular UN budget accounted for 10 per cent and extra-budgetary sources like member states and donor institutions for the remaining 90 per cent of the volume (Tomasini and Van Wassenhove 2009b: 68). OCHA “carries out its coordination function primarily through the IASC, which is chaired by the ERC” (Tomasini

and Van Wassenhove 2009b: 68). IASC stands for Inter-Agency Standing Committee and constitutes a 1992-founded coordination body comprised of actors like UN agencies, the Red Cross Movement, the International Organization for Migration (IOM) and three international NGO consortia (Lipok 2007: 33). ERC is the abbreviation of the Emergency Relief Coordinator who heads both the IASC and the OCHA and who reports directly to the secretary general (OCHA 2009c). Consequently both bodies share a common secretariat and the activities of the Office for the Coordination of Humanitarian Affairs are triggered by the IASC working group which holds four regular meetings a year (Lipok 2007: 33). The head of an OCHA country mission is the Humanitarian Coordinator who is the most senior UN official in a country affected by a humanitarian crisis and who is instated by the ERC (OCHA 2009c).

4.2.1.2. Tasks and Services

The main task of OCHA is to coordinate humanitarian relief provided by a high number of actors. The two main fundamentals that enable this position are the “political support and the recognition of the UN system” (Tomasini and Van Wassenhove 2009b: 66) as well as the fact that the Humanitarian Coordinator is – per definition – the most senior UN official in an affected country or region. OCHA approaches its objectives by different means. Regarding large scale emergencies it works via its Humanitarian Information Centres (HIC). These institutions spread information like detailed country maps or NGO contact details to all relief-providing actors in order to coordinate regional and thematic priorities of aid (Perry 2007: 421). Thereby the time horizon of the specific HIC can be short-term (up to nine months) or long-term (up to three years). The former is likely when the specific Humanitarian Information Centre deals with sudden-onset emergencies like natural disasters. That was the case in Pakistan (earthquake), Sri Lanka (tsunami), Indonesia (tsunami) and Myanmar (cyclone) (OCHA 2009a). Long-term endeavours – on the other side – usually occur in slow-onset crises like complex emergencies. These were recorded in Iraq (war), Liberia (civil war) and Sudan (civil war) (OCHA 2009a).

OCHA is deployed by the Inter-Agency Standing Committee (IASC) and coordinates relief provided by a high number of actors. In large scale emergencies it works via its Humanitarian Information Centres (HIC). These institutions spread information like country maps or NGO contact details to all relief-providing actors in order to coordinate regional/thematic priorities of aid.

Figure 48: UN Office for the Coordination of Humanitarian Affairs (OCHA): Structure, Tasks and Services

Besides Humanitarian Information Centres OCHA also triggers respectively operates programs that last for an indefinite time. It, for instance, triggered in 2002 the Afghanistan Information Management Service (AIMS) whose main objective is the building of government information management capacity and that is now primarily operated by other actors like the Afghan government⁴³.

A second example of projects that have a long-lasting effect is the Inter Agency Working Group (IAWG) for Central and East Africa. The regional OCHA in 2002 set up this project which today has more than thirty members including UN agencies, the world's largest NGOs and other international organizations⁴⁴ (OCHA 2009b). Its goals comprise regional coordination and information exchange, increased understanding of the partner organizations' roles and capacity and the sharing of technical information and best practices (OCHA 2009b). To achieve this aim the IAWG works in specialized groups, namely Logistics, Training, Information Management & Technology, and Emergency Preparedness & Response, that are steered by the so-called Core Group (OCHA 2009b). The objectives of the Logistics sub-group that holds meetings on a (bi-) monthly basis include pool sharing of information, human resources, distribution, and relief goods and equipment (OCHA 2009b). Following OCHA the participation of the world's largest humanitarian actors "offers the opportunity to

⁴³ Inter alia the European Commission (EC), The Asia Foundation (TAF), the United States Aid Agency for International Development (USAID) and UN agencies like the United Nations Development Programme (UNDP), the United Nations Assistance Mission in Afghanistan (UNAMA) and the Food and Agriculture Organization (FAO) (OCHA 2009a).

⁴⁴ With the military, for example, OCHA cooperates via the Civil-Military Coordination Section (CMCS) located at the OCHA headquarters in Geneva (OCHA 2008).

connect the regional logistics network to emerging global trends in areas such as fleet management and supply chain management” (2009b).

Another tool of OCHA is the Inter Agency Working Group (IAWG) for Central and East Africa. This project works in specialized groups like Logistics or Information Management/Technology. These groups conduct pool sharing of information, distribution, relief goods and equipment, and human resources.

Figure 49: OCHA’s Inter Agency Working Group (IAWG) for Central and East Africa

4.2.1.3. OCHA Central African Republic

A more recent single-country mission of the OCHA has taken place in the Central African Republic (CAR). Silvia Hidalgo of Development Assistance Research Associates (DARA), a Madrid-based NGO, reports the situation within the CAR as of September 2008:

“There is, in fact, a perpetual state of insecurity, as law and order in the north has collapsed. Gangs of bandits in the north-west, known as *zaraguinas*, spread terror, cause massive displacement (approximately 100,000 people) and kidnap both children and adults for ransom. According to different sources, the bandits come mainly from Chad and, to a lesser extent, Niger. Ethnic rivalry, previously insignificant, is a new element in the conflict which has arisen from political misrule along ethnic lines. The latest ceasefire was signed on 9 May 2008. But it is still too early to know whether the truce will lead to peace and improve people’s living conditions.” (2008: 142)

As mentioned above the crisis in the Central African Republic is about approximately 100,000 displaced people. This situation - existent since 2003 - has its roots in political instability and has even aggravated as in 2006 the number of affected persons was ‘only’ 50,000 (IRIN 2006). In this special case the displaced “are not accommodated in camps, but are scattered throughout the north and are difficult to find and reach” – a situation that makes “effective, timely, and appropriate humanitarian relief” very challenging (Hidalgo 2008: 143-144).

To make things worse the emergency response was hindered by funding difficulties - only Medicines Sans Frontières and the International Committee of the Red Cross provided large-scale relief before 2006 (Hidalgo 2008: 143-144). With regard to per-capita-spending the CAR was a donor orphan (Koch 2009: 67). Then, in 2006, the UN started to show more presence and set up an office of OCHA as well as appointed a Humanitarian Coordinator (Hidalgo 2008: 145).

The main functions of OCHA have been fundraising and coordination. Important in the former matter are diverse funding mechanisms of the UN system like the Central Emergency Response Fund (CERF) located at OCHA⁴⁵. Within a year the OCHA's Financial Tracking System registered a 214 per cent rise of total humanitarian aid – from US\$ 25.8 million in 2006 to US\$ 81.1 million in 2007⁴⁶ (Hidalgo 2008: 144). The major share of these funds has been channelled through NGOs that generally still do the majority of 'front-line' crisis relief (Hidalgo 2008: 145). With regard to coordination OCHA largely fulfilled its role as coordinator within the Humanitarian and Development Partnership Team (HDPT) that was established and has been managed by this UN institution. Hidalgo states:

“The array of challenges facing humanitarian actors in CAR has meant that the response is in many ways unique. There is close collaboration among aid implementing agencies and many instances of good practice. Ensuring partnerships between UN agencies and NGOs requires constant effort, sustained by the work of both OCHA and the Humanitarian Coordinator. The Humanitarian and Development Partnership Team (HDPT), managed by OCHA, brings together all humanitarian and development organizations as a new form of the Inter-Agency Standing Committee (IASC) country working group.” (2008: 146)

⁴⁵ CERF is a funding mechanism that pre-positions monetary sources for humanitarian activities and channels these funds – if required – through UN organizations like the United Nations Children Fund (UNICEF), the United Nations High Commissioner for Refugees (UNHCR), the World Food Programme (WFP) and the World Health Organization (WHO) (CERF 2009b). In 2008 CERF gave grants of nearly US\$ 300.5 million to 53 countries and more than US\$ 128.3 million to so-called underfunded emergencies in 20 countries. Altogether it has contributed to more than 400 humanitarian projects in 2008 (CERF 2009a).

⁴⁶ The main providers of funds were the United States (US\$ 18.4 million), the European Commission Humanitarian Office (US\$ 10.4 million), the UN Central Emergency Response Fund (US\$ 7 million), Sweden (US\$ 6.8 million), and Ireland (US\$ 5.5 million) (Hidalgo 2008: 144).

This Humanitarian and Development Partnership Team (HDPT) – led by the Humanitarian Coordinator – set up the Coordinated Aid Programme (CAP) for the Central African Republic whose features comprise a joint appeal mechanism and a joint tool to “plan, implement, coordinate, and monitor HPDT activities” (Hidalgo 2008: 146). Similarly argues Lanzer – the Humanitarian Coordinator in the CAR – who states that the CAP “is a tool that helps aid agencies work together to analyse the political context and its humanitarian consequences, agree about the priority needs of the population, draw up a plan to meet them, and advocate for funding” (2008: 106). Regarding the initiatives described above the Humanitarian Coordinator also delivered more transparency of and accessibility to information than had existed before:

“Accessible information is needed if people are to become aware of a situation. Before arriving in CAR, I was surprised at how difficult it was to obtain information about the country in any language other than French.[...]Accordingly, one of my top priorities upon arrival in Bangui was[...]to get the word out, in English. By January 2007, a weekly newsletter was being issued, a blog and web site were up and running, an intranet was established so that humanitarian and development practitioners could exchange and classify information by region or sector, and Google Earth was used to map key issues. These Web-based tools made information instantly available to potential users inside and outside CAR.” (Lanzer 2008: 107)

OCHA’s main functions in the Central African Republic have been fundraising and coordination. Coordination has been achieved with the OCHA-triggered Humanitarian and Development Partnership Team (HDPT). Within this body UN agencies and NGOs coordinate their actions and cooperate in needs assessment, joint standards and the like.

Figure 50: OCHA Central African Republic: Tasks and Services

Within the HDPT a cluster system⁴⁷ was installed. Thereby “an agency is designated as the lead for a specific sector, with the presumed aim of improving

⁴⁷ In September 2005 the Inter-Agency Standing Committee (IASC) – the primary UN mechanism for coordination of UN- and Non-UN-humanitarian actors – endorsed the Cluster Approach that features nine clusters that represent major tasks in humanitarian work. Each cluster comprises many aid actors as well as an UN-specified lead agency (GLC 2009).

quality and accountability for programming in that sector” (Solé-Arqués 2008: 155). The CAR cluster system – in charge since August 2007 - included sectors like protection, water and sanitation, food security, and logistics (Hidalgo 2008: 143; Lanzer 2008: 110). Thereby the performance of clusters has varied – especially food security and logistics have achieved outstanding results. Due to a seriously cooperative approach of UN agencies and NGOs both clusters showed “a sense of ownership and added value” (Lanzer 2008: 110). Generally OCHA has managed it to create an ‘atmosphere’ where pool sharing of information and human resources is conducted by the main relief providers in the Central African Republic.

Altogether the UN Office for the Coordination of Humanitarian Affairs (OCHA) has managed it to trigger pool sharing. However, as logistics – only one sector of OCHA’s cluster approach – accounts for approximately 80 per cent of the costs associated with emergency response (Trunick 2005: 8), the UN decided to set up “a specialised form of inter-agency coordination mechanism to deal exclusively with logistics issues in increasingly complex operational environments” (Kaatrud, Samii and Van Wassenhove 2003: 11) – the United Nations Joint Logistics Centre (UNJLC) which is presented in the following subchapter.

4.2.2. United Nations Joint Logistics Centre (UNJLC)

In this subchapter, structure, tasks and services, as well as a country mission (Afghanistan) of the United Nations Joint Logistics Centre are presented. The UNJLC is an inter-agency platform whose mission it is to coordinate the logistics capabilities of cooperating humanitarian agencies during large-scale emergencies (Van Wassenhove 2005: 484).

Since the beginning of 2009 the United Nations Joint Logistics Centre's operational integration into the structures of the United Nations Logistics Cluster⁴⁸ has begun. With the completion of this endeavour the UNJLC will be re-named Global Logistics Cluster. As this mainly constitutes a re-labelling with only minor organizational changes, and in order to honour source validity – by November 2009 virtually 100 per cent of researched field missions ran under the UNJLC name - we will further use the term United Nations Joint Logistics Centre. Future primary literature, however, will use the term Global Logistics Cluster.

Figure 51: UN Joint Logistics Centre or Global Logistics Cluster?

4.2.2.1. Structure

The UNJLC has its headquarters in Rome and is an inter-agency platform for logistics coordination in crises. Thus it is an UN common service that “seeks the widest possible participation among all humanitarian logistics actors (UN and NGO alike)” (GLC 2009).

The United Nations Joint Logistics Centre is rooted in the relief efforts in the 1996 Eastern Zaire crisis which - in order to give shelter to 1.1 million refugees in the area (Buckley 1996) – made necessary the urgent, but complex coordination and pooling of aircrafts among diverse UN agencies (Kaatrud, Samii and Van Wassenhove 2003: 11). The discussions that followed resulted in the March 2001 endorsement (Tomasini and Van Wassenhove 2005: 13) and the March 2002 institutionalization of the United Nations Joint Logistics Centre by the Inter-Agency Standing Committee Working Group (IASC-WG) – the project development framework of the most senior UN inter-agency coordination body⁴⁹ (Van Wassenhove 2005: 484).

⁴⁸ In September 2005 the Inter-Agency Standing Committee (IASC) endorsed the Cluster Approach. Regarding the logistics cluster World Food Programme (WFP) is the lead agency (GLC 2009).

⁴⁹ “The IASC-WG is composed of the directors of the Emergency Programs of the IASC agencies or their equivalent counterparts. It is a unique forum involving the key UN and non-UN humanitarian partners.” (Tomasini and Van Wassenhove 2009b: 69)

Itself being no agency, the UNJLC is dependent on “a high level of voluntary cooperation from the participating agencies in terms of staff (secondments) and information sharing” (Kaatrud, Samii and Van Wassenhove 2003: 13). The platform is currently staffed from UN agencies like WFP, UNICEF, UNHCR and IOM as well as private business and NGOs (UNJLC 2009). Generally the “UNJLC presence is designed to be light and flexible, with organizational structures kept to the minimum” (GLC 2009). Thereby every organization maintains its logistics system as Kaatrud, Samii and Van Wassenhove state:

“The UNJLC approach underlines the need to preserve and respect each and every agency’s logistics system. By viewing the humanitarian effort as a ‘modular’ system, it seeks to enhance and strengthen individual logistics systems, develop synergies across agencies and improve efficiency for the humanitarian community as a whole.” (2003: 11)

The leading agency of the UNJLC is the World Food Programme - the UNJLC is “under its custodianship for legal, finance and administration matters” (GLC 2009). This is due to the fact that the WFP is the leading logistics organization of the UN’s cluster system (GLC 2009). Its logistical capability – always disposable – includes 30 vessels, 70 aircraft, and 5,000 trucks (WFP 2009). The World Food Programme’s budget consists exclusively of voluntary donations and in 2008 the agency managed to raise US\$ 5 billion in funds (WFP 2009). WFP’s field officers exclusively conduct activities in the target country, whereas the headquarters in Rome are responsible for worldwide logistical coordination (Mayr 2006: 36).

The United Nations Joint Logistics Centre (UNJLC) is staffed from UN agencies like WFP, UNICEF, UNHCR and IOM as well as private business and NGOs. Thereby every organization maintains its logistics system. The leading agency of the UNJLC is the World Food Programme (WFP).

Figure 52: UNJLC Structure

The activation of the UNJLC is done through the IASC which acts upon request from the Humanitarian Coordinator (OCHA country head) and the United Nations Country Team (UNCT) (GLC 2009). Tomasini and Van Wassenhove:

“A decision to activate the UNJLC is made within 24 hours on the basis of the scale of the crisis, existing agency capabilities, the extent of bottlenecks, possible use of MCDA (Military/Civil Defense Assets), and situation assessments by the UNJLC Unit.” (2009: 69)

Following activation, deployment will be initiated within 48 hours – this process includes briefing of the agencies and authorities concerned and the recruitment of UNJLC staff (GLC 2009). Following specific tasks and services (4.2.1.2) are conducted at headquarters as well as in the field⁵⁰ as long as they are demanded by the most senior UN representative of the area. UNJLC’s operations are – however – usually short-term:

“UNJLC’s operations are envisaged as a temporary bolster during the response phase of an emergency. After this initial relief phase, humanitarian activities will focus on rehabilitation and/or re-settlement. Hence, no UNJLC is activated without a clearly defined exit strategy.” (GLC 2009)

UNJLC’s activities take place in the immediate period of time after a crisis’ outbreak⁵¹. Within the crisis lifecycle it does not deal with the aftermath, the so-called reconstruction or rehabilitation phase. Accordingly - within the coordination framework of Donini (see 3.3.4 *Crisis Lifecycle*) - the UNJLC falls into the categories coordination by command⁵² (centralized) and coordination by consensus (joint). Since its formal founding in 2002 the United Nations Joint Logistics Centre has been active in large-scale emergency responses in Afghanistan, Iraq, Liberia, Sudan, Indian Ocean Tsunami Response, Pakistan

50 “To best fulfil its coordination mandate, the UNJLC sets up a host of temporary satellite offices around a regional coordination office established for the duration of the emergency.” (Kaarud, Samii and Van Wassenhove 2003: 11)

51 The UNJLC operation triggered by the Indian Ocean Tsunami in 2004 – for instance - started on 30 December 2004 and predominantly lasted until the end of September 2005 (Elzinga and Folmer 2005: 3-8).

52 Coordination by command is – e.g. – used in negotiating agreements with governments (landing rights, transport corridors, visas, customs clearance) and usually occurs in the initial stages of an emergency response (Tomasini and Van Wassenhove 2009b: 81).

Earthquake Response, Lebanon and in the Democratic Republic of Congo (GLC 2009). In addition it has contributed relief to minor humanitarian crises – namely floods - in Mozambique, Pakistan, Uganda and Bangladesh (GLC 2009).

4.2.2.2. Tasks and Services

Management in crisis relief is very challenging due to the amount of information that must be processed and its ever changing status. No single organization is capable of constantly monitoring all relevant facts about issues like “infrastructure, accessibility, availability and prices” (Kaatrud, Samii and Van Wassenhove 2003: 12). And even if an agency would have this information – e.g. of logistical bottlenecks caused by activities of neighbouring states, recipient governments, military forces or private logistics providers that are in control of assets like warehouses or fuel depots – individual organizations “usually do not have the resources to engage in simultaneous negotiations in multiple locations with different actors” (Kaatrud, Samii and Van Wassenhove 2003: 12-13). But only then – with proper information processing- and bargaining capabilities - agencies can “optimise their activities in terms of response, cost and stock pre-positioning[...]and help avoid wasteful competition among and duplication within humanitarian organisations” (Kaatrud, Samii and Van Wassenhove 2003: 12). In order to enable this situation the United Nations Joint Logistics Centre’s mandate is to make multi-agency logistics as effective and efficient as possible.

The UNJLC provides information processing- and bargaining capabilities in order to optimize inter-agency coordination and cooperation.

Figure 53: UNJLC Tasks and Services 1

To address the first challenge - information processing - the UNJLC assumes the role of an “information manager” (Tomasini and Van Wassenhove 2009b: 90). This manager gathers material of its participating agencies and collates, analyzes, and disseminates information in order to improve decision-making of humanitarian actors (GLC 2009). These activities not only include the provision

of basic logistics information⁵³ in the form of data, information, and knowledge, but also the development/implementation/running of information sharing tools (e.g. websites, mailing lists, field meetings), the mapping of areas with the help of Geographic Information Systems (GIS)⁵⁴ and the consequent provision of maps to UN agencies and NGOs, the running of a Custom Information Guide (CIG)⁵⁵ to evaluate and benchmark customs clearance, and Joint Supply Tracking (JST)⁵⁶ in order to prioritize and consolidate cargo movements (GLC 2009). The accessibility to these types of information is essential. A good example of this paradigm is the UNJLC website. In order to reach the target group – field logisticians – the web-portal’s design must be as simple as possible due to low bandwidth and lack of sophisticated software in the field (Tomasini and Van Wassenhove 2005: 6). Another feature is password-protected intranet that allows UNJLC team members to upload files rapidly and to share information with a higher degree of privacy (Tomasini and Van Wassenhove 2005: 8).

UNJLC gathers material of its participating agencies and collates, analyzes, and disseminates information with regard to logistics procedures, logistical maps (GIS), customs, as well as provides tracking and tracing.

Figure 54: UNJLC Tasks and Services 2

In addition to this information-centred pool sharing model, the UNJLC on demand also provides asset brokering⁵⁷ (Kaatrud, Samii and Van Wassenhove

⁵³ General logistics information like transport procedures/schedules or infrastructure assessments (GLC 2009; for more information and a logistical map see Appendix I)

⁵⁴ As of November 2009 91 countries are logistically mapped under the normative guidance of the UN Spatial Data Infrastructure for Transport (UNSDI-T) 2.0 (GLC 2009). The Global Logistics Cluster’s Map Centre is available at: <http://www.logcluster.org/tools/mapcentre>.

⁵⁵ The CIG is a ‘country-by-country content management system’ based on information sharing and is compiled with the help of the international logistics provider TNT who deploys staff to the UNJLC (GLC 2009). It can be reached at <http://cig.unjlc.org/>.

⁵⁶ Needs are assessed via the so-called Cargo Movement Request (CMR; see Appendix II) and reports issued that tackle both the global (all agencies) and the individual supplies picture (GLC 2009). In 2010 the JST will be replaced by RITA, the web-based Relief Item Tracking Application (GLC 2009).

⁵⁷ In contrast to asset management, asset brokering is coordinative, not operational – the operational management of assets like inventory centres, trucks, or aeroplanes usually – as was the case in Afghanistan - remains in the hands of the participating organizations (Tomasini and Van Wassenhove 2009b: 71). Anyway, this separation can be difficult as Elzinga and Van Randwijck recorded in Afghanistan (2003: 8).

2003: 11). Asset brokering helps to tackle the second challenge, negotiation capability, and constitutes pool sharing of means of distribution like aircraft, vessels, and trucks, or inventory space. With regard to air assets Kaatrud, Samii and Van Wassenhove state:

“The UNJLC – without interfering in an agency’s established air chartering arrangements – can facilitate the pooling of limited airlift capacity with the aim of matching eventual excess capacity with outstanding demand.” (2003: 11)

Another example would be pool sharing of inventory space. Again, Kaatrud, Samii and Van Wassenhove recorded:

“To address this, the UNJLC often brokers exchange agreements between agencies in need of storage facilities and those who have them, coordinates sharing of storage space and liaises with military or local civil authorities in possession of these assets in order to speed up their transfer to humanitarian organisations.” (2003: 13)

Asset brokering includes pool sharing of distribution and inventory space.
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Figure 55: UNJLC Tasks and Services 3

Compared to OCHA the UNJLC - with its information processing-, asset brokering-, and bargaining capabilities - supposedly applies the pool sharing approach in a more detailed and sophisticated way. This is shown in the next subchapter with help of UNJLC’s Afghanistan country mission.

4.2.2.3. UNJLC Afghanistan

As we have elaborated in the former subchapter the United Nations Joint Logistics Centre applies pool sharing of resources and thus is both information manager and asset broker. As mentioned before, activities with regard to information are the provision of basic logistics information, information sharing tools, spatial maps (GIS), a Custom Information Guide (CIG) and a Joint Supply Tracking (JST) system. In addition assets like means of distribution are pooled.

For further understanding the author would like to present these endeavours in detail. Thereby UNJLC's operations in Afghanistan are used.

In Afghanistan the UNJLC applied its 'headquarter – regional office – satellite offices' organizational structure. Besides the Rome-centred headquarter and the Islamabad-based regional office, UNJLC operated temporary satellite offices⁵⁸ in cities like Termez, an Uzbek city on the border to Afghanistan (Kaatrud, Samii and van Wassenhove 2003: 12). In the regional and satellite offices staff was compiled of around 20 international and 30 local logisticians (Elzinga and Van Randwijck 2003: 10). UNJLC Afghanistan had two phases – period 1 from October 2001 to March 2002 (humanitarian relief) and period 2 from April 2002 to March 2003 (capacity building) (Elzinga and Van Randwijck 2003: 5). The structure of this country example follows the abovementioned activities⁵⁹. Thereby mainly the UN-NGO context is taken into account⁶⁰.

Basic logistics information included contact details of organizations active in the region or requirements regarding visas, customs, housing, and security (Tomasini and Van Wassenhove 2005: 2). Elzinga and Van Randwijck also name airlift schedules and information on infrastructure, availability and prices of transport, and weather forecasts as supply of information (2003: 7).

⁵⁸ Basically – especially in the first phase of UNJLC Afghanistan – UNJLC Rome concentrated on strategic issues like the transport of relief goods and equipment into the crisis region, UNJLC Islamabad coordinated regional tasks like the transport of supplies from the region into Afghanistan, and UNJLC's satellite offices (e.g. in Termez) did the field work (Tomasini and Van Wassenhove 2009b: 71).

⁵⁹ Except Joint Supply Tracking (JST) and pool sharing of inventory space

⁶⁰ As there has been war in Afghanistan since October 2001 humanitarian space has been considerably defined by the US-led coalition forces and thus also civil-military coordination is a main task of the UNJLC in this country (Elzinga and Van Randwijck 2003: 5). The UNJLC negotiated, for instance, on behalf of all humanitarian actors (coordination by command) with the military in order to "streamline and hasten the transit and movement of humanitarian cargo and personnel from Afghanistan's neighbours" (Kaatrud, Samii and Van Wassenhove 2003: 12). One part of these negotiations is the de-conflicting of "the use of common logistics assets such as airspace and airfields with military forces" (Tomasini and Van Wassenhove 2009b: 73).

Information sharing tools: In Afghanistan UNJLC operated a website⁶¹ and a newsletter service as well as produced CD-ROMs in order to distribute basic information to agencies in the field (Elzinga and Van Randwijck 2003: 9). Following Tomasini and Van Wassenhove “these bulletins served to monitor the division of tasks in the field, anticipate and communicate solutions to problems of common interest” (2005; quoted in Tomasini and Van Wassenhove 2009a: 556). These ‘problems of common interest’ include, inter alia, fuel, rates of transport and infrastructure. Regarding fuel, a commodity which is outside the mandate of a single agency, Van Wassenhove states:

“If a central body such as the UNJLC anticipates fuel shortages in a certain region because of cartel formations which are raising prices, humanitarian organizations would probably appreciate this information being posted on a website and be ready to discuss how they can collectively solve the issue.” (2005: 484)

The second issue are local logistics service providers. They possibly hinder effectiveness and efficiency as Kaatrud, Samii and Van Wassenhove report:

"During the Afghan crisis humanitarian agencies unknowingly engaged in wasteful competition by bidding up the price of transport to secure access to truck capacity[...]The cargo transport cartel resulted in a 300% price increase over a six-month period. After conducting a technical study on the Afghan transport sector, the UNJLC presented a transport price proposal intended for use by all agencies. By threatening to bring in a UN trucking fleet in the event of non-agreement and publishing agreed rates on its website, it put an end to the price hike. Overall, millions of the humanitarian community’s dollars were saved.” (2003: 13)

The third matter of interest – infrastructure – does not only mean the provision of logistical maps, but also the active development of infrastructure funding

⁶¹ When the Afghan crisis stroke the UNJLC was not even formally institutionalized though already existent. Thus its website for Afghanistan was locally programmed at high speed and showed some failures like lacking support for browsers other than the Microsoft Internet Explorer or the user’s dependence on the right Java version installed on his or her computer. Anyway, three months after the start it got 2,500 users and by May 2003 this number increased to 7,500 (Tomasini and Van Wassenhove 2005: 3).

proposals on behalf of and with the humanitarian community (Kaatrud, Samii and Van Wassenhove 2003: 13). Kaatrud, Samii and Van Wassenhove report:

“The UNJLC’s coordinating role has expanded to encompass various stakeholders including the donor community. For example, to help the development of a common UN strategy for the vital rehabilitation of Afghanistan’s road network, the UNJLC embarked on a number of infrastructure survey projects. After assessing Afghan road conditions and traffic capacity, it helped the humanitarian community develop proposals for donor and Coalition funding.” (2003: 13)

Spatial maps (GIS): Logistical maps were jointly made by UNJLC and OCHA’s Humanitarian Information Centre (HIC) “with HIC providing the GIS layer database and UNJLC adding the layers with logistic information” (Elzinga and Van Randwijck 2003: 12).

Custom Information Guide (CIG): UNJLC Afghanistan did not only provide information about customs issues, but also negotiated on behalf of the humanitarian community with the US-led coalition (Kaatrud, Samii and Van Wassenhove 2003: 12) and local authorities (Van Wassenhove 2005: 483).

Pool sharing of distribution: In this matter UNJLC Afghanistan acted as coordinator. Especially airlift capabilities and capacities – of military aircraft or civil planes chartered by either UN agencies or donors – were recorded and matched with the needs of humanitarian actors (Tomasini and Van Wassenhove 2009b: 71). Then UNJLC staff took into account humanitarian priorities and “assigned assets to agencies or advised them on pooling of assets for long-range airlifts” in order to “achieve synergies and efficiency” (Tomasini and Van Wassenhove 2009b: 71-72). A similar approach had been applied with regard to barge capabilities and capacities. At the outbreak of the Afghan crisis bottlenecks occurred in Termez – an Uzbek city bordering Northern Afghanistan along the Amu Darya river (Kaatrud, Samii and Van Wassenhove 2003: 12). As Uzbek authorities initially refused to re-open the river-crossing bridge, UNJLC Termez “speedily negotiated an agreement with the Uzbek authorities for the transport of

humanitarian cargo by barge to Afghanistan and established a system to prioritise and schedule barge cargo” (Kaatrud, Samii and Van Wassenhove 2003: 12).

UNJLC Afghanistan provided basic logistics information, information sharing tools, spatial maps (GIS), a customs information guide (CIG), and pool sharing of distribution.

Figure 56: UNJLC Afghanistan: Tasks and Services

UNJLC Afghanistan managed pool sharing. Now we have seen already two promoters of this concept, OCHA and UNJLC. It is time to present pool sharing in software development⁶². This issue is the focus of the next chapter that deals with the Humanitarian Logistics Association (HLA) and its software - HELIOS.

4.2.3. Humanitarian Logistics Association (HLA)

The Humanitarian Logistics Association (HLA) has its roots in the Humanitarian Logistics Conferences that are hosted by the Fritz Institute – an US-based NGO – since 2003. This subchapter presents the structure and tasks/services of the HLA and the associated HELIOS software project.

4.2.3.1. Structure

The founding body of the Humanitarian Logistics Association (HLA) is the San-Francisco based Fritz Institute, a NGO “whose mission is to strengthen the infrastructures of humanitarian relief organizations by mobilizing logistics and technology expertise and resources from the corporate and academic communities” (Thomas 2003: 2). Since 2003 the Fritz Institute holds meetings regarding the key challenges of humanitarian logistics which it calls:

⁶² Applications like tracking and tracing. The IFRC's Logistics and Resource Mobilisation Department (LRMD), for instance, managed it to reduce the amount of unsolicited goods in the Gujarat earthquake emergency response to 5% with its commodity tracking system (Chomilier, Samii and Van Wassenhove 2003: 15).

“(a) the lack of recognition of the strategic role of logistics by top managers and donors; (b) the shortage of skilled and experienced logistics professionals in the sector; (c) the limited amount of collaboration between organizations relative to the logistics function; (d) the inability to build a strong business case for logistics through metrics; and (e) the insufficient leveraging of technology to assist logisticians in the execution of a complex array of tasks they are charged with in an operation.” (2006)

Thereby it brings together key logistics representatives in the humanitarian world “with the aim of encouraging collaboration, integration, standardisation, synergy and joint product development” (Gustavsson 2003: 8). The participants - the partners of the Fritz Institute - comprise the world’s main humanitarian actors - inter alia OCHA and UNJLC - as well as government agencies, private business, academic institutions and foundations⁶³ (Fritz Institute 2009b).

One project that was triggered by these conferences is the Certification in Humanitarian Logistics (CHL) which started in 2006 with 26 pilot candidates and constitutes “a flexible distance-learning course based on a competence model, linking on-the-job experience with learning” (Fritz Institute 2006).

A second endeavour was the 2005-foundation of the Humanitarian Logistics Association (HLA) with the goal to be a professional association with individual membership – a community of practice as “a group of people united by a common effort that interact and share knowledge” (Thomas 2003: 9) and as “representative body of logisticians in the humanitarian community” (Fritz Institute 2006). This second institution – located at the Fritz Institute - is presented in the next subchapter.

The Humanitarian Logistics Association (HLA) is a community of practice formed by logisticians in order to share knowledge and benefit from synergies.

Figure 57: Humanitarian Logistics Association (HLA)

⁶³ Inter alia Care International, Catholic Relief Services, IFRC, Medicines Sans Frontières, Oxfam, People in Aid, Save the Children, UNHCR, UNICEF, WFP, WHO, World Vision (humanitarian actors), European Commission Humanitarian Office, USAID (government agencies), Intel, KPMG (private business), Columbia University, Erasmus University, Georgia Institute of Technology, INSEAD, Harvard University, Kenyatta University, MIT, Stanford University (academic institutions), Bernard Osher Foundation, Stanley S. Langendorf Foundation, William and Flora Hewlett Foundation (foundations)

4.2.3.2. Tasks and Services

Parallel to the founding of the Humanitarian Logistics Association Anisya Thomas – then managing director and actual member of the board of directors of the Fritz Institute – and Laura Kopczak set up a very important position paper. They defined five strategies to improve humanitarian logistics. These are now presented – thereby words in parentheses indicate the scope of them:

- (a) Establishment of a *professional logistics community* (knowledge sharing),
- (b) Investment in *standardized training and certification*⁶⁴ (setting of standards),
- (c) Focus on *metrics and performance measurement* (communication of effectiveness),
- (d) *Communication of logistics' strategic importance* (awareness creation), and
- (e) Development of *flexible technology solutions* (increase of service level) (2005: 7).

All of these strategies are applied by the Humanitarian Logistics Association (HLA). Of these strategies some affect pool sharing more than others. Thereby especially (a) professional logistics community and (e) flexible technology solutions are of importance to this thesis' main object of observation. The first one due to its clear link to pool sharing of information and the second one owing to the fact that IT issues have not yet been addressed by this work. Accordingly the focus of the author is on HLA activities that approach one of these two strategies. Following the Fritz Institute pool sharing of information⁶⁵ constitutes a main goal of the Humanitarian Logistics Association (HLA):

“Collaboration among organizations and among functional groups within organizations has helped increase recognition of logistics as a strategic function. However, to develop scale as in other sectors, there must be greater interaction and cooperation among organizations. As logistics gains visibility, part of the

⁶⁴ This is done via the abovementioned Certification in Humanitarian Logistics (CHL). It is the goal of the CHL - compiled by humanitarians, private business and academics - to be an “externally recognised certification program” that overcomes the lack of institutional knowledge in the humanitarian sector by formalizing this knowledge (Thomas and Kopczak 2005: 9-10).

⁶⁵ Again ‘information’ refers to data, information, and knowledge as explained in 4.1.

new responsibility is to share lessons learned and find out how other organizations have addressed challenges.” (Fritz Institute 2007b)

The same is valid for flexible technology solutions. Members of the HLA work on them as proper IT systems supposedly provide considerable benefits. Pettit and Beresford, for instance, speak of “inventory savings and supply chain control” (2009: 459). Similarly Thomas and Kopczak argue that IT solutions feature “visibility of the materials pipeline” and thus “create the infrastructure for knowledge management, performance measurement and learning” (2005: 7). These individuals – with leading efforts from the Fritz Institute - created HELIOS. The development and distribution of this software are presented in the next subchapter.

4.2.3.3. HELIOS Supply Chain Software

It is common sense in the humanitarian community that flexible IT is an important issue. Accordingly Thomas and Kopczak state:

“Humanitarian relief organizations have a common need for integrated information technology (IT) solutions that support procurement, distribution through a pipeline, tracking and tracing of goods and funds, flexible and robust reporting, and connectivity in the field.”(2005: 12)

Given the catalogue of relief goods and equipment of the International Federation of the Red Cross and Red Crescent Societies (IFRC) that alone comprises 6,000 items ranging from cranial drills for surgery at field hospitals to plastic sheeting for temporary shelter, the implementation of functions like tracking and tracing is an enormous challenge to IT specialists (Thomas and Kopczak 2005: 12). Thereby the number of items has to be multiplied with the diverse supply chain partners like global, regional, and local suppliers of relief goods⁶⁶, providers of commercial transportation and third-party logistics, aircraft charter companies or

⁶⁶ “The UNICEF warehouse in Copenhagen includes an inventory of US\$22 million in relief supplies at any given time; these supplies are procured from over 1,000 vendors worldwide.” (Thomas and Kopczak 2005: 12)

local transport firms that provide trucks, cars or even mules and donkeys (Thomas and Kopczak 2005: 12).

Adding to this complexity researchers compare the state of humanitarian logistics to the commercial counterpart in the midst of the 1980s (Rickard 2003: 9; Thomas and Kopczak 2005: 7; Van Wassenhove 2005: 476). Hence it is not surprising that – in a study conducted by Thomas and Kopczak - only “26% of the responding organizations used tracking and tracing programmes, whereas the big majority still worked with Excel spreadsheets and/or manual records” (2005: 6). This fact in combination with another, namely that logistics accounts for 80 per cent of the costs associated with emergency response (Trunick 2005: 8), asks for proper software development and IT implementation. Therefore the Fritz Institute started to work on new logistics software. Before actual development it conducted two major studies regarding agencies’ needs (requirements) and current distribution of software in the humanitarian world.

The first analysis was done in collaboration with the IFRC and twelve other humanitarian relief organizations (HRO). Anisya Thomas – then managing director of the California-based NGO – reports:

“Our team spent over 3,000 hours interviewing the entire logistics team, as well as key functions that interact closely with logistics such as desk officers, operations managers, finance and IT at the International Federation of Red Cross and Red Crescent Societies (IFRC) as part of a requirements gathering exercise for the development of a new logistics information software. Subsequently we visited 12 leading humanitarian relief organizations[...]at their headquarters and in the field, to understand and map their relief logistics processes. Finally, we brought the heads of logistics of these and other HROs together with leading supply chain professors at a Humanitarian Logistics Conference for two days to discuss the research, validate our results about their pain points, and give input to the path forward.” (2003: 2)

The second study analysed the current usage of software in the humanitarian world. Even before the analysis, it was known that the variety of programs would be enormous. Lee, Wally, and Zbinden reported in 2003:

“The technology landscape in the humanitarian sector is often extremely fragmented, limiting the availability of timely and accurate information. Organisations either buy large off-the-shelf commercial packages that need extensive customisation or create small in-house solutions for each field location. In the former instance, the dynamic variables and context of relief are not captured. Customisation to address this problem is very expensive and inhibits absorption of routine upgrades. Attempts to scale up home-grown solutions are rarely effective and are often dependent on the transient expertise of the organisation’s IT staff.” (34)

Consequently the Fritz Institute scrutinized several IT solutions with regard to system strengths and weaknesses. Thereby especially commodity tracking systems (CTS) were of interest. The screened systems are now listed with applying agency in parentheses. They included SUMA (Pan-American Health Organization), Microsoft FACTS (Save the Children / Mercy Corps), CTS 2000 (World Vision), CTS (Save the Children), Purchase Plus PALMAS (Oxfam / International Rescue Committee), and Log 6.5 (Medicines Sans Frontières) (Fritz Institute 2004). Strengths and weaknesses were listed with regard to functions like ‘process coverage’, ‘planning’, ‘inter-modular and inter-version workflow’, ‘food item suitability’, ‘context sensitivity’, ‘logistics management’, ‘reporting’, and ‘standard and non-standard item categorization’ (Fritz Institute 2004).

This knowledge resulted in the project of developing “a basic standard system as a foundation” which should constitute a common platform with “modular flexibility to add and subtract” (Fritz Institute 2004). Especially the modular design is supposed to be essential as it enables “to connect existing systems and introduce new ones to provide visibility and information about the entire relief supply chain” (Lee, Wally, and Zbinden 2003: 34).

Studies about needs assessment and current distribution of software resulted in the objective to create a modular system based on a common platform.
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Figure 58: Objectives of Software Development

The project was called HELIOS and should be a platform for many humanitarian agencies. Under the slogan “Action: Bringing Information and Visibility to the Field” the Fritz Institute, other members of the Humanitarian Logistics Association (HLA), and IT firms developed the HELIOS supply chain software that is based on modules⁶⁷ and features extensive monitoring functions like reports and dashboards that provide a high degree of supply chain visibility⁶⁸ (Fritz Institute 2006; Fritz Institute 2009a).

The pilot program started in Kenya in August 2006 with three initial field users of HELIOS 1.0 – namely Kenya Red Cross, Merlin and World Vision International (Fritz Institute 2006). The last one already had collaborated with the Fritz institute since several years (Gustavsson 2003: 8). World Vision’s former logistics information software was partly Microsoft-Access, partly paper-based and tracking and tracking (T&T) thus difficult (Fenton and Wachiuri 2007: 5). Consequently World Vision appreciated HELIOS to provide improved commodity T&T, more accurate information, individual reporting, easier variance analysis, enhanced standardization of relief goods and equipment, the ability to import and export data, the capability of online processing, and the saving of resources like time (Fenton and Wachiuri 2007: 13). Further World Vision was very active to promote the benefits of joint software development, namely shared costs of investment, implementation, and training (Fenton and Wachiuri 2007: 17)⁶⁹.

These thoughts were shared from many HLA logisticians and thus the HELIOS Users Group (HUG) was founded in 2008 (Blansjaar et al. 2008: 10). It is headed by the Fritz Institute and is defined as open source project (Blansjaar et al. 2008:

⁶⁷ For the modular structure and technical specifications of HELIOS see Appendix III respectively Appendix IV.

⁶⁸ This is not only valid for the agencies themselves, but also for “donors, colleagues, countries, field locations and teams” as Helios provides “macro and micro views from a variety of angles” (Fritz Institute 2009).

⁶⁹ Even joint operation of the software would be possible – up to now users ‘only’ share implementation information.

4-5) with an own support website where “documentation is being gathered, software releases are published and the user community can communicate via an issue tracker, forums, wikis and shared document spaces” (Fritz Institute 2009a).

The main goal of HUG is to establish a sustainable HELIOS community by sharing costs, best practices and input/output as well as by creating standards, benchmarks, and development priorities (Blansjaar et al. 2008: 8)⁷⁰. In 2008 the group included Oxfam GB, World Vision International and International Medical Corps (IMC) which started using HELIOS in Somalia and Zambia (World Vision) respectively Sudan and Indonesia (Oxfam) (Blansjaar et al. 2008: 8) and developed HELIOS 1.1 and 1.2 (Fritz Institute 2009a). In September 2009 Oxfam intended to start implementation of HELIOS in 20 countries – that would mean that it has covered 75% of its supply chain within 18 months (Fritz Institute 2009a). In addition the HUG shares data, information, and knowledge with all members of the Humanitarian Logistics Association (Fritz Institute 2008a).

As we have seen the development of HELIOS comprises pool sharing of information and human resources. With regard to this software and its recent development it is opportune to say that there is a chance for HELIOS to become the standard supply chain application in humanitarian logistics.

HELIOS supply chain software is defined as open source project and is based on modules that feature extensive monitoring. The HELIOS Users Group (HUG) was founded in 2008 and aims at sharing costs, best practices and input/output as well as creating standards, benchmarks, and development priorities. In 2009 the group included Oxfam GB, World Vision International and International Medical Corps. Oxfam intended to cover 75% of its supply chain within 18 months.

Figure 59: HELIOS Supply Chain Software: Project Characteristics

⁷⁰ This may be promoted by the fact that competition regarding the use of new IT is “of less importance” (Pettit and Beresford 2009: 459).

Before switching to the costs and benefits of pool sharing, the extraordinarily important role of donors for the implementation of this concept is illustrated. Donors appreciate capacity building and standardization and thus may promote – e.g. through their funding criteria – efforts to apply pool sharing. European Commission Humanitarian Office (ECHO), for instance, is such a donor whose funding objectives comprise capacity building and standard operating procedures (Fritz Institute 2007b). Thereby it primarily funds activities of UN agencies and the International Federation of the Red Cross and Red Crescent Societies (IFRC) and from 2002-2007 committed more than € 115 million⁷¹ (ECHO 2008: 4).

An example of funded projects would be IFRC's regional logistics units for pre-positioning – called Humanitarian Procurement Centres – whose job it is to provide professional and harmonised services to both the RC movement and other partners (ECHO 2008: 6-7). Another project would be WFP's regional UN Humanitarian Response Depots (UNHRD) whose main task is it to strengthen the relief efforts of UN, international, governmental, and non-governmental organizations (ECHO 2008: 8). Analogous to the in 4.1 already presented UNHRD in Brindisi (Italy) access is granted to all the abovementioned organizational types in other UNHRD in Accra (Ghana), Dubai (United Arab Emirates), Panama City, and Subang (Malaysia) (ECHO 2008: 8). The only requirement for the use of UN depots is to be an ECHO partner⁷² – a relationship that is stipulated in a standard Memorandum of Understanding (MoU) (ECHO 2008: 9). A third project is the Certification in Humanitarian Logistics (CHL) headed by the Fritz institute (which is also involved in HELIOS). ECHO supports this certification based on a distance-learning course that links job experiences with theory (ECHO 2007: 7).

⁷¹ This figure is only about the thematic funding 'capacity building'. In 2006, for example, ECHO spent a total of € 671.3 million (ECHO 2007: 2). By its own account ECHO is "one of the largest single donors of humanitarian assistance in the world" and accounts for approximately 25% of total global humanitarian aid (ECHO 2007: 2).

⁷² In total there are more than 200 implementing partners (Fritz Institute 2007b).

Donors that appreciate capacity building and standardization are important for the implementation of pool sharing. The European Commission Humanitarian Office (ECHO), for example, funds such activities of the UN and the International Federation of the Red Cross and Red Crescent Societies (IFRC).

Figure 60: Capacity Building: The Importance of Donors

After the presentation of the status quo of pool sharing and the associated donor importance, costs and benefits of pool sharing are now presented.

4.3. Costs of Pool Sharing

Calculating the costs of pool sharing is challenging. This is valid for the whole humanitarian sector as full costs are difficult to obtain. Feldbrügge reports with regard to relief efforts of GTZ, a development agency owned by the German state, in Mozambique's flooding emergency in 1998 that "with the exception of relief items, most of the costs for a full cost calculation were not available" (2001: 125). Anyway, the author would like to briefly present expenses that accompany pool sharing. Pool sharing is a form of cooperation and thus – per definition – includes coordination. As Minear found out coordination usually goes with considerable expenditures (2002; quoted in Tomasini and Van Wassenhove 2009b: 85). Accordingly "sometimes parties are unwilling to share because they do not want to assume the cost or invest in the resources needed" (Tomasini and van Wassenhove 2009b: 105).

Generally we can speak of direct and indirect costs. The former comprise – inter alia – "salaries, travel costs to the field for those coordinating, time and money for travelling to meetings for those being coordinated" (Tomasini and Van Wassenhove 2009b: 85). Indirect costs occur especially at headquarters. It is usually at the senior level where pool sharing agreements are stipulated, concluded and approved. These negotiations constitute significant transaction

costs⁷³. The same is valid for expenses that go with the preparing of reports and the salaries of those in charge of negotiating, evaluating, reporting and the like. In addition it can be argued that the “time-consuming review processes for joint reports, which are likely to be longer the more agencies are involved, cannot be taken lightly” (Tomasini and Van Wassenhove 2009b: 85). Consequently it is always important to monitor the cost/benefit ratio. As Tomasini and Van Wassenhove argue:

“If those involved cannot reap additional benefits from the coordinated efforts compared to what they could have achieved in going it alone, then the investment in time and money will have been a waste” (2009b: 85).

Benefits of pool sharing are now presented in subchapter 4.4.

4.4. Benefits of Pool sharing

As always the cost/benefit ratio should determine if organizations cooperate or not. Pool sharing – or better – the proper implementation and running of it can reap significant benefits. These are now presented with regard to cost, risk, service level, and income. Thereby the first three benefits match the humanitarian supply chain evaluation framework of McGuire that comprises “cost (resources), risk (insecurity) and reduction of suffering (customer service)” (2006).

4.4.1. Decrease of Costs

Similarly to the difficulty of calculating the costs of pool sharing, it is challenging to determine its cost reductions in numbers. Hence the presented examples are both rather conceptual and evidenced by praxis. The structure follows the categorization of different types of pool sharing introduced in 4.1.

⁷³ Search and information costs, bargaining and decision costs, and policing and enforcement costs (Watkins 2009).

Pool sharing of information

Sharing of information can decrease costs of virtually all logistics activities. For this section the author compiled three tasks of humanitarian logistics: needs assessment, procurement, and distribution.

Regarding needs assessment it is essential to estimate the actual number of affected persons as precisely as possible. But this is often not the case. In the 2004 Asian tsunami, for instance, many organizations assessed needs like nutrition on basis of registered persons within a community (Perry 2007: 420). As Perry argues that turned out to be a miscalculation as the actual number of victims was considerably lower due to the high degree of casualties caused by the natural disaster's impact (2007: 420). If agencies had systematically shared data, information, and knowledge, they would have been able to calculate correctly and thus save money.

Another important fact regarding this issue, constitute the costs that accompany the registration of victims. With regard to refugee populations, for example, Telford estimates the 'cost of periodic registrations or revalidations' to be approximately one dollar per person in Africa (Telford 1997; quoted in Feldbrügge 2001: 92). And in this figure indirect costs like travel expenses and working time are not even included (Telford 1997; quoted in Feldbrügge 2001: 92). Here we have an economies-of-scale effect. The more organizations share their information respectively contribute personnel and equipment to this endeavour, the cheaper registration costs are per agency.

Procurement is another activity whose costs can be decreased by pool sharing of information. Humanitarian agencies could share information regarding common high-frequency and/or high-cost items. Thereby participating organizations get a clearer picture of the market and thus a better bargaining position - a situation that eventually leads to decreased expenses. Even better – of course – is the foundation of a consortium in order to aggregate demand. Gustavsson speaks of

“higher purchasing-power discounts and framework agreements”⁷⁴ (2003: 7). Similarly argues Soin (2004; quoted in Pettit and Beresford 2009: 461). This is valid for all types of civil humanitarian actors like UN agencies and NGOs of all sizes. Another important issue are currency exchange rates. Procurement of humanitarian actors is often conducted locally. But especially in developing countries official exchange rates may differ from unofficial exchange rates. Hence information sharing with regard to reasonable sources of domestic currency indirectly reduces local purchasing costs.

The third activity – distribution – is often characterised by competition on the buyer side. Pettit and Beresford state:

“In emergency relief situations, however, aid agencies are likely to be competing with each other for the same transport capacity and this will increase the cost as local transport sources react to market forces and increase prices as demand outstrips supply.” (2009: 457)

In certain cases prices of distribution will be subject to price-rigging as well. In Afghanistan, for instance, competitive patterns of aid agencies combined with scarce resources resulted in a cargo transport cartel that increased prices by 300% within six months (Kaatrud, Samii and Van Wassenhove 2003: 13). This is where pool sharing of information comes into play. Some organizations may know the ‘true’ prices respectively the rates charged before the humanitarian crisis. Anyway, as they negotiate with a cartel they are not able to get a reasonable deal. But if they share this information with the majority of agencies and agree with them on an equal bidding behaviour, prices are likely to fall. That was also the case in Afghanistan. The United Nations Joint Logistics Centre (UNJLC) – the main logistics coordinator for UN agencies and NGOs in that relief effort – conducted a study on the domestic transport market (Kaatrud,

⁷⁴ With regard to nutrition: if members of the consortium share inventory space too, the decrease of costs has even two layers. The first layer is represented by lower purchase prices at every time of the year. The second layer refers to the fact that during the harvest season prices are lower than during the rest of the year. By buying food supplies in advance and commonly storing them, agencies profit a second time. Of course this is only valid if individual storage costs are low.

Samii and Van Wassenhove 2003: 13). The findings of the survey resulted in the following actions of the UNJLC:

“After conducting a technical study on the Afghan transport sector, the UNJLC presented a transport price proposal intended for use by all agencies. By threatening to bring in a UN trucking fleet in the event of non-agreement and publishing agreed rates on its website, it put an end to the price hike. Overall, millions of the humanitarian community’s dollars were saved.” (Kaatrud, Samii and Van Wassenhove 2003: 13)

Altogether we could say that the individual searching costs for any crisis-related information can be reduced by applying the pool sharing concept. Forecasts, for instance, integral part of any decisions with regard to logistics, profit from data matching and aggregation and thus from pool sharing.

Pool sharing of information can decrease costs of virtually all humanitarian logistics activities, examples being needs assessment, forecasting, procurement, and distribution.

Figure 61: Pool Sharing of Information: Cost Factors Addressed

Pool sharing of human resources

Personnel accounts for the largest share of overall costs in the humanitarian sector (Tomasini and Van Wassenhove 2009b: 145). Manifestations of pool sharing of human resources are common projects where persons from different agencies come together in order to work on a specific topic, or even the sharing of persons in the sense of an agency for temporary work.

An example of the former would be the development and implementation of software by multi-agency teams. This has been the case in the HELIOS project – presented in 4.2.3 - where staff from various organizations has been working together on a common supply chain software platform. Oxfam – the lead agency with regard to implementation – in September 2009 intended to start operations of HELIOS in 20 countries – that would mean that it has covered 75% of its

supply chain within 18 months (Fritz Institute 2009a). It supposedly would not have been able to do this without a software platform already tailored to humanitarian logistics and shared implementation know-how. Hence it can be said that due to the common use of personnel the participating organizations saved costs and time.

The second type of pool sharing of human resources – the temporary deployment of staff from one organization to another and vice versa – is applied by actors like the WFP which uses stand-by partners like governmental entities, NGOs or private donors that contribute with cadres of specialists to logistical operations (Scott-Bowden 2003: 18). Similarly, WFP deploys staff to its partners on request. Following Mayr this helps organizations to “extend geographical reach and keep personnel costs down” (2006: 24).

Due to the common use of human resources - the most expensive factor in humanitarian logistics - the partner agencies save costs and time as well as extend the geographical range of their operations.

Figure 62: Pool Sharing of Human Resources: Cost Factors Addressed

Pool sharing of inventory space

There are manifold examples of pool sharing of inventory space reaching from commonly operated inventory centres to reserve capacity one organization has in the storage facilities of its partner. Both types provide not only more flexibility, but also reduce costs. In the former case capital expenditure is distributed according to the actor’s reserved capacity and thus shared. In addition there may be the possibility to profit from economies of scale. The latter case especially addresses aid agencies that either start operations in a country or are active there at irregular intervals. They are able to rapidly ship goods to the storage facility of their partners and distribute them further. An example of this type would be the UN Humanitarian Response Depots (UNHRD) in Brindisi (Italy), Accra (Ghana), Dubai (United Arab Emirates), Panama City, and Subang (Malaysia)

(ECHO 2008: 8) Eventually both types make global pre-positioning – a trend in the humanitarian world – feasible and, cheaper.

Pool sharing of distribution

It is about sharing distribution capacity in the form of free volume in aircrafts, trucks, ships, trains, cars, and the like. Regarding ‘cost reduction potential’ this approach is of importance. Vehicle fleet management, for instance, has the second largest share of overall costs in the humanitarian sector, only outnumbered by personnel (Tomasini and Van Wassenhove 2009b: 145).

With the help of pool sharing of distribution excess capacity can be avoided and thus costs reduced. An example would be the charter of aircraft. As this means of distribution is a very expensive one, it is important to use 100% of capacity in order to spread cost over a maximum of relief goods and equipment. Anyway, aid agencies often do not use all of this capacity due to time restrictions. This excess capacity could have been sold to another humanitarian actor who is in need of it.

Another issue tackled by pool sharing of distribution is the trade-off between transport costs and transport frequency respectively supply chain responsiveness. This relation is critical to transport planning (Chopra and Meindl 2004: 451). In order to guarantee a responsive supply chain, humanitarian organizations should consolidate their cargo heading for the same destination. Thus they would be able to ship goods in a flexible way while paying reasonable transport rates. McGuire states with regard to health care goods:

“Transport efficiency as well as transport frequency can be increased by consolidation of health care goods with other humanitarian assistance goods such as food or shelter material, requested by the same destination. Another possibility is consolidation of health care goods from different humanitarian organizations but for the same destination into one shipment.” (2006: 189)

Hence it would be rational to share capacity. A systematic approach to this issue is an Internet-based distribution capacity exchange like the UNJLC website. Following Bock as many international NGOs as possible should be part of this exchange that works with agencies being resource providers - which state specifics of the means of distribution in question like dimensions and suitability – and resource enquirers – whose demand is based on specific needs like preservation of the cold chain (Bock 2006: 59). Alternatively also institutions like the Fleet Forum⁷⁵ could be used to consolidate cargo. These initiatives “allow humanitarian organizations and the private sector to interact via a broker for best results” (Tomasini and Van Wassenhove 2009b: 145). An advantage of this solution would be to work with an already existent exchange. The proper exchange of excess capacity would reduce costs significantly. Even the transaction costs inherent in any exchange could be offset by reduced paperwork⁷⁶ and thus time spent on bureaucracy that usually accompanies international transportation (Mayr 2006: 58).

With the help of pool sharing of distribution excess capacity can be avoided and thus costs reduced. In addition it enables to ship goods in a flexible way while paying reasonable transport rates. It works via an internet-based distribution exchange like the UNJLC website.

Figure 63: Pool Sharing of Distribution: Cost Factors Addressed

Pool sharing of relief goods and equipment

Similarly to the other approaches pool sharing of relief goods and equipment can decrease overall costs. Thereby especially transaction costs are reduced. The following explanation should help to understand this. It is valid for two scenarios. They feature an agency that is in immediate need for a certain relief good or equipment due to the fact that (a) its normal supplier(s) are not able to deliver in time or (b) it does not have a source of supply because of unexpected

⁷⁵ For more information on the Fleet Forum see Tomasini and Van Wassenhove 2006.

⁷⁶ Paperwork occurs due to customs clearance, insurance policies, or significant inter-modal activity (Mayr 2006:58)

demand. Hence this organization usually searches global-, regional, or local markets in order to find an adequate supplier. This involves considerable expenses like the cost equivalent of the time staff members need to find a proper offer and to negotiate and stipulate agreements (indirect costs) or travel expenses of employees (direct costs). These transaction costs can be mitigated by the use of pool sharing. By having a standby agreement regarding specific items with another humanitarian actor in place, the challenge described above could be overcome not only faster, but also cheaper. The immediate request for capacity does not incur extraordinary transaction costs.

In this sense pool sharing functions best when participants act strategically. An organization is likely to agree on stand-by capacity that it either needs at irregular intervals or that it is impossible to get in proper quality. Thereby organizations can concentrate on their core supplies (and thus competences) while sometimes relying on others and vice versa. As the author's literature review has shown, this form of pool sharing respectively specialization has yet been very rare. An example would be WFP that has agreements with standby partners to deploy service packages which comprise relief goods and equipment (Scott-Bowden 2003: 18).

Pool sharing of relief goods and equipment reduces transaction costs and works best with specialized agencies that manage differing items.
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Figure 64: Pool Sharing of Relief Goods and Equipment: Cost Factors Addressed

To summarize this chapter the following quote of UNJLC Afghanistan's achievements with regard to cost reductions is presented:

“While there is no quantitative evidence to assess the magnitude of the cost reduction, it is clear that in this case the humanitarian community benefited from consolidating their purchasing power to obtain better deals with their service providers, maximizing the use of space in aircraft, keeping their inventory low, improving their planning and forecasting throughout the supply chain, minimizing competition for resources among partners, increasing their service level since the UNJLC prioritized cargo based on beneficiary needs.” (Tomasini and Van Wassenhove 2009b: 72)

4.4.2. *Decrease of Risk*

Crises trigger situations full of risk that humanitarian logistics has to deal with. Kovacs and Spens even state that “humanitarian supply chains are specialized in managing large-scale risks” (2009: 507). On the one side risks occur for the affected population. The remedy of these problems is the main goal of aid agencies. On the other side they constitute an important challenge to the relief organizations themselves as these regularly are active in environments that pose security challenges or funding constraints. Security, for example, is a major issue in humanitarian work. Following Bickley traffic and vehicle-related accidents alone are responsible for the major share of humanitarian workers that are either injured or killed (2003: 60; quoted in McGuire 2006: 187). Thus it can be argued that the second type of risk affects the basis for crisis relief as the solution of an organization’s own problems must have priority over the solution to the problems of end beneficiaries⁷⁷. This subchapter only deals with the second type of risk that addresses the humanitarian actors themselves. The risks of the affected population are directly addressed by the service level provided by aid agencies and are thus elaborated in 4.4.3, *Increase of service level*.

This thesis exclusively deals with the risk for the humanitarian actors themselves, namely security challenges and funding constraints.

Figure 65: Limitation of the Term ‘Risk’

Pool sharing of information

The sharing of data, information, and knowledge is of big importance to risk reduction. Due to time pressure and other obstacles aid agencies regularly are not able to adequately process information, a situation that usually leads to incorrect decisions with regard to meeting an organization’s needs. Following Feldbrügge this lack of capacity has its “roots in high time pressure, size and complexity of the decision-making situation and the choice of an inappropriate decision-making

⁷⁷ Medicines sans Frontières, for example, withdrew staff for five years from Afghanistan (June 2004-June 2009) due to security concerns (MSF 2009).

model” (2001: 64). As the preferences of the organization and the type of available information define the decision-making parameters (Königsperger 1997: 4; quoted in Feldbrügge 2001: 64), the probability of decisions based on biased respectively fragmentary information is high. This can be remedied by pool sharing of information. As partners share data, information, and knowledge, they are able to match their preferences and mitigate asymmetric information. The refined decision-making parameters contain the drawing of false consequences and thus the risk for organizational staff, assets, or funding is reduced. Regarding staff and assets, for example, sharing information about necessary security preparations, cultural issues, dangerous routes, military checkpoints, reliable middlemen, and more, helps to reduce risks. Funding, on the other side, is made easier with help of agencies sharing information about access to donors, formal requirements, joint appeals, and coordination of proposals.

Pool sharing of information about necessary security preparations helps to reduce risks. Funding is easier with help of agencies sharing information about access to donors, formal requirements, joint appeals, and coordination of proposals.

Figure 66: Pool Sharing of Information: Risk Factors Addressed

Pool sharing of human resources

From an organization’s view it is a challenge to overcome security problems and funding constraints. Personnel from different agencies can work together in order to decrease the risk that emanates from these problems. Regarding security, for instance, humanitarian actors regularly put together personnel in order to form convoys of vehicles. The latter “allow one to assist the other in rough spots, where a single vehicle would be rendered helpless and vulnerable” (Mayr 2006: 66). Bickley, for instance, recommends that every vehicle heading for a dangerous passage must be accompanied by at least one other means of transport (2003: 69; quoted in McGuire 2006: 188). Especially in environments characterised by (civil-) war, this decreases the risk of getting kidnapped, injured,

or even killed. Another – totally different - issue tackled by pool sharing of human resources are funding constraints. An example of this would be the joint generation of funding appeals and project proposals that address public funding mechanisms like the United Nations Central Emergency Response Fund (CERF). Another example would be joint fundraising via commonly operated websites or social network groups in order to reach private individuals.

In order to reduce security risks humanitarian actors put together personnel in order to form convoys of vehicles. Funding risks are addressed by joint appeals.

Figure 67: Pool Sharing of Human Resources: Risk Factors Addressed

Pool sharing of inventory space

This approach to pool sharing reaches from commonly operated inventory centres to reserve capacity one organization has in the storage facilities of its partner. Especially the latter version can help to reduce funding risks. Today aid agencies compete for donor funding. Donors, on the other side, are likely to choose actors that have a special core competence. One of these core competencies would be to provide basic shelter everywhere in the world at record speed. Pool sharing of inventory space supports this as the applying agency is able to rapidly start operations even in countries where it does not have warehouses through its ability to ship goods to the storage facilities of its local partners. The communication of this capability – often under the name of global pre-positioning – helps to avoid funding constraints and thus secures activities.

Pool sharing of distribution

This variation of the pool sharing concept mitigates security risks. As was elaborated before traffic and vehicle-related accidents alone are responsible for the major share of humanitarian workers that are either injured or killed. The reasons behind this fact are dangerous routes with regard to road conditions and/or possible ambushes of insurgents or driver fatigue. Therefore it is opportune in such circumstances to reduce shipments to the absolutely necessary.

The pooling of asset capacity of trucks or ships is thus an adequate means to reduce an organization's risk to the minimum. McGuire states:

“The ‘economies of risk’ requires using larger vehicles, consolidating consignments into full car or truck loads and reducing delivery frequency and flexibility if necessary. For the driver and the assets, the risk of travelling through a dangerous area is the same whether the vehicle is empty or full. Consequently two deliveries with a half full vehicle will double the risk for the driver. Likewise two deliveries of full car loads incur twice the risk of a single delivery with a truck which can carry the same load as two cars.” (2006: 187)

In dangerous circumstances it is opportune to reduce shipments to the absolutely necessary. The pooling of asset capacity is an adequate means to achieve this.

Figure 68: Pool Sharing of Distribution: Risk Factors Addressed

Pool sharing of relief goods and equipment

Analogous to pool sharing of inventory space this approach underscores the organization's capability of starting operations anywhere at record speed. This is possible through the rapid availability of special goods or equipment through partner agencies. The risk of funding is thus supposedly reduced as the humanitarian actor in question is able to show a distinguishing core competence that attracts donors.

4.4.3. Increase of Service Level

The pool sharing concept not only has the possibility to reduce costs and risks, but also to enhance an agency's service level. Sharing capacity adds flexibility as well as operational and geographical range, and thus makes an organization more capable and beneficiary-oriented.

Within the humanitarian world, though, there is often a different understanding of who these beneficiaries are. Many NGOs, for instance, would call their donors 'customers' and the people they help 'victims' or 'affected population'. These organizations primarily feel responsible to their funding sources (Oloruntoba and Gray 2002; quoted in Oloruntoba and Gray 2009: 490). Anyway, the majority of

aid agencies supposedly define the affected people as customers. Following Oloruntoba and Gray – who adopt the commercial customer service perspective to the emergency response context - these customers, not the sources of funds, “should be the focus of emergency relief chains because they[...]may be affected by injury, illness, hunger, thirst, homelessness, and so forth” (2009: 489). Similarly argues McGuire who states that “customer satisfaction[...]also applies to humanitarian organizations” (2006: 126).

Through this adoption of commercial customer service perspective to the humanitarian context, the definition of service level changed. Whereas the former notion provides supreme customer service to the most profitable products and services (Christopher 1998: 59; quoted in McGuire 2006: 132), the latter provides supreme customer service to the most critical goods and services (McGuire 2006: 132). Generally the notion of customer service in a relief context - that is non-repetitive, non-routine, and non-profit - is scarcely researched (Oloruntoba and Gray 2009: 486-489).

Anyway, important things to notice when talking about customer service in this context are that - besides the unpredictability of demand in crisis relief - (a) end users of goods are normally no clients of the vendor, transport-provider, or donor (Long and Wood 1995: 213), (b) end users usually do not have any formal claims against ‘sponsors’ of funds, goods, and services (Long and Wood 1995: 226), and (c) emergency relief chains are characterised by a high number of volunteers that lack training (Oloruntoba and Gray 2003; quoted in Oloruntoba and Gray 2009: 490).

Sharing capacity makes an organization more capable and customer-oriented. Customers of aid actors are the beneficiaries. Applying the commercial customer service perspective on humanitarian logistics is difficult due to the characteristics of humanitarian affairs.

Figure 69: Customer Service Perspective on Humanitarian Logistics

Aid agencies have to deal with these circumstances. Anyway, some of them supposedly have the false indicators of a proper customer service in crisis relief as Oloruntoba and Gray argue:

“For example, NGOs have such internal measures of customer service performance as tones delivered on-site damage-free, number of containers arriving on-site on time, number of aid-users fed per day, or number of relief staff arriving promptly in the disaster zone.” (2009: 494)

These indicators are too technical and neglect the perspective of beneficiaries: McGuire states:

“Logistics services of humanitarian organizations need to develop a general customer service policy but also need to tailor services to the context, constraints and requirements of individual humanitarian assistance programmes as well as to the needs of the respective end-users.” (2006: 131)

Pool sharing, on the other side, demands incorporation of this view as it is all about how to reach more beneficiaries in less time, how to promote cooperation in order to add service complementarities, how to promote different skills and ways of reaching people, and the like. The remaining subchapter presents examples of this outcome, thereby again following the familiar categorization of pool sharing types.

Pool sharing of information

Tomasini and Van Wassenhove state that “information is the foundation upon which the humanitarian supply chain is designed, formed, and managed” (2009b: 90). Anyway, as already elaborated in 4.4.2 *Decrease of risk*, due to time pressure and other obstacles aid agencies regularly are not able to adequately process information. This situation leads to incorrect decisions with regard to meeting beneficiaries’ needs. In order to reduce the probability of decisions based on biased respectively fragmentary information, both preferences and available information of a humanitarian actor must be taken to a higher level. The way to reach this goal is pool sharing of information. As partners share data,

information, and knowledge, they refine their decision-making and thus the service level of aid. Especially knowledge is of utmost importance to more customer service. Thereby the following is valid: “The maximum value of knowledge is produced only when it is captured and shared among the different stakeholders” (Tomasini and Van Wassenhove 2009b: 115) or ‘The higher the knowledge level, the higher the service level’.

Practical examples of pool sharing of information with regard to an increase of service level would be needs assessment, demand forecasting, and food distribution. These intertwined tasks are of essential importance for crisis relief. Unfortunately, they are often conducted rather separately than together. Perry, for instance, reports that in the 2004 Asian tsunami emergency response “the majority of the needs assessments were made separately by the international aid agencies for their own particular requirements” (2007: 420). Hence it would be opportune to work together and share information.

With reference to needs assessment pool sharing of information is key as today’s emergencies are very complex, making joint analyses a factor in increasing service level. Similarly forecasting based on pool sharing of information delivers better results with respect to precision as demand is aggregated. The better data, information, and knowledge are, the better the forecast will be. Indeed, if two humanitarian agencies share needs and forecasting information, this reduces not only the bullwhip effect and thus the cost of inventory, but also increases service level as recipients get aid in time and at the right amount.

Another example of this approach to pool sharing would be food distribution. Regarding the equal distribution of nutrition the proper update of beneficiary lists is of extraordinary importance (Mayr 2006: 76). If aid actors share information relating to this matter, this leads to more flexible and accurate registers and thus enhanced customer service as unequal food distribution is prevented. Further organizations often agree on ration cards that make the fast identification of

groups of beneficiaries easier (Mayr 2006: 76). These are often colour-coded and enable the instant determination of groups like ‘Families with children under five years’, ‘New arrivals’ ‘Locals’, or ‘Internally displaced persons’ (OHA 2003; quoted in Mayr 2006: 76).

As partners share information they refine their decision-making and thus the service level of aid. Practical fields of application would be needs assessment, demand forecasting, and food distribution.

Figure 70: Pool Sharing of Information: Service Level Factors Addressed

Pool sharing of human resources

This approach to pool sharing leads to flexibility and specialization and thus enhances agencies’ service level. As argued in 4.1. *Pool sharing of civil actors*, pool sharing of human resources starts where pool sharing of information ends. The latter being a prerequisite for the former, cooperation enters a new stage. An example of this relationship would be needs assessment and demand forecasting that were elaborated in the section above from the ‘pool sharing of information view’. The ‘pool sharing of human resources view’, on the other side, is based on information sharing, but further incorporates the notion that personnel from different aid actors comes together in order to work on joint needs assessments and joint forecasting. This supposedly makes reports about end user demand and planning documents even more precise, a service level-increasing factor.

Another example would be the HELIOS open source software developed and implemented by NGOs active in humanitarian aid as well as research and policy making. This joint project resulted in a successful common supply chain software platform whose functions presumably could not have been specified without the countless working hours of people coming from diverse NGOs. These functions alone increase the service level of HELIOS-applying organizations⁷⁸. In addition

⁷⁸ Inter alia tracking and tracing (T&T). In relation to T&T Pettit and Beresford, for example, speak of a “potential to significantly improve the effectiveness of aid delivery and minimise waste” (2009: 458).

the software can be customized, a fact that lays the ground for more flexibility in the field, which is – vice versa – a trigger of service level improvement. Another benefit is speed. Oxfam, for instance, has covered 75% of its supply chain with HELIOS within 18 months (Fritz Institute 2009a). From this speed – possible due to open source software and information sharing with developers and implementers – current and future beneficiaries profit.

Another example with regard to specialization provides the World Food Programme (WFP). This agency uses stand-by partners that contribute with cadres of specialists to logistical operations (Scott-Bowden 2003: 18). This helps to increase service level as demand for special services⁷⁹ is satisfied in a flexible and fast manner under the umbrella of WFP's field operations.

In order to get more precise and faster results personnel from different aid actors comes together in order to work on joint needs assessments, joint forecasting, joint software development, or joint research and policy making.

Figure 71: Pool Sharing of Human Resources: Service Level Factors Addressed

Pool sharing of inventory space

The main advantage of this approach is global pre-positioning. As sharing inventory space with partners around the globe is possible, agencies elevate the service level as they can respond faster and operate more flexible. This is especially valid for small niche actors like providers of special health care. An example with regard to fast response would be the UN Humanitarian Response Depot (UNHRD) in Southern Italy which is commonly operated by the UN, the Italian government and diverse partner agencies (Mayr 2006: 54). As the relief goods and equipment stored in the warehouse are already cleared through customs, participating actors can start operations at an adequate speed. More flexible operations, on the other side, are guaranteed through a worldwide

⁷⁹ These include not only special capabilities in logistics, but also in terms of languages and cultural competence (Mayr 2006: 24).

network of inventory space sharing partners that make an organization's geographical range of operations more comprehensive.

Pool sharing of distribution

It is about sharing distribution capacity in the form of free volume in aircrafts, trucks, ships, trains, cars, and the like. Due to the consolidation of relief shipments more beneficiaries can be served in time and existing ones more frequent. The first goal is attained as excess capacity is avoided and thus more relief goods and equipment find their way to victims in time. Especially in the immediate post-disaster phase this is of utmost importance. Also the second objective – more frequent shipments – is achieved through more consolidation of cargo heading for the same destination. As organizations pay reasonable prices while shipping small amounts, a high transport frequency is feasible. This is essential particularly for slow-volume shippers like health care providers (McGuire 2006: 189).

Pool sharing of relief goods and equipment

This type of pool sharing provides flexibility and a time advantage similar to the ones elaborated above. As participating actors are able to use supplies from partners, their range of potential operational activity widens. If necessary, for example, organization A is able to request a water and sanitation unit from B and vice versa. From a service level perspective this concept is especially valuable when the participating agencies are specialized and need the requested supplies only occasionally or for short periods of time. Then, the transaction costs⁸⁰ and thus time are relatively low – the population affected by a crisis can be extensively sheltered even by specialized actors within a short period of time. The WFP again uses this approach with its standby partners that deploy service packages which - inter alia - comprise relief goods and equipment (Scott-Bowden 2003: 18).

⁸⁰ For more information, see 4.4.1, section pool sharing of relief goods and equipment.

4.4.4. Increase of Income

The last benefit of pool sharing constitutes the increase of income. As the humanitarian actors portrayed in this thesis are non-profit organizations, income stands for funds of sponsors like private individuals, business, government agencies, foundations, academic institutions, and many more. In 2005 the annual budget of international NGOs was estimated to be US\$ 26.9 billion (Gatignon 2007; quoted in Koch 2009: 1). As many actors involved in humanitarian work compete for funding, it is important for an agency to be outstanding with regard to quality, quantity, speed, or flexibility. It is important to have a core competence that distinguishes one from another. Oloruntoba and Gray state with regard to NGOs:

“Efficient emergency relief chain performance has implications for NGO business continuity.[...]Consequently, only those international NGOs that can leverage emergency relief chain management as a differentiator and competitive tool in the ‘crowded’ humanitarian sector are likely to possess a sustainable competitive advantage in the competition for donor funds, thereby guaranteeing their business continuity and survival.” (2009: 494-495)

Oloruntoba and Gray list supply chain management (SCM) as key differentiator that provides a sustainable competitive advantage (2009: 495). Recovering the already elaborated facts of this thesis it can be argued that pool sharing is embodied in the SCM concept. Its principles like value-oriented cooperation mirror those of SCM. Consequently the author of this thesis believes that pool sharing can support an agency’s core competence and is itself a competence that can make the difference. Tomasini and Van Wassenhove, for instance, call a “central platform” of agencies⁸¹ – a structure well known in pool sharing – a key differentiator when it comes to donor funding as the administrative costs of the platform are lower than those of solo-acting organizations (2009b: 85-86). In conclusion all the manifestations of pool sharing presented in chapter four – already realized or yet concept – have the potential to constitute this competitive advantage and secure an agency’s funding.

⁸¹ The in 4.2.3 presented HELIOS Users Group (HUG) would be an example of a central platform.

4.5. Obstacles to Pool Sharing

This subchapter deals with obstacles to pool sharing. Before the four main obstacles are presented – namely donor orientation, competition, organizational culture, and lack of strategic thinking – the context of pool sharing is briefly reviewed.

Pool sharing is an eligible concept within humanitarian logistics whose main benefits are a decrease of cost, a decrease of risk, an increase of service level, and an increase of income. However, it is mainly conceptual as the number of organizations that thoroughly apply pool sharing is supposedly low⁸². Many logisticians prefer to work on their own with only little cooperation (Thomas and Kopczak 2005: 6). Schulz and Heigh, for instance, attach logistics personnel little willingness to account for best practices either applied by other humanitarian actors or by private business (2007; quoted in Pettit and Beresford 2009: 451). Reasons for the former may be the reluctance of NGOs to communicate - this is especially valid for Southern NGOs (Lenzen 2001: 12; quoted in Appel 2009: 97) – and the conflict of an organization's self-interest and its professional interest (Brock 2001; quoted in Appel 2009: 97). The actors themselves respond differently. Asking, for example, major Austrian relief organizations about cooperation during the 2004 Asian tsunami emergency response, Bock found out that they reduced cooperation to information sharing due to different philosophies, key activities, goals, budgets, and so on (2006: 52). In addition they tend to work within the existing network structures of their partner organizations (Bock 2006: 52). The Austrian Red Cross works within the IFRC, CARE Austria within CARE International, and the like.

⁸² Some findings of a study of Koch and Van der Laan: although 58% of 47 questioned NGOs in the Arusha region of Tanzania (characterised by agency concentration) have cost sharing agreements with other organizations, only 43% share human resources, 34% share means of distribution (especially vehicles), and 27% conduct joint fundraising (2007: 7). Regarding the sharing of information in the relief efforts triggered by the 2004 Asian tsunami 56% of logisticians shared information about how to set up the supply chain (Thomas and Kopczak 2005: 6).

However, besides the lack of communication, ad-hoc management and well-established agency-specific networks, the author of this thesis chose donor orientation, competition, organizational culture, and lack of strategic thinking to be the main obstacles to pool sharing.

Following research humanitarian logistics are characterized by a reluctance of agencies to communicate and the conflict of an organization's self-interest and its professional interest. The actors themselves speak of different philosophies, key activities, and goals and prefer to work in the network structures of their partners.

Figure 72: Obstacles to Pool Sharing: Reasons

4.5.1. Donor Orientation

Basically donors are - as income-providing institutions - very important stakeholders of humanitarian organizations. Their importance must be taken into account and their interests, requirements and conditions considered (Thomas and Kopczak 2005: 11). This basic donor orientation is valuable. Anyway, often the relation between sponsors and aid agencies incorporates dynamics that prevent interagency cooperation and thus pool sharing. Their consequences – at the same time the name of the following sections – are misguided funding, earmarked donations, and adoption of donor structures.

Misguided funding

When we talk about the work of humanitarian actors, basically programs and support services are meant. The former activities are highly 'visible' and include services like the provision of food, water, shelter, sanitation, and the like, whereas the latter ones are rather 'invisible' and comprise logistics, technology, communication, human resources, and more (Thomas and Kopczak 2005: 5). Pool sharing is incorporated within the second – 'invisible' – sphere. As it combines logistics, technology, communication, and human resources, it provides the basis for the front-line activities mentioned above. Unfortunately,

donors want to fund programs, not support. Regarding logistics, for example, Thomas argues that many sponsors not even understand its role and importance (2003: 1). Hence receivers of funding would spend their money on operations rather than on administration (Lewis 2007: 20). Thomas and Kopczak state:

“Funds are usually allocated by donors to programs with a certain percentage allowed for administration, which includes support. Thus, the focus is on short-term direct relief rather than investment in systems and processes that will reduce expenses or make relief more effective over the long-term. As a consequence, logistics and other support services may not have adequate funding for strategic disaster preparedness, and investing in infrastructure, such as information systems⁸³, is discouraged.” (2005: 5)

Arguable aid agencies follow this direct requirement. It is called direct as it is usually bound to public support and thus funding. Nevertheless, thereby pool sharing is impeded as “strategic disaster preparedness opportunities are discouraged” (Thomas 2003: 7).

In contrast to ‘invisible’ activities like logistics or information technology, donors tend to fund ‘visible’ ones like the provision of water or shelter.

Figure 73: Obstacles to Pool Sharing: Misguided Funding

Earmarked donations

Another type of direct requirement is an earmarked donation. Regarding procurement, for example, there are basically many possibilities for humanitarian actors. They could choose between an open and a restricted tender (McGuire 2006: 142) as well as pool sharing where information with partner agencies is shared or even joint purchasing agreements are stipulated. Anyway, often national legislation and – especially – donor requirements must be considered (McGuire 2006: 142). Sponsors may, for instance, tag donations to a special source of supply, to a country of origin, or even to a type of purchase like collaborative sourcing. The first two examples do not support any pool sharing

⁸³ Mayr, for instance, lists e-procurement, advanced tracing and tracking methods, and inventory management systems (2006: 87).

thoughts, whereas the third one does. Hence donors – through their requirements – have the possibility to do both encourage and discourage pool sharing. However, historically sponsors have not fostered clear incentives to coordinate and cooperate (Tomasini and Van Wassenhove 2009b: 85). Unfortunately, this pattern still appears to prevail today. Tomasini and van Wassenhove state:

“Agencies also differ in their funding mechanisms which have a direct impact on their flexibility. Earmarked donations pose a challenge for coordination, limiting the ability of agencies on the ground to reallocate resources as they deem most suitable.” (2009b: 84)

Sponsors often tag donations to a special source of supply or to a specific country of origin.

Figure 74: Obstacles to Pool Sharing: Earmarked Donations

Adoption of donor structures

As we have heard before, donors tend to fund operational rather than strategic disaster response and may require earmark donations – both direct formalities that humanitarian actors usually comply with in order not to lose income. Sometimes aid agencies even – consciously or unconsciously – adopt their organizational structures to those of their sponsors. In this case we can speak of an indirect requirement. This is especially valid for NGOs. Their work is often characterized by a cycle of temporary and underfunded projects and thus they “live from grant to grant and project to project” (Gustavsson 2003: 7). In order to secure long-term funding many organizations start to align their funding applications and their financial conduct⁸⁴ to those of their donors. Regarding ‘Northern’ NGOs this development has been recorded by Kuhn who traces this change back to co-financing agreements stipulated by donors (2005: 171-173; quoted in Appel 2009: 129).

⁸⁴ This comprises accounting, reporting, and the like.

Further bureaucratic structures manifest themselves due to strict regulations relating to the sizes of food aid, and the categorization of beneficiaries (Feldbrügge 2001: 76). These new administrative demands on aid agencies are challenging. Suzuki states:

“NGOs which are funded by donors must always prioritize the provision of reports and information to these donors, but at the same time the organization must maintain a focus on the implementation of projects and the maintenance of effective relationships with the beneficiaries.” (1997; quoted in Lewis 2007: 202)

Altogether this situation incorporates considerable problems to pool sharing as it makes the – besides agency-beneficiary and agency-donor cooperation - third layer of humanitarian work, namely agency-agency cooperation, even more difficult. As an organization’s capabilities are limited, and used to full capacity, inter-agency activities like joint appeals for funds are often neglected. In addition, following Carroll, this growth of ‘contracting’ reduces organizational learning and effectiveness in general (1992: 18; quoted in Lewis 2007: 77).

In order to secure funding many organizations start to align their financial conduct to those of their donors. This growth of contracting impedes pool sharing as an agency’s capabilities are limited and joint appeals for funds thus neglected.

Figure 75: Obstacles to Pool Sharing: Adoption of Donor Structures

This subchapter has dealt with donor orientation. Dynamics of donor-actor relations often constitute an obstacle to pool sharing as they often lead to conforming actions of aid agencies and thus to misguided funding, earmarked donations, and adoption of donor structures. Oloruntoba and Gray conclude:

“A significant proportion of the problems, challenges and complaints associated with both the international and domestic management of emergency relief chains may be traced to a simplistic, almost exclusive customer service focus (and reliance) on governmental donors and their agencies.” (2009: 488)

4.5.2. Competition

This subchapter deals with competition as obstacle to pool sharing. Before two main drivers of competition in the humanitarian world are analysed in detail – namely power and agency concentration – the general context of competition in this sector is presented.

An aid agency has two types of interests, professional and selfish ones. In an ideal world, the former interests would by far outweigh the latter ones, and all participating actors in crisis relief would have the same goals as well as thorough knowledge with regard to the capabilities of the other partners (Relief Web 2005; quoted in Mayr 2006: 24). Anyway, in the present world it appears that professional and self-interests are in constant struggle for the lead. On the one hand there is cooperation to achieve humanitarian objectives, whereas on the other hand there is competition (Mayr 2006: 24). Thereby self-interest especially addresses an organization's mode of operating and funding (Long and Wood 1995: 216-226). Thus fundraising is of major importance as first, aid actors presumably do not have any income generated by own products or services, and second, limited resources trigger competition (Tomasini and Van Wassenhove 2009b: 84).

Hence competitive patterns have flourished between UN agencies and international NGOs (Stephenson 2005; quoted in Oloruntoba and Gray 2009: 495). These patterns are fortified if aid actors neglect to differentiate themselves. With regard to NGOs Oloruntoba and Gray state:

“Many humanitarian NGOs do exactly the same things: they go to the same donors (governments, institutional and private); they use the same mass media to raise funds; their marketing strategies are very similar; and they use the same transport carriers and logistics service providers.” (2009: 495)

Especially marketing is of major importance when it comes to fundraising. The more distinguishable an agency is, the easier is it to market itself as something

special. Eventually this may culminate in being a brand. If, however, an organization lacks to achieve this, other actors will be able to quickly copy any new marketing strategies employed (Daugherty, Stank, and Ellinger 1998: 47). The result is competition and “often to the detriment to valuable coordination” (Fenton 2003: 24). Thus it would be purposeful to give these organizations an incentive to collaborate. Then their cooperation itself would incorporate a distinguishing effect and promote funding. So far donors have lacked to do this as Tomasini and Van Wassenhove report:

“They (note: donors) have indirectly promoted competition by funding individual agencies based on their standalone performance,[...]capacity, and, to some extent, branding.” (2009b: 85)

In the humanitarian sector professional and self-interests are in constant struggle for the lead. Due to limited funding, competitive patterns have flourished. These patterns are fortified if aid actors neglect to differentiate themselves. So far donors have rewarded individual, but not joint differentiation.

Figure 76: Competition in the Humanitarian World

OCHA and UNJLC⁸⁵ aim at avoiding competition. However, due to power and agency concentration a certain degree of competition is likely to remain.

Power

Every cooperative effort needs the sharing of information. This force for good may be at the same time seen as a force for evil. This is because of the fact that information is power. Data, information, and knowledge usually make an organization special and thus may deliver a competitive advantage. Agencies fear to lose this advantage when they share information with others. As these patterns of power are supposedly valid for both the corporate⁸⁶ and the humanitarian world, we can use an argument of Bowersox, Closs and Cooper

⁸⁵ Others would be the Humanitarian Logistics Association (HLA) or the International Federation of Red Cross and Red Crescent Societies (IFRC).

⁸⁶ Harrison and Van Hoek, for instance, identify the misuse of power as a main barrier to a functioning supply chain (2002: 236).

who state that “in most business situations, knowledge is power, so unwillingness to share and a general lack of understanding how to share knowledge are not uncommon” (2007: 259).

A type of power-bearing information that agencies are reluctant to share is funding source information (Lewis 2007: 184). Another would be information about logistics processes – thereby Mayr even attests many organizations to follow the “The organisation which is first at the disaster site gets more publicity and thus more donations” principle (2006: 87-88).

Information is power. Thus many organizations are not willing to share it. A type of power-bearing information that agencies are reluctant to share is funding source information. Another would be information about logistics processes.

Figure 77: Power – Background of Competition

Agency concentration

The second driver of competition presented is agency concentration. As explained in 3.4.5 *Location decisions*, increasing returns to scale, labour mobility, and path dependence are triggers of NGO concentration. This phenomenon causes competition and thus impedes cooperation. In literature on humanitarian logistics such statements can be found on a regular basis. Thomas and Kopczak, for instance, argue that “with an increasing number of aid agencies, the competition for donor funding is getting more intense” (2005: 4). Similarly Perry reports with regard to the 2004 Asian Tsunami that “the presence of so many aid groups hampered coordination efforts” (2007: 421). In order to better understand this connection between agency presence and competitive patterns, we first have to distinguish between different types of cooperation. Thereby a reference is made to chapter 4.1 where those levels of cooperation were already explained. These were introduced by Koch who set up the following benefit-oriented classification scheme (2009: 130):

- *Level 1 cooperation* is characterised by high selective benefits for individual NGOs, but not for the end beneficiaries. A classic example of this level would be cooperation that aims at the funding supply constraint like joint fundraising via websites, joint project proposals or joint appeal for funding.
- *Level 2 cooperation* stands for general benefits for both individual NGOs and the target group. It usually aims at operational quality like joint training centres for staff or a mutual quality control system.
- *Level 3 cooperation* delineates high benefits for the end beneficiaries, but not for the individual NGOs. Activities like the coordination of regional and thematic priorities fall into this level.

Given this basic information the elaboration of the causal connection between organizational concentration and competition can be started. Works on this issue can be both conceptual and practical.

Authors like Cooley and Ron (political economy applied on NGOs), Giles and Evans (social psychology applied on inter-group hostility), and Olson (political economy on collective action) argue from a theoretical point of view. Cooley and Ron, for instance, assert that the more local concentration of aid agencies takes place, the more strategic and opportunistic behavior would be the consequence as organizations seek to secure their survival (2002; quoted in Koch 2009: 128). Similarly, Giles and Evans - who use a power-oriented approach - come to the conclusion that increasing concentration would result in individual action to struggle for the control of economic, social, and political structures (1986: 483). Also the argumentation of Olson relates to the former ones. He argues that in bigger groups individual benefits would become less noticeable, whereas transaction costs would increase - an incentive-reducing situation that eventually leads to less cooperation (1971: 62). As we have seen, theoretical publications from 1971 to 2002 state 'The more concentration, the fewer cooperation' and

trace this competitive pattern back to the conflict about influence spheres. Arguable the trigger of cooperation manifests itself in the selective benefits for the individual organization, and not in the common benefits for the group (Olson 1971: 2). As Olson argues this is especially valid for medium- to large groups:

“Indeed unless the number of individuals in a group is quite small[...]rational, self-interested individuals will not act to achieve their common or group interests.” (1971: 2)

This has an impact on the level of cooperation preferred by humanitarian actors. Thus the conceptual approaches presented before are applied on the cooperation classification scheme of Koch. Thereby, level 1 cooperation - exclusively benefiting individual organizations - manifests itself often and following Olson is the maximum cooperation level of large groups⁸⁷ (1971: 2, 62). Level 2 cooperation benefits both agencies and the target group, and according to Olson would be the maximum cooperation of small groups (1971: 2, 62). The third level of cooperation provides mainly collective benefits. Its manifestation follows the ‘Value especially to beneficiaries, but not to agencies’ pattern and is supposedly rare. Interestingly, collective benefits tend to reach their maximum at medium-level concentration due to existing NGO complementarities and modest competition for funding and beneficiaries (Wade 1988; Barr and Fafchamps 2005; both quoted in Koch 2009: 128-130).

Practical approaches to the concentration-competition issue deliver a NGO study of Van Laan and a NGO simulation game of Koch, both simultaneously conducted in 2007 in the Arusha region of Tanzania, Africa. The former is a classical survey made up of 47 structured interviews (Van Laan 2007: 16). Its two main findings are now introduced to the reader. First, Van Laan found out that 69% of respondents state to cooperate on level 1, 57% on level 2 and only 9% on level 3 (2007: 39). Second, it shows that the more concentration occurs

⁸⁷ This is valid unless there “is coercion or some other special device” (Olson 1971: 2). Olson names “the force of patriotism, the appeal of the national ideology, the bond of a common culture, and the indispensability of the system of law and order” (1971: 13).

(Arusha city), the lower cooperation (fewer hours) is (Van Laan 2007: 32). Both points basically validate the theoretical assumptions presented before. The second endeavour to proof the causal connection between concentration and competition is the NGO game conducted by Koch with the help of 37 participating agencies (Koch 2009: 172). The findings of this extensive simulation game⁸⁸ are analogous to the ones of the survey:

“The more concentrated teams (teams that worked on the same theme and/or had more players) scored lower on cooperation. They succeeded in funding fewer joint projects that benefited the community.” (Koch 2009: 137)

Consequently Koch concluded his research by stating that both survey and game “make it clear that high levels of concentration tend to reduce cooperation” (Koch 2009: 143). Interestingly, both empiric studies listed fundraising - an example of level 1 cooperation – the only exemption of this relation. NGOs reported to continue respectively continued this type of joint action even in a competitive environment (Koch 2009: 143). Koch comments this with “NGOs are only willing to cooperate when it benefits their own organization, and cease to do so when those benefits are not guaranteed” (2009: 143).

In bigger groups individual benefits become less noticeable, whereas transaction costs increase - an incentive-reducing situation that leads to less cooperation and more competition for the control of economic, social, and political structures. Consequently, following a survey of 47 NGOs in Tanzania 69% cooperate on level 1, 57% on level 2, and only 9% on level 3 (Van Laan 2007: 39).

Figure 78: Agency Concentration: Trigger of Competition

⁸⁸ For information regarding internal (game design) and external validity (survey), see Koch 2009: 139-141.

4.5.3. Organizational Culture

This subchapter deals with organizational culture as obstacle to pool sharing. Before presenting manifestations of this scenario, characteristics of aid agencies' organizational culture are presented. They lay the background of this challenge to pool sharing.

Characteristics of aid agencies' organizational culture

This section starts with a quote of Osborne and Plastrik who define organizational culture to be “a set of behavioural, emotional, and psychological frameworks that are deeply internalized and shared by the organization's members” (1998: 255). This shared value system guides individual and collective decision-making and thus is a strong determinant for all activities. Regarding humanitarian actors these common frameworks relate to “the alleviation of suffering of victims of disasters and humanitarian emergencies” (Thomas 2003: 7)⁸⁹.

Anyway, at the same time organizational culture can be a challenge to new logistics approaches like pool sharing. The reasons behind this may be either general or specific to the humanitarian sector. An example of the former would be information. As was explained in the previous subchapter individual knowledge is power – a situation that impedes pool sharing unless the perceived benefits of shared knowledge are high enough to change this. With regard to organizational culture information is essential too. Data, information, and knowledge gathered, compiled, and created by an organization, form its specific culture. It is when this information becomes sacred that pool sharing is discouraged. The main reason behind this may be that pool sharing incorporates new and/or differing information. It is hard to replace old ideas and realities with new ones if data, information, and especially knowledge are “entrenched and hard to replace” (Tomasini and Van Wassenhove 2009b: 129).

⁸⁹ Values are based on general assumptions of life. In this case they could be traced back to faith, the humanitarian principles, altruism, and the like.

An example of the latter – reasons specific to the humanitarian sector – would be aid agencies’ values regarding the recruitment of logistics personnel. Thereby humanitarian actors tend to appreciate an individual’s attitude more than his or her capabilities. Consequently many neo-logisticians have no prior on- or off-the-job training. Thomas reports:

“People who choose a career in this world come from diverse and varied backgrounds. Our sample of head logisticians included an actor, an osteopath, an extreme sports enthusiast, a nurse and a country manager.” (2003: 7)

Following Oloruntoba and Gray only 45 out of 100 logisticians of humanitarian organizations have a university degree or any other formal qualification in areas like transport or logistics (2003:4; quoted in McGuire 2006: 33). This type of culture tends to promote logisticians that are rather attitude-led than capability-led. Their focus is rather on the ‘big thing’ than on process improvement (Thomas 2003: 7) and their background often lacks any experience with corporate logistics management (Gustavsson 2003: 7). Even if this slowly starts to change, it is still a situation leading to mismanagement and lack of strategic thinking. Pool sharing, however, needs strategic thinking. Whereas examples of mismanagement are presented in the next section, lack of strategic thinking is elaborated in the following subchapter.

Organizational culture can be a challenge to pool sharing. The reasons behind this may be either general or specific to the humanitarian sector. An example of the former would be information as it forms an organization’s specific culture. It is when this information becomes sacred that pool sharing is discouraged. An example of the latter would be aid agencies’ values regarding the recruitment of logistics personnel. As these are rather attitude-led than capability-led, only 45 out of 100 logisticians have a formal qualification in transport or logistics.

Figure 79: Organizational Culture: A Challenge to Pool Sharing

Manifestations of the obstacle ‘organizational culture’

The author of this thesis chose three examples, namely lack of institutional learning, ineffective leveraging of technology, and organizational independence. The first phenomenon was explained by Thomas as consequence of “organizational culture and high employee turnover” (2003: 7). Thereby it can be argued that ‘high employee turnover’ also belongs to the sphere of an agency’s value system due to its temporary mission and reluctance to insist on a stable staff. From a value point of view it is accepted to be active as logistician for only nine months or one year. Consequently high (field-) logistics personnel turnover is enabled – Thomas and Kopczak speak of up to 80% (2005: 6). As staff changes frequently, usually information is lost, matters are not followed up, and individual connections with employees of other actors are discontinued. Edwards speaks of a value system that restricts information exchange (1994; quoted in Lewis 2007: 214). And Thomas and Kopczak mention:

“The experience of the occasional veteran logistician is largely tacit and difficult to communicate to the next generation, nor is it transferred from one field context to another.” (2005: 6)

The incubation time of innovative processes is thus elongated. And pool sharing can be regarded as (process-) innovation. The second manifestation is the ineffective leveraging of technology. As the organizational culture of many humanitarian actors for a long time has appreciated mission more than implementation respectively ‘product’ more than ‘process’, opportunities with regard to technology have been wasted. Thomas calls this a ‘pain point’ as “while the technology exists for creating the desired IT solutions[...]organizational culture[...]impeded systems development” (2003: 8).

The third issue to address is organizational independence. Basically a positive thing it can turn out an obstacle to pool sharing when laid out in a radical way. The International Committee of the Red Cross (ICRC) is such a case where the struggle for absolute independence impedes cooperation. Toby Lanzer, the

Humanitarian Coordinator of UN activities in the Central African Republic, had to take this in consideration:

“Of course, some organisations, such as ICRC, are careful of such efforts to bring together the aid community, but we made it clear at each step that joint analysis and coordinated planning would in no way diminish or infringe on the independence of organisations.” (2008: 110)

Red Cross representatives themselves – in this case an Austrian Red Cross officer interviewed by Lipok - state that extensive cooperation with actors like UN agencies or NGOs would be restrictively scrutinized as following the organization’s principle of independence such joint action would not be possible (2007: 79). As dunantists⁹⁰ they see themselves as being different to UN agencies. So the latter would often pursue different politics, e.g. in combination with a peace-keeping mission⁹¹ (Lipok 2007: 107).

As we have seen organizational culture can limit information exchange and logistics capabilities, and thus may lead to a lack of institutional learning, to ineffective leveraging of technology, and to the uncompromising desire to stay independent. Such a value system impedes pool sharing.

Figure 80: Manifestations of the Obstacle Organizational Culture

4.5.4. Lack of Strategic Thinking

Organizational culture can trigger a lack of strategic thinking. This subchapter describes what this implies for pool sharing. These manifestations are now presented in the following sections, namely no recognition of the strategic

⁹⁰ Dunantists solely adhere to the humanitarian principles of humanity, neutrality, and impartiality. Their beliefs follow the ones of Henry Dunant – the spiritus rector of the Red Cross - and they “advocate a non-interventionist strategy in conflict” (Tomasini and van Wassenhove 2009b: 24). For more information see 3.4.2.2.

⁹¹ Peace-keeping missions and large-scale emergencies involve the military. Usually aid agencies neglect cooperation with the military as they fear “that close association with the military could undermine the neutrality, impartiality and independence that characterises humanitarian aid” (OECD 1998: 10). Anyway, regarding large-scale emergencies like the 2004 Asian tsunami such an assessment is unfounded. Following the OECD the UN even build capacity of their aid agencies’ logistics systems in order to “raise the bar’ above which military involvement becomes necessary” (OECD 1998: 15).

importance of logistics, no communication of the strategic importance of logistics, and no understanding of strategic management. Thereby the word ‘no’ is symbolic and refers to insufficient.

No recognition of the strategic importance of logistics

Pool sharing is about individual agencies that share capacity in any form like information, human resources, inventory space, distribution, and relief goods and equipment. A prerequisite of this concept is a supply chain perspective⁹². Bowersox, Closs and Cooper define supply chain management (SCM) as “firms collaborating to leverage strategic positioning and to improve operating efficiency” (2007: 4). However, if aid agencies fail to regard logistics as essential, as key to SCM, this lack of strategic thinking constitutes an obstacle to pool sharing. As this is still common today we have to deal with no recognition of logistics’ strategic importance. Tomasini and Van Wassenhove 2009b state:

“A significant stumbling block to better preparedness in the humanitarian sector has been the failure to have logistics recognized as an essential element of any relief operation.” (2009b: 52)

Similarly argue Fenton (2003: 23) and Gustavsson (2003: 7). Of course, this attitude also affects human resources. From the senior to the field level logisticians are underrepresented. Thomas and Kopczak, for instance, revealed in their research that most budget-controlling jobs are occupied by program staff⁹³, and that only 42% of the field assessment teams active in the 2004 Asian Tsunami emergency response included a logistician (2005: 5). Furthermore logistics personnel lack on- and off-the-job training – a prerequisite of pool sharing. The Fritz Institute⁹⁴ conducted a survey of 104 senior logistics managers employed by 17 different aid agencies in order to explore if the ‘required skills’ in their job are matched by ‘perceptions of available and required training’ (Fritz

⁹² The major difference between commercial and humanitarian SCM is their bottom-line goal: in the former case it is profit, in the latter case it is the adequate service level granted to beneficiaries (Tomasini and Van Wassenhove 2009a: 549)

⁹³ In contrast to support staff. Program staff provides ‘visible’ activities like the provision of food, water, and shelter. Support staff conducts ‘invisible’ activities like logistics, technology, and communications.

⁹⁴ For more information see 4.2.3.

Institute 2007a: 14). The following figure shows the six key skills identified by the respondents and their approval rating as well as the existing training of these skills (expressed in %).

Key Skills	Approval rating in %	Training in %
Managing people who perform logistics	95%	41%
Performance Measurement	91%	41%
Development of logistics strategy	91%	34%
Recruitment and training of new personnel	88%	33%
Setting up supply chains for new programs / operations	85%	39%
Process development	83%	20%

Figure 81: Lack of Strategic Thinking: Insufficient Training of Key Skills
(based on Fritz Institute 2007a: 15)

All these skills are essential to pool sharing. They incorporate the potential to learn from past missions, to constantly think about future requirements, to start matching these requirements with the organization's processes, and to make human resources ready for these processes. Unfortunately however, aid agencies do not adequately address these issues as Fritz Institute's survey shows.

With this background information in mind one should not wonder that there was a lack of qualified personnel in the 2004 Asian Tsunami relief efforts. Following a survey of Thomas and Kopczak 88% of large humanitarian agencies temporarily withdrew senior logisticians from ongoing missions in Sudan in order to fill this gap (2005: 5). Thus: pool sharing needs more ambition. And:

training is not training. Its proper realization needs adequate project management, input from outside the organization, and standardization (Thomas and Kopczak 2005: 6).

No communication of the strategic importance of logistics

Even if aid agencies are aware of logistics' importance, pool sharing potential is often lost due to communication problems. Thomas and Kopczak chose an analogy to explain this issue:

“The transformation of logistics from a peripheral function to a strategic one in the private sector can be traced back to the time when logisticians began to be able to measure and communicate their value.” (2005: 10)

Basically this is also valid for humanitarian logistics. In order to communicate achievements to the public, to donors, to beneficiaries, to governments, or to other humanitarian actors, performance measurement is necessary. Thereby evaluating best practices could be obtained from companies that – like aid agencies – are active in an environment characterised by a series of projects (Thomas and Kopczak 2005: 11).

No understanding of strategic management

Aid agencies lack understanding of strategic management. This inadequate thought and practice may be due to the fact that humanitarian actors historically have shown the pattern of following commercial approaches with considerable delay. NGOs, for example, considered management to be - per se - insufficient to the non-profit sector (Lewis 2007: 191). This attitude has led to a situation where management is only seen on an ad-hoc basis – to the detriment of “formal management training and techniques” (Lewis 2007: 191). Following Dartington this created priorities in management that appreciate mission more than objectives (1992; quoted in Lewis 2007: 191). And this operations-only management is still common.

Another lesson of history provides the strategic planning approach in humanitarian logistics. The strategic planning concept was introduced by academic institutions and large US-American corporations in the 1970s. Ironically it is basically the opposite of the above listed ‘ad-hoc management’. In the humanitarian sector it needed 20 years for this concept to be accepted and implemented – at a time when strategic planning was already considered outdated in private business (Lewis 2007: 23). A phase began where aid agencies – especially big Northern NGOs – have tried to ‘design’ their activities with help of plans. However, how would you ‘plan’ a pool sharing partnership? Plans are too static to deal with this type of active partnership characterised by “ever evolving roles and unexpected outcomes” (Lewis 1998; quoted in Lewis 2007: 185). In addition strategic planners tend to lay a disproportionate focus on their own organizations factors while neglecting the ones of their environment. Lewis states:

“The success or failure of a development NGO therefore depends largely on its ability to influence its environment and appreciate outside forces correctly, and NGOs are more dependent on these external factors than most other organizations.” (2007: 166)

Thus researchers⁹⁵ demand that a truly strategic management perspective - incorporated in overall supply chain management - has to be applied. If the historical pattern of ‘humanitarian management follows business management’ stands the test of time, future humanitarian logistics performance will be measured at the supply chain, and not at the organization level⁹⁶.

Aid agencies often use either some kind of ad-hoc management, or plan-oriented planning procedures. Regarding the creation of an atmosphere that enables pool sharing both management techniques are insufficient.

Figure 82: Lack of Strategic Thinking: Insufficient Management Approaches

⁹⁵ An example being Perry (2007: 414)

⁹⁶ This thought is based on Bowersox, Closs and Cooper who predict the “supply chain as a primary unit of competition” in logistics (2007: 8).

5. Conclusion and Outlook

Conclusion and Outlook consist of three sections. The first is a brief summary of the thesis' scope, structure, and findings. The second answers the research questions stipulated at the beginning of this work. The last section provides an outlook based on the factors that promote pool sharing.

This thesis has dealt with pool sharing in humanitarian logistics. Recovering the already elaborated facts of this thesis it can be argued that pool sharing is embodied in the supply chain management concept. Pool sharing is the capability of pool members to share capacity in any form like information, human resources, inventory space, distribution, and relief goods and equipment. All kinds of actors - civil, public, and private - can be part of such a pool. This thesis, however, focuses on civil actors like non-governmental organizations (NGO) and UN agencies.

Pool sharing – defined as process innovation – is analysed on both the conceptual, and the practical levels. On the former level literature on partnerships is used to define the fundamentals of a pool sharing relationship - the sharing of risk, the free exchange of information, and process integration. In addition different designs of this concept are presented. On the practical level the thesis summarizes the status quo and presents the United Nations Office for the Coordination of Humanitarian Affairs (OCHA), the United Nations Joint Logistics Centre (UNJLC), and the Humanitarian Logistics Association (HLA).

With help of this structure's findings it can be concluded that pool sharing is an eligible concept within humanitarian logistics. Its main benefits are a decrease of cost, a decrease of risk, an increase of service level, and an increase of income. However, pool sharing is found to be mainly conceptual as the number of organizations that thoroughly apply it is supposedly very low, with pool sharing of information being an exemption. Existing obstacles to the implementation of pool sharing turned out to be donor orientation, competition, organizational culture, and lack of strategic thinking.

Q1: Why do organizations cooperate?

This question is of utmost importance to pool sharing. The author sees pool sharing as part of cooperation. Cooperation - joint operation or action (Princeton University 2009) – stems out of a certain relationship between actors. Identified as triggers of cooperation have been interdependence, supply chain management and donor requirements. Interdependence denotes that humanitarian actors are dependent on others with regard to capacity or specialisation. Supply chain management, on the other side, tackles the challenge of globalization. Also in the humanitarian sector globalization is a big issue. Parker states:

“Increasingly a world with fewer boundaries calls for organizations able to transcend vertical and horizontal boundaries and create hybrids that are both cost effective and responsible to local, regional, domestic, international and global communities of interest.” (1998; quoted in Lewis 2007: 132)

These fewer boundaries combined with a higher number of crises and NGOs make it necessary to cooperate. Donor requirements, the third trigger of cooperation, are also influenced by this paradigm shift and now show more incentives for cooperation than in the past.

Q2: What are the fundamentals of a pool sharing relationship?

As there is neither a specified definition of pool sharing nor a defined framework of its characteristics, the author has applied thoughts of business partnership literature as well as his own thoughts on pool sharing in order to close this gap. Pool Sharing is defined by the author as being a partnership – a specific form of relationship within a supply chain. This type of ‘working together’ stands in between arm’s length relationships – where transactions are solely based on the market price – and vertical integration – where two or more actors own a common organization (Harrison and Van Hoek 2002: 218).

Following the author of this thesis a pool sharing relationship’s fundamental requirements are the sharing of risk, the free exchange of information, and process integration. Moreover, pool sharing relationships are characterised by a

part-standardised organizational structure. This means that the partnership has “common elements in organization, terminology, and procedures” (Auf der Heide 1989: 137).

Q3: Which designs of pool sharing exist?

Pool sharing relationships are designed around the type of capacity shared. Some share only information, while others share multiple types of capacities. In total this thesis has identified information, human resources, inventory space, distribution, and relief goods and equipment.

Information - defined as data, information, and knowledge - is the most important capacity and yet the only one widely shared in the humanitarian sector. Examples of information coordinators would be the UN Office for the Coordination of Humanitarian Affairs (OCHA) (4.2.1.2), and the UN Joint Logistics Centre (UNJLC) (4.2.2.2). They collect material of their participating agencies and disseminate NGO contact details, forecasts, GIS-based country maps, infrastructure assessments and updates, transport procedures and schedules, and customs issues.

Manifestations of shared personnel, on the other side, are common projects where persons from different agencies come together in order to work on a specific topic, or even the sharing of persons in the sense of an agency for temporary work. Examples presented in this thesis are – inter alia – the development and implementation of HELIOS software (4.2.3) and WFP’s stand-by partners (4.4.1).

Similar solutions exist with regard to inventory space. Either member organizations provide it to other agencies in exchange of another form of capacity. Or pool partners set up an inventory centre together and thus share investment- and operating costs. Regarding the former type of inventory pool

sharing Bock recommends an online platform that allocates free space to other humanitarian actors in a fast and efficient way (2006: 57).

Sharing distribution capacity in the form of free volume in aircrafts, trucks, ships, trains, and cars, is another possibility of pool sharing. With the help of this approach excess capacity can be avoided and thus costs reduced respectively end beneficiaries faster served. In this matter UNJLC Afghanistan acted as coordinator: especially airlift capabilities and capacities of manifold actors were recorded, matched with the needs of humanitarian actors, and assigned accordingly (Tomasini and Van Wassenhove 2009b: 71-72). Furthermore it would be opportune - analogous to inventory space - to set up an information system that works like a distribution capacity exchange.

The last type of design - pool sharing of relief goods and equipment - is rather conceptual. The WFP again uses this approach with its standby partners that deploy service packages which - inter alia - comprise relief goods and equipment (Scott-Bowden 2003: 18).

Q4: What are the benefits of pool sharing?

With help of conceptual and practical examples a decrease of cost, a decrease of risk, an increase of service level, and an increase of income are identified as benefits of pool sharing.

A decrease of costs can be registered with regard to operations and investments. Thanks to pool sharing operative expenditures – costs of goods and services as well as transaction costs – of tasks like needs assessment, procurement, inventory management, and distribution are reduced. Similarly investment expenditures of projects like software development are shared by partners.

Decrease of risk is another benefit of pool sharing. Thereby risk addresses the aid agencies themselves, and not the victims of a crisis. Especially one type of risk

appears to be mitigated by pool sharing, namely security risk. The sharing of information regarding necessary security preparations, cultural issues, dangerous routes, military checkpoints, reliable middlemen, and more, helps to reduce risks.

In addition pool sharing provides the basis for an increase of service level. Sharing capacity adds flexibility as well as operational and geographical range, and thus makes an organization more capable and beneficiary-oriented. Consequently needs assessment and demand forecasting are more accurate as well as global pre-positioning and more frequent deliveries possible.

Eventually an increase of income can be recorded. Aid agencies depend on donors' funds. Thus it is important for an agency to have a core competence that distinguishes one from another. The author of this thesis believes that pool sharing is a competence that can make the difference.

Q5: What are the obstacles to pool sharing?

Obstacles to pool sharing are donor orientation, competition, organizational culture, and lack of strategic thinking. Thereby especially donor orientation needs further specification. Basically donors are very important stakeholders of humanitarian organizations. Anyway, aid agencies often orientate themselves too much towards their sponsors with regard to questions like 'What has to be funded?', 'Where should these goods be bought?', and 'How should the funding mechanism be designed?' This is important as donors tend to fund highly visible activities like the purchase of 10,000 tons of wheat, but are reluctant to fund 'invisible' activities like logistics (Thomas and Kopczak 2005: 5). Regarding procurement, on the other side, sponsors may tag donations to a special source of supply or to a specific country of origin. Eventually donor orientation can lead to bureaucracy as humanitarian actors tend to adopt their organizational structure to those of their donors. This growth of administrative demands impedes the - besides agency-beneficiary and agency-donor cooperation - third layer of humanitarian work, namely agency-agency cooperation.

Competition is another obstacle to pool sharing. Its roots lie in the funding criteria of donors, use of power, and agency concentration. The funding criteria of donors have benefited single humanitarian actors which are highly distinguishable instead of organizations that work together. In addition aid agencies are often reluctant to share power-bearing information like funding source information or information about logistics processes. Eventually - as both conceptual and empiric works have shown - agency concentration is the third trigger of competition. Theoretical publications as well as a NGO survey of Van Laan and a NGO simulation game of Koch state 'The more concentration, the fewer cooperation' and trace this competitive pattern back to the conflict about influence spheres.

The third obstacle to pool sharing is organizational culture. Principles, for instance, restrict information exchange at the International Federation of Red Cross and Red Crescent Societies (IFRC). Or existing, entrenched ideas and realities are hard to replace.

The last obstacle – lack of strategic thinking – manifests itself in insufficient recognition and communication of logistics' importance, and insufficient strategic management. The first statement refers to the fact that in a sector whose logistics costs account for 80% of total costs, logisticians are underrepresented from the senior to the field level. Moreover logistics personnel often do not have any logistical background respectively do not receive sufficient on-and off-the-job training. The second phenomenon is insufficient strategic management. Many aid agencies either lack any strategic management, or they apply a strategic planning perspective that intends to 'design' all activities with help of plans. However, how would you 'plan' a pool sharing partnership? Plans are too static to deal with this type of active partnership.

Outlook

The outlook deals with factors that promote pool sharing, namely trust and donor requirements. Thereby the first factor has its merits when we talk about agencies that already cooperate in some form or another. In order to make the next step – pool sharing – they have to build trust in each other. It is an aid agency perspective. The second factor – donor requirements – is valid if sponsors intend to promote pool sharing of humanitarian actors. It is a donor perspective.

Starting with trust, it is an endogenous endeavour of extraordinary importance when it comes to an agreement on and the implementation of pool sharing. Thereby knowledge about other organizations is essential as it fosters inter-agency communication and coordination (Dynes and Quarantelli 1970: 5). Knowledge can be acquired with regard to an organization's roles, competence, resources, needs, and terminology (Wenger, Quarantelli and Dynes 1986: 33). Another important issue is the organizational culture of partner agencies. Pool sharing needs some form of agreement with regard to responsibilities, procedures, terminology, and performance measurement. Thereby it is essential to incorporate "existing organizational structures and respective cultures of relevant network members" in order to build trust (Pagram 1999: 28).

However, many humanitarian actors do not intend to form such a thorough form of cooperation. Unlike the profit margin in the corporate sector, the humanitarian sector lacks a clear trigger of cooperation (Tomasini and Van Wassenhove 2009b: 87). This is where donors can play their part. As they are more and more interested in agency cooperation, donors could promote pool sharing through their incentive system. Part of their funding criteria could be a key performance indicator (KPI) that measures the degree of cooperation with other agencies (Fritz Institute 2007a), or – more concrete – the degree of pool sharing. Anyway, this direct requirement could be seen as interference to the work of humanitarian actors, especially of non-governmental organizations. Thus indirect requirements will be necessary as well. Possibilities include the acceptance of insurance, the

granting of credit, and the provision of a premium for actors that apply pool sharing. Donors could accept insurance regarding the political risk of a country or they could grant credit to agencies that invest in shared capacities and the accompanying logistics and IT infrastructure (Koch 2009: 158). An example of the latter would be the funding of inventory space pool sharing by the European Commission Humanitarian Office (ECHO). It sponsors warehouses of both the IFRC and the WFP which also other UN agencies and NGOs are able to use. Another method would be the strategic support of actors active in underfunded crisis regions in order to avoid competitive patterns due to agency concentration. Furthermore sponsors could provide all the above-mentioned incentives in order to enlarge existing pool sharing relationships.

Eventually – this is valid for pool sharing in general - it is important to communicate the benefits of pool sharing to the public. It would be appropriate to find a media partner that conducts coverage of the partnership and thus enables a ‘pool sharing friendly’ environment.

Appendix

Appendix I: Logistical map Sudan

Basic information includes “sea and airlift capacity and availability, transport procedures and schedules, infrastructure assessments and updates, customs issues...; Reporting through specific information products such as Situation reports, bulletins, roads status map & matrix, snapshots” (GLC 2009). The figure below assesses Sudan’s infrastructure.

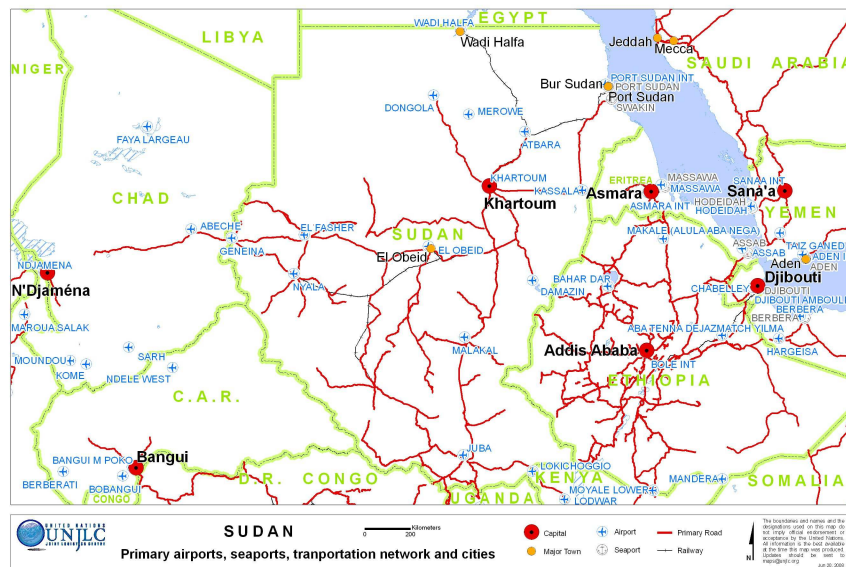


Figure 83: Logistical Map Sudan (GLC 2009)

Appendix I: Cargo Movement Request (CMR) for Joint Supply Tracking

UNITED NATIONS JOINT LOGISTICS CENTER - OPERATION									
CARGO MOVEMENT REQUEST									
INSTRUCTIONS FOR USE: Please complete this form as much as possible and attach a full packing list as a supplement. The form and packing list may be sent electronically to UNJLC. If there is insufficient space in the Load Description area, please use additional forms - please do NOT add lines.						For UNJLC use only		PRIORITY	
						ETD:			
						Mvt Req #:			
<u>Email to</u>									
Organization						One form per destination			
						FROM			
Sender						TO			
Consignee									
Contact				Contact					
Title				Title					
Tel/Sat.				Tel/Sat.					
E-mail				E-mail					
						Ready to Move Date			
If you need to request movement for more than 14 line of commodities, please use several forms, do not add lines to this spreadsheet									
Item	Qty	Unit of Measure	Description of Items	Package Type	Package Qty	Total Gross Weight (Kg)	Total Gross Volume (m³)	Org. Item Desc.	Org. Item Code
Ex	24	kit	Health Kit	pallets	2	15	2	Analysis Kit	ABC123
1									
2									
3									
4									
5									
TOT	0					0	0		
Be prepared to move to shipment to the loading point with 24 hours									
Comments, Special information on cargo (Cold Chain) and Dangerous Goods Info									
<p><i>Dangerous Goods cargo for sea transport according to IMO & operators regulations.</i></p> <p>All customs / governmental / taxation /transport issues should be complete, UNJLC will confirm your booking by return email/phone call/fax</p> <p>I hereby certify that the above cargo either contains no dangerous goods,</p>									
Signature/Name (electronic):									
Callsign/planned date/transport				Callsign/actual date/transport				Remarks	

Figure 84: Cargo Movement Request (CMR) (adapted from GLC 2009)

Appendix III: Helios module structure

Helios software is structured in modules – a fact that provides a lot of flexibility. Like when solving a puzzle, users can decide where to ‘start’. Modules of Helios include Project Management, Request Processing, Procurement, Warehouse, Mobilization, and Tracking. They are presented in the following figure:

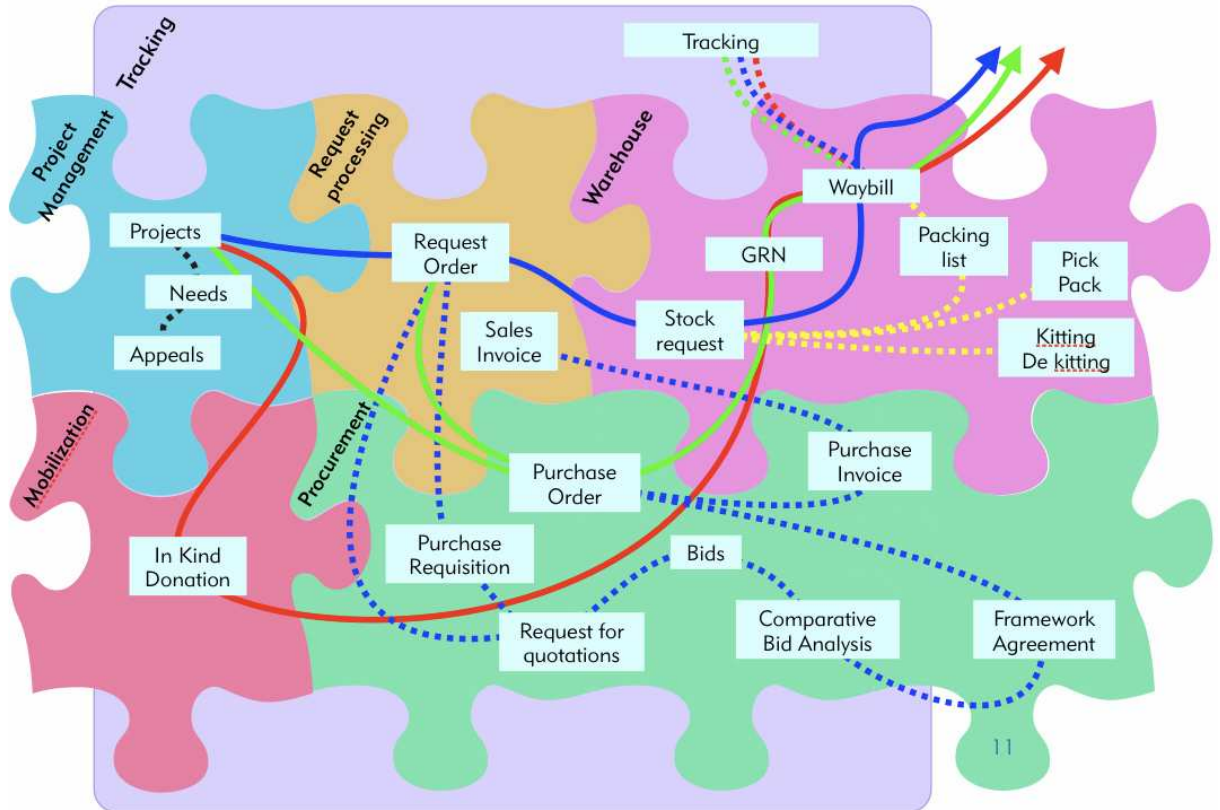


Figure 85: Module Structure of HELIOS (Fritz Institute 2009a)

A solution to the puzzle is given by the Fritz Institute who gives the following explanation with regard to proper understanding of HELIOS:

“HELIOS supply chain begins when a project is created using the Project Management module. Demands for projects are managed with the Request Processing module...using tools such as Request Orders and Sales Invoices. The...Mobilization module enables the planning, tracking and reporting of in-kind donations. Procurement...provides powerful tools to manage the acquisition of goods and services, including Purchase Order, Procurement Invoice, Request for Quotation, Bids, Comparative Bid Analysis and Framework Agreements. The...Warehouse module manages inbound and outbound consignments...Finally, the Tracking module is used to track the flow of goods through the supply chain...from demand to delivery point, using a commodity tracking number.” (2009a)

Appendix IV: Technical specifications of HELIOS

The technical specifications of HELIOS are now briefly presented with help of an explanation and a figure. Information and figure are obtained from the Fritz Institute:

“HELIOS was developed using the popular and reliable Microsoft .NET platform. It currently uses .NET 3.5 on the Microsoft Windows Server 2003 operating system, with a Microsoft SQL Server 2005 database. This can be delivered via a hosted solution, or from an organisation's own servers. Where connectivity into a country is restricted, HELIOS has been deployed on servers in country offices. To access it, users require Internet Explorer browser version 5.0 or higher. There is a planned UI upgrade that will support Firefox and other standards compliant browsers. HELIOS can also run stand-alone on a laptop running Windows XP. HELIOS can be hosted as a Software as a Service (SAAS). Data transfer between installations is possible allowing laptop and in-country installations to upload and download both master data and transactions where there is no web connectivity.” (2009a)

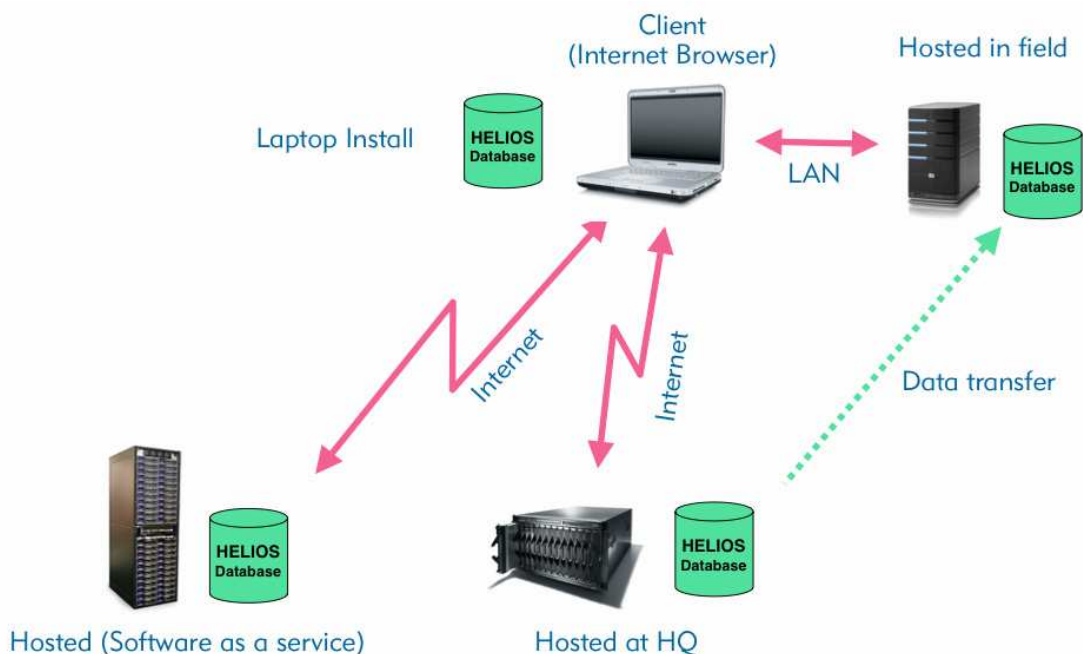


Figure 86: Technical Specifications of HELIOS (Fritz Institute 2009a)

Furthermore it is possible to integrate HELIOS into an agency's ERP, Procurement, Financial or other legacy systems (Fritz Institute 2009a).

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