



Sustainable Water Supply Under Adverse Conditions

The Case of Lebanon

Practical Project in Development Cooperation

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St. Gallen, May 2017

Abstract

This paper aims at analyzing what the private sector can contribute to overcome the large flows of refugees. Regarding this objective, the paper focuses on the sustainable water supply in Lebanon. The analysis of the current refugee situation in Lebanon and the needs and problems in the water sector identified the lack of coordination between private and public actors as the main obstacle to a sustainable supply of water. Therefore, the paper focuses on different approaches of how the coordination between public and private sector can be facilitated. Not only conferences but also creating associations, thereby institutionalizing the dialogue between the public and private actors, are seen as a viable approach. However, Public Private Development Partnerships are assumed to be the most efficient response to the problems in the Lebanese water sector. Therefore, the paper suggests on the one hand to support concrete Private Public Development Partnerships and on the other hand to alter the general framework in order to make Private Public Development Partnerships more appealing.

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Abbreviations and Acronyms

IDP	Internally Displaced Person
ITS	Informal tented settlements
MoEW	Ministry of Energy and Water
n.d.	No date
NGO	Non-governmental Organization

p.	page
pp.	pages
PPDP	Public Private Development Partnership
PPP	Public Private Partnership
PTT	Turkey's Postal and Telegraph Corporation
RWEs	Regional Water Establishments
SDC	Swiss Agency for Development and Cooperation
SDGs	Sustainable Development Goals
UN	United Nations
UNDP	United Nations Development Program
UNHCR	United Nations High Commissioner for Refugees
WASH	Water, Sanitation and Hygiene
WWAP	World Water Assessment Program

2 Introduction

According to UNHCR, the global forced displacement is attaining record-high numbers in the last years. The Middle East is one particularly affected region as a big part of the displaced people is coming from Syria. The displaced people from Syria mainly sought refuge in the neighboring countries such as Lebanon, Jordan and Turkey. This enormous influx of refugees has put pressure on the affected states, bringing them to the limits of their capacities, especially in the water sector (UNHCR, 2016, p. 2-14). As the affected states do not have much capacity left, the private sector can make a valuable contribution to ensure sustainable long-term development of the region. Therefore, the present paper focuses on the following question: How can the private sector contribute to overcome the large flow of refugees?

Today, water is recognized as one of the key resources for development, growth and poverty reduction (Kemper & Sadoff, n.d., p. 1). Therefore, access to safe drinking water forms an integral part to achieve the SDGs, mainly in the context of an enormous population growth induced by the large flow of refugees and rising poverty. In addition to the current refugee situation in the Middle East, water is extremely scarce in this region. In combination, the enormous population growth triggered by the Syrian crisis further increases water demand resulting in serious implications for development and poverty reduction (Tropp & Jägerskog, 2006, p. 1). Therefore, providing sustainable access to safe drinking water can contribute to relieve the countries providing shelter to millions of refugees. The case of Lebanon was selected because sustainable development is particularly challenging in this country due to the weak government, the social tensions and the large influx of refugees. In this strained context, the private sector can, in collaboration with state institutions, make a major contribution to overcome the large flow of refugees by enabling sustainable water projects.

To provide an answer to the research question, the paper is structured as followed: Firstly, Lebanon's current situation concerning refugees and social stability within the country will be analyzed. Then, the needs and problems in the water sector are discussed. Secondly, two successful projects of the water sector will be presented. From these projects different success factors and principles for sustainable projects will be deduced. This part of the paper is of major importance because sustainability

remains a serious challenge as 30 to 50% of water supply projects fail after two to five years (WWAP, 2015, p. 19). Based on these steps, different approaches for the SDC have been elaborated in discussion with different experts (see appendix). These approaches will be presented in Chapter 5. The last chapter then discusses the systemic impact of sustainable projects in the water sector within a longer time frame.

3 Water supply and the refugee situation in Lebanon

The goal of this chapter is to analyze the current refugee situation in Lebanon and its spill-over effects on the development of the rest of the country. Then, the paper further shows the fragile context of social stability in Lebanon due to a vast religious diversity, which does often undermine political consensus. Further, the legal status of Syrian refugees is shown which is related to Lebanon's experience with Palestinian refugees. After the general refugee context in Lebanon, the needs and problems in the water sector are addressed.

3.1 Refugee Situation

Syria's civil war has led to the most disastrous humanitarian crisis in recent times. Killings and human rights violations are widespread and bombings are destroying whole cities, leaving behind a vast majority of Syrians without humanitarian assistance. Since the outbreak of the civil war in 2011 about 11 out of 22 million Syrians have left their homes. Within Syria 13.5 million Syrians are in need of humanitarian assistance. According to the UNHCR, more than five million have been registered in neighboring countries and 6.3 million people are displaced within Syria (UNHCR, 2017). Turkey, Iraq, Jordan, Egypt and Lebanon are the main receiving countries.

The estimated number of UNHCR registered and non-registered Syrian refugees in Lebanon accounts to 1.5 million people that sought protection in a country four

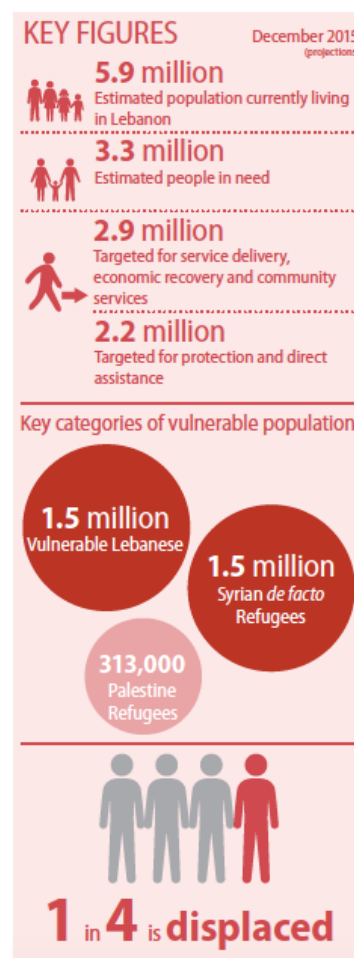


Figure 1: Key Figures, UN, Government of Lebanon (2015)

times smaller than Switzerland. Every 1 in 4 persons in Lebanon is a Syrian refugee. The country is also a destination to more than 30'000 Palestine refugees from Syria, who joined the pre-existing population of around 300'000 displaced Palestinians in Lebanon (UNHCR, 2017, p. 11).

As the under-resourced government had no clear and official policy early on, the incoming refugees are spread across the country, situated in 17'000 different locations, where 55% of the accommodations fall short of minimal humanitarian standards (LCPS, 2016, p. 6). The fragile government has transferred the responsibility of dealing with the refugee influx to the more than 1000 Lebanese municipalities (European Commission, 2017).

Most of the refugees are located in the North and Central Bekaa, Wadi Khaled, Sahel Akkar and increasingly in suburban areas of cities such as Tripoli and Beirut (Lo Giudice, pp. 2-3).

In 2011, Lebanese communities welcomed the incoming refugees without hesitation and provided shelter, services and support. However, the protracted crisis has threatened social stability within host communities and studies show that protracted refugees stay on average 17 years in the host country (UNHCR, 2015, p. 20). Some municipalities in the North and in the Bekaa host more Syrian refugees than Lebanese people, posing a big challenge as municipalities often lack administrative and financial capacities. Part of the incoming Syrians have sought protection in the poorest villages, which have already been poor, vulnerable and unable to provide public services before the vast refugee influx (Parliamentary Assembly, 2016).

The vast influx of refugees has led to many spillover effects in different sectors of the historically fragile Lebanon:

- ⇒ **Economy:** The Lebanese economy is collapsing. Especially major sectors as trade, tourism and services are negatively impacted. Lebanon's pre-crisis economy registered an average growth rate of 9.2% in 2007-2010, while since the outbreak of the Syrian conflict Lebanon's GDP only grew 1.8% in 2011-2014 (The World Bank, 2013).
- ⇒ **Employment:** Competition over job opportunities in the unregulated labor market have created high social tensions between Lebanese and Syrians. Syrians work illegally, accept lower incomes and work for more hours without

social benefits, crowding out Lebanese workers in the unskilled labor sector (UNHCR, 2014).

- ⇒ **Poverty:** By the end of 2015, 29% of the 1.2 million UNHCR registered Syrians in Lebanon are unable to meet their minimum requirement and more than 336'000 Lebanese and at least 220'000 Palestinian refugees live under Lebanon's lowest poverty line of 2.4\$ per day. In total, since 2011, the number of poor in Lebanon has risen by nearly two-thirds. (UNHCR, 2014, p.11)
- ⇒ **Price increase:** Prices of basic commodities, services and housing have risen drastically due to the increasing demand. As a consequence, vulnerable households are not able to secure basic needs (UNHCR, 2015, p. 76).
- ⇒ **Services:** The overcrowded host communities face deficient healthcare and education services, a huge increase in municipal spending on waste disposal and high pressure on already scarce water resources and infrastructure. The water sector, not able to respond to the increasing demand in terms of quantity and quality, has been further strained since the refugee influx (ILO, 2014, pp. 9-10).

3.1.1 Fragile social stability in a multi-confessional country

Social stability within Lebanon is not only challenged since the outbreak of the civil war in Syria. Sectarian hostilities between the 18 different sects including Christians, Sunni Muslims, Shi'a Muslims, and Druze stretch back to the Ottoman Empire. In 1975, social stability was collapsing and Palestinian refugees, who fled to Lebanon after the establishment of Israel, added up to the breakout of a bloody civil war, which lasted 15 years. Shia and Christians perceived Palestinian refugees as rivals whereas Lebanese Sunni saw them as a leverage to increase power in the government. Militants from all sides were competing against each other and the civil war ended only in 1990 with the adoption of the Taif Agreement (Berkley Center for Religion, Peace, and World Affairs, 2013, p. 5).

The Taif Agreement adopted a system of political power-sharing in order to avoid any conflict due to religious, ethnic and racial divisions. Every major group is provided with a certain share and is represented according to the population size in public offices (Taif Agreement). As a consequence, the diversity of the different sects is still expressed in religious, social, and political life.

Despite the achievement of restoring peace after the civil war, the politics of power-sharing comes with limits. Different interests, informal governance, and decentralization with a lack of coordination between the local and central level undermine the process of rebuilding. Especially in times of political non-consensus, the politics of power-sharing is useless. It took the parliament more than two years to elect a new government. During the political deadlock, Hezbollah increased much of its power marginalizing the Sunni population. In 2016, the newly elected government promised to restore balance between the different religious groups. Yet the Syrian civil war is again challenging sectarian divisions within Lebanon. The government proclaimed a neutral stance towards the Syrian civil war refraining from affiliating with either the regime or the opposition (Barnes-Dacey, 2013). However, the 18 different sects identify themselves more with outside forces than with national identity and thus have a clear stance towards the Syrian civil war. Hezbollah, Lebanese biggest Shia political group, supports pro-regime forces whereas many Sunni affiliate more with the Syrian rebel opposition (Shelton, 2014). Therefore, the Syrian civil war is contributing to an already strained social stability context deepening sectarian polarization.

3.1.2 Palestinian experience and legal status of Syrian refugees

Lebanon has no specific legislation or regulation on refugees. While the Lebanese government signed the 1948 Universal Declaration of Human Rights, Lebanon did not sign the 1951 UN Convention on the Status of Refugees nor its 1967 Protocol. Syrian refugees have thus no status and are referred by the government as “displaced” persons. Nevertheless, the principle of *non-refoulement* is generally recognized and thus no country can force refugees to return to their home country if freedom would be threatened there (ILO, 2014, p. 14).

While Syrian refugees in Lebanon are entitled to apply for residency permits, which give them access to public services like schools, a change in the criteria to attain permits in January 2015 has made it more difficult to get or renew permits by requiring several documents from various sources. Acquiring these documents is often expensive, complicated, or downright impossible. Many Syrian refugees are thus living in Lebanon without permits, which bars them from the use of public services and makes them susceptible to detention or deportation by Lebanese security forces (Amnesty International, 2015, p. 8).

Perceiving Syrian refugees as displaced persons and the adoption of the no-camp policy is related with the negative experience with Palestinian refugees. The public perception of Palestinians in Lebanon is often negative because of their (perceived or real) role in Lebanon's civil war from 1975 to 1990 (Shuyab, 2014, pp. 20-37). Only a fraction of Palestinians have received Lebanese citizenship. Those who have received citizenship are overwhelmingly Christians (Shuyab, 2014, p. 23). The Lebanese government is interested in increasing the number of Christians in Lebanon to demographically support the balance of governmental power between Christians and Muslims. For this same reason, Christian Lebanese do not want more Muslims to become Lebanese citizens, because this might necessitate giving more governmental power to Muslims. This is an obvious hindrance for Palestinians, because the majority are Sunni Muslims.

62% of Palestinians have settled in the 12 UNRWA administered camps, which are of extremely poor conditions. 38% live in gatherings or host within host communities close to the camps (Chaaban et al., 2010, p. X.).

Due to the negative Palestinian experience, the Lebanese government is highly reluctant in implementing new camps for Syrians, as it fears that they will also remain indefinitely. Especially, the majoritarian Shia Hezbollah group is against camps fearing an increase of the Sunni population.

3.1.3 Living conditions of Syrian refugees

At the beginning of the crisis, Syrian refugees sought protection in apartments or houses. However, the protracted war forced some Syrians to live in other types of shelter, as they cannot afford rent anymore. In 2016, 71% of refugees lived on their own in apartments or houses, 17% in informal tented settlements (ITS) and 12% in non-residential shelters, such as worksites, garages and shops. The shelter conditions are often precarious and do not meet the minimum humanitarian standards, suffering from overcrowding, dangerous structural conditions or urgently needed repair and lack of a toilet (UNHCR, 2015, p. 19).

The increased proliferation of Syrians in different shelter types, result in more shortfalls and gaps in supply and services including the water sector. The increased family expenditures and worsened living conditions force some refugees and poor Lebanese to use informal ways to get electricity and water access (WB, EU, IMF,

2014, p. 121). In the following section, the needs of Lebanese and Syrian refugees concerning access to water are analyzed.

3.2 Needs in the water sector

Since the end of the civil war in 1990, the water governance and infrastructure in Lebanon are deficient. Two decades of post-conflict, under-investment and the current refugee crisis all added up to a fragile water infrastructure and poor management (The World Bank, 2013, p. 108).

20% of the total households have no access to water through public network. More than 80% of the households do not meet satisfied water needs in terms of quality and quantity. The existing water networks are fragile and only 8% of sewage is effectively treated (UNHCR, 2017, p. 158). A report by UNICEF (2000) revealed that more than 70% of the water resources in Lebanon are polluted (Darwish, 2004, p. 109). Although 79% of the Lebanese population had access to potable water before the refugee crisis in the highly urbanized Beirut and Mount Lebanon, supply was interrupted several times during the day. Some residents received only three hours of water supply per day since 2005, which makes them unable to meet their minimum water needs. As a consequence, it is common to buy alternative sources of drinking water, such as water from mobile water trucks or from bottles. However, the alternative resource is often more expensive and unsafe (USAID, 2016). While the costs for network supply are 21\$ per month, the costs for bottled or trucked water go up to 40\$ per month per household in a context of growing poverty (UNHCR, 2017, p. 159).

The massive influx of refugees has increased the demand for water by 28%, which has further stressed the water systems in many regions. Reduced access to water and inadequate wastewater management expose vulnerable Lebanese and Syrians to an increased risk of waterborne diseases (UN, Government of Lebanon, 2016, p. 14). Diseases transmitted through food and water continue to be the most frequently reported in Lebanon, accounting for 50% of all reported diseases (UN, Government of Lebanon, 2015, p. 47).

3.2.1 Sources of drinking water for refugees in ITS

Water, sanitation and hygiene (WASH) needs in informal tented settlements (ITS) have been prioritized by NGOs and aid agencies. A UNHCR study revealed that 79%

of refugees in ITS have access to safe water (UNHCR, 2014, p. 8). They mainly rely on trucked water from non-NGO providers (19%), protected wells (18%), and on trucked water from NGO providers (16%) (UNHCR, unicef, WFP, 2016, p. 24).

However, the situation cannot be generalized and not all ITS profit from safe water access. In Dalhamiyeh (Zahle) for example, refugees stated that the provided water was unhealthy resulting in sickness amongst all the inhabitants of the settlement. Another refugee from the settlement stated: „We are eleven people living in one tent. The water container is not large enough. No one is taking care of us.“ (UNHCR, unicef, WFP, 2016, p. 24) As the government does not want any permanent infrastructure in ITS, it undermines the work of NGOs and aid agencies to implement any sustainable water solution.

3.2.2 Sources of drinking water for refugees outside of ITS

Refugees in unfinished and abandoned buildings as well as poor Lebanese may be at the risk to be neglected by NGOs and aid agencies (UNHCR, 2014, p. 8). In 2016, bottled water (42%) and household tap water (27%) were the two most common sources of drinking water. But in only two out of three households water did arrive for more than two hours per day (UNHCR, unicef, WFP, 2016, p. 24)

Refugees, which have settled within host communities, typically are concentrated in already impoverished localities and in informally developed and dense populated urban areas, where access to essential electricity, water and wastewater services are insufficient. (UNHCR, 2014, p. 2) In the Akkar Governorate, in Northern Lebanon, where according to the last poverty study, over 63%¹ live under the poverty line and where Syrian refugees constitute one third of the population, WASH needs are high (OCAH, 2016). Contaminated local drinking water supplies were already an issue before the refugee crisis and only 54% of the Akkar Governorate had access to water. (UNHCR, 2014, p. 12)

Water sourced from wells, which are not sanctioned or controlled by the state, is the most common source of drinking water for refugees in Akkar, followed by trucked water, bottled water, and spring water. Particularly refugees living in abandoned buildings face problems in obtaining water due to challenges in finding clean water,

¹ UN, EU, IMF, 2013, p. 120

costs, incidence of waterborne illness and difficulties with distance (UNHCR, 2014, p. 14).

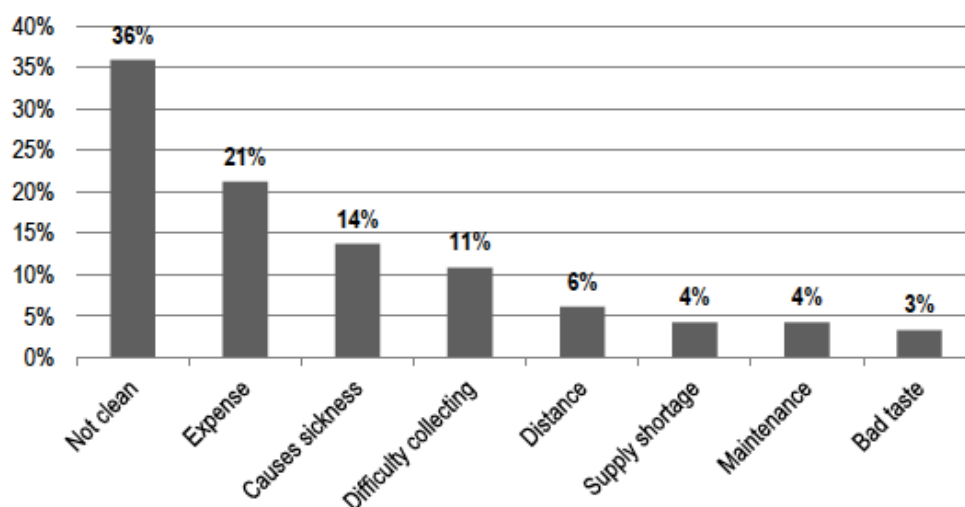


Figure 2: Main problems related to drinking water, Akkar Governorate, UNHCR (2014)

3.3 Problems in the water sector

Lebanon is the water richest country in the Middle Eastern region due to the rough topography, the great altitudes of mountains and the relatively high precipitation rates. However, the country suffers from water resources for irrigation, domestic and industrial use. The following problems in the water sector could be identified:

Legal framework of the Lebanese water sector

Law 221, adopted in 2000, and its amendments currently regulate the water sector. The Ministry of Energy and Water (MoEW) has the primary authority over the water sector enacting laws and regulations. Additionally, the four Regional Water Establishments (RWEs) in Beirut-Mount Lebanon, Bekaa, North and South Lebanon have the role of service provision, water planning, funding and evaluating of the infrastructure and investment requirement. There are also secondary stakeholders, such as the Ministry of Environment for example, which also play a critical role in the water governance. The RWEs should act financially and administratively autonomous. However, the reality looks different due to annual debts and lacking personnel. (El Amine, 2016, pp. 6,8) In 2010, a long over-due National Water Sector Strategy has been launched to improve the water management with the vision “A right for every citizen, a resource for the whole country”. However, under-funding,

prioritization of other projects and conflicting interests undermined the plan (UNHCR, 2017, p. 158). The weakness of the legal framework has led to several problems.

Poor water storage

While the water storage in the region accounts for 85%, Lebanon only stores 6% of its water resources. The lack of investment, increased urbanization, lagging reforms and droughts in the past years further contributed to the water deficit (The World Bank, 2014).

Growing trend of digging wells

As the government is unable to provide its citizens with safe water, there is a growing trend of digging wells for water, which has already been the case before the refugee crisis. The Minister of Water and Energy estimates that at least 55'000 – 60'000 unlicensed wells have been dug (UNHCR, 2017, p. 160). The extraction through illegal wells has impacted negatively the quality of water for the Syrian refugees and Lebanese citizens and has also negative impacts on the environment. The extraction caused the water table to drop to alarming low levels leading to seawater intrusion into the central water supply. Especially in the Shatila Refugee Camp located in the southern suburbs of Beirut, water is salinated. (Klingseis, 2016, p. 31)

Infrastructure

After the Lebanese civil war, only the primary supply lines and part of the secondary lines were rehabilitated leading to losses in water quantities and infiltration. The limited public infrastructure forces households to rely on water wells, water tankers or bottled water. Moreover, wastewater networks are insufficient. The governmental policy to hinder any permanent infrastructure in ITS continues to drain financial and human resources. Water trucking and desludging remain the major components in addressing water needs in ITS. (UNHCR, 2017, p.161)

Low level of funding

Under financing poses a big challenge. In 2016, the water sector received only a small portion of the requested fund, which undermines meaningful investments in infrastructure and water quality systems (UNHCR, 2017, p. 161). Furthermore, as most of Lebanese households rely more on informal networks than on public water services, the water sector is unable to create revenues, which are necessary for infrastructure improvement.

Increased demand

The increased demand has added to Lebanon's vulnerability to drought cycles and climate change, stressing the quantity and quality of reserves.

Dispersion of localities

The distribution of refugees across the country impedes the work of NGOs and aid agencies. The lack of data makes it difficult to assess the vulnerability of refugees and thus, results in unequal distributed water and sanitation services.

Non-coordination

A lack of a clear mandate in the water sector has led to the overlapping of duties and responsibilities amongst and within the water institutions. The different responsibilities are scattered amongst various entities without coordination, hindering an efficient performance. Further, the lack of enforcement mechanisms of RWEs does not hinder corruption and non-compliance.

NGOs, aid agencies and the private sector add up to the unclear and chaotic water management. Numerous NGOs, aid agencies and private companies are all trying to alleviate the gap between demand and water supply by providing Lebanese and refugees with trucked water and bottled water. According to Mister Beutler, NGOs are competing with each other and private sectors undermine given laws and regulations, and benefit from the weak state (see appendix, chapter 9.3). The incoordination leads to an incoherent strategy, providing overlapping services and neglecting some localities. As there is still a huge gap between demand and water supply, and as NGOs and aid agencies struggle with financial resources, the private sector is indispensable. The private sector could also help the RWEs to overcome administrative constraints. However, private companies should not take over the states' responsibilities and undermine given laws. Cooperation with governmental authorities and the Water Sector is absolutely necessary in order to achieve a sustainable water solution. The government should spell out a clear mandate in order to avoid any overlapping responsibilities and illegal networks.

4 Sustainable projects

The following chapter focusses on the presentation and analysis of two existing projects, which can assist in coping within the refugee crisis by including the private sector. After a short introduction of the two projects by Fontes Foundation and cewas Middle East, including the most important unresolved issues, the analysis emphasizes on the most important principles of sustainable water projects for a potential replication of similar initiatives in Lebanon.

4.1 Fontes Foundation

4.1.1 Project description

Founded in 2004 by Dr. Andreas Koestler, Fontes Foundation is a Norwegian NGO, which recently also founded a Swiss Branch in Fontes GmbH Switzerland. The organization focusses on the provision of sustainable water distribution facilities and their management in areas where the access to safe drinking water is limited (Koestler & Heierli, 2017, p. 1). Fontes has been active in countries such as Uganda for over 10 years (Website Fontes Foundation), particularly interesting for the context of the refugee crisis in Lebanon, is their involvement in the IDP camp in Goma town in the Democratic Republic of Congo. In the aftermath of a volcano eruption in 2002 in combination with the civil war in Congo, a large group of IDPs resettled in the area of Goma town (Koestler & Heierli, 2017, p. 1). In 2016, multiple NGOs withdrew from the area, so that Fontes took over the existing infrastructure, now running the water distribution facility as a local business, which means that the service is no longer for free for both the local community as well as the refugees in the area. The management and maintenance of the water distribution service is run by a local water committee, which was implemented, trained and supported in their work by Fontes, but consists of members of the local community itself (see appendix, chapter 9.1). What makes this project sustainable is that it invokes the mentality that the distribution and treatment of safe water is a service, even though water itself is a human right. This justifies the necessity to pay a price for the service. With the money collected from the water distribution service, it is then possible for the management to take care of the maintenance of the necessary infrastructure, so that the service can be upheld sustainably. The management of the water facilities and particularly the 'Art of Collecting Money' (Koestler & Heierli, 2017, p. 1), which

arranges the economy for the delivery of a sustainable water distribution service is one of the core concepts making Fontes Foundation successful.

4.1.2 Unresolved issues

Even though Fontes Foundation's approach for a sustainable water distribution service is working successfully, four unresolved issues can be identified. These unresolved issues need to be considered when possibly replicating this approach in Lebanon. In the interview, Andreas Koestler mentioned the following problems (see appendix, chapter 9.1):

Firstly, water is seen as a human right today, therefore people might not be prepared to pay for water. There needs to be an acceptance that the service of providing and treating safe drinking water is in fact a service that needs a proper monetary compensation. Only then can there be an interest for a private actor to provide such a service.

Secondly, there needs to be a possibility for refugees to have access to money, since otherwise they have no chance at being able to pay for the service. This means, a partly functioning economy has to be in place, to which the refugees have access to. Another possible solution might be cash based aid programs. According to the UNHCR (2016) there has been a shift towards cash based aid programs for refugees and other displaced people from in-kind support, especially in the Middle East. Since most refugees in Lebanon live in cities with no legal access to employment, cash based aid can give them the possibility to fulfil their needs in their own priority, including food, water, rent, etc.

Thirdly, since the water distribution service is no longer free, this might exclude people from the service, since the poorest might not be able to afford it. However, Koestler (see appendix, chapter 9.1) argues that it is more important to provide the service, even taking this problem into account, than not providing the service, since in the latter case safe water would not be provided at all.

Fourthly, there have been issues with corruption in the water committees of some projects Fontes Foundation has been involved in (see appendix, chapter 9.1). Unfortunately, projects that handle large amounts of money in Africa and the Middle East are prone to corruption. Therefore, there have to be checks and balances set in place to make corruption less likely and to find out quickly, in case it appears none

the less. One aspect that could prevent corruption might be the installation of a digital payment system (see appendix, chapter 9.4 and chapter 5.1.6).

4.2 Cewas Middle East

4.2.1 Project description

Cewas is a charitable organization founded 2010 and located in Switzerland. Its main focus is the education of start-ups in the area of sustainable water management. The goal is that private sector initiatives are utilized to solve issues in the water sector of their own country. Cewas supports start-up companies by helping the owner to flesh out their business idea and to develop a business plan, more general, by coaching the start-up in its beginning phase from the first idea until the final implementation in an actual business and beyond. After the first establishment of cewas in Switzerland, the basic idea was spread to countries such as South Africa, Zambia, and India and finally in 2015 with cewas Middle East to Palestine, Jordan and Lebanon. In Lebanon the project is right now in its initial phase, the coaching of a first group of start-ups is currently just starting (see appendix, chapter 9.2).

As a charitable organization, cewas is currently supported by the Global Program of Water of the SDC, be it financially or in the cooperation with local governments and the connection to their network (see appendix, chapter 9.2).

Start-ups that have been coached by cewas include all types of businesses in the water sector, as well as businesses in sanitation and waste water technologies. Usually, the technology necessary is already available in the start-up itself, cewas then helps to improve the already existing technology and the connection between economy and technology. Existing projects coached by cewas Middle East in Palestine are for example a start-up that focusses on the environmentally friendly recycling of electronic waste, since the contemporary model usually results in the pollution of ground water, and a mobile game app that teaches children how to save water and informs them of the water problematic in the Middle East (see appendix, chapter 9.2).

4.2.2 Unresolved issues

For the implementation of cewas Middle East in Lebanon, Michael Kropac (see appendix, chapter 9.2) identifies three major problems.

Firstly, it is hard to establish a contact with the local government, since the political system is quite difficult to understand for outsiders, because of various groups that influence the system like different religious groups or Hezbollah (see chapter 3.1.1). Since the water sector in Lebanon is centralized within the government, it is also difficult for businesses to enter the sector. In this difficult context, the contact with SDC is very helpful for cewas, since SDC already has established contacts within the government.

Secondly, there is also an issue with corruption. According to Kropac (see appendix, chapter 9.2) it is difficult to establish a business “cleanly”, which means without having to bribe people to speed up the process of implementation.

Thirdly, there exists a cultural barrier against the occupation with waste water and sanitation, which is especially strong in the Middle East. These kind of jobs do not hold any social prestige in these countries. However, cewas tries to make this sector more attractive for the local population, since it provides a major challenge in Lebanon’s water sector and therefore holds interesting economic opportunities for the improvement of technology in this area.

4.3 Principles of sustainable water projects

The following chapter discusses the most important principles of sustainable water projects, which the analysis of Fontes Foundation and cewas Middle East provides and which can be replicated in similar initiatives in Lebanon.

4.3.1 Long-term orientation

The water sector is one of the most important sectors for the development of a country. Therefore, it is important that this sector can be sustained over a long period of time. Both of the described projects provide an important initiative in this sector by establishing a functioning and self-sustaining water distribution service on the one hand and the support of innovative business ideas on the other hand. Be it the sustainable provision of water distribution facilities or the support of local start-ups to be sustainable in the future, both Fontes Foundation and cewas have a long-term orientation, meaning that they strive to contribute to a long functioning service in the water sector. This long-term orientation is one of the most important key factors for the success of both initiatives.

4.3.2 Beneficial for both the local population and the refugees

As we have stated before, the presence of a large number of refugees in Lebanon has a toll on the local population, resulting in a collapse of the local economy and infrastructure. It is therefore important, that projects are not only beneficial for the refugees, but also for the local community to avoid the emergence of resentment. What both projects do very well is the inclusion of the local community. In the case of Fontes Foundation, both the refugees and the local community are treated equally, since both have access to the water distribution service and both pay the same amount for the service. The beneficiaries of cewas Middle East are also going to be both the local community and the refugees. Even though the coaching is, according to Kropac (see appendix, chapter 9.2), mostly going to be featuring locals, since refugees might not be allowed to open a business. The costumers and with that the main profiteers of the newly established services will include both refugees and locals. In combination with the long-term orientation of both projects, this could mean that the infrastructure and business models that are established in the context of the current refugee crisis, will still be available for the local population, when the crisis is eventually resolved.

4.3.3 Access to the local market and “the Art of Collecting Money”

According to Kropac (see appendix, chapter 9.2) the refugee situation in Lebanon is comparable to an explosive population growth. This growth makes the implication of decentral solutions for infrastructural problems necessary, since the government is currently overtaxed with the situation, which provides an interesting opportunity for businesses to provide these solutions. Even though the refugee crisis in Lebanon is putting a lot of pressure to the local economy and infrastructure, it therefore also offers interesting business opportunities for businesses like Fontes Foundation or start-ups like the ones that are coached by cewas. If these projects have enough support by the local market and external help in the initial phase, there is an existing economic potential since the local market is currently overtaxed with the additional people, meaning that there is a demand that can be satisfied by the private sector.

However, even if there is a demand for water by refugees, the refugees still need access to either the local labor market or another way to acquire money like cash-based aid programs to be able to compensate a business for their service, be it for a business like Fontes Foundation or businesses that are supported by cewas. Still,

Kropac (see appendix, chapter 9.2) states that refugees not only need access to money or the labor market, but primarily need access to an existing local market as a whole to create a demand for businesses in the water sector. Since most refugees in Lebanon live in cities and other places with access to the local market and cash-based aid programs already exist (UNHCR, 2016), such an economic potential does exist.

In combination with the possibility for refugees to access to the local market, there needs to be a mind-set that allows for the payment for water services (see appendix, chapter 9.1). This is especially true for businesses that focus on the service of the distribution of safe water. When people consider the delivery of water to be free and not a service, it is nearly impossible to create a business focusing on exactly that delivery. The mind-set that water distribution is in fact a service in combination with the “Art of Collecting Money” (Koestler & Heierli, 2017, p. 1) meaning the installation of sustainable delivery infrastructure and the implementation of a structure to collect money from the costumers, enables businesses to satisfy the economic demand that the refugee crisis presents today.

5 Recommendation for further SDC action

As already chapter 3.3 described, the severe situation of the Lebanese water sector in Lebanon is caused due to the lack of coordination and cooperation between the private sector and the Lebanese state. Although there are both customers able to pay a price for water services and private Lebanese companies having the know-how to pump and deliver water, the water service provision is inadequate due to the lack of coordination. In order to overcome these problems, it is crucial to bring together governmental and private actors and to find overlapping interests in the water sector.

5.1 Enable and support PPDP projects

A well-functioning water supply network, which covers all of Lebanon and meets the regulatory standards, is of urgent need. This for mainly four reasons already outlined earlier in this paper: First, the costs for bottled trucked water are twice as high compared to a network supply, which is especially worrying in the context of rising poverty. Second, 50% of all reported diseases are transmitted through food and water, which means that enforcing the regulatory health standards is crucial. Third, it is estimated that at least 55'000 unlicensed wells have been dug, which negatively

impacted the quality of water for the Syrian refugees and Lebanese citizens and also the environment. The extraction caused the ground water level to drop alarmingly low leading to seawater intrusion into the central water supply. Fourth, contrary to 79% of the refugees in ITS, a large share of the Lebanese population does not have access to safe water. A water supply, which mainly provides refugees with safe water, could lead to social unrest. Thus, a water supply network for all Lebanese people is a precondition. Public Private Development Partnerships (PPDP) are assumed to be capable to most efficiently respond to these challenges.

In a PPDP public and private actors cooperate and jointly finance a project that seeks to improve the lives of people living in poverty (Sida, 2012). The private sector's innovative thinking, knowledge and interest in market expansion within the legal and institutional framework of the public sector is assumed to be the most efficient response to address social and environmental development challenges at a systemic level. Sida (2012) mentions various examples of PPDP's contribution to solve development challenges for example by securing decent working conditions, creating models for demand driven and high quality vocational training, thereby improving young people's employability and so on. Ziad Hayek, secretary general of the Higher Council for Privatization (HCP) estimated, that "a series of successful PPP projects in Lebanon would secure over 200'000 new jobs over a period of five years, all the while meeting the economy's most basic needs in a timely matter" (Beirut Accelerated, 2016).

On the one hand, the SDC should support concrete PPDPs; on the other hand it could be more effective to alter the general framework in order to make PPDPs more appealing.

5.1.1 Alter the general framework in order to make PPDPs more appealing

"From 2002 to 2007, the first Lebanese experience with a public-private partnership (PPP) in the water sector took place in the northern city of Tripoli" (Allès, 2012, p. 394). It was thought to be a pilot project to convince the Lebanese of the benefits of PPPs. However, "the absence of a legal framework, unclear institutional responsibility for the water sector and a difficult political situation during the contract period, led two partners to terminate their cooperation" (Allès, 2012, p. 396). The case of Tripoli clearly underlines that substantial improvements in the general

framework are needed to make PPPDs more attractive. Following, there are various suggestions that are expected to improve the general framework for PPDPs.

Partnering should be mutually viewed as representing an opportunity rather than a threat and a loss of control (Dima, 2004, p. 427). As outlined above, the Lebanese state is rather weak, which makes government officials reluctant to shift competences to a public partner. The focus should be to identify common goals and to build bridges including common working practices and specific reporting and record keeping requirements. According to Dima (2004, p. 427), it must be “deployed adequate time and staff to ensure that both partners resources are tapped and both have their goals and needs adequately represented”.

Enacting a PPP law will instill confidence in potential investors. Up to this day the Draft PPP Law has not been enacted by the Lebanese parliament. Consequently, this inadequate legal framework is assumed to be a major cause for the lack of cooperation between public and private partnership. Rather than a concession, the Tripoli Water project was set up as a management contract. According to EIB (2011, p. 21) these “closed-door proceedings could be challenged before the courts, which increases the amount of risk incurred by private investors.” Furthermore, the current Draft PPP Law contemplates a clear policy outlining for the authorization criteria for the approval process of arbitration procedures, which is the favored dispute resettlement for investors (EIB, 2011, p. 22). In the consequence enacting the Draft PPP Law would instill confidence in potential investors, thus increasing PPDP project’s attractiveness.

Upgrading institutional capacities to guarantee technical quality and design of PPDPs. According to EIB (2011, p. 22) institutional capacities have to be upgraded in order to meet the demands of the new PPP law. With enhanced capacities, there will be more robust feasibility studies, increased transparency in the bidding process, which would favor PPPD’s investment attractiveness and competition (EIB, 2011, p. 22). In order to maximize project cost efficiency for the authority, invitations to tender should clarify early in the process the allocation of risks such as exchange rate and inflation (EIB, 2011, p. 23). The current institutional capacities are not sufficient to do so, thus they need to be enhanced. Apart from the national capacities, the institutional capacities on local level have to be enhanced too as under the Draft PPP Law, also municipalities can propose PPP projects (EIB, 2011, p. 22). Lastly, as

Ameyaw and Can (2016, p. 1355) mention, due to the monopolistic character of water, PPDPs can rapidly evolve into monopolies. Private actors often abused their position by restricting investment and disregarding service quality. Therefore, authorities must closely monitor the private partner's behavior to prevent rent-seeking and to ensure that he operates within the legal framework.

Obviously, the general framework must be improved. Using the SDC's limited resources most effectively would mean to improve the general framework. Therefore, the SDC should help to enact the Draft PPP Law and once enacted, support the enhancement of institutional capacities. Although the SDC should push for it, there might be other partners better suited to do so. Thus, collaboration with other actors such as states or NGOs is highly recommended. On top, improving the general framework for PPDPs should be included in "The Swiss Cooperation Strategy for Lebanon". The SDC's role should be to spread awareness about the current situation and the importance of improving the general framework for PPDPs as the way to improve the severe conditions in the water sector in Lebanon.

5.1.2 How to best design PPDPs in the water sector

In case the improvement of the general framework for PPDPs in Lebanon exceeds the SDC's capacities or range of duties, the focus should lie on how PPDPs should be best designed.

Cooperation with small local partners: First of all, cooperation with local instead of national Lebanese authorities is preferred, as the national government is weak, whereas the local government is physically closer to the private partners and the project. Additionally, it should be cooperated with local businesses instead of big multinational companies for mainly two reasons: First, thereby a local industry develops and second, the bargaining power and demand of big companies decrease the SDC's bargaining weight in the decision-making process.

Strong partnerships as warranty in the absence of a sufficient legal framework and strong authorities: It is important to build a strong relationship with your partner and to ensure that there is a shared understanding of the way the project is proceeded. Given the insufficient legal framework and weak authorities, mutual trust and understanding is the best way to accomplish a successful partnership. The mandatory rotation principle of SDC's officials make it necessary that after each rotation enough time should be invested to (re)build the relationship with its partner.

SDC's involvement as assurance for the private partner: The involvement of the SDC also helps to reassure the private partner, who is highly skeptical of a cooperation with the Lebanese government, which they perceive to be corrupt and inefficient.

Safe water access for both refugees and locals: Even though the main focus of the SDC is to help refugees, a PPDP in the water sector should always aim to provide both refugees and locals with water. Otherwise, the outcome would be social unrest. This already is part of the SDC's strategy (see appendix, chapter 9.5).

Risk has to be allocated to the actor best positioned to bear it: The key risks involved in providing the service have to be identified and the party, which is best positioned to bear each risk must be determined. According to Lambert and Koestler (2015, p. 9) the common risks include exchange rate risks, tariff and fee collection risks and policy risks.

The customer should pay according to the amount of water consumed. Payment mechanism in PPDPs can be either arranged so that the private actor receives payment from the customer, from the government or from a combination of the two (Lambert & Koestler, 2015, p. 9). However, to ensure financial self-sufficiency and thereby sustainability regardless of foreign aid, the payment should be made by the customer. Additionally, billing should be according to the concrete consumed amount of water. In current projects, such as in the Bekaa Valley project, consumers are charged an overall price for water. Consequently, there is little incentive to use water economically. Projects such as the above described of the Fontes Foundation offer viable insights about the installation and maintenance of a payment system in the context of corruption (see chapter 4).

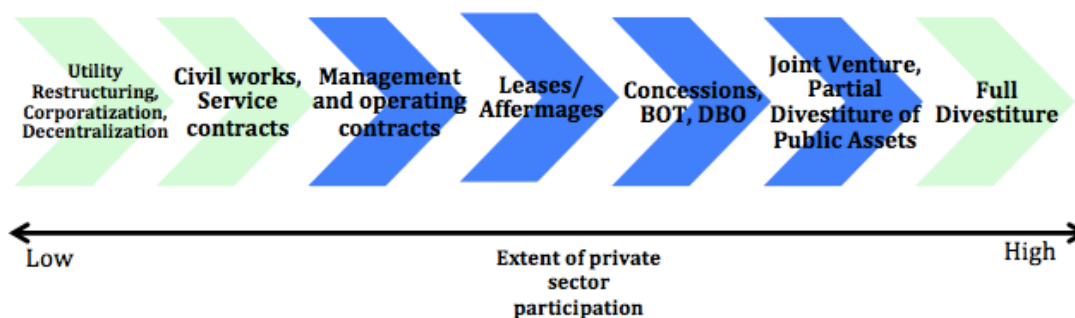


Figure 3: The extent of private sector participation, The World Bank (2011)

Concessions are the recommended juridical form: As figure 3 “the extent of private sector participation” shows, the involvement of the private sector can vastly vary. As the Lebanese authority is comparably weak, a low extent of private sector participation should be avoided. Concessions seem to offer the appropriate extend of private sector participation in the context of Lebanon. In a concession, the private

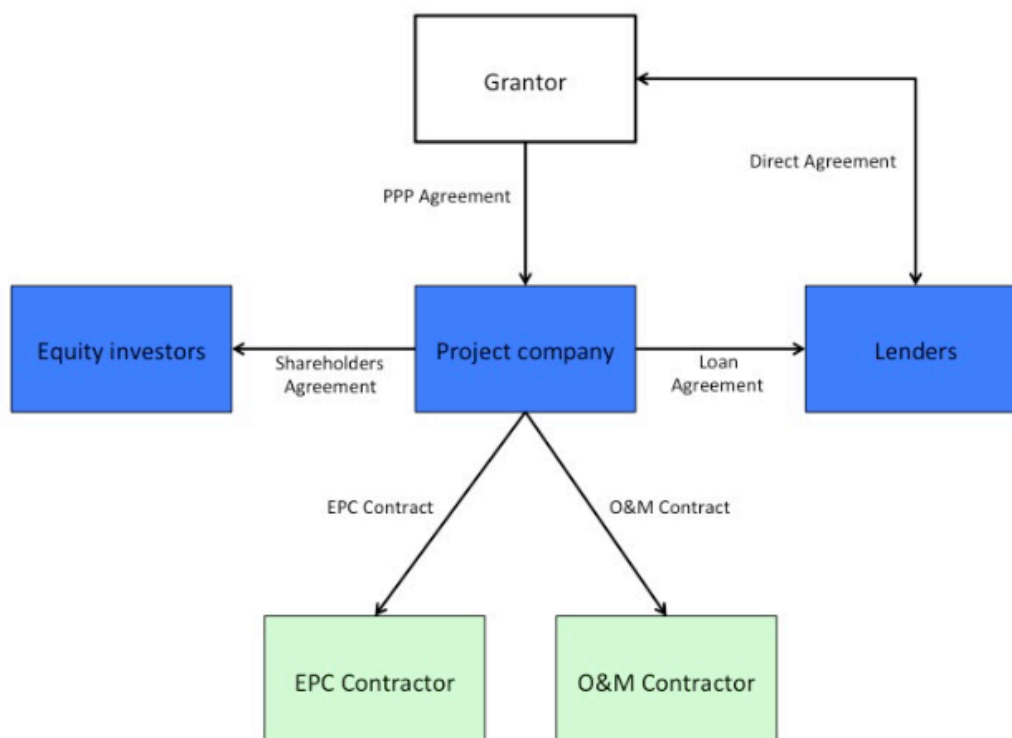


Figure 4: Typical financial structure of a PPP, WHO (2014)

actor has the long-term right to use all the utility assets, which are transferred to him. This includes responsibility for all operation, maintenance, finance and all required investments. With the end of the concession period, all assets are returned to the authority. (Lambert & Koestler, 2015, p. 12). To ensure the operator meets the required standards, close governmental oversight is necessary. However, a major disadvantage of concessions is the exchange rate risk as investments are mostly paid in foreign currency, whereas tariffs are paid in the local currency. A devaluation of the local currency would lead to both an inability to repay the debt and an increase in tariffs (Lambert & Koestler, 2015, p. 31).

Involve financial and legal advisors in order to understand the relevant trade-offs in project finance: As a PPDP involves various actors and is often project-specific, financing PPP projects is very complex (Lambert & Koestler, 2015, p. 12). Therefore, financial and legal advisors should be involved in order to understand the trade-offs in project finance. Figure 4 shows the typical PPP financial structure. “The

proposal for the development of a new PPP project is usually initiated by an equity investor. The typical equity investors – also called sponsors or project shareholders – are project developers, engineering or construction companies, infrastructure management companies, and private equity funds” (World Bank et al., 2014, p. 50). On the other hand, “lenders may include commercial banks, multilateral and bilateral development banks and non-bank financial institutions, and institutional investors such as pension funds. They support the project by providing project bonds that are sold on the capital market, or by sovereign wealth funds and other financial intermediaries.” (World Bank et al., 2014, p. 50) Lenders are, due to the political risk, eager to follow the strict requirements regarding environmental and social safeguards. Additionally, lenders will be supportive during negotiations with the government and persuade the authority that sufficient loans will be available during the development of the water utility (Lambert & Koestler, 2015, p. 15). Delmon (2010, p. 35) states that public financing often fails in the actively analyzing risks and proper resource allocation, which leads to high costs in the long run. An advantage of PPDPs is that lenders have a strong incentive to properly assess risk management and allocation at an early stage of the project. Farquharson et al. (2011), Delmon (2010) and Yescombe (2013) offer helpful literature on project finance with private sector investments.

Multistakeholder approach: As mentioned above the involvement of an international partner is crucial for many reasons such as reassurance for the local partner. However, as the means of the SDC are limited, cooperation with other international partners seems equally important. Potential international partners could be actors such as the World Bank, the EU, or countries already interested in the Lebanon such as Germany, the UK or the US. In addition, non-governmental actors such as the CH-Lebanese chamber of commerce should also be considered as partners.

SDC has to restrict itself to the role of an enabler to avoid crowding out of the Lebanese government: The Lebanese authorities are weak and therefore often seen as an unreliable partner. The SDC can fill this gap, providing reassurance to the private partner and supporting the Lebanese authorities in fulfilling their part in the PPDP. However, it must be avoided that the presence of the SDC is too overwhelming, simply replacing the Lebanese authority and fully taking on the role of the public partner. This would lead to a crowding out of the Lebanese state and

hinder the Lebanese authorities to build up the competencies in the area of PPDPs. Consequently, the role of the SDC should be that of an enabler, ensuring that the Lebanese authorities are capable to build the capacities. Thus, the SDC's role should be that of an enabler, assisting in the buildup of know-how in the technical, legal and institution-building area.

5.2 Additional recommendations

5.1.3 Enable dialogues between public and private actors

Before cooperation is possible, it is necessary to find common interests and setting up a level playing field with the private sector. Therefore, opportunities for exchange need to be created, where the actors can meet, enact in a dialogue and find common interests. Additionally, the private sector needs to be persuaded that cooperation with governmental authorities lies in their very interest. The involvement of the government will ensure that the water service is provided in a sustainable matter. Possible ways to find common ground could be to create conferences or workshops, where topics related to the water sector should be discussed. Special focus should be on the latest innovations and new approaches to face the problems in the water sector in Lebanon. Thereby, both private and public actors have incentives to participate due to the know-how provided during these events. On top, there should be enough room left to discuss common interests and possible cooperation, be it in a formal or informal setting. Apart from being a platform for dialogue, these conferences can also be used for knowledge transfer. The SDC can do both encourage and convince other actors such as the Lebanese government or NGOs to fund and organize these platforms or take the initiative upon itself.

An initiative, which successfully pushes into this direction, is the "Lebanon Water Forum", which is organized by the Ministry of Energy and Water (MoEW) and funded by the European Union. It brought together government authorities and their institutions, service providers, academic experts and practitioners in the field to reflect on water service provision (Amin, 2016, p. 5).

It is important that this kind of dialogue not only happens at the national level but also includes local authorities and businesses. Given the weakness of the nation state, involvement of local authorities is crucial to enforce and ensure given law in order to achieve sustainable water solutions.

5.1.4 Institutionalized dialogue through establishing association

Another way that goes beyond conferences would be to institutionalize the dialogue between public and private actors and create associations in the water sector. This would create points of access and thereby ease exchange of information and the finding of common interests. As the involvement of local authorities is crucial due to the weakness of the state on national level, the association should also contain subordinated regional branches.

5.1.5 Scaling up

Another important assistance that the SDC can provide initiatives such as Fontes Foundation and cewas lies within the assistance to scale their project up directly or by spreading the knowledge of the project in SDC's network that SDC's partners can provide this assistance. By spreading the information that can be gathered by successful projects, other initiatives are enabled to reproduce their approach or parts of it where it is appropriate and also provide feedback on how to improve the already existing models. According to Pietro Mona of the SDC (see appendix, chapter 9.4), the SDC can assist projects to scale up their model by presenting them for example to the word bank or other major donors, thus linking the donors and the projects together, which then presents the opportunity for small successful project models to adapt their approach on a larger scale. In doing so, the principles of sustainable water projects should always be included.

5.1.6 Digital payment/Fintech

As it has been stated before when discussing Fontes Foundation, whenever there is a large amount of cash, there is the possibility of corruption. Because of that, Mona (see interview, chapter 9.4) advises to consider digital payment. By paying with a credit card, debit card or a similar device, the amount of cash that has to be handled by the local staff is reduced or brought to zero, which also makes the sums of money easier trackable and reduces the temptation of corruption. The SDC is therefore advised to consider the possibility of digital payment, when implementing projects similar to Fontes Foundation. Possible partners for such projects might include major providers of card payment services such as MasterCard or VISA. According to UNHCR (2016) there are already projects in place which use such digital payment options. The report shows an example, where debit cards are distributed to refugees in Turkey by the Turkey's Postal and Telegraph Corporation (PTT) based on their

identification number, which then can be used at any shop that is part of the MasterCard network. The implementation of card based payment can also help to decrease transaction costs.

Another similar technology is Financial Technology or short Fintech. Boon (2017) describes Fintech as “a term used to describe technological advances and changes in the banking and finance industry. It involves new technology, such as smartphone applications, and innovations, like web-only banking and crowdsourcing, that allow people to keep track of their money in ways that differ from traditional banking.” Fintech companies are usually start-ups that offer banking services, without actually involving a traditional bank. An example for such a product is the Suisse app TWINT, which offers a payment service via smartphone. Similar to card based digital payment services, Fintech solutions might be interesting to take into consideration as an alternative to cash, when establishing a project in Lebanon, if the necessary infrastructure like for example phone service or internet (depending on the product) is available.

Both Fintech and Digital Payment can therefore be a simpler solution for the circulation of cash based aid programs as there is no need for actually handling cash, as soon as the necessary infrastructure for the alternative source of payment is distributed.

6 Impact

The present paper has elaborated sustainable projects and supporting measures of the SDC that can improve the access to safe drinking water. The aim of this chapter is to elaborate the benefits and wider impact of sustainable projects that provide access to safe drinking water. Firstly, the chapter provides an overview of possible benefits along the dimensions of sustainable development. The second part examines the impact on the systemic level within a longer time frame.

6.1 Water and development

The role of water in fostering development is recognized widely and access to safe water, basic sanitation and hygiene is seen as an extremely effective way to reduce poverty (WWAP, 2015, p. 9; 22; Grey & Sadoff, 2006, p. 5). The SDGs also point out

that water and sanitation are at the core of sustainable development, critical to the survival of people and the planet (UN, 2003, p. 10).

Along the dimensions of sustainable development (economic growth, social equity, environmental sustainability) various benefits of access to safe drinking water can be identified. However, the third dimension, environmental sustainability, is not considered in this paper as its' scope is limited to access to drinking water and is not dealing with other important aspects of water such as waste water management, water stewardship etc.

Economic growth is fostered by access to safe drinking water in several ways. Firstly, on an individual level access to safe drinking water increases the productivity. As 88% of disease in the developing world is caused by unsafe drinking water (Fodgen, 2009, p. 19), safe drinking water bears an immense potential to improve health conditions. Such a reduction in water-related diseases can enhance productivity (WWAP, 2015, p. 19). On top of that, facilitated access to drinking water can bring enormous time-savings as collecting safe drinking water is often time-consuming in most parts of the world (UNDP, 2006, p. 6). This would allow spending this time for economic activity and therefore increase the productivity. Secondly, economic growth would be fostered because access to water can increase livelihood opportunities especially for agriculture and family run-businesses (WWAP, p. 19; 22). Poor societies can therefore profit from multiple benefits as water can be used for livestock, small gardens, food production for sale or other commercial use (Koestler, 2007, p. 1). Besides income opportunities, increased access to water provides entrepreneurial opportunities in various areas for local entrepreneurs that might generate a high return for local economies (WWAP, p. 22). The described income opportunities result in an increased purchase power that enhances the demand on local markets and increases investment (Koestler, p. 2), strengthening a "self-sustained dynamic of economic development" (WWAP, p. 24).

The second dimensions of sustainable development, social equity is also positively influenced by a facilitated access to safe drinking water. The two main aspects are poverty reduction and education. A lack of safe water and poverty are mutually reinforcing (WASH, 2014). To reduce poverty, economic growth that can be fostered by access to safe water, is essential. Regarding the relation between access to safe drinking water and education, a strong link between high levels of access to safe

drinking water and high levels of education can be found (Fodgen, 2009, p. 20). Two important reasons that prevent children from attending school are illness related to unsafe drinking water and the time spent collecting water (Fodgen, p. 21). Children suffering from water-related illness are carrying the disadvantage to school because this leads to a reduced cognitive potential and may even lead to absenteeism (UNDP, p. 45). This results in lost opportunities for education (UNDP, p. 47).

6.2 Systemic level

On a systemic level, sustainable water projects from the private sector have the potential to boost the national economy. Different principles of sustainable water projects aim at building or utilizing local potentials. The local community should be seen as potential service providers, for products such as water pipelines, pumps, etc. As a consequence, a local market can evolve, creating employment opportunities for the local inhabitants and refugees.

On a regional level, different implications of sustainable water projects can result. Firstly, if the water infrastructure was built in a sustainable way, the local community can profit from a high-quality water infrastructure with developed secondary and tertiary networks. This positive impact will endure even if refugees can return to their country of origin. In addition, the refugees will not adopt an everything-for-nothing attitude, as they also have to pay for water services. This is of major importance if the refugees can return to their country of origin because an everything-for-nothing attitude might impede the rebuilding of a country after the conflict.

On the state level, the provided state support with different approaches (see chapter 5) might result in strengthened state institutions and increased capacities, which facilitates coordination between private and public actors. Ideally, this leads to positive spill-over effects to other sectors with similar problems (e.g. electricity). This will further strengthen state institutions and contribute to stability in the region.

Overall, improved access to safe drinking water, a strengthened economy, a strengthened state and more stability in the region have the potential to ease the tensions caused by the large influx of refugees. Ideally, this results in fewer refugees assuming the risk of the Mediterranean crossing to reach Europe. (see appendix, chapter 9.2)

7 Conclusion

The present paper aims at answering the following question: What can the private sector contribute to overcome the large flow of refugees? The focus of the paper lies on sustainable water supply in Lebanon and the needs of the refugees and the local population. In the first part of this paper, the current refugee situation in Lebanon including a historical perspective was discussed. Thereafter, the needs and problems in the Lebanese water sector were elaborated, displaying the severe condition of the Lebanese water sectors. Based on this, it was concluded that a weak state, powerful private actors undermining laws and a lack of coordination between public and private actors are the central problems in the water sector. The second part of the presented paper closely analyzed two successful projects in the water sector and drew conclusions on principles for sustainable water projects from that analysis. The third part examines the SDC's role in implementing and supporting sustainable water projects. There, six approaches to improve the situation in the Lebanese water sector have been introduced. However, the most promising is to improve PPDP's general attractiveness and to help form and design successful PPDPs in the Lebanese water sector. In this context enacting the Draft PPP Law is crucial and should be pushed. Overall, the SDC has to restrict itself to the role of an enabler to avoid crowding out of the Lebanese government.

This approach would create a win-win situation for all parties involved, including public actors, private actors, local communities and refugees. Improved access to safe drinking water would enhance the development on an economic and social dimension whereby the local population and refugees could profit equally. In addition, strengthened state institutions and improved coordination between private and public actors might have positive spill-over effects to other areas, such as electricity. All in all, this contributes to ease tensions created by the large influx of refugees.

It has to be emphasized that different obstacles are preventing a far-reaching impact of water projects. For example, the Lebanese authorities are against permanent infrastructure concerning refugees. In addition, the employment opportunities created by sustainable water projects are in the current legal system only to the benefit of locals because the Lebanese law prohibits refugees to work. In general, legal uncertainty can be a major obstacle for private actors to work hand in hand with

public actors. Furthermore, the transition from humanitarian aid to development cooperation in Lebanon presents an important challenge.

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9 Appendix

9.1 Interview Dr. Andreas G. Koestler

Baseline: Nicht grosse internationale Unternehmen beauftragen, sondern lokale Potenziale ausnutzen oder gar aufbauen. Im ersten Schritt ist es das Geld der UNO und von NGOs, aber Ziel muss es sein, dass der Verbraucher bezahlt. Darum wichtig herauszufinden, wie Flüchtlinge an Geld kommen. Startpunkt ist eine genaue Analyse der Flüchtlingsökonomie. Wie viel Geld müsste man dem Flüchtling pro Tag geben, damit eine gesunde Ökonomie entstehen kann?

Fragen zur Fountes Foundation

- Wie würden sie das Safe Water Projekt beschreiben?

Goma musste aufgrund eines Vulkanausbruchs geholfen werden. Zusätzlich hat der Bürgerkrieg der Leute dazu veranlasst, auch in das sichere Goma zu flüchten. Dadurch das IDP vor Ort waren, haben die UNO und andere NGOs immer mehr Geld eingesteckt. Das hat sich über die Jahre aber abgeflacht: Letztes Jahr war kein Geld mehr da, um Wasser zu fördern. Fountes Foundation übernahm die Infrastruktur und verlangte neu einen Preis für das Wasser. Dadurch, dass IDPs schon solange vor Ort waren, hatten sie auch finanzielle Mittel. Es gibt immer die ärmsten der Armen, die sich das Wasser vielleicht immer noch nicht leisten können. Aber nur weil es den ärmsten der Armen nicht hilft, darf man sich nicht davon abschrecken lassen, einen Wasserpreis zu erheben. Die Alternative wäre gar kein Wasser. Immer noch besser, dass einige kein Wasser haben, anstatt dass alle kein Wasser mehr haben. Gouverneur von Goma fand es gut.
- Was kann mit dem Projekt direkt und indirekt erreicht werden?

Direkt: Sicheres Wasser. Gerade, wenn sehr viele Leute auf engem Raum zusammen sind. Im Libanon sind sehr viele Flüchtlinge in der Bevölkerung integriert. Das heisst, Wasser kann nicht gratis herausgegeben werden. Es muss über Cash geholfen werden, oder Möglichkeiten müssen gegeben sein damit sie arbeiten können. Sodass, wenn die Flüchtlinge wieder in ihr Land zurückkehren, etwas für die lokale Bevölkerung bleibt. Rückkehr in das eigene Land ist ein kontinuierlicher Prozess.
- Erfolgsfaktoren des Safe Water Projekts?

Normale Ökonomie entwickeln lassen, damit auch ein Markt entstehen kann.
- Probleme des Projekts
Ärmsten der Armen konnte nicht geholfen werden. Wasser kann nicht mit unterschiedlichem Preis abgegeben werden.
- Wie kann die einheimische Bevölkerung bestmöglich einbezogen werden? (Akzeptanz schaffen)

Konflikt zwischen der einheimischen Bevölkerung, die für das Wasser zahlt und den Flüchtlingen, die das Wasser gratis erhalten. Als Konsequenz werden alle einfach im Flüchtlingslager Wasser abholen. Wenn die Flüchtlinge jetzt auch einen Preis zahlen, dann würden sich auch lokale Unternehmen bilden, um die Einheimischen zu versorgen.

Fragen zu Flüchtlingscamps

- Grösste Herausforderung für Trinkwasserversorgung in Flüchtlingscamps?

Es kann keine nachhaltige Wasserversorgung aufgebaut werden, weil das Flüchtlingslager isoliert ist und sie über kein Einkommen verfügen. Bevor man an Nachhaltigkeit denkt, muss man sich überlegen wie ein Business Modell funktionieren könnte. Erst wenn man das Business Modell und die Geldflüsse eines Flüchtlingslagers versteht, kann man versuchen, sich zu überlegen, wie ein Flüchtlingslager nachhaltiger werden könnte, und wie der Privatsektor einzubeziehen ist.
- Funktioniert ein nachhaltiges Wasserversorgungsprojekt, das auf Beiträgen basiert, in Flüchtlingscamps?

Flüchtlingslager ist niemals nachhaltig, es ist einfach irgendwo ein Lager platziert. Die Gastländer wollen auch keine permanente Lösung anbieten, weil niemand will, dass sie bleiben. Flüchtlingslager sind eine temporäre Institution, durchschnittlich bleiben Flüchtlinge 17 Jahre. Sie sollten nicht als isolierte Einheit betrachtet werden, sondern die lokale Bevölkerung sollte als potenzielle Service Provider gesehen werden, die das Flüchtlingslager versorgen. Z.B. Wasserröhren/Pumpen lokal kaufen, damit sich auch ein lokaler Markt entwickeln kann, auch wenn das einen höheren Preis bedeuten würde.

Fragen zu Jordanien und Libanon

- Was sind die grössten Probleme im Bereich der nachhaltigen Wasserversorgung in diesen Ländern?

Abkoppelung des Flüchtlingslagers vom restlichen ökonomischem System. Man muss diese Ökonomien verbinden und erkennen, dass auch viele Jobs von Lokalen für Flüchtlinge geschaffen werden. Es muss Akzeptanz dafür geschaffen werden, dass man für den Service einen Preis zahlt. In den anderen Projekten, in denen alles gratis zur Verfügung gestellt wurde, konnten die Behörden nicht wirklich Anforderungen stellen. Jetzt ist es so, wenn dafür gezahlt wird, können auch die Behörden Anforderungen stellen. Wenn ich Geld für etwas ausbebe, dann kann ich auch etwas dafür fordern.

- Replizierbarkeit der Wasserversorgung ausserhalb von Flüchtlingscamps, in Gegenden, wo auch Wasserknappheit herrscht?

Es kann z.B. Pipelines in solche Gegenden geliefert werden. Aber Wasserknappheit ist ein sekundäres Problem, primär ist das fehlende Einkommen.

- Konkret: Jordanien und Libanon - eignet sich das Projekt für diese Länder?

Ich kann mir nicht vorstellen wie das Geld der Flüchtlinge in Jordanien generiert werden kann, da die Flüchtlinge in isolierten Flüchtlingscamps leben.

Unterschied Libanon / Jordanien: Grösster Teil der Flüchtlinge im Libanon wohnen bei Bekannten/Familie. Situation in Jordanien ganz anders, es gibt diese gigantische Flüchtlingslager in der Wüste, wo nur Flüchtlinge beieinander sind.

Im Libanon eignet sich das Projekt eher, da Flüchtlinge sehr stark integriert sind und darum auch Geld vorhanden ist. Darum müsste man auch verstehen, wie das Business Modell funktioniert. Wichtig ist, dass man die Wasserinfrastruktur nicht nur auf das Flüchtlingslager begrenzt. Oft geht es den Flüchtlingen besser, als der lokalen Bevölkerung. Daher muss auch eine Wasserversorgung für die lokale Bevölkerung gebaut werden.

Flüchtlinge haben kein Einkommen, darum kann man ihnen kein Geld abnehmen. Statt Lebensmittel soll Geld abgegeben werden damit sich eine Ökonomie entwickeln kann. Cash Payment to refugee (CASH for refugees) um lokale Ökonomie aufrecht zu erhalten. Damit würde ein Denken etabliert, dass Wasser nicht gratis ist. Welche Mentalität nimmt ein Flüchtling mit, wenn er Jahre lang alles gratis bekommt: Er denkt, dass alles gratis ist. Dadurch hätten auch lokale Firmen bessere Chancen, eingebunden zu werden. Heute beauftragt die UNO grosse internationale Organisationen um die Wasserversorgung sicherzustellen und handelt mit der UNO einen Wasserpreis aus, ohne mit lokalen Anbietern zu arbeiten.

Fragen zur Rolle der staatlichen Institutionen/der DEZA

- Wie könnte die DEZA dabei mithelfen/eingebunden werden?

Business Modell (welcher Service wird von wem durchgeführt, woher fliesst Geld in das Lager) des Flüchtlingslagers verstehen. Zusätzlich soll auch eine Marktanalyse des Ziellandes analysiert werden. Im nächsten Schritt muss das Business Modell des Flüchtlingslagers und die Ökonomie des Gastlandes in Einklang gebracht werden. Kann man das in Einklang bringen und ein gemeinsames Business Modell schaffen? Ziel muss es sein, den privaten Sektor zu entwickeln.

Wie könnte man die Wasserversorgung privatisieren und welches Know-how wird gebraucht? Training in Unternehmensführung/Entrepreneurship und im Bereich Wasserversorgung in Schulen, die die DEZA aufbauen könnte. Unternehmensführung. Ein anderer Ansatz könnte sein, herauszufinden, wer der Lehrer ist, wie er bezahlt wird, es muss herausgefunden werden, was die Geldströme sind. Auch Wasserversorgung müsste abgegeben werden, von

NGOs an den Privatsektor. Wir sollten eine Analyse machen, wie viel Geld braucht ein Flüchtling pro Tag, damit eine gesunde Wirtschaft entstehen kann? Die Cash-Ökonomie in einem Flüchtlingslager müsste verstanden werden. Es ist notwendig, dass jemand diese Informationen zusammenträgt und Potentiale aufzeigt, um die für die Privatwirtschaft interessanten Potenziale aufzuzeigen. Zusätzlich könnte die DEZA unterstützen, in dem sie das Startkapital, um diese Projekte aufzuziehen, bereitstellt.

Abschlussfragen

- Welche anderen Projekte im Bereich der nachhaltigen Wasserversorgung kennen Sie?

Es gibt nur wenige Projekte, die wirklich nachhaltig sind, weil es immer noch umstritten ist, dass das Wasser einen Preis hat. In diesem Sinne hat die UNO lange Zeit kontraproduktiv gearbeitet, indem sie gesagt hat, dass Wasser keinen Preis haben soll. Zentral muss es sein, dass der Wasserservice (nicht das Wasser selbst) einen Preis hat. Es kann gut aufgezeigt werden, dass das Wasser gefördert, abgefüllt und verteilt werden muss. Und auch das Geld muss ausgezahlt werden. Daher muss das Verständnis geschaffen werden, wie Geld in diese Ökonomie kommt und dass diese Berufe auch wieder Geld in die Ökonomie bringen. Wegkommen von der Gratiswirtschaft eines Flüchtlingslagers, weil sie dann auch diese Gratis-Mentalität mitnehmen, wenn sie in ihr Heimatland zurückgehen.

(6. April 2017)

9.2 Interview Michael Kropac, Co-Director cewas

Cewas ist ein gemeinnütziger Verein, der 2010 gegründet wurde. Der Fokus von cewas liegt in der Ausbildung von Start-ups im Bereich des nachhaltigen Wassermanagements. Heute betreut cewas weltweit Start-up Programme, z.B. in Südafrika, Kenia, Indien, Südamerika, Sambia und seit 2015 auch im Mittleren Osten. Die Rolle von cewas ist es, Technologien/Ideen so weiterzubringen, dass sie auf dem Markt platziert werden können. Angefangen hat das Engagement von cewas im Mittleren Osten in Palästina, wo ca. 10 Startups mit einem Trainingsprogramm begleitet wurden. Es hat sich herausgestellt, dass dies auch in dieser Region funktioniert und so wurde letztes Jahr ein Programm mit der DEZA in Jordanien und Libanon lanciert. Privatwirtschaftliche Ansätze im Bereich Wasser sind auch im Mittleren Osten spannend, da dies noch wenig bekannt ist und der Wassersektor vom Staat dominiert wird.

- Welches sind erfolgreiche Projekte von cewas Middle East geförderte Start-ups?

Erfolgreiche Projekte sind sehr unterschiedlich, denn Unternehmer kommen mit einer Idee auf cewas zu. Einige Beispiele: Ein Palästinenser hat ein Verfahren entwickelt, wie Edelmetalle aus Elektroschrott getrennt werden können. Da dieses Verfahren sehr umweltfreundlich ist, im Vergleich zu herkömmlichen Methoden, wird dadurch das Grundwasser weniger belastet. In einem anderen Projekt wurde ein Handyspiel für Kinder entwickelt, das auf die Problematik des Wassersparens aufmerksam macht.

- Wie wählt cewas die Einsatzgebiete im Mittleren Osten aus?

Der Fokus liegt auf den Ländern rund um Syrien, da dort die Wasserproblematik auf die Flüchtlingsproblematik trifft.

- Richten sich die von cewas unterstützten Projekte im Mittleren Osten eher an Flüchtlinge oder an die lokale Bevölkerung?

Die Lage ist je nach Land sehr unterschiedlich, z.B. in Jordanien und Libanon. In Jordanien ist es eher gemischt, jedoch werden die Start-ups grösstenteils von jordanischen Unternehmern sein. Denn syrische Flüchtlinge haben da oft keine Möglichkeit, etwas aufzubauen. Im Libanon ist diese Situation noch verstärkt. Jedoch sind die Endkunden der unterstützten Projekte oft Flüchtlinge.

- Was sind die Hauptprobleme bei der Implementierung der Projekte im Mittleren Osten?

Cewas implementiert selber die Projekte nicht, sondern unterstützt Start-ups. Die Probleme, die cewas jedoch antrifft in Libanon, ist der Umgang mit den Behörden. Das komplizierte politische System, die internen Spannungen zwischen den verschiedenen Gruppierungen erschweren die Arbeit in Libanon. Eine weitere Herausforderung für Start-ups ist, dass das Unternehmen korruptionsfrei agieren kann. Speziell im Mittleren Osten besteht die Problematik, dass es viele Marktverzerrungen gibt, beispielsweise bekommen einige das Wasser gratis, andere müssen etwas bezahlen.

- **Cash for Refugees:** Wäre es hilfreich für privatwirtschaftliche Initiativen im Wassersektor, wenn die Flüchtlinge für den Wasserservice bezahlen könnten?
Im Prinzip ist das ein guter Ansatz, dass man den Flüchtlingen Bargeld gibt und sie dafür Dienstleistungen von lokalen Unternehmen in Anspruch nehmen. Die Schwierigkeit liegt allerdings im Detail, denn es braucht einen funktionierenden Markt. Wenn es diesen nicht gibt, wird dies schnell ausgenutzt. Der Nutzen von Cash for Refugees ist also situationsabhängig.
- **Flüchtlingscamps** sind normalerweise nur temporär. Inwiefern ist das ein Problem, um ein Unternehmen im Wassersektor aufzubauen?
Die Camps sind nicht das grösste Problem, da die meisten Flüchtlinge in host communities untergebracht sind. Mehr Informationen zu Ansätzen in verschiedenen Situationen unter: <http://www.sswm.info/category/step-sswm-humanitarian-crisis/introduction>
Das Hauptproblem ist mehr, wo hört die humanitäre Hilfe auf und wo beginnt die Entwicklungszusammenarbeit. Cewas versucht hier einen Übergang zu gestalten, indem das Ziel ist, Start ups von Anfang an so zu gestalten, dass sie längerfristig Erfolg haben können. Die Flüchtlingssituation in Ländern wie Libanon kann mit einem extrem schnellen Bevölkerungswachstum verglichen werden. Da die Kapazitätsgrenzen schnell erreicht sind in diesem Kontext, müssen dezentrale Lösungen gefunden werden und da kommen Unternehmer ins Spiel.
- **Welchen Impact** kann ein verbesserter Zugang zu sauberem Trinkwasser im Kontext des Mittleren Ostens haben?
Der Mittlere Osten ist eine der Region mit sehr wenig Wasser. Ein wichtiges Problem ist, dass das Grundwasser in vielen Ländern des Mittleren Ostens ausgeht. Dies kann auch enorme Kostenfolgen haben. Von der Ressourcenperspektive her werden deshalb neue Lösungen benötigt. Dies macht die Region für den Wassersektor interessant. In dieser Region sind neue innovative Lösungen, wie Recyceln von Wasser, Reuse von Wasser, Wasser sparen im Fokus. In einem politischen Kontext kann eine verbesserte Situation in Ländern wie Libanon - also auch bessere Wasserservices, Arbeitsplätze, etc. - ein Anreiz sein, dass man nicht als Flüchtling nach Europa kommt. Mit einem unternehmerischen Ansatz kann ein Beitrag dazu geleistet werden.
- **Wie gestaltet** sich die Zusammenarbeit mit Ministry for Water and Energy oder anderen Departementen oder NGOs?
Das Ministry muss jeweils informiert werden, aber die eigentliche Zusammenarbeit findet mit den lokalen Behörden statt und mit lokalen Wasserversorgern. Die Wasserversorgung ist nicht komplett zentral organisiert. Mit den lokalen Akteuren ist man in Kontakt und schaut, wo sie Probleme haben und wo eine gute Zusammenarbeit mit NGOs, internationalen Organisationen oder Universitäten entstehen könnte. Bei einigen Themen, wie zum Beispiel Abwasser und Sanitation gibt es jedoch grosse kulturelle Barrieren. Oftmals ist das Abwasser ebenfalls ein grosser Teil des Problems und nicht nur der Zugang zu Wasser. Cewas versucht diese unattraktiven Bereiche zu fördern.
- **Welche Rolle** nimmt die DEZA bei cewas ein?
Neben der Finanzierung hilft die DEZA insbesondere beim Kontakt mit den Behörden. Denn die DEZA hat bereits viele Kontakte und Netzwerke und eine lange Historie. Dies öffnet oftmals Türen zu Regierungskreisen. Zudem kennt die DEZA die bestehenden Probleme. Für cewas ist diese Zusammenarbeit sehr wertvoll.

(20. April 2017)

9.3 Skype Call Philipp Beutler & Dalia Lakiss, SDC National Programme Officer Lebanon

- **What is the situation** concerning safe water in Lebanon?
It's not so easy to go right into it, as it is a broad topic. The role of the private sector is not to help. It's about identifying the role of the private sector and the current set up of the private sector in the face of a very weak state. It is important to find a common ground and an eye-level relationship, and how this could further evolve. The private sector should not get mandates, as they are already present in the water sector. The private sector will not help just because they are nice. They need an incentive to do so. It must be assessed where common interests with the private sector lie. In the water domain, our experience with the local water authority is that there are good regulations in place, but there is a lack of proper

implementation or enforcement in Lebanon. Standards and funds are not maintained. Circumstances make it hard to move towards a better water management. The private sector has to play a role, because they are competent, so we need to buy this competence. Overall, where does the private sector have incentives for collaboration beyond solidarity?

- Is there any cooperation between the UNHCR, the government of Lebanon, the Ministry of Water and Energy, other NGOs, etc.?

There is cooperation with the UNHCR and we know what they are doing, and all their projects concern both refugees and locals. Ministries in general are easily accessible. We have a steering commission, so we have a direct line. However, we are not really good in linking up with the private sector. What we would like to see, is a private sector representation at the local level.

In Bekaa was a talk with the chamber of commerce about a cooperation with business and public water authorities. The impression is that they are unsure how this should work. So there is a need to push towards some collaboration and how this should be done. Service contract for water clocks control.

Most services or products can be directly found on the market, there are good universities here. So we only rely on international organizations if the local market cannot provide it. However, always local markets first. SDC does not undercut this local competition. NGOs behave like an actor on the market and compete for donor money. I agree that we should not create a parallel system of NGOs.

- How can local municipalities be engaged in a sustainable way?

As the government is weak, it is subsidized by the private sector. The private business is strong. Therefore, the partnership with the private sector is seen by the government as a threat as the private sector is perceived to redirect the money for projects from Zahle. Important to strengthen the region's water supply, so that both host communities and refugees profit from safe water supply. As most refugees are living with Lebanese, all solutions must be for both refugees and the local population. Switzerland always seeks support of the local government.

- How is the private water sector in Lebanon organized?

Most water is trucked to the regions, so you may need to pay a water bill. This is quite a big business. Refugees, that live in communities, need to pay for the water. Additionally, Lebanon doesn't want permanent refugee structures.

- How to deal with the governmental policy not to implement any permanent infrastructure?

There is no permanent structure, as the refugee situation in itself is not sustainable. It's about supporting these countries as long as the crisis lasts. We are highly interested in a cooperation between the private sector and the state beyond solidarity or a simply mandate.

- Can the development of the water sector be a source of job creation? Exhausting local capacities or relying on international organizations to do the job?

It's about how to conceptualize the public private partnerships (PPP). The SDC chooses whoever is doing it best or most cost-efficient. Precondition is, that all partners have to follow local law and provide sustainable supply. Do we have a matching area of interest with the private sector? We try to establish an economic market by mandating as many local businesses as possible. But Swiss tax payer's money paying projects is not sustainable, as these financial aid is temporarily restricted. The NGOs and so on are always using local companies in order to do the job. Sometimes they bring some tools and infrastructures because this kind of tools are not available.

- Is it usually the role of women/children to collect water as in Africa (with regard to gender equality)?

No, it is not the case in Lebanon. Any family member can go into the shop and buy a bottle of water. It is not the responsibility of children or women.

- SDC aims for sustainable water management, how is this project set up? (Do the locals have to pay fees? Water as a human right versus paying a fee in order to make it self-funded, thus economically sustainable)

It's not about free water but about unrestricted access to water. It's about access to safe water in a cost-efficient way through the private sector: What must they do, how can they contribute. First job is to play by existing rules, funds to private sector as it is now not good enough. We would like to see how private business can make the best use of public funds.

What do we expect from this paper? Find something that we cannot provide ourselves here. We talk a lot about PPP, however, only limited action follows these talks, there is a lack of a shared understanding of what we actually mean by PPP. Goal of the paper should be to show in an abstract, theoretical way how we ideally see the PPP with regard to the refugee movement. How would you go about it, what is the role of the PPP. The SDC lacks expertise when it comes to PPP.

- Can the introduction of a cash-economy help to overcome this problem?

In the Lebanon case this approach will not work and does not reflect the reality. There are no refugee camps, so there is no problem with free water. It's not a classical refugee situation in camps. Every Lebanese family pays for water, as it is delivered in huge tanks. So the private sector is already engaged. As rules are not enforced, private businesses can do what they want. The water quality is going down. We don't need more private sector presence, there are already excellent entrepreneurs. What we need is a more regulated environment that is enforcing existing laws and that is creating a level playing field.

- What are successful projects and what made them successful?

The most interesting one is the Bekaa project, where the SDC partnered with the regional partners in a more efficient way. Another project is the Water Network: REDO as one way to reach out and pull expertise and competence to make sure our solutions are sustainable.

- Where and how can Switzerland and the SDC have the biggest impact in the future concerning sustainable safe water supply? What needs to be considered?

Added Value of Switzerland is to provide capacity building, because we have a lot of investors and donors who are investing in water infrastructures. Only few focus on how to maintain this structure. So what we can do is empowering them to maintain this structure.

However, what the SDC can do is restricted by the mandate of the SDC. Due to our mandate, solutions are immediate reactions to a humanitarian crisis rather than long-term solutions. The SDC wants to enable local authorities to do it rather than that Switzerland steps in and makes it. It's about helping them to build risk management capacities. From a development perspective, where we have some competence to offer, we will provide it.

(26. April 2017)

9.4 Discussion at the Swiss Agency for Development and Cooperation

Gut war der holistische Ansatz, der politischen, wirtschaftlichen Realität. Es ist schwer nachhaltige Arbeitsplätze für Flüchtlinge zu generieren, gerade weil es auch Spannungen gibt zwischen dem Bedürfnis der lokalen Bevölkerung nach Arbeitsplätzen. Libanon ist ein unglaublich schwieriges Land, hat keine funktionierende Regierung und geprägt von sozialen Spannungen (z.B. der Bürgerkrieg). In diesem Kontext schwierig eine nachhaltige Entwicklung zu schaffen.

- Soziale Spannungen müssen noch genauer aufgezeigt werden. Das Zusammenleben im Libanon hängt auch von einer komplexen Machtverteilung der Ethnien innerhalb vom Libanon ab.
- Die Geschichte Libanons muss auch immer vor dem Hintergrund der palästinensischen Flüchtlinge betrachtet werden, sollte im Paper stärker erwähnt werden. Daher stammt der libanesischer Widerstand nach permanenten Flüchtlingsstrukturen.
- Es gibt 3 nachhaltige Lösungen im Bereich Flüchtlinge
 - Rückkehr (kommt nicht in Frage aufgrund der Situation in Syrien)
 - Viele Syrier in Jordanien und Libanon hoffen auf ein Ende des Krieges und eine Rückkehr. Weil nach ein paar Jahren viele in Jordanien und Libanon gesehen haben, dass sie in diesen Ländern keine Zukunft hatten, sind sie nach Europa weitergezogen. Das heisst, die Leute, die noch in Jordanien und Libanon sind, hoffen vermehrt auf Rückkehr.
 - Wideransiedlung in Drittländern (politisch schwierig, nur wenige Länder nehmen Flüchtlinge auf)

- Lokale Integration (wäre der beste Ansatz, aber nicht einfach aufgrund der Spannungen und der hohen Zahlen)
- Welche Lösungsansätze können gefunden werden im Libanon?
 - Cewas und Fontes wäre gut
 - Wie kann Korruption eingeschränkt werden im Fontes-Projekt? Zum Beispiel mit Digital Payment. Denn Digital Payment ist elektronisch nachvollziehbar
 - Verbindung mit anderen Sektoren zwischen Wasser und anderen Sektoren z.B. der Landwirtschaft. Zum Beispiel Reduktion des Wasserverbrauchs
 - Mangelnde juristische Rahmenbedingungen
 - Stärker betonen, wie die Schweiz sich mit anderen Ländern zusammenschließen kann, in einem Verbund arbeitet (z.B. mit EU, Weltbank, usw.), um einen grösseren Hebel zu erzielen.
 - Kommt nicht gut, wenn wir sagen, dass sie aufgrund der Migrationsprobleme dieses Projekt einbringen können. Das Framing ist wichtig. Es muss in ihrer Flüchtlingslogik kommuniziert werden.
- Was kann das Globalprogramm Migration machen?
 - „Help to enact PPP law“ ist nicht Kerngebiet des GP Migration. Dies wäre ein Schweizer Anliegen und nicht nur vom GP Migration
 - GP Migration könnte aber koordinieren, eine Plattform aufbauen und finanziell mittragen, um diesen Dialog zwischen den verschiedenen Akteuren zu erreichen.
 - Scaling up von erfolgreichen Projekten indem die USA oder die Weltbank einbezogen werden, um zusätzliche Mittel für ein Scaling up zu erreichen.
 - Transfer von Wissen. Da es viele Flüchtlingssituationen gibt, sollte das Wissen von einer Region in eine andere transformiert werden. Das technische Wissen ist insbesondere auch vor dem Hintergrund des Wiederaufbaus von Syrien wichtig. So könnte der Privatsektor den Wiederaufbau in Syrien unterstützen.
 - Alternative Finanzierungsquellen können durch DEZA gefördert/ermöglicht werden (z.B. Fintech, Digital Payment)
- Förderung der wirtschaftlichen Selbstständigkeit
 - Flüchtlinge warten 17 Jahre auf Lösung des Problems und sind solange abhängig von der Hilfe. Daher muss die Frage nach wirtschaftlicher Unabhängigkeit gelöst werden. Da der Privatsektor der grösste Arbeitgeber ist, hängt es auch stark von ihm ab.
 - Viele Flüchtlinge arbeiten bereits im informellen Sektor im Libanon. Aber gleichzeitig verlieren die Libanesen deswegen ihre Arbeit an Flüchtlinge. Es wäre deshalb besser, einen kontrollierten Zugang zum Arbeitsmarkt für Flüchtlinge zu schaffen. Der informelle Zugang zum Arbeitsmarkt ist viel schädlicher, als ein offener Diskurs darüber zu führen.

(1. May 2017)

9.5 Interview Lukas Rüst, Assistant Program Officer – Lebanon, Jordan & Iraq SDC

- Die DEZA stellen sich Fragen zum Einbezug des Privatsektors und PPPs momentan selber. Denn im Libanon arbeitet die DEZA vor allem mit internationalen NGOs, UNO und dem Staat zusammen und weniger mit dem Privatsektor. Ein Grund dafür ist, dass das Engagement im Libanon humanitär entstanden ist.
- Ein allgemeines Problem im Libanon ist die instabile Regierungszusammensetzung. Das Land hatte während drei Jahren praktisch keine Regierung. Dementsprechend ist es schwer für den Privatsektor mit der Verwaltung Kontakt zu haben und Abkommen zu schliessen.
- Die DEZA ist interessiert an Ideen, wie man mit dem Privatsektor zusammenarbeiten könnte. Die momentane Stärke der DEZA humanitärer Hilfe liegt darin, die Bedürfnisse von Flüchtlingen zu befriedigen. Momentan werden zu diesem Zwecke verschiedene Organisationen (z.B. UNO, NGOs) unterstützt, die Flüchtlinge und arme Libanesen unterstützen. Die humanitäre Hilfe der DEZA weiss, dass sie auf PPDP Partnerschaften am meisten Einfluss nehmen kann. Denn als eine solche Organisation kann man nicht den Privatsektor und Staat als Ganzes zusammenbringen. Alles, was die humanitäre Hilfe macht, ist auf Projektebene, d.h. normalerweise ist ein Akteur aus dem Privatsektor und der Staat involviert.

- Der Wasseresektor ist insbesondere für die Schweiz interessant, da in diesem Bereich sehr grosse Expertise vorhanden ist. So ist es beispielsweise interessant zu schauen, ob Schweizer oder auch Libanesische Unternehmen mit dem Bekaa Water Establishment zusammenarbeiten könnten. Ob eine solche Zusammenarbeit jedoch konkret als PPDP bezeichnet werden kann, ist zum aktuellen Zeitpunkt unklar.
- Ist ein fehlendes PPP Gesetz im Libanon ein grosses Hindernis?
Das ist nicht dramatisch, denn solche Gesetze sind in einem solchen Kontext oft fehlend.
- Wieso ist das Projekt erfolgreich, obwohl keine PPP Gesetze vorhanden sind?
Der Erfolg vom Bekaa Valley Projekt ist, dass das Projekt indirekt Flüchtlinge unterstützt und sich gleichzeitig sehr eng am libanesischen Partner orientiert. Es ist also nicht ein pures humanitäres Projekt.
Ein grosses Problem bei der Syrienkrise ist, dass es kein baldiges Ende haben wird. Die angrenzenden Staaten kommen so mit ihren eigenen Systemen an Grenzen. Das Bekaa Valley Projekt setzt dort an und stärkt die Kapazitäten und unterstützt Partner.
- Problem bei ganzer Syrienkrise ist, dass es kein baldiges Ende haben wird. Staaten kommen an Grenze mit eigenen Systemen. Das Projekt setzt dort an und stärkt Kapazitäten und unterstützt Partner. Im Libanon ist die Schweiz nicht so stark involviert. Die Förderung der wirtschaftlichen Entwicklung und Strukturierung des Privatsektors haben deshalb kein eigenes Budget. Deshalb geht eine Plattform, die private und öffentliche Akteure zusammenbringt, über die Mittel der DEZA hinaus. Es ist aber trotzdem interessant, welche Empfehlungen diese Arbeit machen kann, auch bezüglich Abwesenheit des PPP Gesetzes. Die Humanitäre Hilfe kennt sich nicht gut mit dem Privatsektor aus.
- Wie arbeitet die DEZA mit PPDPs?
PPDPs bedeutet, dass Akteure des Privatsektors und der Staat bzw. Entwicklungsagenturen gemeinsame für Entwicklungsziele arbeiten. Diese Entwicklungsziele sind nicht primär das Ziel von privaten Akteuren, jedoch wird zunehmend erkannt, dass der Privatsektor ohne eine entwickelte Gesellschaft nicht funktionieren kann. Die DEZA macht dabei keine Subventionen an den Privatsektor, sondern die Risiken werden gemeinsam getragen. Z.B. kann der Privatsektor im Bekaa Tal eine wichtige Rolle in der Wasserversorgung einnehmen. Die zentrale Frage dabei ist: Wie können die Akteure gemeinsam für Entwicklungsziele an Bord geholt werden? Es gibt verschiedene Kontexte, in denen die DEZA operiert. Beispielsweise gibt es grosse Entwicklungsprogramme in Entwicklungsländern, die weniger humanitäre Probleme haben. Dort sind viele Mittel vorhanden und es besteht die Möglichkeit auf die Gesetzgebung einzuwirken. Ein anderer Kontext ist die humanitäre Orientierung. Dort gibt es Probleme und Grundbedürfnisse, die gelöst werden müssen. Die Gesetze und Rahmenbedingungen sind in diesem Kontext weniger wichtig. Eine Absicherung der Projekte erfolgt durch das Abschliessen von Projektabskommen mit der Regierung. Für das Bekaa Valley Projekt wurde zum Beispiel ein Projektabskommen mit dem Bekaa Water Establishment abgeschlossen. Für private Akteure ist es nicht unbedingt schlecht, wenn es weniger Reglementierung gibt, denn das bedeutet auch mehr Handlungsspielraum.
- Kann die DEZA im Libanon den Erlass eines PPP Gesetzes fördern?
Momentan, in der aktuellen Kooperationsstrategie, gibt es im Libanon keine Kapazitäten, um sich mehr im Gouvernanzbereich zu engagieren. Die DEZA ist im Libanon zurzeit primär humanitär aufgestellt (basic needs and services, Schulinfrastruktur, Schutz gegen Naturkatastrophen, Unterstützung von Flüchtlingen). Es könnte aber sein, dass nach der aktuellen Kooperationsstrategie (2019) eine neue Kooperationsstrategie für Entwicklung gibt, die ein Engagement im Gouvernanzbereich vorsieht. Die ist also eher eine Idee für eine zukünftige Strategie. Dabei ist es wichtig, mögliche Partner zu finden, denn normalerweise werden Projekte zusammen mit anderen Gebern unterstützt (z.B. Weltbank, andere Staaten). Im Libanon sind die wichtigsten Partner die Weltbank (in allen Ländern wichtig), andere Länder wie Deutschland, Grossbritannien, USA und die EU. Aber auch nicht staatliche Akteure (z.B. Handelskammern) haben ein Interesse daran.
- Wie werden in einer Kooperation mit grossen Ländern (Deutschland, USA) Vorschläge der Schweiz aufgenommen?

Es kommt sehr darauf an. Momentan ist Libanon stark im Fokus aufgrund der grossen Betroffenheit im Zusammenhang mit der Syrienkrise. Es besteht eine grosse Aufmerksamkeit und ein politischer Druck, dass die angrenzenden Länder von Syrien unterstützt werden müssen, damit die Flüchtlinge dort bleiben können. Die Folge davon ist jedoch, dass andere Krisen (z.B. Jemen, Horn von Afrika) weniger beachtet werden. Die DEZA ist in diesen Ländern zwischen Nummer 10-15 unter den Geberländern. Die Position der DEZA ist allgemein gesehen nicht sehr stark, aber wenn man sich auf spezifische Bereiche konzentriert und auch Personal hat, ist es möglich, bessere Ergebnisse zu haben. Das Projekt im Bekaa Valley kann zum Beispiel nur gemacht werden, weil die Schweiz viel Expertise hat, die innerhalb der DEZA einfach mobilisiert werden kann. Das ist auch der Vorteil der humanitären Hilfe. Denn über diesen Weg kann die Schweiz selber Projekte umsetzen. Das gibt es in der Entwicklungszusammenarbeit nicht, da die Schweiz dort eher Geber als Umsetzer ist. In der humanitären Hilfe ist das jedoch umgekehrt.

- Welche privaten Akteure sind gute Partner für PPDPs?

Die humanitäre Hilfe hat keine klaren Antworten auf diese Frage. Sie wollen jedoch eher klein anfangen. Es sollen keine Millionenbeträge investiert werden, sondern eher mit lokalen Partnern oder punktuell mit internationalen Partnern zusammengearbeitet werden. Das Problem mit grossen internationalen Unternehmen/Partnern ist, dass diese Unternehmen riesig sind und selber auch gewisse Ansprüche haben. Damit die humanitäre Hilfe ein Projekt gestalten kann, sollten Projekte möglichst klein sein und dezentral beginnen. So hat die humanitäre Hilfe grossen Einfluss. Zudem sollte in einer Region angefangen werden, wo die DEZA ein Büro vor Ort hat. Ausserdem lohnt es sich zu Beginn eines Projektes, viel Zeit zu investieren, vor allem wenn man mit Akteuren zusammenarbeitet, die man nicht gut kennt. Zu schnell eingegangene Partnerschaften basieren oft auf Missverständnissen und sind selten erfolgreich.

Auf der Regierungsebene gilt im Libanon eher Zurückhaltung, ein grosses Projekt mit der Zentralregierung durchzuführen. Dies kommt aber immer auf die Umstände an. Im Bekaa Valley kann der öffentliche Partner des PPDPs die DEZA oder auch der Staat Libanon sein. Es gibt ganz unterschiedliche Formen, wie sich der libanesische Staat einbringen kann. Wenn ein Projekt beispielsweise das Bekaa Water Establishment interessiert, dann geben sie ihre Zustimmung, aber eigentlich ist die Schweiz der Akteur, der das Projekt vorantreibt. Die Schweiz ist in einem solchen Kontext auch oft ein Garant für den privaten Akteur, da die Schweiz für eine gewisse Zuverlässigkeit und für eine korruptionsfreie Arbeit steht.

- Wo sehen Sie die optimale Rolle der Schweiz?

Zum Beispiel in der Zusammenführung von lokalen Unternehmen und lokalen Regierungen. Die Schweiz kann aber auch gut selber Partnerschaften mit privaten Akteuren eingehen. Bezüglich der Finanzierung wäre es gut, wenn das Kapital aus dem Libanon kommt. Aber schlussendlich kommen in einem PPDP die Beiträge immer von beiden Parteien, vom Staat (eher von der Schweiz, auch wenn der Libanon involviert ist) als auch vom Privatakteur im libanesischen Gebiet. Diese Beiträge können in Form von Finanzierung oder Naturalleistungen sein. Zentral ist, dass beide Parteien einen Beitrag leisten.

- Was sind attraktive Finanzierungsmittel?

Es werden momentan Bonds z.B. mit dem IKRK getestet, oder via Weltbank Projekte finanziert. Das ist interessant, wenn man grösser denkt, aber die DEZA denkt eher kleiner. Denn es ist schwierig eine solche Partnerschaft zustande zu bringen. Deshalb schaut die DEZA innerhalb der Organisation, wie die Mittel beschafft werden können.

- Ist es besser, wenn libanesische Behörden und der Privatsektor die Mittel aufbringen? Realistisch gesehen bringt die DEZA und libanesische Unternehmen den Grossteil der Mittel.
- Kann in einem solchen Projekt auch ein finanzieller Beitrag von der Bevölkerung im Libanon erwartet werden?

Im Projekt Bekaa Valley wurde eine Water Billing Unit aufgestellt. Diese stellt den Verbrauch von Wasser in Rechnung. Jedoch wird im Bekaa Valley der Wasserverbrauch nicht anhand von Mengen in Rechnung gestellt, wenn die Mengen tief sind. Es wird also nicht verfolgt, welche Wassermenge privat konsumiert wird. Das ist auch ein Grund, weshalb es viel Verschwendung von Wasser gibt. Zudem ist die Beziehung der Bevölkerung gegenüber dem Staat anders, als wir es hier kennen. Es fehlt an Vertrauen in den Staat und das Verständnis, dass die Bevölkerung einen Beitrag zum Staat leistet, fehlt ebenfalls.

- Wie kann im Kontext von Libanon mit Korruption, Monopolen (Rent Seeking) im Wassersektor umgegangen werden?
Korruption ist ein enormes Problem. Eine Möglichkeit, um gegen Korruption vorzugehen ist, dass die DEZA selber Akteur in einem PPDP ist, also der öffentliche Partner darstellt. Denn die DEZA ist ein vertrauensbildender Akteur.
- Wenn aber die DEZA selber der öffentliche Partner ist, wird dann nicht das Vertrauen in den libanesischen Staat untergraben?
Das ist ein guter Punkt. Wenn die Studenten hier Ideen haben, wäre Herr Rüst froh, diese zu erhalten. Längerfristig muss sich die DEZA zurückziehen. Dann könnte das Projekt zusammenbrechen, weil lokale Behörden bisher nicht solche Projekte gemacht haben. Es ist oft ein Fehler bei humanitären Projekten, dass es schnell gehen muss und man deshalb selber Projekte lanciert. Man denkt nicht daran, welches Potential lokal vorhanden ist.
- Könnte die DEZA auch als Verbindung zwischen verschiedenen Projekten tätig sein, anstatt selber Projekte zu machen?
Die DEZA ist meistens als Finanzierungsquelle aktiv. Aber das Problem, welches die DEZA hat, ist, dass sie im Libanon ein relativ kleiner Akteur ist. Um projektübergreifend Einfluss zu haben, ist es wichtig, dass die Projekte zusammenhängen. Wenn man sich zum Beispiel auf einen gewissen Bereich fokussiert, ist es möglich.
- Herr Mona hat in der Diskussion vorgeschlagen, zu versuchen, das Engagement im Wassersektor mit anderen Sektoren zu verbinden (z.B. Landwirtschaft). Welche Schnittstellen sehen Sie?
Wasser und Landwirtschaft ist bestimmt eine Schnittstelle, da die Landwirtschaft ein erheblicher Wasserkonsument ist. Zudem organisiert das DEZA Büro im Libanon auch Projekte für den Landwirtschaftssektor in Verbindung mit Wasser. Andere Sektoren bedeuten auch andere Akteure. Alleine schon in einem Sektor aktiv zu sein und eine Rolle einzunehmen, ist nicht einfach. Zudem ist die Koordination in mehreren Sektoren nicht die Rolle der DEZA. In der Realität fehlen dazu die Personal- und Finanzressourcen. Theoretisch kann man einen solchen Link auf dem Papier schon produzieren, aber wenn man schaut, was vor Ort passiert, dann ist das nicht viel. Zum Beispiel macht die DEZA einen finanziellen Beitrag für Libanon von 20 Mio. Die Hälfte davon geht an palästinensische Flüchtlinge. Also bleiben noch 10 Mio. übrig. Pro syrischen Flüchtling sind das etwa 10 CHF. Das sind also nicht viele Mittel. Zudem müssten auch personelle Ressourcen vorhanden sein, um Einfluss zu nehmen. Deshalb ist es wichtig, sich zu konzentrieren. Herr Rüst denkt, es ist bereits eine sehr grosse Herausforderung, in einem Sektor Einfluss zu haben.
- Welche Zeithorizonte werden für PPDPs angesetzt?
Die Zeithorizonte der DEZA sind ca. 4-5 Jahre. Das ist schon relativ lang. Die meisten humanitären Projekte sind auf eine Dauer von 0.5-1.5 Jahre angelegt. In der Entwicklungszusammenarbeit denkt man in längeren Zeithorizonten. Klein anfangen bedeutet auch mit einer kurzen Dauer anfangen.

(2. May 2017)

10 Declaration of Authorship

"We hereby declare

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- that we have mentioned all the sources used and quoted them correctly in accordance with academic quotation rules;
- that the topic or parts of it are not already the object of any work or examination of another course unless this has been explicitly agreed on with the faculty member in advance;
- that our work may be scanned in and electronically checked for plagiarism."

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