

OPPORTUNITIS AND CHALLENGES MET IN THE PROCESS
OF REPLICATING A SOCIAL ENTERPRISE CONCEPT FROM
A KNOWN AREA TO A GEOGRAPHICALLY AND
CULTURALLY DIFFERENT AREA

CASE STUDY: AQUACITY CONCEPT FROM INDONESIA TO
PAPUA NEW GUINEA - A SOCIAL IMPACT ASSESSMENT

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PREFACE – A PERSONAL NOTE

I am concerned about poverty alleviation and efficient ways to reach the Millennium Development Goals, especially the enabling and inclusion of the disadvantaged. I am near obsessed about social impact and ways of reaching as many as possible with well-working concepts. I get impressed by those who dare to take risks on behalf of others, and move their ideas out there, to be incorporated among the people who will benefit from these ideas. So, who are they? Social entrepreneurs are not bound by formal and informal boundaries; they connect, combine and find synergies, they look beyond set limits, seek opportunities and work efficiently with limited resources. They are socially intelligent and can work as “translators” between different “worlds”, and know how to communicate and partner up with different stakeholders and “door openers” to achieve their goals. They don't give in or up. They work pragmatically and strategically, with sustainability at heart. They truly inspire others. This is my summary and impression after meeting and reading about great social entrepreneurs. I have always been intrigued by new ways of dealing with a problem. In 2004 I was deeply involved with a project aiming at integrating physically handicapped people in Afghanistan through sports - and we managed to get a national team to the Paralympics in Athens. This was my trigger to social entrepreneurship, although I didn't know the term then. It is my thesis topic and preferably my profession later on. I admire incubators like The Hub¹ and Ashoka² and Schwab³ Fellows.

A word of warning. This master thesis is not an archetypical one. It will not follow a predefined stream. But when studying entrepreneurship and innovation we are encouraged to think in different ways to achieve our goals. I see connections and indulge in all kinds of approaches. To dive into details and paint the big picture are parallel processes in knowledge-building activities, and especially in the world of social entrepreneurship. I hope you will refill your understanding of innovative and scalable ways of doing good, from reading my thesis. It is based on a SIA for social enterprise in the process of transferring concept to Papua New Guinea. Enjoy the journey!

Margrethe Valler, Oslo/Ås, December 15th 2011, mvaller05@yahoo.no

¹“We're a social enterprise with the ambition to inspire and support imaginative and enterprising initiatives for a better world. The Hub is a global community of people from every profession, background and culture working at 'new frontiers' to tackle the world's most pressing social, cultural and environmental challenges “
<http://the-hub.net/>

² “Ashoka envisions an Everyone A Changemaker™ world. A world that responds quickly and effectively to social challenges, and where each individual has the freedom, confidence and societal support to address any social problem and drive change. <http://www.ashoka.org/>

³The Schwab Foundation for Social Entrepreneurship is a not-for-profit, independent and neutral organization, founded in 1998, with the purpose to advance social entrepreneurship and to foster social entrepreneurs as an important catalyst for societal innovation and progress. <http://www.schwabfound.org>

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The PNG way: (water) bus doctor and village court (boat at the back), Angoram, Sepik river



Teacher Sheila's house in Wom. The beach is right behind, where she enjoys swimming.

ABSTRACT

Rita Westvik and Margrethe Valler conducted in 2010 a Social Impact Assessment in Papua New Guinea for an Asian social enterprise with experience from Indonesia. The purpose was to find out how a vast development project in a coastal swamp area, in a province called East Sepik, would impact on the local people. During field study we also found factors where people could impact the success rate of the project. Hence, the other way around. Some of these findings are recurring in this thesis. I have chosen to elaborate on those that are mainly related to the theoretical backdrop and main objective;

What opportunities and challenges can be met in the process of replicating a social enterprise concept from a known area to a geographically and culturally different area?

Another aim of the paper has been to give it practical relevance as well as learning about the field of social entrepreneurship, for the reader to get an understanding and for the social enterprise to contemplate around needed strategies when venturing into risky and complex development projects in an unknown territory. The field work yielded unique data, mainly qualitative; based on surveys, interviews and foresight workshop, with a participatory approach.

After literature review and field work, the following sub problem statements emerged:

Sub-problem statement 1

What social factors does a social enterprise need to consider in the planning stage of transferring a holistic development project into a culturally different area?

Case: LSO from Indonesia to PNG.

Sub-problem statement 2

THE PROJECT IMPACTING THE PEOPLE.

Views on change, cultural diversity and future prospects

Main findings and recommendations

- Social enterprises can up-scale by allowing knowledge transfer to happen through people to people encounters, the use of “cultural interpreters” and a participatory approach.

- A social enterprise entering a new country needs to consider land issues, cultural diversity and tolerance, education level and system and work culture.
- A social enterprise needs to encourage dialogue with target groups regarding their hopes and fears about the future and the impact of the project on their lives.
- Social challenges due to transit phases that a local society may be going through are in need to be facilitated in a constructive way. E.g. in PNG there is a transit from subsistence to monetary economy, thus migration issues and influx of money are considered potential roots of social problems.
- The recommendations and concerns voiced by the impacted people related to the planned project need to be taken into consideration when forming strategies for the development, e.g. cultural centres and the training of life skills knowledge, such as long term planning.

ABSTRACT IN NORWEGIAN

Rita Westvik og Margrethe Valler gjennomførte i 2010 en Social Impact Assessment i Papua Ny-Guinea for en asiatisk sosial virksomhet med erfaring fra Indonesia. Hensikten var å finne ut hvordan et stort utviklingsprosjekt i et kystnære sumpområde, i en provins som heter East Sepik, ville innvirke på lokalbefolkningen. Under feltstudie fant vi også faktorer hvor folk kunne påvirke suksessen til prosjektet. Altås, snudd på hodet.

Noen av disse funnene er tilbakevendende i denne masteroppgaven. Jeg har valgt å utdype de som i hovedsak er knyttet til den teoretiske bakgrunn og hovedproblemstilling;

Hvilke muligheter og utfordringer kan møtes når en sosial virksomhet overfører et konsept fra en kjent område til et geografisk og kulturelt annet område? Case: LSO fra Indonesia til PNG.

Et annet mål for oppgaven har vært å gi den praktisk relevans, samt lære om sosialt entreprenørskap, både for leseren å oppnå forståelse og for den sosiale virksomheten til å lære av strategier når de beveger seg inn i risikable og komplekse utviklingsprosjekter i ukjent terreng. Feltarbeidet ga unike data, i hovedsak kvalitativ, basert på spørreundersøkelser, intervjuer og forsight workshop, med en deltakende tilnærming.

Etter litteraturgjennomgang og feltarbeid, dukket følgende underproblemstilling opp: **HVORDAN FOLKET PÅVIRKER PROSJEKTET.**

Underproblemstilling 1:

Hvilke sosiale faktorer gjør en sosial virksomhet må vurdere i planleggingen av overføring av et helhetlig utviklingsprosjekt inn i et kulturelt annet område?

Underproblemstilling 2:

HVORDAN PROSJEKTET PÅVIRKER FOLKET

Synet på endring, kulturelt mangfold og fremtidsutsikter

Hovedfunn og anbefalinger

- Sosial virksomheter kan oppskalere ved at kunnskapsoverføring skjer gjennom møter mellom mennesker, bruk av "kulturelle tolker" og en deltakende tilnærming.
- En sosial virksomhet inn i et nytt land må vurdere landspørsmål, kulturelt mangfold og toleranse, utdanningsnivå og system og arbeidskultur.
- En sosial bedrift trenger å oppmuntre til dialog med målgruppene om sine håp og frykt for fremtiden og virkningen av prosjektet på deres liv.
- Sosiale utfordringer som følge av transittfaser som en lokal samfunn kan gå gjennom må tilrettelegges på en konstruktiv måte. F.eks i PNG er det et transitt fra livsopphold (subsistence) til pengeøkonomi, og dermed migrasjonsspørsmål og tilstrømmingen av penger er ansett som potensielle årsaker til sosiale problemer.
- Anbefalingene og bekymringer fortalt av de påvirkede personer knyttet til det planlagte prosjektet må tas i betraktning når strategier for utvikling skal utarbeides, f.eks kulturelle sentre og trening av livsferdighetskunnskap, slik som langsiktig planlegging.



Rita, I and people of Wom village

1. INTRODUCTION

1.1 BACKGROUND

The social entrepreneurship field is vast and developing, and in Norway still fairly unknown. I contemplated various options to explore for my thesis. Then by chance I met Rita Westvik through an acquaintance. On the very same day (Sept. 16th 2010) she got a request from *her* acquaintance, CEO DJames Lim of Lim Shrimp Organisation (LSO), to undertake a social impact assessment (SIA) in a country new to them; Papua New Guinea (PNG). LSO has near three decades of experience from developing and running a sustainable aqua culture city in Indonesia with more than 300 000 so-called aquapreneurs, or aqua farmers - aimed at improving livelihood. From 2007 they have been able to transfer the concept to other developing countries and are in dialogue with several governments, among others Papua New Guinea. The purpose is to improve the livelihood for poor people. The field work in PNG took place in October 2010. The project was called Aquapolis, is meant for about 25 000 people, including education and health services. We used a variety of approaches to learn the mindsets and social structures of the people of the area. Both of us being “scope crawlers”⁴, we ended up with a report of more than 300 pages and a range of information and recommendations.

PNG is a country in the Pacific Ocean, part of Oceania, lies partly on the New Guinea Island, the second largest in the world. Australia administered PNG until their independence in 1975. PNG is diverse both nature and culture wise. Approx. 82 % live rurally in villages and their more than 800 languages represent different cultures and rituals.⁵ The country has had missionaries influencing them for decades and Asian investors extracting natural resources. The people of PNG try to balance traditional and modern ways, also confirmed by our survey.

With permission from LSO and Rita Westvik I will use this research experience and SIA (Social Impact Assessment) as case for my thesis. It will hopefully provide an understanding for the rather unique concept of the social enterprise LSO, see how it fits in with other models – and not the least learn from the approach used in a feasibility phase. We tried to find; what should be

4 Labeled so by a mutual friend - meaning that we seek knowledge wherever it can be found.

5 http://en.wikipedia.org/wiki/Papua_New_Guinea

enquired, from whom, and how do you involve the beneficiaries and stake holders? What are their ideas and future views. We let the people's worries and anticipations weigh when making recommendations and decisions which will affect their future lives. We were listening to their ideas, encouraging and recommending their participation, letting them shape the project and allowing their creativity solve potential challenges and leveraging on the new possibilities.



Rita Westvik and Margrethe Valler in Wewak town, capital of East Sepik Province

1.2 THE STRUCTURE OF THE THESIS

This thesis (also called paper) is so-called “hourglass shaped”. It starts with a presentation and discussion around the Millennium Development Goals, aid and development perspectives and arenas to give an international background picture of the case study in PNG. Based on this is an objective for the thesis presented; how to transfer a concept to reach social impact. Based on the objective, there is a dive into relevant literature, articles and interviews. Based on this there is a set of problem statements and research questions, in which the literature and case study from Papua New Guinea and the corresponding Social Impact Assessment, will try to answer. The paper will try to sum up by reflecting on the initial background topics, theories and incorporating PNG findings into it, as well as recommending further studies and provide concluding marks.

1.2.1 Introducing the topics and methods

The notion of social entrepreneurship is difficult to grasp, as well as which grass field they are playing on, so a theoretical framework and some of the debate will be presented. Additional topics and challenging areas encountered by a social enterprise like LSO attempting to transfer their concept to other countries, will be covered, such as scaling, knowledge transfer and culture understanding. The Social Impact Assessment in Papua New Guinea provides most of the unique data collection, including interviews, surveys and a foresight workshop. Replication of existing concepts to a different culture, and thereby scaling up the social impact, as well as finding the aspects that need to be mapped to enhance the success rate, is what this paper is mainly concerned about. All in the planning phase.

1.3 MILLENIUM DEVELOPMENT GOALS



Figure x: The 8 MDGs, set by the UN to be reached by 2015

Working towards the Millennium Development Goals (MDGs)⁷ is something social entrepreneurs, including LSO, believe in, so I have chosen to include interviews and presentations of two speakers who had attended the recent MDG Summit in New York in September of 2010, straight before our field trip to PNG. Charles Abugre and Emily Joy Sikazwe were in Oslo at a relevant conference organized by the Norwegian Polytechnic Society. Charles

⁶http://www.cities-localGovernments.org/upload/img_news/94275107910_9378394266_mdgs.jpg

⁷<http://www.un.org/millenniumgoals/>

Abugre from Ghana is a regional director for the UN Millennium campaign (office in Nairobi). I have singled out relevant notes from his lecture that were relevant to the situation in PNG and their need of infrastructure and value creation.

- Some countries are still struggling to establish an institutional DRIVE, which is very difficult without value creation, science and infrastructure. A prerequisite to achieve this is the removal of poverty, ignorance and diseases.
- (Like PNG) Ghana has had an immense population growth, from 4,4 million in 1960 to 60 million in 2010, with many different language groups and a very diverse culture.
- Poor countries need to transform from low value to high value production.
- Industrialize, copy technology and improve taxation system.
- Within agriculture, it needs to feed own population, not rely on imports. We need to make small-scale farmers productive!
- International trade and finance should improve.

After his speech we made a short interview. He stresses: “We need to focus on JOB CREATION. Finding ways to put entrepreneurs at work and make entrepreneurship deliver development and social goals for society. This goes for all poor countries, the need to focus on enterprise and initiatives with added-value.

Emily Joy Sikazwe asserts that the MDGs should be taken as one, holistically, as they are all linked. We shouldn't just choose and pick. She stressed that “trade must be fair. Developing countries are looked down on, but want to be dealt with on their own terms, with dignity - with mutual respect. Education is not enough. If you educate people they might migrate if there are no attractive jobs - so jobs are needed!”

We have noticed that African poor countries and PNG have a range of challenges in common. Charles and Emily both declare the need of industry development, value improvement and the enabling of job creation, for poor countries to get out of their poverty trap and to be able to reach the MDG goals. LSO has a model that is aligned with this.

1.4 PROLIFERATION OF ACTORS AND MODELS

Just from reading papers and following the news we get a glimpse of the proliferation of models and approaches with the aim of development and improved livelihood for people. International non-governmental organizations (NGOs), aid agencies, businesses with Corporate Social Responsibility (CSR) programs may take their ideas and methods with them from the outside and try to implement them in partnership with locals. Then there are the national development programs, and civil sector grassroots initiatives, some keeping it small, some trying to scale up. Some of these actors try out known methods, with success or failure. Without doubt there is a debate concerning aid strategies which has not had the intended impact, due to many reasons, perhaps hidden agendas. Or corruption, which Dambisa Moyo is concerned about. I find it extra interesting that this Aquapolis can be labelled a so-called South to South project, with limited involvement of “westerners” which have been in the “aid industry” for decades. Although DJames Lim is based in Singapore, the main aqua city reference is in Indonesia, which together with PNG scores fairly low on the UN’s Human Development Index (HDI); 101 and 137 of 168 countries. (Norway ranks 1 of 168). Social entrepreneurs try out innovative sector-crossing strategies. They claim that this strategy makes the development more sustainable as well as becoming donor independent. But these strategies are also under scrutiny. Some people debate *their* “hidden” agenda, and believe it is unethical to create income as well as social value. Even others refer to extreme examples, like the media coverage recently of mass suicides in India, allegedly due to a micro finance trap. This chapter is included to give the reader an idea of the complex development arena and various actors, from outside or inside the country at stake, which LSO is operating in.

1.4.1 Aid criticism

This is not meant as an attack on aid, but there is no doubt a great deal of debate about the efficiency and even (ironically) adverse effects of conventional aid. Social entrepreneurship can provide more efficient alternatives methods. Zambian-born economist Dambisa Moyo, created massive controversy with her book “Dead Aid” in 2009, where she claim that aid is actually impoverishing the people of Africa more than it is helping.⁸

⁸ http://www.wired.com/techbiz/people/magazine/17-10/ff_smartlist_moyo

Jack Sim on Aid

I met Ashoka Fellow and WTO (World Toilet Organization) social entrepreneur Jack Sim at Emerge conference in Oxford Dec. 2010. He presented and discussed public inclusiveness, poverty and aid. “By including poor people”, he holds, “we haven't lost anything, we have gained. A long term intervention is needed. Are India and China getting out of poverty due to aid? No, due to jobs and markets. It scales quickly. They make themselves get out of poverty”.

Djames Lim on Aid

“Have you seen any specific aid projects, like hospitals and schools, similar to your idea? How is the way they work compared to yours” Lim replies: “I cannot comment on how effective they are etc. But in terms of big scale, I have not seen something that is super successful. I would like them to also succeed. But they have a lot of costs. In the end of the day, how much do they actually help the people? They need big offices and expensive salaries for their own staff. We cut down on our own man power. We don’t have posh offices; we use the government offices, and local man power.”

Aid is a complicated issue, and this paper will not discuss it in further depth. Nonetheless, conventional aid and how social impact can be reached more efficiently with different methods, especially using participatory approach, is something that many social entrepreneurs debate.

1.5 WHY LIM SHRIMP ORGANISATION?

How do Lim Shrimp Organisation and their eco aqua city concept fit into this picture?

As a social enterprise, with scale and impact in mind, can CEO Djames Lim provide a (more) efficient model? And what can LSO learn from other fields? Djames Lim calls himself a social developer and believes in a so-called “triple win” concept, where three parties all win; the poor, the government and LSO, as the developer Djames believes in the empowerment of the “aquapreneurs” - LSO’s term for the non-employed aqua entrepreneur. In contrast to cooperatives, traditional small scale farmers, employees and independent entrepreneurs, he urges the balance of the collectivistic idea behind a co-owning structure and the individualistic choice of excelling or selling out. In addition to this, the city is planned to provide social benefits such as free education and health services, as well as tax income and social stability in the interest of

the government. LSO hope to yield adequate profits to further scale the concept to more developing countries, thus enabling economic sustainability.

2. OBJECTIVE

The Social Impact Assessment required that we covered a range of topics. This thesis will deduct a selection and emphasize on areas in need of being mapped in a planning stage of replicating a social enterprise concept from one area to a culturally different. In addition there is a relevant literature review and advises from the knowledge researcher Arne Bygdås and the interculturalist Bjørn Christian Nørbech - that a social enterprise in this phase really can learn from. The objective of this paper is thus to cover a selection of recommendations and strategies, like a report would do, and in addition take into consideration the findings and voices from Papua New Guinea, to try to answer the following main problem statement:

What opportunities and challenges can be met in the process of replicating a social enterprise concept from a known area to a geographically and culturally different area?

Two sub-problem statements, with their corresponding research questions, are directly connected to the case of LSO in PNG. The first being of a descriptive nature, covering how the people and their accustomed culture and challenges can have an impact on the project itself, thus providing information to assess the risk and map areas to be aware of. The latter is more future and change orientated, and consequently more related to the impact the project may have on the people of the East Sepik Province, and how they perceive it. The sub-problem statements and subsequent research questions will be presented at the end of the Chapter 5. By and large, I hope to highlight and introduce topics and new approaches relevant to solving social challenges. Some areas are in need of being understood more thoroughly, especially when venturing into a country with a different culture and setting, such as PNG is both to us from the North and Singapore-based DJames Lim. We learnt that this requires humility, curiosity, openness, patience and inclusiveness.

3.0 LIMITATIONS TO THE STUDY

It is important to note that the Aquapolis is a *planned* project, it is not in a construction process or in operation, and thus it is difficult to test the success. The Social Impact Assessment we did was a part of a two-part feasibility report, intended for the PNG government and Parliament, before they make the decision to invest. The other part is an Environmental Impact Assessment (EIA). The EIA was not completed when we handed in our report in January 2011, and thus we don't know these results. We are not nature scientists, but our assumption must be that this part is taken care of. We are informed that the Aquapolis is based on sustainability and eco friendliness, but have not visited the existing aqua city in Indonesia, to do surveys there as well. To link the findings from our SIA report, being quite specific on mapping the people we surveyed for the Aquapolis project, into the more overarching and general theories of social entrepreneurship proved somewhat challenging, but rewarding. Hence, all findings will not be covered by their own theories, but rather illustrate the need of general topics in need of awareness and strategies to be able to handle such complex development projects as constructively as possible. Some topics, covered by the SIA, are not covered to a great extent in this thesis, but when the report will be officially available it can be read there.

I will here make short comments on some of these success criteria:

LSO will need a sizable piece of land (2000 hectares), so the attitudes and involvement to the Aquapolis development by the land owners is a success criterion. In PNG land is owned customary, usually not registered in an official record. We were repeatedly warned about how land disputes and law suits can harm the project. The Eye for Eye (revenge) culture, the complex religion picture and inflated expectations (said in church; "we will all be millionaires"), can also cause challenge and need to be dealt with.

I have in this thesis tried to focus on a limited number of topics which are in particular important when transferring a concept from one culture to a different one. Although *technology* transfer is an important process for LSO and anyone trying to replicate and scale across borders, I believe the human factor is the most unpredictable and important to handle well to ensure success with any development, and thus will focus on the *knowledge* transfer for this paper.

4. CASE STUDY PRESENTATION

4.1 THE SOCIAL ENTERPRISE LSO and their model

I have not been able to find much objective third party information regarding Lim Shrimp Organisation (LSO), realising that that would make a better academic analysis, but the paper is assuming the sincerity of the information given during interviews, LSO's website and the reassurance from people who know DJames Lim. According to LSO; "Lim Shrimp Organisation Limited (LSO) is one of the world's most successful social developers having founded, built and operated the largest integrated aquaculture farm in the world under the trans-migration program in Indonesia during the 80ies, supported by International Funder Bank. The mission of the Organisation is to turn poverty ridden countrymen and fishermen into aquapreneurs, who are taught how to culture economically viable shrimps with a real possibility to own also the farm and the land. LSO works on integrated shrimp culture with supporting services like schools, health clinics and entrepreneurship. This creates export and tax revenue and social stability." LSO has since 2007 been permitted to transfer the concept to other countries with direct cooperation with governments. The following are interested; Timor Leste, Uganda, Sri Lanka, Malaysia, Puerto Rico, Oman, China and The Philippines.



Photo 2: Family tending their aqua farm



Photo 3: Aerial view of the aqua city in Indonesia

What we learn about Lim Shrimp Organisation is reflecting the ideas behind social entrepreneurship; doing good by doing well, ensuring the correct distribution of wealth, battling corruption, the sustainability focus, the triple win concept and ensuring improved livelihood by

encouraging entrepreneurship and co-ownership instead of regular employment. LSO has a vision of improved livelihood and opportunities for poor people, done in a sustainable way and creating an environment for business and markets. They also see that incentives for several stakeholders are success factors to make it work. They believe that it should be constructive for both the Government (improved social stability + tax income), the aquapreneurs (given the chance to run and own their own farm creating income and improved social services, such as recreation, education and health) and the developers (making profits from the operation). When co-owning and co-operating in a bigger scheme, it also creates economics of scale. LSO (referred to as the developer/initiator) has the technological and organisational competency, as well as access to international markets. The aquapreneurs will create a mix of cooperation and competition, we can call it "cooperation" as they need to both help and correct each other.

Djames Lim's belief, and experience from Indonesia, is that the opportunity for people to become home owners and run their own aqua farm , with their own input directly leading to their outcome, is more motivational and productive than if they were employees. However, to reduce the normal risks when starting something completely on your own, they are provided training and become part of a market chain and larger infrastructure. LSO wants to share their knowledge with other countries. To reduce their own investment risk and ensuring national ownership, they promote involvement and investment from the governments. The government should provide investments to develop the infrastructure, and provide mortgage loans to the aquapreneurs to be able to buy a farm. Interview of Djames Lim in Appendix 7.



Photo 4: Dressed up by Wom women, receiving Djames Lim and dr.Sammy Toti at Wewak airport.

4.2 THE COUNTRY, THE PROVINCE, WOM VILLAGE AND AQUAPOLIS

4.2.1 Papua New Guinea (PNG)



Photo : A man in a shop showing the PNG flag

Illustration 1: Map of PNG

Language

English is the official language. A local pidgin, with many English words and Melanesian grammar, is widely spoken, as well as around 700 local languages.⁹

Capital: **Port Moresby**

Area size : **452860 sq. km**

Currency: Kina (word derived from their traditional currency; kina shells)
1 Kina = approx. 2 NOK

Population, last estimate: 2010: 7,2 million **Future population estimates:** 12.9 million (2050)¹⁰

Ethnic groups Papuans 85%, Melanesians 15 %¹¹ **Religion:** Many people follow traditional religions and also belong to Catholic (33 percent) or Protestant (58 percent) communities.¹²

⁹New Internationalist World Guide

¹⁰U.N. DESA (2009)

¹¹NI World Guide

Percentage rural population 2007 84.4 percent.

In appendix 2 you will find: PNG DEVELOPMENT PERFORMANCE 1975 - 2005

4.2.2 East Sepik Province (ESP)

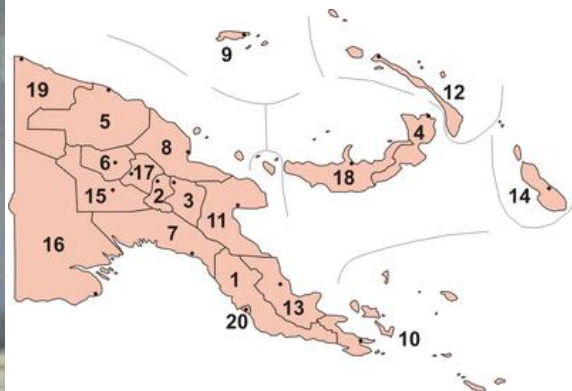


Photo 6: A man in a shop showing the ESP flag Illustration 2: Province no. 5 is East Sepik.

DEMOGRAPHY

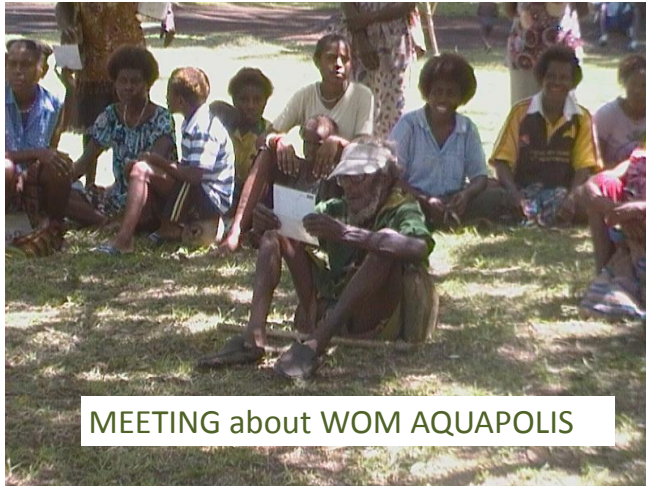
East Sepik is a province in Papua New Guinea. Its capital is Wewak. East Sepik has an estimated population of **343,180 people** (2000 census) and is roughly 42,800 km square in size.

In Appendix 3 and 4 you find more information about East Sepik Province and Wewak.

¹²NI World Guide

¹³U.N. DESA - World Urbanisation Prospects 2005

4.2.3 Wom village at a glance



Village meeting Oct. 2010

- Wom is a village in Wewak District, East Sepik Province
- Approx. 300 inhabitants (2007; 260)
- Household size; 5-14 people, including extended family members.
- Approx. 10%, that is 30 people, are employed (10 women in the tuna industry).
- Subsistence economy is dominant; kina shell, long tail snails, fish, sago, betel nut, lime, coconuts, chicken and some pigs.
- Wells and collected rainwater. No electricity, poor sanitation system.
- 1 elementary school (since 2009). Plan to establish a public International School.
- Homes: 2-3 rooms with terrace in front. One family has 2-4 houses, kitchen normally in separate house or shelter, cooking on open fire.
- Most families have radio and mobile phone. 6 TVs in total (petrol generator).
- Health; no nurses or doctors, no first aid equipment, nearest health station 20 min. by car. Hospital in Wewak (30 min away). No cars in the village. Use boats if emergency.
- Religion; Catholic, AOG (Assembly of God), SDA (Seventh Day Adventists).

- Social challenges; drinking, fighting, unemployment. Fear they are losing culture, language and traditional way of life.
- Law and order; Council and elders – village meetings, conflict solutions through dialogue, reconciliation and compensation.
- Cape Wom War Memorial Park nearby. Some see potential of income from tourism. Access to recreational space, like beach and football ground.
- Transportation. Village is 45 min walk to main road. Infrequent buses (PMVs, Public Motor Vehicles) available, but normally not on reliable schedule. Boats (photo below).
- Most of the inhabitants showed positive attitude towards the Aquapolis and its development, and reflected around challenges.



A fisherman from Wom. Aquapolis area to the left, by the coast. “Sinking island” at the back.

4.2.4 Aquapolis in tentative numbers and plans

The following slides were made for the foresight workshop, which will be further presented in the Methodology chapter. More information on the Aquapolis in Appendix 5.

TENTATIVE PROJECT PLAN

- Feasibility studies finished by Jan 2011
- Invitation/ tender request in Aug 2011
- Construction start 2011/2012
- Water canals and energy supplies must be in place early
- By 2013: 200 ponds, 1000 aquapreneurs educated
- Fully developed AQUAPOLIS before 2015; MDGs chosen year to have reduced extreme poverty by half
- Aquapreneurs are given loans by the State or get state guarantee 5% interest, max 7%
- Annual profit before tax: 6 000 Kina (500K amonth) in the 10 year period when loans are being paid, afterwards monthly plus can be up to 1 700 K

PROJECT GOAL: SUSTAINABLE, IN HARMONY WITH NATURE



**600 HECTAR LAND
10 X 2 KM
60 – 70% SWAMPS AND
WETLAND
MANGROVES PROTECTED**

Neighbouring villages and settlers will be affected

6000 families can work/live in WOM AQUAPOLIS
BETWEEN 20-30 000 PEOPLE



4.2.5 The reference aqua city in Indonesia

During an interview of DJames Lim, he is asked to describe the reference aqua city in numbers; “It is 2 times the size of Singapore with approx. 100 000 hectar. More than 300 000 live there, and 1 million ppl are benefitted, including those indirectly involved, like suppliers and other people setting up business in the city. During mid 80ies and early 90ies they were the largest exporter in terms of money, outside oil and gas. Their annual GDP turnover was 7-800 mill US doll annual in export. In total including the spin-off; there was more than a billion.”

5. LITERATURE AND INTERVIEWS

Introduction

I will go through a literature review for two purposes; to yield background information about the field of social entrepreneurship and to find relevant theories for the field study and the process LSO is going through. As the Millennium Development Goals and the philosophy behind LSO are based on sustainability, it is natural to commence the chapter with this definition. Various topics, definitions and recommendation within social entrepreneurship and enterprise will be presented. Knowledge transfer, scaling strategies and culture interpretation will also be looked into. These are chosen as core topics in need of being understood before replicating a concept to a culturally different area.

I have added interviews of three people with relevant insights to be able to answer the objective of the thesis. They are integrated in this chapter, and chapter 7 where findings are presented, as comments and recommendations. The interviews (of Lim, Nørbech and Bygdås) will be found as a whole in Appendix 7. Appendix 1 has a list of abbreviations and definition of relevant terms.

5.1 SUSTAINABLE DEVELOPMENT

I have always been proud to announce to foreign friends that our former prime minister Gro Harlem Brundtland chaired the World Commission on Environment and Development (WCED), convened by the UN in 1983. Their report, “Our Common Future”, defined sustainable development and the change of politics needed for achieving that. The definition is often cited: “development that meets the needs of the present without compromising the ability of future generations to meet their own needs.”¹⁴

Elkington and Hartigan (2008: 179)ⁱ combine the scaling and the sustainability aspects in their assertion; “To tackle our great challenges effectively, in a timely fashion, and sufficiently, we must learn how to scale and replicate the more sustainable solutions and mobilize collective efforts.”

¹⁴ http://en.wikipedia.org/wiki/Brundtland_Commission

5.2 SOCIAL ENTREPRENEURSHIP

→ Gandhi: “You must *be* the *change* you want to see in the world”

The main purpose with the theory chapter about social entrepreneurship is to give an insight into the main backbone of this paper, and reach a broader consciousness for those who work in field, perhaps assisting with strategies to increase success rate.

The chapter ends with suggested policy changes to foster social entrepreneurship, to the inspiration and backdrop for debates to politicians and facilitators. And a last note will give the rhetorical question whether social and conventional businesses will blend in the future.

“The world faces epochal challenges – from conflict, terrorism, and weapons of mass destruction; to poverty and hunger; to perhaps the biggest issue of all, climate change. Still, if tackled in the right way, today’s crises can lead to tomorrow’s solutions, even including potential market opportunities. Social entrepreneurs spot dysfunction in the system, and, unlike reasonable people who accommodate themselves to the status quo, try to work out how to change the system equilibrium to a different and more functional state. Many of the most interesting experiments take place in the middle ground, where hybrid organizations pursue new forms of blended value and where better-off customers sometimes subsidize less well-off customers”. (Elkington & Hartigan, 2008: preface and 3).

There is an ongoing debate about the definition and conceptualisation of social entrepreneurship, and I will not indulge into that in this paper. But some of the most common understandings will be presented. Dees (1998)ⁱⁱ one of the “fathers” of the term, defines it like this; “Social entrepreneurship combines the passion of a social mission with an image of business-like discipline, innovation, and determination commonly associated with, for instance, the high-tech pioneers of Silicon Valley.” Nicholls (2005)ⁱⁱⁱ defines social entrepreneurship as: “innovative and effective activities that focus strategically on resolving social market failures and creating new opportunities to add social value systemically by using a range of resources and organizational formats to maximize social impact and bring about change.”

My personal understanding of the term is simply;
”solving known social problems in an innovative and sustainable way.”

The Aquapolis project with its triple win strategy is clearly one of a social entrepreneurial nature. LSO acts as a catalyst by addressing vital societal challenges with competence, entrepreneurial flavor and vision. The LSO team seeks to see opportunities where others see hardship. Jerr Boschee, an American Professor giving a speech at a conference on social entrepreneurship in Oslo Sept. 2010, claims that social innovation and social enterprise are subsets of social entrepreneurship. Social innovation focus on new *ideas* with social mission, and social enterprises seek to move away from grant-dependency towards self-sufficiency via the creation of income streams.

5.2.1 Social entrepreneurship business models

Social entrepreneurs engage with a wide range of business and organizational models, both not-for- and for-profit, but the success of their activities is measured first and foremost by their social impact. The sector is chiefly not-for-profit, but not always non-profit. Elkington & Hartigan (2008) urge that there are at least three main business models that can be used if you are performing in the area of social entrepreneurship. The first two will be briefly described, and the third explained more thoroughly, as it fits the description of LSO.

1. Leveraged Nonprofit Ventures: In the areas of complete market failures, where there is no or minimal WTP (willingness to pay), it can be impossible to use for-profit business models. The key is to leverage on available resources that measure up to the nature and scale of the challenges. The characteristics of this model can be;
 - a. A public good
 - b. The organisation is a change catalyst, enabling direct beneficiaries to assume ownership and achieve long term sustainability
 - c. Multiple external partners support financially and politically
 - d. Founding entrepreneur is the figurehead

Example; Bunker Roy and his Barefoot Collage¹⁵, whom I was fortunate enough to meet during the Emerge Conference in Oxford in Dec. 2010.

2. Hybrid Nonprofit Ventures: display a blending of nonprofit and revenue-making for-profit strategies. They have the following characteristics:

¹⁵ <http://www.barefootcollege.org/>

- a. Goods/services are delivered to populations that have been excluded or underserved by mainstream markets. A share of costs can be recovered through this sale.
 - b. Funds are mobilized, and investors encourage a stronger business mindedness. Example: The Aravind Eye Care System¹⁶, serving rural India. By charging wealthier patients more and poorer patients less, they have developed a sustainable business model.
3. Social Businesses normally emerge in countries with few philanthropic funds available, and are thereby required to set up as for-profit entities, but their core business focuses on social missions. Characteristics;
- a. Set up as a business with a specific mission to drive transformational social and/or environmental change.
 - b. Profits are generated, but main aim is not to maximize financial returns for shareholders, but rather financially benefit low-income groups and expand the venture by reinvestment.
 - c. The entrepreneur seeks out investors interested in the combination of financial and social returns.
 - d. The financial and thus scaling opportunities can be significantly greater as social businesses can easier take on debt and equity.

Examples: LSO and Sekem in Egypt, founded by Ibrahim Abouleish¹⁷

5.2.2 Who are the Social Entrepreneurs?

DJames Lim, in his interview, explains his understanding of a social entrepreneur and a social enterprise; “Trying to give poor people a chance of a livelihood, which is sustainable. And to achieve a domino effect. I see myself as a social developer. I don’t look at this as an aquaculture business. I look at this as a concept that can be multiplied and duplicated. It is a good model, anywhere in need to eradicate poverty and create jobs. We are setting up companies in different

¹⁶ <http://www.aravind.org/>

¹⁷ <http://www.sekem.com/>

countries, and are helping Governments. Different countries and their leaders want us to share with them.”

Nicholls (2005) describes social entrepreneurs as disruptive agents of the social sector: They are risk-taking mission-driven opportunity seekers who are constantly searching for innovative solutions to social problems. In these characteristics the social entrepreneur and the conventional entrepreneurs share much in common. The key difference is that the social entrepreneur focuses on social outputs, not solely on financial outputs.

Examples of social entrepreneurs:



Muhammad Yunus (Grameen Bank, Bangladesh), www.nobelprize.org - picture above

Fazle Abed (Bangladesh Rural Advancement Committee or BRAC)

Chief Fidela Ebuk (Women's Health and Economic Development Association, Nigeria)

David Green (Project Impact, USA)

Liam Black (Furniture Resource Centre, UK)

Jeroo Billimoria (Childline, India)

The social and environmental entrepreneurs force the rest of us to look beyond the edge of what seems possible. What motivates many of them is not doing the “deal”, but achieving the “ideal”. These people are not limited, but are can-doers. Some are angry, not accepting a dysfunctional status quo, perhaps having been trapped by it themselves and thus creating their motivation to act upon it.

“What is different is that their anger, their passion, isn’t simply blown away as steam. Instead, they work out how to turn it into useful locomotion.” (Elkington & Hartigan, 2008: 12)

10 CHARACTERISTICS OF SUCCESSFUL SOCIAL ENTREPRENEURS

Elkington & Hartigan (2008:5):

1. Try to shrug off the constraints of ideology or discipline
2. Identify and apply practical solutions to social problems, combining innovation, resourcefulness and opportunity
3. Innovate by finding a new product, a new service, or a new approach to a social problem
4. Focus – first and foremost – on social value creation and, in that spirit, are willing to share their innovations and insights for others to replicate
5. Jump in before ensuring they are fully resourced
6. Have an unwavering belief in everyone’s innate capacity, often regardless of education, to contribute meaningfully to economic and social development
7. Show a dogged determination that pushes them to take risks that others wouldn’t dare
8. Balance their passion for change with a zeal to measure and monitor their impact
9. Have a great deal to teach change-makers in other sectors
10. Display a healthy impatience

Katinka Greve Leiner, Ferd’s Director for their division “Ferd’s social entrepreneurs”, asserted at a social entrepreneurship conference in Oslo November 13th 2008:

A successful social entrepreneur:

1. adds value
2. is revolutionary
3. identify opportunities (not just difficulties)
4. mobilize others’ resources to achieve goals
5. not necessarily only profit-orientated
6. is not naive
7. place innovation and change also in the public sector

5.2.3 Definitions of Social Enterprise

The UK-based Social Enterprise Coalition¹⁸ provides the essence and definition of social enterprise as “business trading for a social purpose”. The Coalition further explains common characteristics that social enterprises display:

1. **Enterprise Orientation** - they are directly involved in producing goods or providing services to a market.
2. **Social Aims** - they have explicit social and/or environmental aims such as job creation, training or the provision of local services. Their ethical values may include a commitment to building skills in local communities. Their profits are principally reinvested to achieve their social objectives.
3. **Social Ownership** - Many social enterprises are also characterised by their social ownership. They are autonomous Organisations whose governance and ownership structures are normally based on participation by stakeholder groups (...) Profits can be distributed as profit sharing to stakeholders or used for the benefit of the community.

There is an ongoing debate among practitioners and academics over the exact definition of social enterprise. The UK Government defines it this way; "A social enterprise is a business with primarily social objectives whose surpluses are principally reinvested for that purpose in the business or in the community, rather than being driven by the need to maximise profit for shareholders and owners."

5.2.4 Systemic change

Nicholls (2005) points to social entrepreneurs who are bringing about systemic change by influencing social behaviour on a global scale. For instance, the Fair Trade movement has seen its sales internationally grow at double-digit rates. LSO, with their replication process are also in a position to bring about systemic change, with their pragmatic approach to social problems and close links to governments. This could potentially start a trickle-down (and up?) effect and increase awareness and competency, also within politics.

¹⁸

<http://www.socialenterprise.org.uk>

The nature of social entrepreneurship may seem to encompass apparently contradictory trends. Social entrepreneurship blurs the traditional view that ‘value’ can be understood as either economic or social. LSO and other social enterprises show it is possible to do both.

5.2.5 Sharing is caring

To reach increased impact and perhaps systemic change, social entrepreneurs realize that they need to share their knowledge and concepts and there are “catalyst bodies” or intermediaries around them whose philosophy is to “spread the good word” and provide the needed resources in the name of enabling. These are organizations and foundations, such as Ashoka, Schwab, Skoll and Leapfrog Fund. They appoint and assist social entrepreneurs with great ideas and proven successful operations, sometimes referred to as Fellows, to allow wider reach and thus impact. Sometimes the scale will push a systemic change. For example, Leapfrog Fund is designed “to spur the transfer of successful innovations between entrepreneurs in different parts of the world. Such replication is one key part of system change, but another is altering the system conditions, the strategy adopted by would-be game changers like those behind the transparency, accountability, and emission-trading movements.” (Elkington & Hartigan (2008:11).

Extract of interview with DJames Lim;

Do you have patents? (to test their “sharing” philosophy)

-No, not for this concept. Anyone can do it, and are welcome to, but actually *running* a big aqua city is another matter.

5.2.6 Is DJames Lim a social entrepreneur? (SCHWAB)

DJames Lim and his LSO have not as yet been through a selection process to be called a social entrepreneur, but this paper will use Schwab’s criteria to test applicability for DJames Lim, and illustrate Schwab’s corresponding emphasis within the area of social entrepreneurship.

The Schwab Foundation for Social Entrepreneurship is a not-for-profit, independent and neutral organization, founded in 1998, with the purpose to advance social entrepreneurship and to foster social entrepreneurs as an important catalyst for societal innovation and progress. The

Foundation is under the legal supervision of the Swiss Federal Government and is headquartered in Cologny-Geneva, Switzerland.¹⁹

Social entrepreneurs can work in various fields. Since a balanced intervention requires an integrated approach, their activities often span several fields at the same time. When selecting the members for its network, the Schwab Foundation applies a number of criteria that together characterize an outstanding social entrepreneur.

According to Schwab's website²⁰, the top 3 most important criteria are:

1. Innovation: The candidate has brought about social change by transforming traditional practice. Such transformation can have been achieved through

- an innovative product or service,
- the development of a different approach, or
- a more determined or rigorous application of known technologies, ideas and approaches.

A salient characteristic of a social entrepreneur is coming up with a pattern-changing idea and implementing it successfully.

Djames Lim's family and LSO are using their knowledge and experience within the industry of aqua culture, but using it in a new way, with a social mission benefitting poor people, providing a better livelihood, new knowledge and independence. The approach is innovative and holistic in nature, and no doubt rigorous and determined. "Check."

2. Sustainability: The candidate has generated the social conditions and/or institutions needed to sustain the initiative and is dedicating all of his/her time to it. If set up as a for-profit entity, the orientation toward social and environmental value creation predominates, with financial return treated as a secondary means to an end, rather than an end in itself.

Djames Lim's philosophy is both of a Triple Bottom Line (TBL), highlighting the social and environmental value, in addition to the economical, being the means to the end - and his own

¹⁹ <http://www.schwabfound.org/sf/AboutUs/index.htm>

²⁰ <http://www.schwabfound.org/sf/SocialEntrepreneurs/SearchandSelectionProcess/Criteria/index.htm>

triple win philosophy; all three main parties (aquapreneurs, the government, the developer (LSO)) must all provide and gain something out of the deal. “Check.”

3. Direct social impact: The candidate has founded, developed and implemented the entrepreneurial initiative directly, together with poor or marginalised beneficiaries and stakeholders. Impact manifests itself in quantifiable results and testimonials and is well documented. There are no significant negative externalities.

Djames highlights the importance of learning about and involving the beneficiaries. They are the ones, in the end, running, owning and developing the new eco aqua city. LSO’s experience from Indonesia, being the acclaimed world’s biggest integrated shrimp farm social enterprise is described according to Djames Lim; ”It is huge, 2 times the size of Singapore; 100 000 hectares. More than 300 000 live there, and 1 million people in total are benefitted, including those indirectly involved; suppliers all over the world, other people setting up business in the city, which also include people from Sumatra and outside. During the mid 80ies and early 90ies they were the largest exporter in terms of money, outside oil and gas. Their annual GDP turnover was 7-800 mill US dollars annually in export. In total, including the spin-offs, there was more than a billion.” “Check.”

4. Reach and Scope: The social entrepreneur’s initiative has spread beyond its initial context and has been adapted successfully to other settings in the country or internationally, either by the entrepreneur him/herself, or through others who have replicated or adapted elements of it.

The aqua city in Indonesia, the initial project, has grown steadily over the years since the start in the 80ies. Since 2007 LSO has been able to disseminate the concept to other countries, which they are in the process of doing now, eg. to PNG. “Check.”

5. Replicability: The initiative can be adapted to other regions of the world to solve similar problems. The entrepreneur is open to sharing with others the tools, approaches and techniques that are critical to the adaptation of the initiative.

The concept has already been introduced to as different countries as Uganda, East Timor, Saudi Arabia and Sri Lanka, and Djames is happy to share and collaborate. He says he has no patents

(except for the crab condo in China), but *running and developing* such an eco city is the challenge and is in need of experience *sharing*. DJames Lim is in charge of most of the replication process, but has also been invited to some countries who want to learn from them, but rather own and customize the concept themselves, like in Vietnam. “Check.”

As a conclusion to this section; DJames Lim, with his LSO, has not been through a formal eligibility test according to Schwab’s set of selection criteria. It has, however, been useful to go through the list to both understand the important points of scalable and innovative social entrepreneurship and present LSO accordingly.

5.2.7 Policy changes to foster social entrepreneurship

According to The Economist²¹ policy makers in USA and Britain are discussing new approaches to alleviate society’s troubles. The Obama administration has established a Social Innovation Fund (SIF) to expand the work of non-profit organizations. The fund is one of several efforts to promote new partnerships of government, private capital, social entrepreneurs and the public.

The SIF focuses less on risky innovations than on imitations. Its purpose is to find social innovations that have succeeded on a small scale and to help them have a far bigger impact. Officials call this “investing in what works”.

How do you know if a social innovation works? Businesses have profit, but the social sector lacks a similar yardstick. One continuing challenge will be to figure out “what types of evaluation work at which stage of the scaling-up process.” Intermediaries that advise the scale-up process, like Venture Philanthropy Partners and New Profit, measure the performance of social entrepreneurs obsessively.

Similar to the SIF, Britain’s prime minister Cameron has promoted a “Big Society Bank”. He stresses that “The government needs to open up public services to new providers like charities, social enterprises and private companies so we get more innovation, diversity and responsiveness to public need”.

²¹The Economist August 14th 2010, “Briefing Social Innovation – Let’s hear those stories”

Britain has also established a new corporate form; The public-interest company, which is giving British social entrepreneurs greater flexibility in using the profit motive to scale up social innovations. USA is following suit with the B-corp, a hybrid of a for-profit company and a non-profit organization.

These are examples of policy changes, all aiming to function well, but there is criticism on the implementation reality and promises unmet - a seemingly classic politician trap. This is also a worry felt in PNG, as this paper will look into at a later stage.

The British have invented another interesting take, however; a social-impact bond. The government, through the social-impact bond, pay the investors a return, in the wake of intended results – or nothing, if improvements are not achieved. This creates a win-win-win situation where the risk is transferred to the private capital markets (and incentives to assist the success for the social impact organization). It costs public money only if the scheme provides social benefits. This financial innovation is thought to be working in both rich and poor countries.

It seems that the enthusiasm for social entrepreneurship has run ahead of its effects. The problem is one of speed and scale. Successful innovations have only spread slowly, if at all. In business, entrepreneurial firms that do well grow fast; but social entrepreneurship does not yet have a Microsoft or Google. This leads to the next chapter: how do different experienced practitioners and academics look at the challenges and ways of overcoming the obstacles related to scaling up and replicating working concept in the name of increased IMPACT?

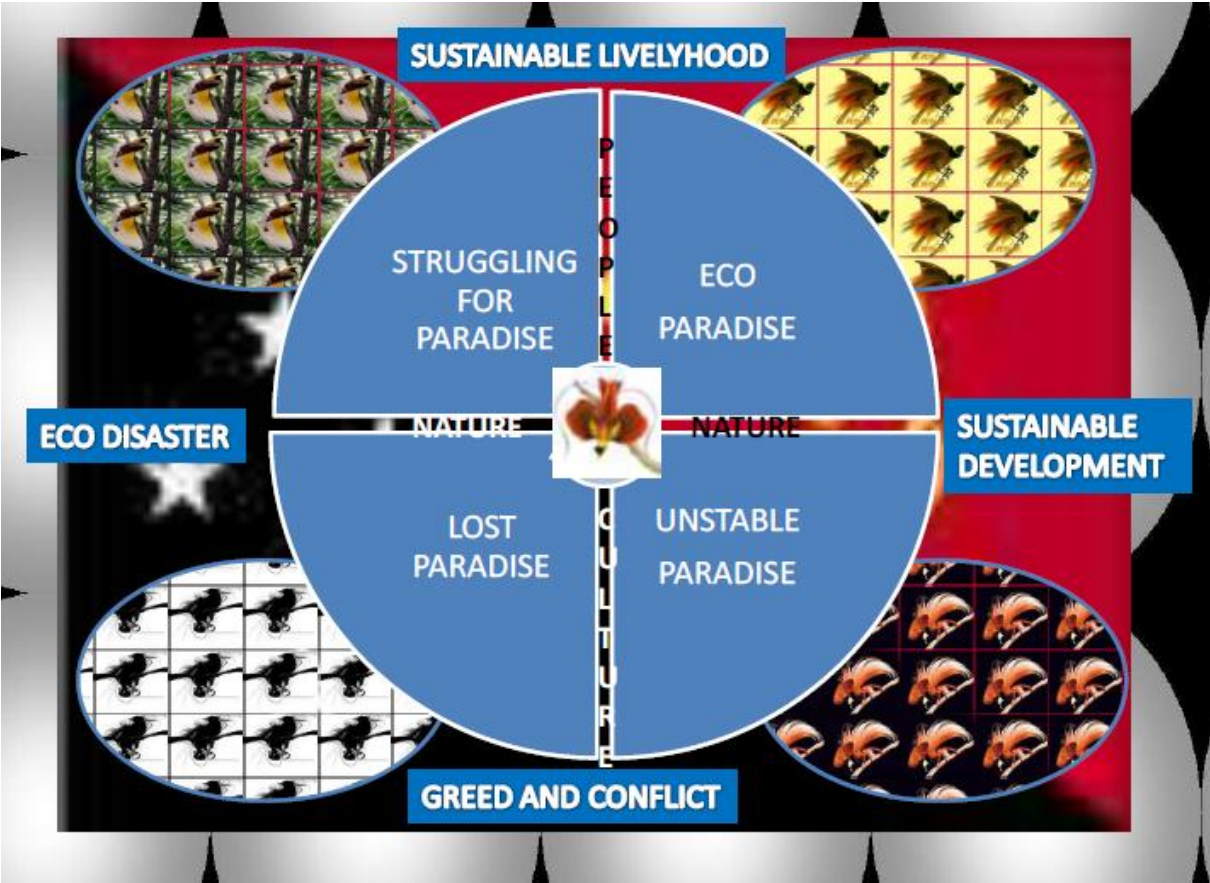
5.2.8 The future of social entrepreneurship?

HydroGen president Joshua Tosteson claims that the ultimate challenge of sustainable business is how to undercut the compelling advantages of economics of scale with quality-focused business models. In 10 years' time, there will be no distinction between a “social venture” and most major businesses – it will be a sine qua non of business going forward.” (Elkington & Hartigan (2008:14)

5.3 THE TIME PERSPECTIVE

Elkington (2004)^{iv} reflects on the needed shift in the way we work strategically around time. “The sustainability agenda is pushing us towards ‘long’ time. Given that most politicians and

business leaders find it hard to think even two or three years ahead, the scale of the challenge is indicated by the fact that the emerging agenda requires thinking across decades, generations and, in some instances, centuries. The need to build in a stronger ‘long time’ dimension to business thinking and planning will become ever-more pressing. The use of scenarios, or alternative visions of the future, is one way in which we can expand our time horizons and spur our creativity. During the field research in PNG, one of the methodologies we used was foresight workshop, which was to take a stakeholder panel on a time travel 10 years ahead, and thus we encouraged them to create such scenarios, as Elkington is referring to. This is in the name of sustainability and paradigm shift. The methodology chapter and case study findings will present more on this particular foresight workshop.



Scenarios developed during the Foresight Workshop, based on driving forces. Notice axis of people and nature.



Culture mix, shock, adaption -or translation?

5.4 KNOWLEDGE TRANSFER AND CULTURE TRANSLATION

When asking how LSO have succeeded, his answer is very clear; “The key to success is failure. You fail, you learn, you succeed.” Djames is open to learning from failure, which in many ways is very good for an enterprise. But this can also become quite costly. Can Djames be advised to learn in more ways? More importantly, LSO is in the process of disseminating a concept and knowledge around their experience, from Indonesia to other developing countries. This chapter will look at theories of knowledge transfer and “culture translation” to assist the learning of LSO and other social developers going through similar process.

FROM ONE-WAY STREET TO ACTIVE CYCLICAL LEARNING

The challenge and opportunity to reach for when expanding on a social enterprise’s social impact must be to move from a “one-way street” knowledge transfer, where a sender believes to know everything the receiver needs to know - to a not solely two-way street, but the next step; a reinforcing cycle of knowledge exchange - aimed at achieving lasting and improved knowledge embodied within the human capital of all parties involved. This is my hypothesis.

Again, it is not being fully tested during this paper and field study, but elements of it will be

touched. For instance, Amy Clark in Ashoka comments on exactly this hypothesis as part of the changing trends in 2011 within the area of social entrepreneurship.²² :“I see a move away from people as service recipients or charity targets. Now the language is shifting in a way that allows for a more active role for everyone. **It's not a one way street anymore – the ideas that work the best are those that engage the active voice on the receiving end.** The design of this type of effort creates a feedback loop and allows people who are being serviced to inform the effort moving forward and to do so in a way that is more direct and actively engages them in a way that helps future outcomes.”

5.4.1 Definition of Knowledge

Like social entrepreneurship, the term knowledge can be challenging to define. Gupta and Govindarajan (2000)^v explain that knowledge flow related to the communication process includes a message, a sender, a coding scheme, a channel, transmission through the channel, a decoding scheme, a receiver and the assignment of meaning to the decoded message. According to Bhatt (2002)^{vi} knowledge is an “organized combination of ideas, rules, procedures, and information.” He says that “knowledge is a “meaning” made by the mind. Without meaning, knowledge is inert, static and disorganized information. Hence the *meaning* people put into the information is the crucial part.” And if you have a different luggage of culture and experiences, your interpretation of meaning will necessarily differ. In effect, knowledge is a *human creation* and is inherently *subjective* (Graeme, 2006)^{vii}, thus making it different from other more factual factor inputs. This creates both a unique source of competitive advantage, but clearly, if not managed well, the subjectivity also makes it challenging to transfer. According to David Lim (2000)^{viii} “we have begun to recognize how organizations can succeed or fail on their ability to effectively use and manage their “knowledge capital”. (...) Knowledge progresses through four primary stages: the creation, diffusion, transfer and application of knowledge.”

For LSO these are important points to take into consideration when trying to transfer knowledge and increase understanding of how to develop and run an aqua city. It may be interpreted quite differently, according to the *meaning* they put into it.

²² <http://ashoka.org/story/ashokas-amy-clark-trends-look-2011>

5.4.2 Knowledge Transfer

Knowledge transfer occurs when knowledge is diffused from the individual to others, and it can be transferred through processes of socialization, education and learning (Roberts 2000)^{ix}.

Davenport and Prusak (1998)^x claim that to be of value to the organization, the transfer of knowledge should lead to changes in behaviour and practices - and the development of new ideas, processes, practices and policies. Garvin (1993)^{xi} suggests that “for learning to be more than a local affair, knowledge must be developed, retained and spread effectively throughout the organization, on a national as well as global scale. New knowledge is created by people who share and transfer their knowledge and expertise throughout the organisation from individual to individual, individual to a group, group to individual, or group to group.”

Anre Bygdås, through an interview, adds to this; “you have knowledge between individuals, or between groups. Moving individuals is easy, but moving groups is not. You have knowledge or technology that can easily be transferred. Some is documented and codified, like routine descriptions.” He continues that “involvement and information are very important when doing deals with partners. Responsibility etc. need to be clear and concretely defined. It doesn't help having a two-way dialogue without ensuring ownership of the project. With knowledge diffusion you try to recreate actively something that exists; the learning of something which originated in a different place.

You also have the quite standardised model, sometimes used by companies from USA. They call it a “roll out” strategy, a copy-paste model; used the exact same way regardless of where it is rolled out. It is dependent on rigid discipline and quality assurance.

5.4.3 Knowledge management and interactions

People are carriers of knowledge. Bhatt (2002) argues that “one of the main constituents of organisational knowledge is *interactions*”. In an organisation where the number of interactions between organisational members is kept to a minimum, most knowledge remains in the control of individuals rather than the organization.

The real task of knowledge management is to connect people to people to enable them to share their expertise and knowledge. The goal is to connect questions to answers, or to people who can

help find answers. To promote on-the-job learning and knowledge sharing, both technological and organizational initiatives are needed. (Stewart, 1997)^{xii}.

This indicates that LSO need to facilitate locals of the aqua city in Indonesia to interact with locals in PNG to transfer their knowledge in the most efficient way. Preferably at all levels.

5.4.4 Factors influencing Knowledge Transfer

Different types of knowledge might create challenges for the organisation or the individual to transfer. Different factors that potentially can impact knowledge transfer are the following; Degree of tacitness, trust, cultural background and diversity.

5.4.4.1 DEGREE OF TACITNESS

EXPLICIT KNOWLEDGE

Explicit knowledge is synonymous with information. It has to rely on people to understand and will be applied subjectively (Graeme 2006)^{xiii}.

TACIT KNOWLEDGE

According to Graeme (2006) tacit knowledge is manifested in the human's body, and thus more cognitive and abstract. It can be shared through informal channels such as conversation and storytelling, so it requires extensive personal contact. Knowledge is largely tacit and individually owned, so it is difficult to control the course of knowledge.²³

MAKE TACIT KNOWLEDGE EXPLICIT BEFORE TRANSFER

As tacit knowledge is embedded in social and cultural context (Roberts 2000), knowledge transfer is especially challenging to transfer across borders. Tacit knowledge requires time and more understanding to acquire. This implies that the higher the degree of tacitness, the harder it is to communicate between people from different levels and cultural backgrounds and the greater challenge it is to transfer the knowledge in a way that is understood by the receiver. Explicit codified knowledge is easier to "copy-paste" as it may be transferred as "blue print". Hence,

²³ <http://www.nhu.edu.tw/~society/e-j/25/25-16.htm>

being conscious of how to transform tacit knowledge to explicit knowledge would prove to be especially useful when transferring knowledge from one place to a geographically and culturally different one.

5.4.4.2 TRUST

Trust is essential for cooperation between different parties. Trust increases the amount of information that can be exchanged and is ultimately positively correlated with knowledge transfer (Singh and Premarajan 1995)^{xiv}. If there are cultural differences and geographical distance between the two parties, the transfer of knowledge will probably prove more challenging due to the higher level of uncertainty between the sender and the recipient, and in the message/information being transferred.

5.4.4.3 CULTURAL BACKGROUND

Culture is a complex concept which has been given many different definitions. Hofstede et al. (2001)^{xv} says that “Culture is collective programming of the mind”. Ralston, Gustafson, Cheung and Terpstra (1993)^{xvi} add that “culture is beliefs and values widely shared among individuals.”

NATIONAL CULTURE

According to Hofstede (1980)^{xvii} every country has its own distinctive culture, in which he calls national culture. Hofstede has developed a set of dimensions that characterize national culture. One of them being the individualism-collectivism continuum: the relationship between the individual and the groups that prevail in a particular society. At one end of the scale, the individualism, you find people/cultures that view themselves as independent of collectives, and the ties between individuals are loose. People from collectivist cultures tend to be concerned about the results of their actions on members of their groups and tend to share resources with group members. They emphasize integrity and de-emphasize their independence.

SHARING CULTURAL IDENTIFY ASSISTS THE KNOWLEDGE TRANSFER

A study by Argote et al. shows that when introducing a new group member, the person will only be able to teach the original group members new knowledge if he/she is from the same social identity or a superior.

This confirms the observation Arne Bygdås²⁴ made for Hydro in China; that a "cultural translator/interpreter", which preferably inhibit both these characteristics, would be a very efficient type of person to facilitate an efficient transfer process. As well as being efficient at leading and achieving trust, as Bjørn Christian Nørbech²⁵ stresses in his interview. Read the interview in attachment 7.

5.4.4.3 VALUES SYSTEM DIFFERENCES - CREATING CLASHES AND RICHES

Nørbech further discusses the separate value systems we have in different cultures, and uses the example of how republicans in USA emotionally opposed the new health reform, a reaction which many in Scandinavia would shake their heads in confusion about. We don't deal and interpret the world around us in the same way; we all have different values and attitudes, mainly shaped by our cultural baggage. With international and mixed cultures collaborations this becomes very clear. This has the potential both to create culture clashes *and* be enriching. Javidan et. al (2005)^{xviii}, however, argues that "cultures may have different practices but similar values" Doole and Lowe 2004)^{xix} add that people in different cultures may share common aspirations about their lives and societies. One should bear in mind that culture is not something granted or something we are born with. It is something we learn as we grow in our environment. Culture and values can clearly also develop and change.

This is highlighted in an example presented in a study by Arne Bygås (more in later section). Chinese workers might desire a different organizational culture from the one they are accustomed to. When a foreigner, in this case a Scandinavian, company employs them they may expect a different culture and adapt and adopt the corresponding organisational culture.

²⁴ Arne L. Bygdås is research manager for the department Kunnskaping (= "knowledging"), at SINTEF in Oslo. Arne shares his experience from field work on knowledge transfer for Hydro, a Norwegian MNE (multinational enterprise), from Norway to China and Spain.

²⁵ Bjørn Christian Nørbech is a so-called interculturalist, and the founder of Kulturfolk (= Culture Interpreter). Nørbech is a native Norwegian, but has lived 14 years abroad (www.kulturfolk.no). Nørbech has worked with the culture researcher Geert Hofstede (referred to in the Knowledge section) and one of Kulturfolk's clients is the International Olympic Committee." Nørbech claims; "human beings don't make decisions based purely on rationality, but also based on experience, emotions and their cultural background."

5.4.4.4 DIVERSITY AND IDENTITY

The trend among some MNEs has been to move towards a positive acceptance, even proactively seeking a diverse cultural organization. The organisation Alarga, initiated by Dilek Ayhan, a Turkish-Norwegian social innovator, aims to enhance competitiveness for Norwegian MNEs by strengthening their intellectual capacity through increased diversity. Their partner companies experience that employees with diverse language, religious, educational and cultural backgrounds are vital elements in building for future success.²⁶ As Alarga argues, many organisations see diversity of their workforce as a lever to create competitive advantage in the firm. Lockwood (2006)^{xx} adds to this and asserts that leveraging diversity in the workplace has a positive impact on the bottom line. Diversity corresponds to everything from personality and work style, to dimensions such as race, age, ethnicity or gender. Religion, socioeconomics and education are other ways of categorizing diversity.

CULTURAL IDENTITY

Nørbech argues that even though we are a “flatter world” (a term from Thomas Friedman), we are now more conscious of our national cultural identity than ever before, as we have the chance to travel and be exposed to other cultures through the internet and media, and thereby compare those cultures with our own. As an example, there is a study which confirms that French businessmen become more “French” when working in an international environment than when working domestically. Nørbech adds that the main reason is a need for safety and belonging. On the other hand, like for most PNG’ians, the percentage of us being able to travel abroad and get to this stage is very small. I reflect on this point and come to the hypothesis (not testable in this study) that since PNG consists of 800 languages/cultures, they must be quite used to this consciousness around their cultural identity - for better and worse. Nørbech adds that cultural competency should be developed and built in both sides if knowledge transfer is to be successful. There should be a mutual culture exchange.

5.4.4.5 THE NEED OF A LOCAL CULTURE INTERPRETER AND BRIDGE BUILDER

A summarizing point and perhaps a hypothesis is that the Aquapolis project, as well as any major

26 <http://alarga.org/en>

social enterprise attempting to enter a new culture, will need a culture translator or interpreter; one that has a foot in both the existing local culture and one who has experience and understanding of the culture the social enterprise represents, hereafter called “the entering culture”. The interculturalist Bjørn Christian Nørbech (interviewed March 22nd) confirms that he fully agrees that such a person or team is needed. He warns that it should not be an expatriate from the “entering culture”, as you cannot *lead* without an understanding of the local culture. When you are new in a country, you start by observing, then you interact and participate, and finally, if you really understand and achieve the needed trust, you can lead. But this takes time and is basically too costly (in several terms) for such an advanced project. Nørbech asserts that a local should be the leader, one with an open mind and preferably international experience. The person needs to be a bridge builder; this role is highly important. Choosing and involving the right person/team with the right vigour, someone who appeals to and has the ability to mobilise the local population is imperative. This is all about genuine leadership.

Haas (2006)^{xxi} is not mentioning the leadership role, but has found in his studies that expatriates bring technical knowledge and locals bring country knowledge. Many companies send expatriates overseas to improve the learning and knowledge transfer situation, either to teach the local employees a new technology or for them to acquire new knowledge from the local employees. Thus assisting the cyclical learning and knowledge transfer curve, as mentioned in the introduction. Both the locals and the expatriates thereby help the organisation to acquire, improve and transfer internal knowledge more effectively.

(O’Reilly et al. 1997)^{xxii} add to this that collaboration with people from different cultural backgrounds also bring greater creativity and *innovation*. Their study showed that a mixed group was more creative and better able to implement new ideas than homogenous groups.

This indicates that by having a diversified workforce, transferring knowledge might be easier. Thus, a suggested remark: *The greater the diversity within the organisation, the easier it is to transfer knowledge*. Relating to Aquapolis, this would also apply for aquapreneurs.

5.4.5 Knowledge categorised

Knowledge is more than facts and more than clear communication. Knowledge can exist within one person’s head, but more often between people, especially when needed and used in real life

activities. According to Blackler, F. (1995)^{xxiii} knowledge can be categorised as; embrained, embodied, encultured, embedded and encoded. These categories were often used as a point of reference in KUNNE projects in SINTEF, where Bygdås were working. For LSO it will be useful to map the impacted people's different knowledge type.

Embrained knowledge is that which is dependent on conceptual skills and cognitive abilities. We could consider this to be practical, high-level knowledge, where objectives are met through perpetual recognition and revamping. Tacit knowledge may also be embrained, even though it is mainly subconscious.

Embodied knowledge is action oriented and consists of contextual practices. It is more of a social acquisition; as how individuals interact in and interpret their environment creates this non-explicit type of knowledge.

Encultured knowledge is the process of achieving shared understandings through socialization and acculturation. Language and negotiation become the discourse of this type of knowledge in an enterprise.

Embedded knowledge is explicit and resides within systematic routines. It relates to the relationships between roles, technologies, formal procedures and emergent routines within a complex system.

Encoded knowledge is information that is conveyed in signs and symbols (books, manuals, data bases, etc.) and decontextualized into codes of practice. Rather than being a specific type of knowledge, it deals more with the transmission, storage and interrogation of knowledge.

Like Knowledge Management, Knowledge transfer seeks to organize, create, capture or distribute knowledge and ensure its availability for future users. It is considered to be more than just a communication problem. If it were merely that, then a memorandum, an e-mail or a meeting would accomplish the knowledge transfer. Knowledge transfer is more complex because (1) knowledge resides in organizational members, tools, tasks, and their subnetworks and (2) much knowledge in organizations is tacit or hard to articulate. The subject has been taken up under the title of Knowledge Management since the 1990s.²⁷

²⁷ http://en.wikipedia.org/wiki/Knowledge_transfer

When transferring the concept and training the aquapreneurs and managers of the Aquapolis, it will be helpful to learn that there are different types of knowledge, and appreciate the ones inhibited by the local PNG people, both collectively and individually.

5.5 HOW CAN SOCIAL ENTERPRISES UPSCALE THEIR SOCIAL IMPACT?

The paper has now been through advises and theories regarding the knowledge transfer and aspects in need of awareness with regards to culture. Now I will turn to the scaling process.

In addition to transferring the concept from Indonesia to PNG, and thereby scaling, has DJames Lim informed that the Aquapolis will start with 1000 aquapreneurs and then work their way forward to a total of 6000. It will requires upscaling and this section will try to answer;
How can social entrepreneurs effectively scale their impact to reach the many people and communities that could benefit from their innovations?

Many social entrepreneurs and enterprises struggle with the scaling and replication phase. Some don't want to do it at all. There is a balance between reaching optimised social impact, risk of losing control of the original idea and management and ending up with an inefficient bureaucracy when growing. We will look at the different aspects of scaling up and learn from others. LSO has been invited to more than 6 countries in both Middle East, Africa and Asia, so the replication to different cultures is of particular interest.

Mohammed Yunnus has stated the following with regards to replication and scaling; “The more we can move in the direction of business, the better off we are – in the sense that we are free. We have unlimited opportunities to expand and do more, and replication becomes so much easier. We can create a powerful alternative to the orthodoxy of capitalism – a social-consciousness-driven private sector, created by social entrepreneurs.” (Elkington & Hartigan, 2008: 17).

Elkington and Hartigan (2008: 32) confirm Yunnus' statement by pointing out that “Nonprofits can be much harder to scale than for-profit ventures. Bridgespan Group reports that of the over 200 000 nonprofits started since 1970, only 144 have reached an annual revenue above \$50 million. One of the reasons is the dependency on funding and donations, combined with an increasingly competitive environment.”

According to Dees (2004), all scaling strategies, even the dissemination of principles, require resources. Before committing to a specific strategy, social entrepreneurs should have a plausible resource plan in mind. “Social entrepreneurs, foundation officers, and policymakers need to step back and take a more strategic and systematic approach to the question of how to spread social innovations. Too often, they frame the problem in terms of either “replication” -the diffusion and adoption of model social programs, or, more recently, “scaling up,” which commonly entails significant organisational growth and central coordination. While neither of these concepts is inherently ill-conceived, failure to place them within a broader strategic framework can blind social sector leaders to promising options and bias them toward a limited set of strategies.”²⁸ Dissemination, affiliation and branching are some of the strategies mentioned. Faced with this wide range of options, how can social entrepreneurs find the path that is best for them, according to Dees? His advice is to look to;

Five R’s for guidance: Readiness, Receptivity, Resources, Risks and Returns.

The SIA report covered to a certain degree some of these aspects; the local population’s (especially the Wom villagers) *readiness* and *receptivity* for the Aquapolis in terms of their needs and reflections regarding their hopes and fears, the *resources* in terms of natural *resources* are covered in the Environmental Impact Assessment and clearly the swamp areas are regarded as suitable after evaluating several options in the country. The human *resources* are assessed in terms of education level and access, preferred collage programs, as well as the existing work culture, motivation etc. Capital *resources* should come from loans to the aquapreneurs, infrastructure development mainly from the Government, and the knowledge *resources* of how to build and run the Aquapolis is provided by the developer LSO, in collaboration with the locals. Some of the *risks* are covered in the SIA, mainly social structure wise, like experience with cultural diversity, as the Aquapolis consist of people from different wantoks²⁹ and settlements. *Returns*, in terms of monetary, are a prerequisite for the project, for it to be

²⁸ Dees, G, Battle Anderson, B. Wei-skillern, J. ,2004, Scaling Social Impact Strategies for spreading social innovations, Stanford Social Innovation Review, Leland Stanford Jr. University.
http://girlsactionfoundation.org/files/Dees_et_al_2004.pdf

²⁹ Wantok is Tok Pisin that literally means "someone who speaks my language", which by implication means someone from the same village or nearby (Papua New Guinea has the highest diversity of languages in the world, with over 800 languages; the average language is spoken by only 5,000 people).
<http://en.wikipedia.org/wiki/User:Wantok>

economically sustainable. The social *returns* will obviously be the main goal of the Aquapolis, as earlier highlighted, among others in terms of employment, better health and education services. Most of the findings relevant for the five **R**'s are presented in Chapter 7.

5.5.1 Human capital and culture creation

Jerr Boschee (2010), during his talk at Forskningsparken in Oslo, stressed the factor of the *person* to lead the replication. He claims; if the entrepreneur is not present in the area where the concept is tried transferred and adapted, it will almost certainly fail. He had an example from diffusion of social enterprise initiated public projects in different states in the US. The people designated to lead it lacked the devotion and charisma of the original entrepreneur.

However, as discussed on the web-based forum SocialEdge³⁰; Michael Wecker claims “I would say that my impact has been important but that the emergent culture is very much co-created by the broad range of staff. Were I the only bulwark against "mission shift" we would be lost! I also think *that collectively created visions are more durable*. Company culture can become engrained in employees and no matter the size that company grows to, that culture will still permeate throughout. I think the key is for the founders to effectively disseminate the mission through all levels of employees. This is true for non-profits and for-profits alike.”

The Aquapolis will have both employees and aquapreneurs. But the early inclusion of collectively created visions, common culture and rules seems imperative to ensure the mission is not lost during upscaling. Wecker continues: “If this culture is built strong enough, even the lure of money won't be enough to corrupt the company.” The various findings from this paper will provide strategies to hopefully increase chances for this to apply, also for the Aquapolis.

Investing in human capital is something LSO is doing with their 5 months training of the aquapreneurs

5.5.2 Learning about scaling from other disciplines

Farole (2006)^{xxiv} has through his study learnt from several disciplines, in particularly education, when reporting on challenges of scaling innovations. Some focus mainly on the spreading of concepts and ideas. But a scaling process is concerning much more than increasing numbers. It

³⁰ <http://www.socialedge.org/discussions/scale/is-size-the-enemy-of-the-social-enterprise>

hinges on normative changes at all levels and among all key actors, and presents political as well as technical challenges. Although he is referring to quite different arenas, I will further his advices and adjust them to LSO and social enterprises.

According to Farole (2006), based on scaling public reforms, the following need attention:

Spread: the implementation of reforms or new practice at a larger number of sites or groups.

Depth: improved quality; an improvement in practice in deep and meaningful ways.

Sustainability: putting the infrastructure and systems in place to support continued, deep improvements in practice over time.

Shift in Ownership: a transfer of the knowledge and authority to sustain a reform to the implementing sites themselves, to allow for continued improvement over time.

5.5.2.1 WHY DO SOME FAIL AND OTHERS SCALE?

Farole (2006) continues, and suggests that there are elements that can cause scale or fail:

Program Design

Elements of the successful long-term programs include:

Focus: programs with clear missions, easy to understand and explain; more likely to scale up.

Coherence: programs whose elements work together to meet goals fare better.

Speed: it is easier to build support for change when the reforms achieve short-term results that support long-term objectives.

Comprehensiveness: programs with ambitious goals have been more successful than less ambitious programs. The involved parties need to feel like they are part of a larger movement.

Buy-In at the Local Level

To be free to get a selection between alternative programs and good understanding of the changes involved make greater progress once it is launched. However, there is evidence that people who are initially suspicious of or even outright opposed to an innovation can eventually become supportive. The most successful reforms follow a “mutual adaptation” process where local actors adopt specific elements of the reform to suit their local circumstances.

Support during Implementation

Provide support in various forms, by providing the appropriate resources, ongoing training and feedback, and opportunities for collaboration and reflection with others. This support is often provided by intermediary agents, advocating training, best practices, and quality control.

Leadership

Leadership and clear communication of the goals, setting high standards and combining pressure and support. Adjusting training and professional development opportunities.

Quality Assurance

Maintain quality and measure results. This requires developing effective methods for data collection. Communicating the results of evaluations to the community—such openness is necessary if support and quality is to be maintained.

Building Constituencies for Change

Organise and engage the public, although such efforts take time and resources. Another avenue of support is through professional networks such as national organisations.

5.5.2.2 CHALLENGES TO SCALING UP

Changing Practice and Achieving Buy-In

Existing core practices and processes are extremely difficult to change, and especially culture of how things are done. The engaging and staffing of highly-motivated people is crucial, and allowing it to spread to others with more resistance.

Limited Resources

Limited resources have presented a constant challenge for those attempting to scale. A successful scale requires additional funds and a reallocation of existing capital, introducing a potential interest conflict. In addition there are other resource issues; finding capable people who has experience and facilitate the development and train target groups in new methods, as well as finding the time in resourceful people's busy schedules.

5.5.2.3 LESSONS TO LEARN

Lesson 1: Be Flexible

The goal of scaling up is to replicate successful results, not necessarily reproduce every one of its features. Thus, advocates should be flexible when implementing scaling strategies. If substantial resistance is anticipated, less centralized coordination or greater flexibility to adapt models to suit local needs may be preferable. This approach does, however, make it more difficult to provide quality control and assure devotion to the model.

Lesson 2: Create Incentives

Value problem-solving practices and encourage engagement in those when appropriate. Perhaps more important, problem-solving and initiatives to taken on assignments can also be built into the career incentives. There would be other incentives as well; adapt them to local preference.

Lesson 3: Education and Training are Critical

Ideally, training should occur on an ongoing basis and be as targeted as possible. Ensure opportunities to receive training and feedback, and collaboration and reflection with their colleagues or peers. An intermediary authority can be a valuable player in training efforts, by providing information, technical assistance and disseminating best practices.

Lesson 4: Provide Data

If a problem-solving approach is to be taken to scale, and to sustain itself, target groups need to understand their successes and areas of need, and how to improve over time. A management system of quality assurance and performance measurement is critical so that everyone can see progress and what can be done to improve. This requires a continued investment in research, evaluation, and technical assistance.

Lesson 5: Address Capacity Issues

It is important to enhance capacity as you scale. This can take the form of obtaining new funding or reallocating resources toward more successful or vital activities. It may require the formation of new partnerships to help achieve wider coverage and impact. It is important to “market” the

process and approach before scaling-up can be realized. Make efficient use of the existing capacity by targeting resources where they are needed most.

5.5.3 SUCCESS CONTAGIOUS WHEN REPLICATING

Nørbech points out in his interview; “Djames Lim and the social enterprise have a dream, and there are many obstacles to overcome. But if the project succeeds, it will become a leading star for subsequent similar projects, also when LSO continue replicating the concept to others countries. Nevertheless, the starting point should be the local people’s dreams. And mapping the most concrete challenges and overcoming them. Bjørn Christian Nørbech concludes;

If the will, persistence, and courage are adequate in *all parties*, you will win in the end.

5.5.4 Djames Lim on scaling LSO

We have now learnt about scaling and replication from other disciplines and recommendations from Nørbech. But Djames Lim and LSO surely have experience others can learn from in a similar process. Lim informs: “When transferring the concept to other countries, like Sri Lanka, Uganda and Timor Leste, there are different conditions; like culture, climate, tides, and species. Not restricted to that, but basic model, purpose and standard process are the same: Eradicating poverty, providing a livelihood, micro financing for units, teach them how to grow, help with technology, reach the market etc. Lim continues; “In Africa there are different needs and challenges, and it is politically different. Here we are dealing with different nationalities and tribes. We need to address each country and case differently, tailor make it to their conditions.” He provides an example; “PNG is different as most of it is tribal land. The land issue is the biggest challenge.”

APPROACH WHEN DEALING WITH DIFFERENT COUNTRIES

Lim says that they are all are considered as clients. He explains “We map and interview them in depth and talk to the prime minister. We ask about their goal and expectations, their desired annual income for the people, the social welfare system and needs. We ask for their development plans for the next 5 yrs and 10 yrs, both politically, economically and environmentally. When we have the whole picture we see how to develop this. Once we identify where the land is going to be we send the technical team.

5.5.5 Summing up on scaling

In addition to Djames Lim's own experience and recommendation, the following sum up provides useful strategies and reminders, and help answer the question posted in the beginning of the chapter; **How can social entrepreneurs effectively scale their impact to reach the many people and communities that could benefit from their innovations?**

- Leadership, clear communication and focus, easy to understand and explain
- Try to be speedy and ambitious
- provide alternative programs and ensure good understanding of the impact involved.
Follow a “mutual adaptation” process where local actors adopt specific elements to suit their local circumstances.
- appropriate resources, ongoing training and feedback, and opportunities for collaboration and reflection with others.
- Ensure intermediary agents, training and best practice
- and engage the public, all stakeholders
- engage highly-motivated people, so they inspire others with more resistance.
- finding capable people who has experience and facilitate the development
- train target groups in new methods
- Ensure opportunities to receive training and feedback, and collaboration and reflection with their colleagues or peers.
- Consider partnerships to help achieve wider coverage and impact.
- “market” the process and approach before scaling-up can be realised.
- Make efficient use of the existing capacity by targeting resources.
- if the project succeeds, it will become a leading star for subsequent similar projects
- If substantial resistance is anticipated, less centralized coordination or greater flexibility to adapt models to suit local needs may be preferable
- The goal of scaling up is to replicate successful results, not necessarily reproduce every one of its features.

5.6 CASE RELEVANT THEORIES AND COMMENTS

5.6.1 Gender

Arne Bygdås, during his interview, says he has observed women networks which have been quite effective and constructive, but that they get a bit invisible outside the more formal positions. So he recommends the inclusion and encouragement of women groups, preferably allow them to get formal positions.

5.6.2 Work culture

Galera in Becchetti and Borzaga (2010:105)^{xxv} claim that the integration of disadvantaged workers is the most widespread activity supported by social enterprises, as work is crucial to the welfare of families and to the stability of societies. She continues that exclusion from the labour market can be the most important cause of social exclusion, and that failure to integrate all potentially productive workers is a source of inefficiency, as it wastes resources and generates additional costs. A social enterprise can favour the discriminated against by conventional enterprises and provide appropriate on-the-job training to help them overcome their disadvantages.

This is straight in the heart of the purpose behind the existence of LSO, although Lim takes it to the next level, by allowing the disadvantaged people to become aquapreneurs, but with appropriate 5 months relevant on-the-job training.

A piece of warning that Bygdås provided was that it is easy to think that everything should be tailor-made and adapted to the local settings and preferences. The local might, however, expect something grander and different when an international party is the initiator and developer. They might expect foreign leaders and want a different management style. This was his finding when doing research in China. The employees wanted a softer Scandinavian management style than what they were used to. Bygdås concludes that is important to get into dialogue with the target groups, especially map their expectations. Some of the foreign employer informants in PNG complained about the challenges of training, knowledge adoption and establishing motivation with many local employees. Bygdås comments on this issue the following way; “Hydro in China learnt that using a “culture and local knowledge interpreter”, a bridge builder, was their success factor. They invited a Chinese with experience from Norway, but he was originally from the

same area as the local employees, and thus had their respect and could easier achieve understanding. He shared language and culture with them and thus functioned as a mediator. The following hypothesis was confirmed by an expat informant:

”A translator of culture with a foothold in both worlds is a key to success in transferring knowledge from one place to a culturally different”

5.6.3 Local ownership, involvement and motivation

METHOD TO ENSURE LOCAL OWNERSHIP AND INVOLVEMENT

Djames Lim, reflects in his interview on ownership and involvement; “LSO’s method to ensure that locals can run and own this project is to educate and train them well. They think differently. By studying what and how they think, we should blend in instead of changing them 100 %. I think it is the wrong way to just *tell* them how to live life, (laughter). Then I think they will reject us.” Lim refers to their experience of the aqua city in Indonesia. He continues; “In Indonesia we really need their dialogue and involvement with us, as it is a city/township. Social needs and maintaining an equal balance are important. We are not the government; they have their own Town council and elections. They take care of most things themselves. They have political parties, activities and so on. They are migrants from Java, but have integrated themselves into Sumatra. He concludes the transfer point with the following comment; “When we started in the late 80ies, 100 % of our top management were from overseas, like England, The Philippines, Malaysia and Singapore. Today not many foreigners are left. Perhaps max ten. Now there are 300 000 Indonesian, a lot in top level. So you can see the drastic change when it comes to technology and management right transfer.”

ACHIEVING LOCAL OWNERSHIP AND MUTUAL MOTIVATION

Nørbech further stresses that “If the purpose of the project is to achieve local ownership, it should be on the local people’s premises. It is imperative for the motivation of the local people running the project. If there is no shared motivation and goal, and no local understanding of how it all is connected, it will not succeed. Achieving trust, ongoing dialogue and patience are other success factors.

COASTAL, HIGHLAND AND SETTLERS – DIFFERENT MOTIVATIONS

DJames Lim adds on the motivational factor in the following way; “In PNG; the Highland and coastal people are very different. We cannot say PNG people are all the same. The Chinese and westerners in Wewak tell me the coastal people perceive to have better lives than in the Highland. They have everything; the fish, the sea etc. Many don’t really see livelihood as a problem. But the migrants/settlements do, they don’t have land, etc. So the local tribes don’t like the settlements, they think they are there to steal etc. And I guess it is true in some way. But we will try to let them blend in with the locals. The settlements are the people willing to work. If they don’t they won’t survive. But the locals are a more easy going type; “we can fish, no need to work”. We have a problem if there is too much of this attitude. We will offer the local tribes units first. But tell them; “if you rather fish in the sea, you can. If you don’t want to join the Aquapolis project, then we will give it to the settlements. Because we don’t want to offend the locals.

5.6.4 Subsistence economy

There are several definitions and understandings on “subsistence economy”, but the following represents one that suits well with the community we met in Wom and elsewhere in PNG: “A **subsistence economy** is an economy in which enough goods are produced, based on available technologies, and food is grown, hunted or gathered, to provide for the people. A surplus is produced or grown only if a community desires or needs to trade with neighboring communities.”³¹

There is another master thesis, written by A. Melissa J. Lesamana in 2009 at University of Agder (Norway), which reached similar findings and challenges that we did, for a tribe in East Africa. Here is a citation from her thesis: “A historically forced first stage of transition to monetary economy indeed changed the Samburu people. By being introduced to development strategies that are founded on a monetary economy, many of have become marginalized in terms of a monetary poverty which often bear negative consequences such as prostitution, alcoholism, crime and violence. While solely depending on pastoralist and subsistence economy, these outcomes were rarely occurring.”

³¹ http://www.babylon.com/definition/subsistence_economy/English

5.7 SUB PROBLEM STATEMENTS AND RESEARCH Qs

The literature review, interviews and findings while doing our field work in PNG have lead to the following sub problem statements and research questions:

Sub problem statement 1: PEOPLE IMPACTING THE PROJECT

What social factors does a social enterprise need to consider in the planning stage of transferring a holistic development project into a culturally different area?

Case: LSO from Indonesia to PNG.

Research Question (RQ) 1.1

What is the educational situation in PNG and East Sepik, and how can it influence the project?

Research question (RQ) 1.2:

How can local social structures - with emphasis on gender issues, life skills and alcohol problems - influence the project?

RQ 1.3: Observations on the transition from subsistence to monetary economy

Research question (RQ) 1.4:

How can local **job structure and work motivation** influence the project?

Sub problem statement 2: PROJECT IMPACTING THE PEOPLE

Views on change, cultural diversity and future prospects

Research question 2.1:

What is the experience and attitudes regarding change/development?

Research question 2.2:

How is their experience and attitudes regarding cultural diversity and tolerance?

Note: This project requires relocation and mixing of people. PNG is a country of 800 languages and thus separate wantoks³² with corresponding cultural rituals. This may cause both challenges and opportunities when mixing cultures in the new city.

Research question 2.3:

What are the general and project specific future prospects indicating challenges and opportunities?



Kairiru island, off the coast of Wewak. With geothermal energy potential – for the Aquapolis?

32 Wantok is Tok Pisin that literally means "someone who speaks my language", which by implication means someone from the same village or nearby (Papua New Guinea has the highest diversity of languages in the world, with over 800 languages; the average language is spoken by only 5,000 people).

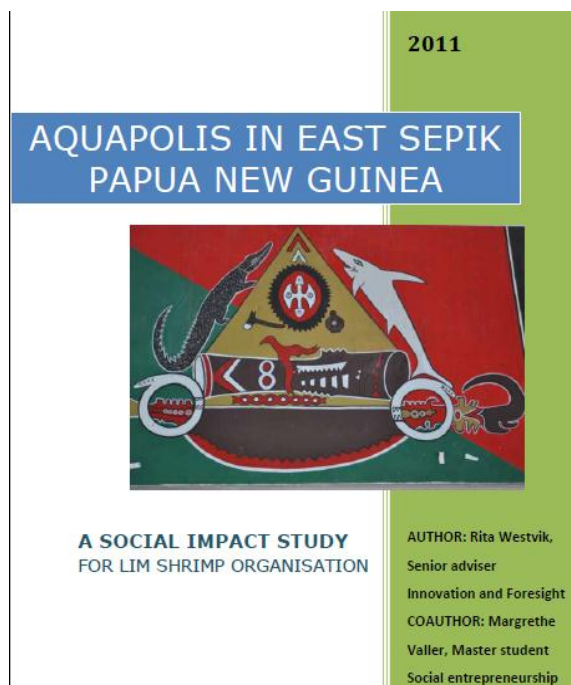
<http://en.wikipedia.org/wiki/User:Wantok>

6. METHODOLOGY

6.1 THE SOCIAL IMPACT ASSESSMENT (SIA)

As my case study is based on the report Rita Westvik and I made for LSO, which was a social impact assessment, I will start the methodology chapter with a description. As to standard definition social impact assessment (SIA) "includes the processes of analyzing, monitoring and managing the intended and unintended social consequences, both positive and negative, of planned interventions (policies, programs, plans, projects) and any social change processes invoked by those interventions. Its primary purpose is to bring about a more sustainable and equitable biophysical and human environment."³³

Social impact assessment is a field under the social sciences collecting knowledge to give basis for systematic reflections and recommendations in advance of the impacts on quality of life of people and communities affected by a proposed project. For example, to explore how the Aquapolis project might influence the everyday life; the way people work, learn, play, cooperate and organize to meet their needs is the focus of this study and the planning process.



The SIA report made for LSO

6.2 CASE STUDY

Casley and Lury (1989)^{xxvi} presents interesting points about case study as a chosen method. They state that it involves the detailed examination of relatively few persons or items. It uses a mixture of methods; personal observations, which may develop into participation; the use of informants for current and historical data, interviewing and tracing of relevant documents. The concentrated nature of the case study enables the use of both the objective methods of measurement and the detailed probing of attitudes and background

The approach can be very flexible, but the consequence is that the case study is entirely dependent on the ability, experience and ingenuity of the investigator. Considerable mental and physical stamina is required, and there is a need to maintain an effective rapport with the target groups at all times. Another consequence of the open-ended nature of field studies is the part played by chance events. Due to this it may be difficult to form detailed plans in advance. The limitation of a case study is that generalisation is difficult, especially if the population in target is not completely representative or homogenous. However, although one may not be able to generalise, one may be able to reject existing generalisations. (Casley and Lury 1989).

The case study is a valuable method of enquiry in the need of a wider and deeper investigation. This was clearly the situation for the SIA as everything from land and future hopes to gender and culture issues was studied for the Aquapolis project.

6.3 RESEARCH DESIGN

6.3.1 Introduction

I have used two main types of methodology; literature review and case study. The case study about Lim Shrimp Organisation entering Papua New Guinea consisted of several types of data collection, i.e. desktop survey, in-depth interviews, focus group interviews, a questionnaire, PNG newspaper articles and village observation. We also conducted a foresight workshop with an stakeholders panel (relevant representatives for the Aquapolis project).

The literature will mainly function as a further recommendation and learning for LSO. I will reflect on how the data collection went at the end of this chapter and present a more general analysis in conjunction with the results in chapter 7.

This paper is mainly based on qualitative research within the social science. Apart from some quantitative information collected through the questionnaire there is a lack of statistical data and thus not deemed feasible to carry out a statistical, variable oriented analysis. The interviewees have mainly functioned as informants with a general understanding and knowledge regarding the people impacted by the project, but some have also been representatives of the population with a direct impact by the Aquapolis themselves.

6.3.2 Participatory Approach

At its core, LSO is fostering the inclusiveness and involvement of the people at stake, so a note on participatory approach is in its place. According to Walker et al (2002)^{xxvii} ”Defining the problem at the start involves identifying the critical, necessary stakeholders. Without their participation, achieving a collectively and socially desirable outcome is not possible, because key information resides in the knowledge and mental models of stakeholders, and because, without the inclusion that comes from participatory approaches, any proposed solution would face a legitimacy problem.”

6.3.2.1 Seven different levels of participatory approach

The extent to which participatory policy-making involves real, meaningful participation varies considerably from case to case, and a continuum can be drawn up to illustrate the levels of participation achieved.

One such continuum, outlined in an FAO document³⁴, suggests seven different levels:³⁵:

Contribution: voluntary or other forms of input to predetermined programs and projects.

Information sharing: stakeholders are informed about their rights, responsibilities and options.

Consultation: stakeholders are given the opportunity to interact and provide feedback, and may express suggestions and concerns. However, analysis and decisions are usually made by outsiders, and stakeholders have no assurance that their input will be used.

Cooperation and consensus building: stakeholders negotiate positions and help determine priorities, but the process is directed by outsiders.

³⁴ <http://www.fao.org/docrep/006/ad688e/ad688e03.htm>

³⁵ http://pgexchange.org/index.php?option=com_content&view=article&id=140&Itemid=132

Decision making: stakeholders have a role in making decisions on policy, project design and implementation.

Partnership: stakeholders work together as equals towards mutual goals.

Empowerment: transfer of control over decision-making and resources to stakeholders.

During the field work for the SIA, we encouraged mainly participatory approach at level 3, consultation, but in the following process, we would recommend higher level.

6.3.2.2 OBSERVATION OF INFORMATIVE AND PARTICIPATORY APPROACHES

I will not analyse observations in-depth in this paper, but during the one month of field work in PNG we inevitably had our eyes and ears with us and this affected the understanding of our surroundings, in addition to giving us ideas on how to proceed with our more structured data collection. I will present an overview of parts of our observations in this general chapter. I mention these observations to reflect the inclusiveness and invitations of participation.

- In Wewak we observed an open meeting with the local Members of Parliament Oct. 19th, which invited the population to discuss issues with locally elected politicians.
- The PNG newspapers had advertisements and articles regarding development issues such as within health and education, family planning, the MDGs, environment and climate, HIV/AIDS.
- The National Research Institute³⁶, with the slogan “Hosting the policy discussions that will shape Papua New Guinea’s future development” invited to a workshop (Sept 14th 2010) regarding the launch of PNG Development Performance Report, 1975 – 2008; stated: “This NRI report gives all Papua New Guineans the opportunity to learn valuable lessons from our development experiences over the past thirty years, in order to chart a course for the future. “
- In addition we conducted observation of village life during several daytime visits to Wom village, where we both interacted and interviewed when it felt appropriate.

³⁶ www.nri.org.pg - Port Moresby, NCD

6.3.3 Data collection

Before, during and after our field work we did a range of data collection, reflecting our “scope crawling”, curious and open nature. This particular nature also helped us along the way when navigating in a country and culture formerly completely unknown to us. Letting go on large parts of it, selecting and analyzing the core in a structured manner has been a demanding exercise. In this paper I have focused on the following collected data:

1. Desktop surveys, i.e. info about PNG, ESP, MDG etc.
2. Foresight workshop with an stakeholder panel in Wewak in October 2010
3. A questionnaire at Yarabos Mercy Secondary School (90 respondents of 129)
4. Interviews with prepared guidelines, semi-structured and informal:
 - two Africans after a UN MDG Summit on the Millenium Development Goals (MDGs)
 - two experts on PNG from Rainforest Foundation Norway
 - Principal of Yarabos Mercy Secondary, Yarabos, ESP
 - Son of the prime minister on “Including the Excluded” program
 - DJames Lim, CEO of LSO
 - Arne L. Bygdås, knowledge expert at SINTEF
 - Bjørn Christian Nørbech, interculturalist
5. Focus group interview:
 - Yarabos Mercy Secondary students
 - Wom young men
 - Wom villagers of all ages
6. Wom Elementary School; project mapping the families of Wom village
7. Participatory observation:
 - Wom daily life + visiting homes + 3 village assembly meetings
8. Diary notes
9. Observation;
 - PNG (foreign owned) newspapers; The Post Courier and The National

- Open meeting with Members of Parliaments (MPs) in Wewak
- Daily life in Wewak and other towns in PNG

6.3.3.1 DATA COLLECTION TECHNIQUES

We have used video and audio recordings, notebooks, PCs and photo camera during data collection. We have given 3 major presentations of the project and our work; one at a Wom village meeting, one at the Yarabos Mercy Secondary school (800 female students) and one in a foresight workshop with an stakeholder panel from Wom and Wewak.

With constructive collaboration from Yarabos Mercy Secondary we got a range of useful data. We informed the principal Marcus Alexander and a teacher with origins from Wom, Rose, about the planned development project Aquapolis, which would be placed near their area and were allowed to invite to an open meeting (on the spot) with Year 9 and 11 classes in their assembly hall. On later visits I performed a focus group meeting, where I also got feedback on the first draft of the questionnaire, an in-depth interview of the principal and hand-out of the questionnaire. Rose helped me collect it. All went well.



Mercy Secondary students enter the school's assembly hall to get information about Aquapolis and make enquiries.

Most of the interviews were performed face to face, except the last interview of Djames Lim, and the one of Bjørn Christian Nørbech, which were performed online via Skype.

When we did interviews together, one was filming, and the other was asking questions.

We always asked on beforehand if filming was ok. From reading their body language, they did not seem to be uncomfortable at being filmed, and we assume this did not in any significant way impact on the results. Rita mainly hand wrote notes in her notebook, I used my quiet small lap top. When observing and interacting with the elementary school children in Wom I showed pictures and videos of them to connect easier, with great success.

Regarding diary notes; each evening we wrote down reflections from the day and topics to follow up on. According to Arne Bygdås (interview), whom has extensive field work experience, taking diary notes is very useful, as there are many details and non-verbal communication that may be left out from other data collection notes.

6.3.4 Places of research and visit

Port Moresby (the capital), Wewak (the biggest city neighboring the project site), Wom, Kairiru Island, Muchu Island, Robin Island, the town Angoram and five villages along the Sepik River in ESP, the Province capital Lae in Morobe, taking part in the annual Morobe Show festival.

6.4 THE ROLE OF THE RESEARCHER

Casley and Lury (1989) continue to explain that the investigators may be affected so that they no longer remain objective observers or recorders. They may over-identify with their subjects and their views or they may be constrained by the relationship that develop between them and the people they study. There may also be misinterpretations due to culture differences or missing rapport.

We were frequently referred to as the “anthropologists”, although we kept repeating that no, we were not anthropologists. But it is quite understandable that we were looked upon as that, as we were probably asking similar questions and behaving like some. In addition PNG is, as earlier mentioned, an “anthropologists’ Mecca”, with immense diversity of cultures and tribes living in fairly traditional ways. We also considered living in the village, and thus taking the “participatory observation” to the next level, but ended up with staying at a hotel in Wewak and travelling on a near daily basis to the Wom village. This made us semi-participatory, I suppose. We had three main visits with learning village life as the main purpose. The first day our

intention was pure observation and I left potentially intruding items, like cameras and lap top, at the hotel. But as we were also regarded as guests, pure observation was difficult to maintain. We then participated in their daily activities. They were welcoming and demonstrated their cooking, guitar playing - and encouraged us to try and join them. The women took charge, but the men and children were around and contributed as well.



Wom women inviting for “cooking class”

There were also incidents during interviews where the respondents stated rather destructive comments, for example the focus group interview in Wom village where they exclaimed “they have to adapt to our rules and culture!!” As tolerance for cultural diversity may be a pre requisite for the harmony and success of the new planned aqua city, Rita started to encourage their reflection around positive and negative consequences of such attitude. When we later discussed this the same evening, on our own, she explained it as an example of “action research – or participatory action research, which is defined as a “reflective process of progressive problem solving led by individuals working with others in teams or as part of a "community of practice" to improve the way they address issues and solve problems.”³⁷

³⁷ http://en.wikipedia.org/wiki/Action_research

6.5 Foresight workshop as method

“Foresight is a systematic, participatory, future intelligence gathering and medium-to-long term vision building process aimed at present-day decisions and mobilizing joint actions”.³⁸ Without a future, there will be little engagement in the present. Foresight and scenario planning consist of possible, plausible and preferable futures. The social impact study explores and foresees the possible impacts in the future in case the project is established. It is meant to identify critical factors (strengths, weaknesses, opportunities and threats), involve the people affected, establish strategic partnership and the best of platforms to make good decisions for this triple win project; before startup. We found that the most efficient way to do the study was to use foresight methodology with the intention of understanding major driving forces and possible futures for the project in PNG’s cultural, social and environmental context.

Foresight is an academic discipline that has a method to estimate and handle risk, establish better common understanding among the involved parties about possible futures; the intention being to give the best of support for choice of a robust strategy.



Foresight methodology is a mix of statistical forecasting, interpretation of multiple facts - and feelings - and operations of fantasy. During the foresight workshop in PNG we encouraged the participants to map drivers, on local, national and international level, and based on these drivers paint a picture of 4 scenarios.



From Foresight Workshop with representatives from stakeholder groups.

³⁸ (FOREN - a guide to regional foresight; EU:2001)

6.7 DATA ANALYSIS

6.7.1 Validity and reliability

I will make some general points here to check data collection against validity and reliability.

Validity is explained by Bryman (2004)^{xxviii} as a concern with the integrity of the conclusions that are generated from a piece of research. When the term is used in its own, the validity of *measurement* is what is usually referred to. Sproull (1988)^{xxix} adds to that that “the degree to which an instrument measures that which is supposed to be measured.”

As mentioned we have interviewed and surveyed a range of people, representing or speaking of the people who may be impacted of the Aquapolis project, including the Wom villagers and its land owners, the son of the Prime minister, business owners, expats, teachers and young men. More than half of the students, which was surveyed to the largest degree, replied that more they would be interested in getting involved with the development project. Other than that they casted light on relevant issues for the Aquapolis, such as culture diversity, social structures and work. Yet, they are not fully representative to the general population and potential aquapreneurs; for instance as they stated to be hard working and enjoy responsibility. Many informants reported that laziness and social problems is a general problem, and hopefully this is something that the project can assist in alleviating. Motivation and capability in terms of working is thus not generally valid based on solely the Mercy students’ responses.

An important target group which we didn’t get to survey is the people living in the settlements outside the town and the neighbouring land owners, the so-called “settlers”. This was due to limited time, but considered very important as they will potentially both be involved and have an impact on the success of the project. Some of the settlers may be invited to become aquapreneurs. And as neighbours to the projected area, they may cause problems when the development starts, to demand their share etc. (according to some informants).

In addition we interviewed about the MDGs, knowledge, health, land; topics relevant for the report and providing valuable background information.

Reliability: Consistency of measurement. The degree to which an instrument measures the same way each time it is used under the same conditions with the same subjects (Sproull 1988).

Bryman (2004) defines it; “The degree to which a measure of a concept is stable.”

The Mercy questionnaire was consistent of its measurement, as it was handed out and collected simultaneously to everyone, and the information meeting in the assembly hall was done for everyone in that population at the same time.

Some of the interview questions could clearly have been asked to several people, making it more valuable for comparability and testing all angels, as well as improving the reliability.

6.7.2 Methodology reflections from the field work

THE WOM ELEMENTARY SCHOOL

We connected well with the only school in Wom; Wom Elementary. The children were curious and the teacher and Principal Sheila Worrin was very helpful, insightful and included us well, so we could do observation. She also assisted in conducting a school project with the pupils. This was conducted partly due to the method we encourage; to be inclusive and informative, including the children, and the need of collecting knowledge about Wom village. The intention was to let the children make a family tree, but many of them don't read and write (“not yet!” as they would say themselves). Sheila ended up making one template, which we copied. She filled out the “forms”, while asking the kids.

FOCUS GROUP OF YOUNG MEN

As young men, according to several other informants, seem to be at the focal point of many social problems, I invited some from Wom to a focus group interview. I was advised to anonymize the young men, especially as some of the issues, like drinking habits, could be information that should be kept confidential. Although they didn't seem to mind and proudly gave me their names, I have chosen to anonymize them.

WOM VILLAGE –FOCUS GROUP DURING OBSERVATION

“If other wantoks are moving to our land they have to adapt to OUR customs and rules!”

To this rather alarming exclamation, Rita intervened and tried to turn the challenge of mixed

and influx of other culture from something threatening to a positive opportunity. Interesting, within some minutes they had changed their minds and attitude regarding the topic and rather wanted to embrace the various cultures and together find ways of how to live together in harmony respecting the differences. Rita and I discussed the above described incident during the same evening. The education level is low in Wom, but the people we talked to had an open attitude when discussing possibly controversial issues. Their response was often “not yet” or “teach us!”

MERCY SECONDARY

In the first draft of the questionnaire I tried to use the term “quota”, but it wasn’t understood, and probably not very commonly used. I changed it to “systems that empower women”, which my test group confirmed they understood. They also kept asking questions about the Aquapolis, so I included an introductory section with facts and plans, to provide a better background information to base their replies concerning the Aquapolis on.

Although informed about in the assembly hall presentation and highlighted in the questionnaire, the eco friendly sustainability aspect of the project is either not understood or believed, as they mention “mangroves/marine life/environment damage. Waste dumped in ocean /climate change /increased pollution/destroy ecosystem and habitants of the swamps” as their main concern. They have probably seen or read about (most of them follow the news) other (especially foreign) development projects that do not have the environmental consideration and thus having caused damages. Several of the points from the potential negative impact of the Aquapolis are similar to their biggest fears mentioned earlier in the questionnaire. This could have influenced the answers to a certain extent.



Yarabos Mercy Secondary School; interviewing teacher Rose + inviting students to a information meeting.

7. FINDINGS AND ANALYSIS

Introduction

In this section you will find the sub problem statements relevant to the case and the corresponding research questions repeated. I will list case specific findings with a summary at the end. Data findings, analysis and discussion are integrated to enhance the logic and to minimize repeating them.

7.1. Sub Problem statement 1: PEOPLE IMPACTING THE PROJECT

What social factors does a social enterprise need to consider in the planning stage of transferring a holistic development project into a culturally different area?
Case: LSO from Indonesia to PNG.

7.1.1. Research Question (RQ) 1.1: EDUCATION AND KNOWLEDGE TRANSFER

Research Question (RQ) 1.1

What is the educational situation in PNG and East Sepik, and how can it influence the project?

EDUCATION SITUATION IN PNG

Main findings from NRI (National Research Institute's) statistics (2010)

- About half of the population above 5 years old have never attended school.
- Of the total population in PNG of about 7 million, 147 328 were registered holding higher (tertiary) education, equivalent to 2 %.
- Attendance at higher education (colleges and universities) in the whole of the country was 17801 students, 18,3 % of them at a university (about 3250).
- The most popular types of colleges: teaching, business/secretarial and health.
- Half of the population of East Sepik, and PNG in general, is under 15 years of age, indicating an enormous need of education.

EDUCATIONAL SITUATION AMONGST YOUNG MEN IN WOM

As young men, according to several other informants, seem to be at the focal point of many social problems, a focus group interview of young men in Wom was arranged. Four men showed up. They were a bit shy at first, but warmed up. Most of them speak pidgin, not being comfortable with English, so teacher Sheila Worrin translated. We were inside the Wom school building. This is what they portray about their educational background and situation:

-26 years old, completed year 9. At year 10 he lost his parents, so he had no one to pay school fees, and he needed to take care of his family. If he could, he would have wanted go back to school. Last year at school was in 2003. Since then he says he has done nothing but helping his sister and two brothers, fishing, etc. He says his siblings have not attended school.

-31 years old, no school, grew up in Wom. Earlier, there was no road to walk. "We followed the river, walked along the swamp, it took 2 hours." He is now married with 5 children. The three eldest children are in grade 5, 3 and 2. The two youngest are in Wom Elementary. School fees in total; 400 Kina for one year. Before he could not pay, and there was no transport. If he has no money, he can't send their kids to school.

-35 years old, tells that his mother died when he was young. They were 9 kids so he was placed with uncles and aunts. But he was doing nothing, so he went back home. He is now married. His wife is collecting kina shell. They have one son who is 14 years old, he is at Yarabos primary school, grade 5.

-28 years old, has 10 years of schooling. Could not continue as it was too difficult to pay fees.

They asserts, before further questions; "Life is hard. There is no money for drinks and school fees. The distance to the public schools and lack of transport adds to the problem."

Emmanuel Saya, leader of Interim land owners' board of Wom confirms that "Most people in the village haven't been to a big school. Maybe 70% or more have not attended any high school, artly due to long distance to schools and no school bus systems."

KNOWLEDGE TRANSFER IN BOAT BUILDING

The focus group of Wom young men explains the following about knowledge transfer of traditional boat building: "Only some know how to make canoes. Only the men who know will

do it. Knowledge is passed on from family to family, mainly from the grandfathers. Every family should know how to do it. Others come to watch and learn. But they don't really learn as they don't get to practice.”

HOPES AND FEARS RELATED TO EDUCATION

When the Mercy students³⁹ were asked the open-ended questions “What is your greatest hope?” and “What is your greatest fear?” their responses frequently corresponded to education. Their 5th most frequent response on “Greatest hope” was “complete/further my education” (9 replies). Their 3rd “Greatest fear” was to be a failure to my parents and flunk my education” (7 replies). The related “unemployment, not enough job opportunities” got the same amount of replies. “Family/ wantok might not have money to pay for my school fees to go for further studies” is another expressed fear by two of the Mercy students.

ATTITUDE TOWARDS EDUCATION AND PERCEIVED RELEVANCE

During observation days in Wom, a focus group of villagers exclaimed; “Education is very, very important and valuable. People in the village didn't appreciate and value education for kids much before, but now it is slowly changing. But the kids who use the public schools need to wake up at 5 am and walk one hour and aren't back before 5 pm. Some leave school because of school fee problems and distance.” The retired teacher Herman keeps repeating «EDUCATION IS IMPORTANT! But many of the young generation don't understand this.” Herman supports Djames Lim's plan that new school(s) inside Aquapolis should be free and accessible for all.

The Mercy focus group reflects on education relevance; “If you are from a village, education might not be so relevant, especially if you go back without getting a job. It feels depressing.” The newspaper The Post Courier has the following statement from Western Highlands education advisor Mark Meninga; “Education is key to future but most parents do not realise this and fail to play their part to pay their children's school fees.”

When asking the focus group of Wom young men how they get an income to pay for school fees, they explain: “Only ladies' income from mangrove's kina shell. There are no other opportunities for income. Some of our fathers/brothers have boats to go fishing.”

³⁹ The Yarabos Mercy Secondary is the girls' school near Wom, which we surveyed.

The Mercy Questionnaire shows that they find Education to be an “extremely important factor for their future life”. 67 % desire tertiary education, mainly University, only 8 % is content with completing by Grade 12.

ACCESS TO EDUCATION AND FINANCING OF SCHOOL FEES

Principal Alexander at Mercy explains the lack of space in the schooling system; “With education there are bottlenecks into every next level. There are not enough schools to cater for all students. First grade 7 and 8, then for grade 9. About 21000 students every year get kicked out of school, and only 10 % can continue into higher education. In all of PNG there is space for only 3500 students at universities” (Confirmed with statistics from NRI).

Education advisor Mark Meninga, in The Post Courier, adds: “The education system has rejected them to continue in the formal education. Competition for the inadequate number of space is fierce.” Michael Somare Jr. (called Mox), says during an interview; “We've got lots of drop outs. At Grade 8, there are 30 % drop out, Grade 10 has 60 % who don't continue and at Grade 12 as many as 80 % drop out. The percentage is 80 % in rural areas and 20% in urban.” He continues “If your parents can't afford school it's going to be difficult. There is, however, a law trying to be passed at the moment, to ensure free education, at least for a certain amount of education. Basically, up to grade 10 will be subsidised.”

As The Mercy school is private the school fees amounts to 1500 Kina annually. The fees are mainly paid by the students' parents (91%), some with loan (27%), but only those who have parents with formal income/security. The rest (11%) get it covered by their family/wantok. Only one student is supported by a company scholarship (a logging company) and no one gets a public scholarship.

WOM ELEMENTARY SCHOOL

Wom Elementary School was established in 2009 as part of a new national education policy which encourages rural areas to prepare their children before entering public schools. According to our informant, their teacher and Principal Sheila Warrin, the school gets no Government support and the school fee per pupil is 60 Kina per year. Around 60 children between the age of 3 and 15 yrs old are enrolled, but only about 30 are active pupils. Sheila is a student at the Teaching collage in the area and works as intern at Wom Elementary. The teenager girl Sharon, with 8 years of education, is Sheila's teacher assistant -and daughter of the counsellor of Wom,

Augustin Jolly. Sheila and Sylvester (Chair of board of parents) presented a school development plan (they want a bigger international school) and a letter called “Request for financial support”, where their needs are explained. They don’t ask for much; basically uniforms, furniture, teaching aid and books.



Wom Elementary school. Classroom is in a rundown building with holes in the roof. The pupils sit on the floor.

ANALYSIS

The present low attendance rate and high percentage of PNG population under the age of 15 together emphasizes the immense need of education services all over the country, including ESP.

It varies how many years education the Wom young men have undertaken, but their threshold to (further) participation is clearly stated; distance, school fees, alternative priorities when in need of taking care of the family. Before the elementary school was established in Wom (in 2009) and the road built, it was particularly hard to access education. There is still no public transport and some cannot afford school fees as they don’t have paid work. It appears that ensuring easy access and free education, kindergarten service and income opportunities, like LSO is planning for the Aquapolis project, are correct incentives to enhance education attendance.

There seems to be support from the students' parents/family/wantok, but also expectations and pressure to succeed with their education and future job prospects as the parents/family/wantok sacrifice and work hard for these children's future. It is also seen as an investment for all members of the family, possibly due to the reciprocity culture (the last assumption is based on desk top survey and observation).

There seem to be a general understanding that education is increasingly important, but if not felt relevant for future job opportunities, motivation can be low among young people. But according to the questionnaire, most of the Mercy students desire to continue into higher education as it is seen as the spring board to jobs and a better life. But competition is fierce as there is far from adequate space in the education system, the higher up they get. Some parents, for different reasons, most probably lack of money, don't pay school fees and thus the children don't get schooling. However, a law about free education is trying to be passed, to ensure up to grade 10 to be subsidised. There is support for a free and accessible education for all in the Aquapolis. The demand is no doubt high, not just for Elementary school. Aquapolis should consider to offer high school and collage as well, and/or at least support reinforcement of the existing ones in the area, including a relevant vocational school, with aquaculture and management on the curriculum. The Mercy school seems very good, and there should be similar offer for young boys.

The Wom Elementary from 2009 is the first school in the village. The school was basic, but seemed well run and included useful curriculum. Sheila has a tough job, but is motivated and does it well. The children attending seemed eager to learn. This school will prepare the village children for the public schools, which is partly the intention. The development plan gives an indication of how they think. It is ambitious and states that it can become an international school, attracting students from other parts of the province. The plan, the head teacher and board of parents should be included in Aquapolis' plan to reinforce schools in the area.

KEY EDUCATION FINDINGS

- School/tuition fees are too expensive for many, some don't prioritize
- Only those who have paid work can get loans to cover school fees
- There is not enough space in the education system to cater for all students
- There are not enough employment opportunities after completed education.

7.1.2 Research Question (RQ) 1.2: CHALLENGING SOCIAL STRUCTURES

Research question (RQ) 1.2:

How can local **social structures - with emphasis on** gender issues, life skills and alcohol problems - influence the project?

As the Aquapolis project will create a new city for approximately 20-25000 people mixed from different wantoks, where their active participation is crucial, it is imperative to understand and map the main social structures and potential reasons behind tensions and challenges. Already during the desktop study (before field work in PNG) it was clear that gender issues and alcohol abuse and their effects on social structures were areas in need of further study. Thus, among several other social topics, these two are highlighted in this section. After arriving PNG we were recommended an additional topic; short term planning and life skills. These topics are all complex and would deserve deeper study, but here they are touched and gives an impression.

GENDER ISSUES

Mercy student, on “Greatest hope”:

"I hope to become one of the women politicians who fight for the rights of women in the country. As a student leader I have seen women's rights been deprived for years."

Millennium Development Goal 3: «Promote gender equality and empower women». According to the MDG report of PNG ;“Women in PNG are less likely to be in paid employment, more likely to suffer violence and poor health, and less likely to be able to read or have gone to school than men. Traditional, social and cultural attitudes hamper the achievement of gender equality. The Government aims at eliminating gender disparity at the primary and lower secondary level by 2015; the upper secondary level and above by 2030.”

Emily Joy Sikazwe, leader of the Zambian NGO Women for Change, and active in International Women's Society, attended the UN MDG Summit in September 2010 with Charles Abugre, and the MDG conference in Oslo, earlier referred to. She explains about her organisation; “Women for change is an NGO that works in rural communities. We believe that women and men can

make a change *together*. It is critical to empower women as a country cannot leave half of their population behind, if they want to develop fast. But they must all be educated, must all have skills, so all boys and girls must go to school to develop their nations.” Her advice to PNG is; “We must start where the women are, because they have the experience and they have carried nations the globe over. They are very skilled and enterprising, and you cannot ignore women.”

After desktop studies and during the first days in PNG, Rita Westvik notes in her diary: “Gender issues, especially violence and rape against women, are high on the agenda in PNG, and the international community’s eyes are often focused on improving this situation.”

Education statistics from NRI makes it clear that older males have a much higher literacy rate and attendance of schooling than older females, but it is gradually evening out with younger generations. However, current attendance rate shows that there is still a long way to go to reach gender equality, as aimed for by the government. Especially when looking at higher education statistics, where 5000 females attend to the 12000 males.

At the hotel we met Mick Murphy, our informant from AusAid, who has more than a decade experience from aid-work in PNG. In an interview he tells us about his experience that men felt threatened and excluded when AusAid in the Highlands tried to arrange women empowering programs. So they ended up offering education and guidelines to both genders.

SUMMARY OF THE MERCY SURVEY REGARDING GENDER ISSUES

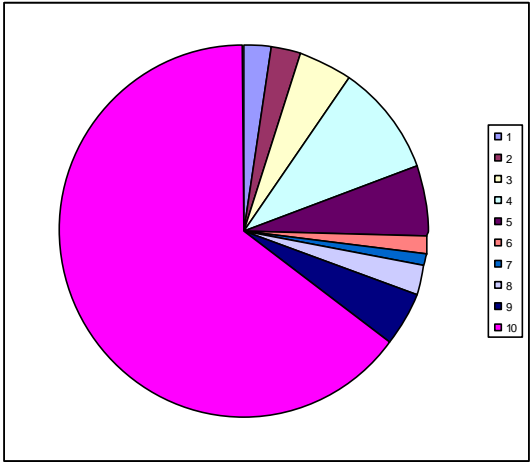
Mercy Focus group

The girls explain that it depends a lot on whether the men are from a matrilineal society or not. If males are raised in a matrilineal culture, they are more relaxed and comfortable with gender equality and women in position. If the men are from a pure patrilineal culture, they may feel threatened, and this can lead to violence against the women, especially when the men are drinking alcohol. This confirms the experience of Mick Murphy from AusAid.

Mercy Questionnaire

Most of the girls (94%) replied that they liked “systems that empower women in politics and managerial positions.”

On the question “which degree do women and men have equal rights and opportunities?” there was a scale from 1 (not at all) to 10 (yes, completely). 18% reply 1-4 and 67% reply 7-10, indicating that most feel that women and men really do have equal rights and opportunities.



Equal rights and opportunities for men and women. Mercy Questionnaire

ANALYSIS

The Millennium Development Goal 3 encompasses gender equality and women empowerment. In PNG the statistics tells a rather grim story and achieving the goals within 2015 is far from possible. Still, we noticed men with t-shirts promoting campaigns, consciousness and plans around the topics. Aquapolis need to incorporate gender issues and equality in their strategies. DJames Lim is very positive to the Mercy school students, and has exclaimed during a phone conversation: “If the Mercy girls run the Aquapolis I believe everything will work well.” In that way the Aquapolis could also function as a gender equality symbol project for the whole of the country.

The results from the Mercy study, especially the one conveying the degree in which women and men have equal rights and opportunities, were somewhat surprising. We generally get the impression, especially through statistics and reports that women are suppressed to a large degree in PNG. On the other hand; women of Wom village, at least those we talked with, seem free, strong and outspoken (Wom village observation). Another note is that the managers/employers we talked to preferred women over men as employees. One of our informants claim; “Women are more trustworthy and drink less”.



Man wearing the campaign: "Stop violence against women. PNG say no!"

SHORT TERM THINKING AND LIFE SKILLS

During an interview of Michael Somare Jr. (called Mox) he informs about The Community College program called "Including The Excluded" (ITE). "ITE focuses on Life Skills and long term planning. It is organised 13 places in the country, and will hopefully be spread out in all the regions; Islands, Southern, Northern, Highland. Mox claims; "In PNG, we've got very short term thinking. It's more hand to mouth. The focus is on how you get fed, not on planning for children's future. We need to expand on that, how you improve your situation in life as well as your community around you, that is; life coping skills."

A hotel manager from The Philippines notes; "I have been here many years now, but was shocked when I first came to PNG. They don't think long term. Consequences, hard work, followed by promotion etc. is not understood here. To teach saving, planning and life skills are most important. In PNG it is about HERE AND NOW."

As a contrast, the following was stated by one of the Mercy students when asked for greatest hope; "to have my children and grandchildren educated at university."

ANALYSIS

The general way of handling planning and thinking in short and long term ways is rather crucial to map when planning for how to develop and organize the Aquapolis. Life skills in itself seem to be an important element to include in the training program. The last statement, however,

imply the correlation between education level and long term thinking - and thereby future aspirations.

DRINKING AND DRUG ABUSE CAUSING SOCIAL PROBLEMS

The Mercy focus group describes the situation where young people go back to the village after schooling, without getting a job; “It feels depressing, so some start drinking and use drugs. They also do that due to the high pressure.”

Emmanuel Saya, leader of Interim land owners board of Wom, explains how drinking, especially home brew and marijuana, makes people vulnerable to the system. They drink as they lose hope. He does however emphasize that there is rarely violence in Wom, but it happens.

Rita Westvik’s diary notes

“Give a PNG-person 24 bottles, and he will drink 24 bottles”, says one of our informants running a business in PNG. It was found that alcohol – both licit and home brew, as well as high potency cannabis, were the major substance problems in PNG. Alcohol seems to be at the heart of the women’s and responsible men’s concern and root of other social problems; work ethics, education/dropout, young men’s night-life and –fights; flare-up of tribal disputes and serious crime like murder and rape.”

Mercy Questionnaire

Most of the girls neither drink nor smoke. 69% never smoke, 11% seldom, 19% sometimes and only one replied “regularly”. 68% never drink, 9% seldom, 23% actually drink sometimes and no one does it regularly. Alcohol is not allowed on the school’s premises, so this has an effect on the replies. When the focus group was asked if someone “smuggled” alcohol into the area, they confirmed; “perhaps 10% do that”.

Focus group, Wom young men

“There is much drinking as there is no service for young people - to end cash. Instead they roam around the community, with negative thoughts. We would have liked a house picture (cinema theater), for instance. The last one was closed down due to excessive drinking.” When asked about their drinking habits they say “We drink usually during the weekends. We could drink 3 days continuously, from the morning, Friday – Sunday. But Monday we stop as there is no more money to buy. Sometimes if you have more money, you continue drinking.”

SUMMING UP ON SOCIAL STRUCTURES FINDINGS

- According to MDG reports, statistics and measurements PNG has a long way to go before reaching the third MDG goal “Promote gender equality and empower women.” There is awareness and plans to improve the situation. Nevertheless, the women we met during our field work proved to be strong and seemingly respected.
- If women are trained separately, men can feel threatened and need to be included. If not, worst case, they may get violent.
- Men from matrilineal societies/wantoks are more comfortable with women with position than are men from patrilineal societies/wantoks. During our stay in Lae this was demonstrated and confirmed while discussing the topic with a married couple from a matrilineal society in Rabaul.
- Life skills training and awareness need to be integrated into training in the Aquapolis
- Excessive alcohol usage, due to an escape from reality with no future aspiration and due to money between the fingers, is perceived to be a cause behind social problems.

7.1.3 Research Question (RQ) 1.3: FROM SUBSISTANCE TO MONETARY ECONOMY

RQ 1.3: Observations on the transition from subsistence to monetary economy

In PNG subsistence economy (check theory section) meets the monetary economy, causing challenges. In Wom our informants explain that their land is eroding and mangroves are dying supposedly due to sea level rising, river erosion, imbalanced salt content and extreme weather. This is diminishing their capability to grow crops and collect shells, and thus their chance to keep a subsistence economy. The knowledge of traditional ways of living in a self-sustained way is deteriorating and new needs in terms of life quality are emerging. There is an increased focus on money, e.g. for school fees, alcohol and clothes. After a conversation in one of the truck rides between Wewak and Wom with both men and women of Wom there were comments both on the increased demand for prostitution as foreign male logging and tuna industry workers influxes the country, and the need of paying various new products (like clothes and school fees) is leading women to prostitution. There is in other words both a demand and supply.

According to the Wom Family Tree school project, most mothers (more than 80%) are

subsistence collectors/farmers/gardeners and fathers fisher men. Only a few (less than 20%) have paid work outside the village. Below you will find an illustration of how subsistence and monetary economies meet: The women of Wom collect kina shells, boil them in coconut juice and put the meat on sticks. This requires lots of work and resources, but creates little cash income when selling at the market. They get about 1 Kina per 5 prepared kina shell, equivalent to about 2 NOK.



Photo 1: 25 year old Lydia (while chewing betel nut) is collecting Kina shells from the mangroves, her only means of income. She is a bright girl, but family could not afford schooling after year 8. Only the women of Wom collect Kina shells. Men from Wom culturally don't collect, but men do in other villages. Photo 2+3: Wom women selling coconut cooked Kina shells at the market (gets only 1 Kina (in money) for 5 sticks). Photo 4: The actual shell is boiled and crunched to make "lime", a white chalk powder, used when chewing betel nut.



ANALYSIS

As mentioned in other parts of this study; people are worried about what money between the fingers can lead to, especially when working for booming industries, referring to Nancy Sullivan's studies⁴⁰ from the vanilla and tuna industry. Money is spent on prostitution, which may lead to more babies, some in need of adoption, and sexual diseases - and alcohol, which may lead to violence and unproductively. The Aquapolis seems to be perceived as a parallel to these other industries which has been developed earlier and thus also the challenges linked to it. This will be further portrayed in the last section of this chapter, where the Mercy survey is taking expected negative and positive impacts of the Aquapolis into consideration.

7.1.4 Research Question (RQ) 1.4: JOB STRUCTURE AND WORK MOTIVATION

Research question (RQ) 1.4:

How can local **job structure and work motivation** influence the project?

DJAMES LIM ON INCOME GENERATING OPPORTUNITIES

“Unemployment will be reduced as better and more sustainable livelihood is being created. As the wealth of each individual farmer grows, more shops and restaurants will be opened by others to cater for the growing demand for better food and services and thus creating more wealth for the whole community. Aquapolis will also be able to have an effect on the existing industry, using local subcontractors generating income for them, as well as a great opportunity for increased cultural, historical and eco-tourism.”

One of the main driving forces behind the triple win concept of LSO is the opportunity to improve livelihood, based on increased opportunities to create income as aquapreneurs, and the growth of relevant surrounding industries. The model is dependent on people's willingness and motivation to work, and certain efficiency to make it profitable. This becomes a success factor, and thus I found it crucial to map the existing models of creating wealth and views on employed and independent work.

⁴⁰ <http://nancysullivan.net/pdf/companyreport-worldbankruralcommunicationssurveyeastsepikandsimbuprovinces.pdf>

WORK MOTIVATION AND PRODUCTIVITY

Mercy focus group

Time spent on school work: In the classroom; Approximately 35 hrs a week. Home work: approx 20 hrs a week. “A normal day is very busy; every hour is scheduled from morning to evening. But we like it, it gives a good rhythm.”

Wom young men focus group

When asked why there are not more boats; “There is a lack of trees suitable for canoe, so we wait for it to get to the shores. We use erama tree – it can be found along the coast, in the jungle. Now it is almost finished because of population growth. But sometimes you find it on the beach.”

BRAIN DRAIN AND UNEMPLOYMENT FOR THE EDUCATED /ACCESS TO WORK

There is (relevant) employment for only 10% of the students who graduate, but cannot get into further studies. Say that we educate 30 lawyers every year, but we can't find jobs for all of them. There is a brain drain problem, but only for the fortunate ones/best ones. The best doctors, lawyers, engineer leave the country. You'll also find some in the settlements, with good education, but with no jobs. Fortunately everyone graduated from here get jobs, further education or something else valuable. (Principal Alexander)

According to the Lae teachers we talked to, the lack of teachers is partly due to “brain drain” to other sectors (like to the extracting industry which pays more), and the teachers are reluctant to go to rural areas.

WORK, PAYMENT, STEALING AND DRINKING

(Comments and advices from Pilipino hotel manager in Wewak)

The manager claims that employing women will be less risky. “We have mostly lady staff here, men are useless after paying day, they use all their money and get drunk. If you pay frequently, like every third day, they will be drunk more often. But when young men grow older they also grow mellow. Family men and women will make better guards. Men tend to change when they have a family.” Regarding the risk of employees stealing: “we need to have a strict inventory

control, especially for drinks. Stealing leads to termination of work contract. There is a bag inspection every morning and evening - every day.” The manager also then tells three stories about honest staff finding and delivering valuables and money lost from the guest, so the picture is not all grim. The manager sums up with some advices:

- *The training pedagogy* should be practical. If the staff is given theory; they tend to say yes, yes, but in practical work they learn more. 3-4 times a year trainers are here to train our staff. On site learning is most efficient.
- *Selection criteria for recruiting*: Consider background, education level, religion (Christians have better work ethics). You will need clear rules about everyday duties and long term performance and on what criteria the aquapreneurs can stay; and on what terms their contract can be terminated in case they get tired or misperform.

ANALYSIS

At Mercy they have a full schedule from morning to evening with school and homework. This also indicates that they are used to others deciding their activities, perhaps not leaving much room for creativity and entrepreneurial spirit? On the other hand, they don't seem to mind long days and appreciate hard work and productivity. This is positive for the Aquapolis if representatives from the Mercy School are included in the project.

The finding from Wom young men, to the contrary, indicates a rather passive, as opposed to proactive, attitude towards work and solving issues. “There is a lack, but we don't actively look for trees for boat building” Their comment also highlights the lack of certain traditional natural resources, claimed to be due to population growth and erosion.

In general, there are not adequate relevant job opportunities in Papua New Guinea for those who invest in an education. This confirms the hypothesis which explains why the Aquapolis makes a social enterprise. One of the main goals is to provide job opportunities; both for the aquapreneurs, the infrastructure, the welfare services (health, schools etc.) and management.

To the contrary, a challenge not considered earlier in this paper is the enormous need of teachers to the educational sector, especially to the rural areas, where 85 % of the population lives.

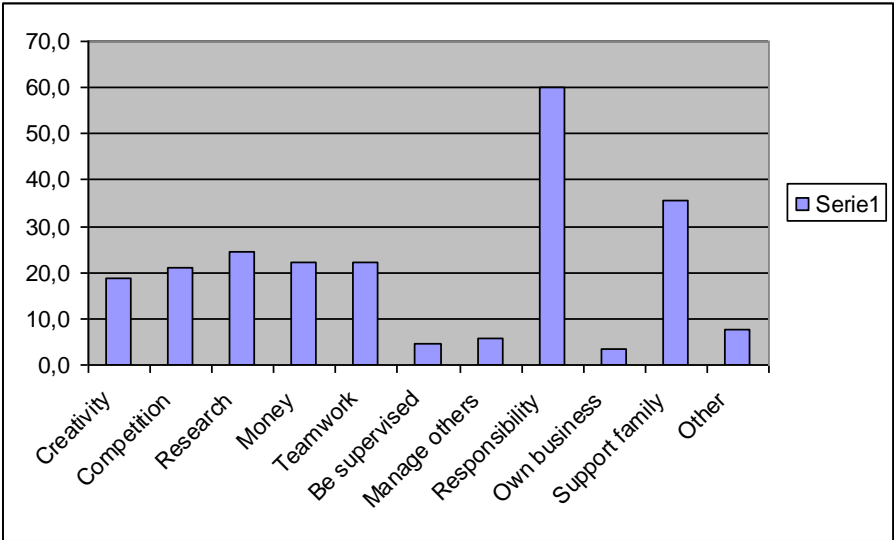
According to the Lae teachers we talked to, educated teacher are attractive employees in other

sectors, especially foreign invested extracting industries. Here the wage is higher, and thus a large proportion of teachers find it more attractive. This creates an imbalance of supply and demand in the education sector. Hopefully teaching in the Aquapolis will be seen as attractive enough, and one of the factors may be a competitive wage level. A close relationship with the teaching academy near Wom will probably be imperative.

In the Aquapolis there will be other job opportunities than the service industry (like a hotel), and the aquapreneurs are not employees as such, but in the development of management, recruiting, training within the Aquapolis these advices and comments should be considered.

Mercy Questionnaire summary on WORK issues

- Their dream jobs are (in order of frequency): Accountant, teacher, journalist, health extension officer, doctor, lawyer, manager/business woman, nurse, flight attendant, social worker, editor.
- 72 % prefer to work 40 or more hours per week. On the other end; 22% would like to work only 10-20 hrs a week.
- Most want to work in another city in PNG (57%), whereas 37% want to return to their hometown/village and 6 % aspire to go work abroad.
- As seen in the figure below; “Responsibility” and “supporting family” are the most important drivers to work well. Research, teamwork, money, competition, creativity were all ticked by about 20% of the girls.



The most important drivers to work well.

When asked how important shaping their own future is, and if they really can, on a scale from 1 to 10, their responses were: About 91% (8-10) say it is very important, and 81% (8-10) say that they can. Citation: "very important because a good future only comes from hard work, perseverance and positive attitudes towards life goals."

ANALYSIS

These findings illustrate their work willingness, as opposed to "lazy" as some informants imply the local population to be. These girls are students at a school where hard work is highly regarded and their schedule is full, so they are used to long hours. So it needs to be considered that the girls are probably not representative for the rest of the population targeted as "aquapreneurs."

Except flight attendant, most of these professions would be needed in an Aquapolis (having in mind it will be equivalent to a town of more than 20 000 people).

The questionnaire did not ask why they preferred the place of work, this would need more study. We can only speculate that perhaps they would stay in East Sepik if there were more job opportunities (like in the Aquapolis), or they see Aquapolis as "another city".

The "future shaping" questions yielded rather surprisingly high numbers, especially when asking who and what factors shape their future, where most answer their parents. We might assume that some didn't understand the scale, but on the other hand they are also very conscious that their OWN hard work at school is the second main factor for their future.

"ParqueSoft, in the IT incubator industry, is a social enterprise whose objective is to stimulate democracy and social justice through the inclusion of previously marginalized young people living in low income communities, transforming them into protagonists of their own enterprises, not employees." (Elkington & Hartigan 2005: 10) This is similar to the idea behind LSO who call their main group of beneficiaries aquapreneurs, encouraging people to take on their own responsibility, not being employees. This goes well with the finding from the Mercy survey, where responsibility is the second most important drive when working.

Still, if this argument proves to be adequately motivational to the targeted ESP-population will be interesting to see. According to an extract of the interview of Djames Lim; "In PNG; the

Highland and coastal people, they are very different. We cannot say PNG people are all the same. The Chinese and westerners there tell me that in Wewak they have better lives than in the Highland. They have everything; the fish, the sea etc. They themselves don't really see livelihood as a problem. But the migrants/settlements do, they don't have land, etc."

ENTREPRENEURS, NOT EMPLOYEES – more motivated?

Mercy principal Mr. Alexander asserts: "Highlanders and Islanders are entrepreneurial. But here by the coast they struggle. They don't have the patience."

Rincon from ParqueSoft claims; "entrepreneurs are born, not made. It's genetic; you can walk into a room full of people and pick the entrepreneur out in seconds. It's something about the look in their eyes." (Elkington & Hartigan 2005: 10)

THE ENTREPRENEURIAL SPIRIT – DOES IT EXIST IN ESP?

Analyses from other provinces in PNG (for example, Epstein, T. S., 1964; Salisbury, 1966, 1970), state that the present and past entrepreneur (the big man, religious leader) is a financial and a political figure that makes his mark by his capacity to persuade others that because of his organizing skills and trustworthiness they should cooperate with him in some enterprise.

PM Somare encourages engagement from the people of East Sepik:

"If you know that your children are going to school and teachers are not turning up or if resources are not available it is your responsibility to rally with other parents and demand that service. (...) May Sepiks continue to be great peacemakers who will keep our country together. Part of our problem in the delivery of services is our own lack of engagement. You the victims must start speaking up for yourselves too."



Michael Somare, Snr. Prime Minister of PNG, from East Sepik, supports Aquapolis ⁴¹

⁴¹ http://en.wikipedia.org/wiki/Michael_Somare

Mini portrait of Emmanuel Saya, leader of the Interim land owners' board of Wom



Emmanuel Saya at Wom beach

Emmanuel came to the Wom village in June and has been here every day since. He tells us that his mother is from Wom, and that he grew up here. Emmanuel holds a University degree from Port Moresby. He is head of the interim board of land owners in the village, and a relative to Prime minister Somare. He believes that the village needs change and that this change must take place on a spiritual level. He strongly believes in the need to change how things are, and is confident that change will occur. We are discussing the clash between subsistent and monetary economy:

Rita; How many do you see can become aquapreneurs?

Emmanuel; There will be many if we educate them!

R: Will they thrive in an industrialized work environment?

E; Along the coast, the respect among people is very high. But it depends on how we inform and educate them to work with the system; we should encourage them and keep hope in them. People tend to accuse and blame each other. They have an “I don’t care” -attitude. Everybody just think about themselves. So we need to change these values and bring back our values and customs. To be yourself is also to be part of the others and have respect for each other.

ANALYSIS

Emmanuel, both holding a higher education degree and affiliated to the Wom village, claims that there is a great potential of making aquapreneurs out of the coastal people, as long as there is

adequate training/education and the respect amongst people is ensured, as well as triggering traditional collectivistic values.

The Mercy students replied the following to their preferred job situation:

54 % want to be employed, 43 % want to be a manager/leader and only 6 % want to be self-employed/entrepreneur.

The point regarding preferred job situation was a bit disappointing and surprising since the Aquapolis is both based on the hypothesis that a self-employed person (an aquapreneurs) is more productive, motivated and efficient than an employed person would be. However, when talking to some of the respondents, the term “self-employed” may have a connotation to being a hard-working woman part of a subsistence economy, like collecting kina shells. This is clearly neither very attractive after investing in an education, nor generating much surplus income.

During the focus group of Wom young men the following was asked: *Would you want to open a shop? For instance make a building for the women to sell artifact?* (Checking their entrepreneurial spirit and interest for starting businesses to make a living)

They hesitate, and say it is difficult. They assert that The Chinese own all the shops and the rent is too expensive (Sheila fills in). They add that there is an attitude problem, because of drinking and revenge. Young boys demand from their mothers «give me money!», but they say no. Then the young boys may burn the shelters for the markets down. This destructiveness doesn't create a great motivation to build a shop.

The responses to this part of the data collection are success factors for the Aquapolis. For the Aquapolis to be successful, it would rely on the people running it; their motivation, willingness and capability to work at the different functions and be entrepreneurial aqua-farmers with drive to produce and co-own with a large numbers of other aquapreneurs.

7.2 Sub problem statement 2: PROJECT IMPACTING THE PEOPLE

Views on change, cultural diversity and future prospects

7.2.1 Research Question (RQ) 2.1: ATTITUDES ON CHANGE AND DEVELOPMENT

Research question 2.1:

How is the experience and attitudes regarding change/development?

CHANGE / DEVELOPMENT

The Wewak Hotel manager claims: “If you want to achieve change it takes lot of time and patience. Lots of patience!! (he laughs).

The Mercy students’ questionnaire enquired about their greatest hope and fear. Several of the responses dealt with change and development. One student sums up her GREATEST HOPE: "to see East Sepik totally changed from what we are now to an improved living standard and the wellbeing for ALL people”. Another citation regarding fear: “If we are developed I am afraid that our customs and traditions might die away. If many changes and development is taking place and lots of money is flowing into this country, diseases, like STDs will be increased very quickly."

The 5th most common fear:

”our country change too much as it will cause loss of cultural identity.

During an interview, the retired teacher Herman stresses: “Many of the young generation don't understand that education is important.” He is pleading us; «Can you *change* their attitude? They are not educated and don't cope well with changing times.»

The focus groups of young men in Wom refers to a different type of change in need of being dealt with: “Right now our land change all the time, due to climate change and sand erosion. Sea is reaching mangroves and destroying them.”

MISSIONARY INFLUENCE AND LOSS OF CULTURE

The focus group interview of young men in Wom explain that “The first missionaries came during the beginning of WW1. Today there are still missionaries; any type, everywhere. They claim; “We are losing culture and traditional religion because of Western style. White man, missionaries come, so we are losing our own traditional knowledge. For instance, we are/were not allowed to do carving by missionaries. And due to education, the system is changing. We are losing our traditional morals and faith. We are losing the traditional money system; the exchanging of goods. They first stopped our mother language, then they said we have to speak and learn pidgin, now it's English.

When asked about their feelings towards the missionaries they say “it is 50/50.” The negative part is that we are losing our customs. The positive is that they bring education and changes. They brought good peace, ceremonies, say we should love one another, stop the killing.. Those negative things are fading away due to education, God, and Government support. They also brought in police, law and order.”

I conducted a semi structured focus group interview during a truck drive, with representatives from Wom. The land owner Harry Saya says “The world is changing. PNG is changing. We would like to change. But our culture is gone. That is not good.” When I ask what they mean by culture they give examples; “The songs, buildings, canoe building, artifacts, craftsmanship, rituals, history, myths, language – and not the least the Sing sing (singing, dancing and dressing up traditionally during special celebrations, like we were invited to be a part of when receiving DJames Lim at the airport). They are all in their 40ies and add; “We didn't learn from the elders and our generation is failing to teach the younger generation. But most of the young are interested. Now the elementary school is trying to teach the kids about our culture as we want to keep it.”

Mini portrait and interview of Emmanuel Saya continues..

Rita: Emmanuel, you have an example from the mining industry, please elaborate?

Emmanuel: When there is a lot of money and a lot of work, people tends to forget about the actual things they need to achieve for their families and clan. They rather spend it on drinking

and womanizing. Money creates more social problems and makes them lazy. That's why we need to change the people spiritually before the project comes.

R: Which challenges need to be solved before others?

E: Social problems within the village. We lack education to accept what is coming. Spiritually we need to change. Law and order is a problem.

R: Is there a clash between traditional and modern ways?

E: It is possible to blend the two ways, also in terms of law and order.

Emmanuel has been going through quite a change himself. For a period he was losing grip of his life through alcohol abuse and the like.

E: People respect me as I have gone through the same and can be a role model for others. I changed when I heard about the Lord. I came out of it and experienced a big change being born again; not through the original Catholics, that was here before, though, but through The Assembly of God. There is change in PNG, all over the country. People want to see improvements here now. The swamps are home for the ancestors' spirits, but of little use for people today.

Emmanuel considers the site to be a kind of rubbish wetland that can be of great importance if the project comes.

E: People here want to see it happen, and nobody, nobody will stop this project!



Highlanders with a drum performance during Morobe Show in Lae – sponsored by Coca-Cola.

An example of the blending of traditional and modern culture?

We arranged a short interview with Jim Thomas, Director of Tenkile Conservation Alliance⁴². He is Australian and has lived and worked with his family in PNG for 8 years to save the threatened tree kangaroo. He says that a TRUST relationship with and amongst the village people is key to success. It took five years to get a breakthrough in teaching people in one of the 45 villages to farm rabbits. Mr Thomas stressed that Success-stories are *change* drivers, inspiring others and creating a competitive culture between the villages and among the villagers. One village made it, proved that it was a successful project and thus there was a visible tangible result, both inspiring and enabling a constructive competitiveness. “If they can do it, so can WE.”

During the interview with Principal Marcus Alexander, he concludes in this way: “There are two groups of people. You’ve got the silent majority; 90% are for good things and supportive. But 10% have big mouths; they dominate, also when it comes to development and change.

ANALYSIS

Loss of traditions and cultural identity, which they see as a negative change, is making them anxious. They, especially the Wom villagers, see it as being partly due to the influence of missionaries and westerners. The influx of monetary economy, which is mismanaged, is something they have felt already and are conscious of.

An old man from Wom is worried about the (village) youth and their lack of coping with changes. He thinks education is an important factor to reinforce/strengthen them to deal with it. The young men themselves are worried about climate change and erosion.

These are really valuable findings for the development of Aquapolis, as

1) Change and development, especially if swift and foreign, although meant positively, is not always seen as something constructive, and thus needs to be handled with care.

2) The monetary economy is still fairly new in PNG and there is a need to provide education in how to deal with it, how to think long term, save and invest, instead of for instance drinking it away.

3) People are anxious to lose their traditional culture and see already signs of it disappearing. This proves a need of strategies to preserve the traditional culture, like ensuring a culture center and integrate it into the daily life, landscape architecture, building architecture, schools etc. There are two other reasons for this importance; the pride and understanding of their identity and education of the diverse culture. If Aquapolis will consist of people from both the settlements and various Wantoks, this is an added value to ensure mutual respect.

Emmanuel, the interim board leader, claims that there is a need of moral and spiritual change, before the Aquapolis project can happen, and so he is working on that. He has himself “seen the light” through one of the sects that today’s missionaries bring in, The Assembly of God, which also has a church in Wom. This is an interesting finding, as the influence of missionaries clearly both have a downside and upside to people. The conclusion that a BLEND is possible, is a very valuable one. The respect of both traditional and introduced spirituals seem to be needed, and is a natural part of people’s lives.

The advice and experience of Jim Thomas’ project with villages in inland PNG is also interesting. Ensure success with some, and then others will follow. Perhaps facilitating some sort of competition? This will introduce change and development in a positive way.

I will conclude this section with an advice to the Wom villagers and Aquapolis from Emily Joy Sikazwe, leader of the Zambian NGO Women for Change: “We believe that women and men can make a change *together*. If men and women work together as equal partners development will be fast-tracked. “

7.2.3 Research Question (RQ) 2.2: CULTURAL DIVERSITY AND TOLERANCE

Research question 2.2:

How is their experience and attitudes regarding cultural diversity and tolerance?

Note: This project requires relocation and mixing of people. PNG is a country of 800 languages and thus separate wantoks⁴³ with corresponding cultural rituals. This may cause both challenges and opportunities when mixing cultures in the new city.

EAST SEPIK PEOPLE'S ATTITUDE TOWARDS OUTSIDERS

During the interview with Principal Marcus Alexander he had several interesting points regarding culture and ESP people's attitude towards outsiders. He refers to some of the Mercy school teachers' experience; "They complain the first year. People around here might not accept you easily in the beginning, unless you prove you are working for them. They will then accept you. The East Sepik people are very clever. The teachers feel it takes a long time to be accepted. When they first come here they want to run away. 2nd year is better and the 3rd year you never want to leave.. (he laughs). He sums up: "People in this province are both open AND hold a healthy scepticism. However, it is more polished here than in the Highlands. We must not forget that there has been influence from outsiders through a long period of time. The Japanese, other Asians, Germans, Australians etc.

RELOCATION AND INTER-MARRIAGE

A minimum 25% of the parents of the students at Mercy are married with someone from a different province, demonstrating that they are used to mix of culture background from their upbringing, and a fair number of people in PNG do inter-marriage.

Wom Elementary School did a family tree project with the pupils. Most of the pupils had parents from two different places, only two had parents where both were from Wom. Inter-marriages are normal, and they have contacts in other villages/towns. Thus; 80-90 % among the parents in Wom is married with someone from another village. More on the family project in Appendix 6.

CULTURAL DIFFERENCES TOLERANCE AND EXPERIENCE

The greatest challenge with the relocation of people, based on survey findings, seems to be the worries behind the non-preventable mix of wantoks. A represents people with the same language and customs, usually from the same village or neighbouring villages.

We wanted to map the Mercy students' culture difference tolerance and experience. Our hypothesis was that if we surveyed if they have friends outside school with other cultural background than themselves and if they would consider marrying someone from another culture, these two findings would convey an indication. The response was the following; most do (about 90 %), mainly from other villages and provinces, some from other countries, like Australia.

Citation:"From all over the province. In East Sepik we have different districts with different

cultural backgrounds. It is good to meet friends from other places and know their identity." 72 % would consider marrying someone from another province, 15 % wouldn't. 58 % were positive to marrying someone from another country, especially if love was involved, whereas 29% not.

During the focus group interview during observation at Wom, a response was: "If other wantoks are moving to our land -they have to adapt to OUR customs and rules!"

MIX OF PEOPLE; POTENTIAL CLASHES

The Mercy girls raised the concern of clashes between different wantoks. 10 % claimed that a negative effect on the Aquapolis would be "a mix of culture and migration will bring bad influence on young people or tribal tensions"

Driving Forces were mapped at international, national and local level during the Foresight Workshop held for Aquapolis stakeholders. "Mixing of culture" was mentioned at all levels.

International: Intercultural marriages, influence of workers from other countries (potentially leading to prostitution and social challenges, even HIV /AIDS).

National: "Influx of different cultures within PNG" and urbanization.

Local: "Settlers' relationships" and "cultural identity in transition".

SETTLEMENTS; PULL FACTOR AND LACK OF SOCIAL CODE

Principal Alexander Marcus argues; "For the settlers outside the urban areas, there is no pushing factor (noone pushed out of land), there are mainly pull factors. Their attraction is towards towns and work. As many are not living with their families there is a lack of social code. They live with others with similar needs and share house. This can also mean losing loyalty to the elders. Our Mercy girls can get harassed, and there are incidents of rape. Many of the girls are scared of the Settlement boys. This doesn't apply for the Wom boys, as there is still social control and the school can talk to the elders."

ANALYSIS

People seem quite used to moving, at least pertaining to inter-marriages. We asked where they grew up AND where their parents were from, for two reasons. To map relocation frequency of people, as many grew up another place than their parents were from. The Mercy students are both quite used to having friends from other cultures (other wantoks are considered as other cultures) and most of them are positive to marrying someone from another province or country. This

indicates a fairly tolerant attitude towards other cultures, which is very positive for Aquapolis. A representative from Wom village, however, urged that others (outsiders) moving into their land, i.e. where the Aquapolis will be situated, have to adapt to their customs and rules. This attitude will need to be taken into consideration and handled with care. Our response then and there was to try to make them rethink this strategy, and within just some minutes they themselves got to a new strategy of cultural centers where all cultures can be portrayed and the need of learning about each other's cultures, to ensure mutual respect. This was rather amazing to observe. They can be swift to adapt themselves, and seemingly also to a constructive strategy.

According to the Foresight Workshop, "culture mix" is a drive factor at all levels, both local, national and international. Concerning Aquapolis, it is mainly meant for people from East Sepik Province, but then again the initiative is from a foreign country, and thus they may associate the Aquapolis to have similar consequences regarding social impact, such as intercultural marriages, prostitution or sexual transferrable diseases, if some of those involved in the project come from other countries, provinces, or even the settlements (mainly outside Wewak). It is interesting that urbanization and "cultural identity in transition" were mentioned.

Experiences from the settlements outside urban areas, which, similarly to a planned Aquapolis, consist of people from different villages mixed in one place, indicate that this topic needs to be catered for in a very strategic way.

SUGGESTED SOLUTIONS FROM THE SURVEYED POPULATION

Examples of conflict preventable strategies mentioned among various informants:

Both Wom villagers and the Mercy students, after some contemplation, recommended:

- Celebrating and respecting the cultural diversity with festivals and cultural centers.
- Representativeness in democratic bodies should also be implemented, and building on their already existing reconciliation traditions.
- Principal Alexander Marcus: "At this school we mix well, we consciously mix people from different cultural backgrounds and provinces in dormitories and cubicles. This applies for students, teachers and administration. It works, but we always have to be on guard, not lose control of the well balanced mix.

7.2.4 Research Question (RQ) 2.3: FUTURE SCENARIOS

Research question 2.3:

What are the general and project specific future prospects indicating challenges and opportunities?

THE MERCY STUDENTS' PERCEIVED AND EXPECTED POSITIVE AND NEGATIVE IMPACT OF THE AQUAPOLIS PROJECT

86 % believed that the planned Aquapolis can have an effect on the East Sepik region.

Negative impact

Citation: "social problems due to money will abound".

RESPONSES	NO.
Environment concerns, specified: Mangroves/marine life/environment damage, waste dumped in ocean /climate change /increased pollution/destroy ecosystem and habitants of the swamps	14
Mix of culture/migration will bring bad influence on young people/tribal tensions	9
Increase in criminal activities	8
Social problems / too much drinking and fighting, broken marriages	7
There can be disputes between land owners and the company involved	4
Loss/ changes in culture and traditions	4
Prices of goods will increase	3
Increase in HIV, STDs and rape	2
Affect people living near the coast	1

Brain drain: More people will work for Aquapolis instead of benefitting ESP	1
Increase of prostitution	1
Shortage of land	1

ANALYSIS

The Mercy girls highlight several risky issues in need to be taken into consideration. This makes valuable knowledge, as the Aquapolis can make strategies on how to avoid them.

The most common reply (14) was related to concerns for the environment, displaying their knowledge and worry about the topic. However, although informed about the sustainability aspect of the project in the assembly hall presentation and highlighted in the questionnaire, it seems like it is either not understood or believed, as they mention it as their main negative impact. They may have heard about other (especially foreign) development projects that do not have the environmental consideration and thus having caused damages.

Cultural clashes, money influx, diseases, broken marriages, land disputes, drinking, loss of traditions, crime etc. are all again mentioned as potential negative outcomes, the second most frequent response. They might consider this project as a modern one, at least belonging to the future, and representing the social problems they already now see happening/worsening and correlate to the *change* and development they to a certain degree want, but perhaps more so fear.

They might also see problems related to settlements and fear the same might happen in this new establishment filled with mixture of people, similarly to what they already see among the settlers, such as loss of respect for family code and structure etc.

Additional negative potential affects mentioned; increased prices, “brain drain”, prostitution increase, shortage of land, affect people living by the beach and swamps. Another note taken is that several of the points from the potential/expected negative impact of the Aquapolis are similar to their biggest fears (in general) mentioned earlier in the questionnaire.

Positive impact

The citations are descriptive and pick up some of the main motivations behind the Aquapolis:

“Money, employment, development of humans and natural resources, overcome poverty.”

"It would improve standard of living because there would be jobs for people (even those who weren't fortunate enough to get educated well), so people can be able to buy healthy food and pay for services, such as education."

"More people will have employment opportunity with better home and good health. This may help solve most of the social problems."

"By creating job opportunities; they will be happy and not involved in criminal activities because this project is for anybody and will improve living standards."

"All the people in ESP can be employed and some will have increased living standards rather than having drunkards and drug addicts causing many problems."

RESPONSE	NO.
Income/job for unemployed people	30
Develop/bring income to Wewak/ the ESP	13
Live a better life /improved living standards	11
Help ESP with youth to settle down and get away from crime, drugs and alcohol	8
Help our country	3
Conserve animals and marine life, and restrict over-fishing	3
Easy way to earn a good amount of money.	2
It will change the town and village (Wom and Wewak)	2
Help people cope with educated, technology and modern lifestyle	1
Basic services to people	1

ANALYSIS

The saying goes “there are two sides of the same coin”, which seems to be the case when the Mercy students reflect on both the potential negative and the potential positive impacts of the Aquapolis development. They were worried it would cause social problems, but they also see that it could, as intended, solve existing social problems. Lack of education and employment access, as well as low living conditions today can be prevented with Aquapolis. The most common reply was “income/job for unemployed people”, followed by increased income to the province/Wewak and improved living standard. The next one is interesting, as they see that this development might especially be positive for troubled youth. In addition, it is remarkable to note that they find prevention of over-fishing as valuable, as opposed to the worry of “destroying the ecosystem”, mentioned as a negative impact.

This finding highlights a clear signal; the Aquapolis has the potential of being both poorly and well welcomed, managed, and developed. The realization of this fact, and in addition, working to its favour, is of uttermost importance.

COMMENTS, QUESTIONS AND CONCERNS RAISED BY THE MERCY STUDENTS

“Now it is risky for women to move around, with this project the men will be occupied with work and get settled.”

“It is great that the young people and students can participate.”

"The Government will claim everything and misuse the money." + "I truly don't trust our government here in PNG because they make promises they never fulfil. So I'm asking; do you think that our Gov't truly will help doing this project?"

The Mercy students raised thoroughly thoughtful concerns and asked important questions, representing their vigilance. Some of them are presented here, including comments:

“If the project turns successful, will it be established in other provinces as well?”

“Why East Sepik over other provinces?” “Will people from other provinces benefit as well?”

These questions were interpreted in two ways; They might be concerned about the perceived competition from other provinces or the envy of people. The other, more positive deduction is that they would like other parts of the country to benefit as well, as they have pride in PNG and

wish for general development reaching all. The concept of transferring a successful project from one place to a culturally different will also comply within a country with such a diverse culture.

“Will there be a boost to the economics of E.S.P?” “Will there be job opportunities for other employment apart from aquapreneurs?” “Will there be opportunities for us who want to become engineers, Health Extension Officers (HEOs), doctors, politicians?”

They are clearly concerned about income and career opportunities for both their province and themselves. They see potential for trickle down effects of the project, which is the intention.

That the Aquapolis would keep the men *occupied*, so they don't harass women is something one girl hoped for. This indicates that men roaming around with limited access to something to occupy them with, like education or jobs, in addition feeling they are without future hope, can be root to some social problems. Boys harassing girls makes them feel unsecure and limits their felt safe walking space. This adds to a comment the Mercy focus group had. They don't swim in the ocean often because they are scared to walk pass the settler boys.

One girl is appreciating the recommended strategy that youth and students can participate and that their voices are heard and respected. This is part of the project method of participation.

The Principal Marcus Alexander is also positive, as he exclaimed;

«It is like a cooperative. I think it would work.»

The claim of Government corruption represents the general distrust of politicians and allegations of corruption, often reported through the media, also while we were there. The unmet promises of the government and corruption risk are something they are worried about and not afraid to question.

LSO's triple win-business method includes to collaborate and encourage ownership feeling and investments from the national Government. This emphasizes the severity of ensuring that the Aquapolis is “corruption free zone”, to secure needed trust and well managed investments.

7.4 AQUAPOLIS CASE SUMMARY

It is very interesting to see that certain topics, especially negative concerns, are mentioned as driving forces on several levels, from global to local, via national, and voiced by both the

foresight stakeholder panel, the Mercy students, Wom villagers and other informants. Climate changes, cultural clashes, need of life skills and education, land disputes were mentioned by most.

- Education and life skills are important, but must be relevant, accessible and preferably lead to work opportunities
- Employment opportunities is clearly needed and hoped for, to some of the Mercy students this was their biggest hope and dream.
- The entrepreneurial spirit is fairly low in ESP, as opposed to the Highlands. Only x % replied “self-employed” as a preferred. . . . At the Mercy. Self-employed may be interpreted as a self-sustained kina-shell collector, representing the subsistence economy, representing hard work and low income opportunity.
- Cultural mixes and immigration influx are mainly mentioned as cause behind negative social problems, such as STD diseases (HIV/AIDS is increasing), cultural clashes and violence and often correlated to increased money influx and mismanagement. But when discussed and intervened by us as researchers, the diversity was also viewed with positive potential. One aspect is the influx of foreign workers, mainly from neighbouring Asian countries; the other is the traditional experience with the 800 languages and diversity of wantoks. The third aspect is the settlements outside urban areas. The conscious strategy with the mixing of people among students and employees at the Mercy school both represent the potential problems but also the potential positive tolerance and mutual learning and respect, which some Mercy students highlighted.
- Loss of culture and changes is feared. Due to missionaries, loss of traditional pride and identity and the coming inevitable modernity and representative change. Even the well-educated Mercy students mainly feared changes, whereas some looked at it in a potentially positive way. They hope for development for their country and its population.
- Population growth, corresponding inability to follow up with health and educations services and the diminishing land and natural resources, are viewed with fear.

- Land ownership is closely linked to tradition and identity. Disputes and law suits are common; there is a new law for land tenure being debated.
- Cultural clashes, money influx, diseases, broken marriages, land disputes, drinking, loss of traditions, crime etc. are all again mentioned as potential negative outcomes. They might consider this project as a modern one, at least belonging to the future, and representing the social problems they already now see happening/worsening and correlate to the *change* they fear.
- They might also see problems related to settlements and fear the same might happen in this new establishment filled with mixture of people, similarly to what they already see among the settlers, such as loss of respect for family code and structure etc.
- Additional negative potential affects mentioned; increased prices, “brain drain”, prostitution increase, shortage of land, affect people living near the sump areas by the beach.

NEGATIVE AND POSITIVE EFFECTS OF AQUAPOLIS

The saying goes “there are two sides of the same coin”, which clearly seems to be the case when the Mercy students reflect on both the negative and positive effects of this Aquapolis project. They were worried it would cause many social problems, but they also see that it could, as intended, solve many existing social problems. Lack of education and employment access, as well as low living conditions today can be prevented with this development project. Especially when you read the citations this is clear. The most common reply was “income/job for unemployed people”, followed by increased income to the province/Wewak and improved living standard. The next one is interesting, as they see that this project might especially be positive for troubled youth. It is also interesting to note that they find prevention of over-fishing, access to education and modern technologies to be positive aspects of Aquapolis.

8. DISCUSSION - REVISITING THE OBJECTIVE

Let us revisit the main purpose of this thesis;

What opportunities and challenges can be met in the process of replicating a social enterprise concept from a known area to a geographically and culturally different area?

8.1 MAINLY CHALLENGES

Let me start by reflecting upon the numerous challenges with a saying by Mahatma Gandhi;

What do I think of Western civilization? I think it would be a very good idea.

This might as well go for PNG. We all seek human rights like freedom to eat and freedom to speak. Like Indians the people in PNG use their freedom to speak and act; in an overwhelming multitude of languages and actions. Nobel laureate Amartya Sen⁴⁴'s concept "argumentative dialectic" also covers the practice we observed in PNG, and these qualities may serve as a powerful force for exchange of opinions and constructive change.

When it come to the challenges for the Aquapolis to be transferred to ESP in PNG, the following challenges were observed and found during our surveys, informal talks and following the media:

The difficulties connected to explaining new ways of producing food, organize work and engage in future planning for the involved land owners and aquapreneurs – taking into account that the experience, mindsets and knowledge on the ground level in PNG is clearly different from that of urban planners, investors and professionals coming in from Port Moresby, Singapore – and Norway. These mental maps and collective imagination about possible bright futures let to potentially distorted and inflated expectations. The distance to PM and the outer world is immense, both geographically and culturally.

Regarding Information and Communication Technologies (ICTs) there is a limit to cheap mobile phones, radios and 5 TVs in the Wom village; this digital literacy gap is not easily bridged in an initial phase of the project.

Social identity, language, level of education, gender issues, mindsets (like tolerance, ethics, behavior codes etc.) differ, for instance from a more hierarchical and efficient Singapore-

⁴⁴ http://en.wikipedia.org/wiki/Amartya_Sen

Chinese developer approach.

Internal conflicts (between land owners, leaders etc.)

Generational differences; both young and grown-up men struggling to develop new male roles.

Challenges when not sharing the same beliefs, assumptions and cultural norms, e.g. being in a development team where other professionals were having serious talks with the spirits; the mix of business development and religion

Rumours, gossip, misconceptions, wrong information

Trust, motivation and corruption

With accusations of corruption, the shown instability and health concerns for the Prime Minister

Somare (which seemingly struggles to get support for the Aquapolis in his political sphere), and upcoming election in 2012; it can also turn into a risky one-legged strategy.

Djames is however loyal to this strategy.

8.2 REFLECTIONS ON SUCCESS PROBABILITY

I would like to bring forward what some claim to be the implicit meaning in the thesis' objective, and the main objective of the SIA; **Do you believe the Aquapolis will it happen at all? And will it, as intended, improve the livelihood of the people in ESP? What is your gut feeling?**

To which side did will the Aquapolis project mainly fall; to the opportunities or to the challenges? And if to the latter, will it be possible to overcome these in a constructive way?

Obviously, one cannot reply based solely on gut feeling and beliefs. I realize that both the project and local culture are immensely complex; the success will still be dependent on unforeseen incidents and behaviour, the political framework etc. But after one month of fieldwork, extended literature search and advice from interviewees working in the field, where the opportunities and challenges, the warnings and strategies were analysed and presented, we found a wide range of valuable information. Using this AND my gut feeling... There are several pitfalls to fall into... some of which we were only briefly presented and some of which we observed and reflected upon, but not thoroughly surveyed in our SIA or this thesis.

LSO insists on the triple win model, involving rely on the Government's support, financing and Involvement and thus dialogue with the impacted people. How is the trust relationship, communication and collaboration climate between the parties?

The Eye for Eye culture, the loyalty to your own Wantok, land conflicts, the power balance between locals and settlers, partly reflected in the high percentage of law suits, partly in violence and consequently, the lack of trust between parties that may need to collaborate in the Aquapolis.

Although, you may easily see that the glass is half empty, I believe that at least an attempt is worth it. Some of our respondents recommended that we take baby steps in the beginning. Make a pilot, meanwhile raise the awareness in the general public, deal with the information need and include the constructive feedback and try out practical methods along the way, with the local people. Then see if it is worth it, to develop such a huge development.

Djames Lim stresses that the best way to learn is to fail, and fail to a certain degree, they will. But the question is whether they will get up on their feet again, readjust and move on.

The concept is unique and interesting and as far as we know, well-working in Indonesia, since the 80ies. More people can benefit. The needs of the people of PNG are there; to improve their livelihood and hopes for development. So, if someone has the opportunity to provide it to them, in a sustainable way, it should be done. LSO and Djames Lim have a recipe, a do good-concept, he wishes to spread to others, and this opportunity should not be wasted. As Nørbech asserts: “If the project succeeds, it will become a leading star for subsequent similar projects, also when LSO continue replicating the concept to others countries. The starting point should be the local people’s dreams. And mapping the most concrete challenges and overcoming them.

If the will, persistence, and courage are adequate in *all parties*, you will win in the End.”



Morobe festival in Lae, showing strength, cultural identity and hopes for the future



9. WHAT NEXT?

9.1 NEW LEARNING: NEW METHOD DEVELOPED

The Social Impact Assessment that Rita Westvik and I executed as consultants for LSO yielded two valuable main pieces of learning; 1) about the case 2) general knowledge about a suggested method of how to execute a SIA before a holistic developing project in a culture new to us.

In appendix 8 you will find the latter, including *what* and *how* sections.

We mapped a large number of topics, some of which we could not predict before we were in the process of the data collection. This was a finding in itself; be open for them, don't limit your study to a set of pre-defined topics.

To our knowledge, foresight is a young discipline within the Social Impact Assessment research area. Since this was an upfront study, the foresight methodology proved appropriate, especially bringing together people with different levels of education level. Their knowledge and attitudes around the same topics would still be compatible and comprehensive. We invited and involved stakeholders representing a wide range, from villagers with little knowledge of English and low education, via media and NGO representatives to Government representatives. The use of foresight workshop, where we put people into mixed groups, reinforced the participatory approach, as well as generating feeling of ownership and a common goal and set of strategies. Hence, using foresight into a SIA is a new recommended method.

9.2 FURTHER RECOMMENDED RESEARCH

In the country of the Unexpected (as we named PNG) we were intrigued by the complexity and diversity of the people and topics, which deserves further investigation. Obviously, with one month at hand, we could solely touch the tip of the iceberg, but we got a general idea, which we based our recommendations on. Still, I will here present further recommended research areas.

Already during the desktop study (before field work in PNG) it was clear that gender issues and alcohol abuse and their effects on social structures were areas in need of further study. In addition, during the field work, especially from informal talks, we found other topics; general life skills, short/long term planning perspectives, as well as the Eye for Eye (revenge) culture,

the complex religion picture, opportunism and inflated expectations. These topics are all complex and would deserve deeper study.

A hypothesis which arose during my interview with Nørbech, could be interesting to test; “Since PNG consists of 800 languages/cultures, each with a particular set of customs, they must be quite conscious around their cultural identity - for better and worse”.

Conventional aid versus social entrepreneurship: This is a complicated issue, and I have not discussed it in depth, but conventional aid’s efficiency is something that many social entrepreneurs debate.

In the knowledge transfer section I present a hypothesis, which would be interesting to test: “The challenge and opportunity to reach for when expanding on a social enterprise’s social impact must be to move from a “one-way street” knowledge transfer, where a sender believes to know everything the receiver needs to know - to a not solely two-way street, but the next step; a reinforcing cycle of knowledge exchange - aimed at achieving lasting and improved knowledge embodied within the human capital of all parties involved.”

10. CONCLUSION

I started, in the preface by saying I am obsessed about scaling impact, and I believe that leveraging on existing well-working concepts is efficient. Scaling social impact seems to be one of the main focuses within the field of social innovation and entrepreneurship. There are many cases and strategies to learn from, which I have referred to in this paper. Looking at the case from a traditionally aid providing country, like Norway, it is particularly interesting to learn from alternative methods, like the one from LSO and other social enterprises. This is a South-to-South project, mainly between Indonesia -formerly considered a developing country itself, and still struggling with its share of social problems and poverty (17% of the population are under the poverty line⁴⁵), scoring fairly low on the UN’s Human Development Index (101 of 168) - and Papua New Guinea, rich in cultural diversity and natural resources, but close to the bottom at 137 of 168 on the HDI. LSO, the social enterprise in focus, is moving its efforts and concept

⁴⁵ <http://en.wikipedia.org/wiki/Indonesia>

from one country where they display a long standing experience, to a culturally very different, for the first time, and boldly planning for several other developing countries – also very culturally different - in a rather short time span. The motivation of the CEO Djames Lim is both good hearted, business-minded and religiously driven. The potential pitfalls are enormous and plentiful. But the purpose of the Aquapolis is to improve the local people’s livelihood opportunities. It is not a small deal. It is impressive, and overwhelmingly complex.

The SIA report included a model that we developed. It may assist the perspective and strategic overview. It combines LSO’s triple win concept, the Triple Helix⁴⁶, and the Triple Bottom Line⁴⁷

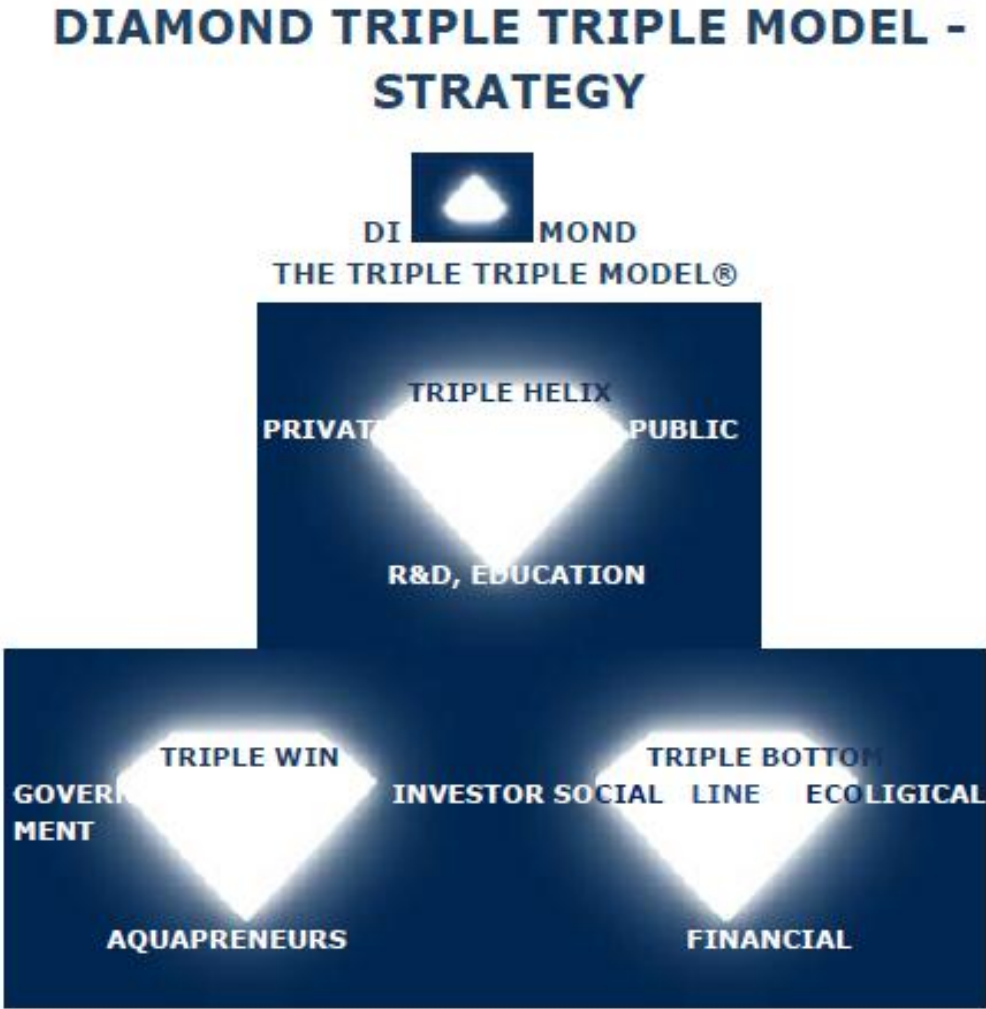


Illustration x: Diamond Triple Triple Model – for strategy development.

46 http://en.wikipedia.org/wiki/The_Triple_Helix

47 http://en.wikipedia.org/wiki/Triple_bottom_line

This project can be described as transformation by design; the design covering both technology, new business models and social development. The current and future social challenges cry for innovation and action of a more sustainable character. Our aim was to support and enable both organisations and individuals to anticipate, adapt and respond pro-actively to the proposed project. So, what did we achieve? Through observation, dialogue, participation, surveys and a foresight workshop we contributed to creating spaces for a better and more effective dialogue between key players. Our aim was to contribute to insights and involvement that ultimately can move the local municipalities, landowners and people at large towards new, innovative and sustainable directions.

A truly participatory approach would of course require that the project is realized. At this moment of delivery of the thesis the situation is unclear, due to shifts in political constellations, sudden deaths and corruption. The world, both in PNG and elsewhere is in a race between implementing ways to improve the human condition and the ever-increasing complexity and scale of global and local problems. So, the basic research question remains: how are we doing in this race? Can we develop strategies and solutions to improve our prospects?

In our recommendations to LSO we warned against the one-political-pillar strategy (solely and full support from the “nations father”, the PM at that time), since it made the project vulnerable to fluctuations and sudden changes, which was exactly what took place.

Still there are expectations and hopes both on the developer’s side and among the people in Wewak that the decision in the present Parliament will be in favor of developing Aquapolis.

I hold that social impact assessments should be executed before any large project which potentially changes the lives of people. This is of even higher importance when the project initiative is foreign, and in particular when there is potentially scepticism amongst the local people, perhaps due to former negative experiences. This is why the inclusive and participatory approach is not just recommended, but fundamental to at all survive in an unknown territory. And who knows, the learning from the impacted people may impact the project in unexpected positive ways. Perhaps it can provide a chance to display cultural diversity and pride, as well as modern technology and improved lifestyles. Perhaps the social enterprise brings valuable added learning and experience back home and to the next venture –in Uganda or Oman?

Acknowledgements

I am first and foremost grateful to my colleague and dear new friend Rita Westvik, who invited me to become her partner doing the consultancy work in PNG, thus enabling a very exciting case for my master thesis, and valuable experience for life. She has been supportive and given constructive feedback, both along and after we completed our report. You are such an inspirational, fun and knowledgeable person, a true social entrepreneur in spirit and focus.

Thanks to my advisors at Norwegian university of Life Sciences (UMB); Eystein Ystad made attempts to get me on track every time I got off it (thanks for the The Economist article) and Anders Lunnan, who got onboard during the first and last part of the thesis journey. Nina Solberg and Pergadis at Frivillighetens Hus in Oslo provided office space, food and helpful input. I must also thank Arne L. Bygdås at SINTEF for the interesting talk on knowledge. I know you were in the final weeks of your own PhD thesis. Congratulations! Bjørn Christian Nørbech, you stopped by Frivillighuset at a perfect timing and allowed an invaluable interview about culture interpretation. And thanks to my friend Nora Svenson Paus for the book “Unreasonable People”.

I thank friends who have inspired me with their master thesis work. Alastair and Farshad were kind enough to proof read the last days before submission. I owe you big time! The encouragement of friends and family has been heart-warming. Thanks to The Rainforest Foundation in Norway; Rune Paulsen and Kamilla Berggrav. Emily Sikazwe and Charles Abugre gave updates on the Millennium Development Goals at the conference by The Norwegian Polytechnic Society, Millennium Group, headed by Nyonga R. Amundsen. I must thank DJames Lim of Lim Shrimp Organisation for choosing Rita and me for the SIA, and for sharing professional and personal wisdom. The people in Wom, thank you for receiving us in such a hospitable manner. You raised concerns about the climate changes and shared dreams about improved quality of life for your people. Philip Tjoeng, Samuel and staff of In Wewak Hotel made the stay in PNG even more interesting. Thank you, Jim Thomas at the NGO Tenkile, for sharing some of your experience of development work in rural areas in PNG. Shane Hashim, Paulette Tyhuis and Pat Wall have contributed with their insights and experience of being expats in Papua New Guinea. We are grateful to the environmentalist, forestry academic,

pastor, culture expert and spiritual man Dr. Sammy Toti for his broad knowledge -and for connecting us to his two teacher friends Nemika and Cecilia, who guided us safely around the city of Lae during the Morobe Festival. Boina tuna! (Thank you in their Rabaul language). Last, but not least, I must thank all the social entrepreneurs out there, whom I have met during travels, field work and conferences. You are my true inspiration - hopefully I will join your grand league one day..

APPENDIX

APPENDIX 1 - ABBREVIATIONS AND DEFINITION OF TERMS

CSR – Corporate Social Responsibility
ESP – East Sepik Province
LSO – Lim Shrimp Organisation
MDG – Millennium Development Goals
MNE – Multinational Enterprise
PNG – Papua New Guinea
SIA – Social Impact Assessment
PPP – Public Private Partnership

Scalability: "the ability of a system, network, or process, to handle growing amounts of work in a graceful manner or its ability to be enlarged to accommodate that growth."^{xxx}

Replicate: "To duplicate, copy, reproduce, or repeat."⁴⁸

Human Development Index (HDI): "The Human Development Index (HDI) is a comparative measure of life expectancy, literacy, education and standards of living for countries worldwide. It is a standard means of measuring well-being, especially child welfare. It is used to distinguish whether the country is a developed, a developing or an under-developed country, and also to measure the impact of economic policies on quality of life"⁴⁹

Participatory approach: Marked by, requiring, or involving participation, especially affording the opportunity for individual participation.⁵⁰

Livelihood: In social sciences the concept of livelihood extends to include social and cultural means, i.e. "the command an individual, family, or other social group has over an income and/or bundles of resources that can be used or exchanged to satisfy its needs. This may involve information, cultural knowledge, social networks and legal rights as well as tools, land and other physical resources."^{xxxi}

⁴⁸ <http://www.thefreedictionary.com/replicated>

⁴⁹ http://en.wikipedia.org/wiki/List_of_countries_by_Human_Development_Index

⁵⁰ <http://www.thefreedictionary.com/participatory>

Holistic development project: By this I mean 1) not merely a school or well being built, but a whole community/city, with a long term self-ownership perspective. 2) The inclusion of local decision makers and developers, not merely a finished wrapped package to be handed over.

Holistic, the term in itself, can be defined as “Emphasizing the importance of the whole and the interdependence of its parts.”⁵¹

APPENDIX 2 – PNG DEV. PERFORMANCE 1975 - 2005

Table 1. Papua New Guinea’s development performance from 1975 to 2005.

Indicator	1975	1980	1985	1990	1995	2000	2005
GDP	K1190 m	K1583 m	K2201 m	K3037 m	K4785 m	K8082 m	K12629 m
GDP GR%	+5.10	+2.80	+3.60	+1.53	+6.96	+1.08	+2.20
Popn. GR		+2.3%	+2.3%	+2.3%			
Life Exp.	47 Yrs	53 Yrs			54 Yrs		57 Yrs
Malay GDP							

APPENDIX 3 –INFO. ABOUT EAST SEPIK PROVINCE

2010 STATISTICS FROM NAT. RESEARCH INSTITUTE)⁵²

East Sepik Province

General Information

Administration

Provincial headquarters: Wewak

Number of districts: 6 - Ambunti Dreikikir, Angoram, Maprik, Wewak, Wosera Gaui, Yangoru Saussia

Number of LLGs: 26

Number of wards: 647

Population

		Male (%)	Female (%)
Total	343181	50.1	49.9
< 15 years	149905	51.7	48.3
15-64 years	183776	48.7	51.3
> 65 years	9500	50.1	49.9
Citizen households	65231		

Area and population density

Area (km ²)	43426
Occupied area (km ²)	9662
Population per km ²	7.9
Population per km ² of occupied area	35.5

Average annual population growth rate (1980-2000): 2.2

About East Sepik

East Sepik Province covers the coastal plains, the end of the Torricelli Mountains and the Prince Alexander Mountains in the north. The Sepik River flows east to west through the province, with the Central Range and the border with Enga Province in the south.

The provincial member is the Prime Minister, Grand Chief Sir Michael Thomas Somare, of the National Alliance Party. He was Papua New Guinea's first Prime Minister and has served this electorate since 1968.

Most of the people of East Sepik Province earn relatively low incomes from food, cocoa, fish or betel nut. Some more moderate incomes can be earned around Yangoru and Dreikikir from selling rubber, cocoa and food. However poor roads are a major limitation. There are also no major industries in the province.

The Sepik Highway and other minor roads provide good coverage of the more populated areas in the north of the province. Water transport is most significant along the Sepik and other rivers. People in the south of the province, towards the border with Enga Province are the most remote, requiring more than a day's travel to reach a service centre.

Electoral statistics

Eligible voters (2000 Census)	170623
Number of votes cast (2002)	160733
2002 Electoral Roll	286716
Number of votes cast (2007)	174215
2007 Electoral Roll	240551

⁵¹ <http://www.thefreedictionary.com/holistic>

⁵² www.nri.org.pg/research_divisions/cross_divisional_projects/11%20East%20Sepik%20Province.pdf

APPENDIX 4 – INFORMATION ABOUT WEWAK

Wewak District

General Information

Administration

District headquarters: Wewak
Number of LLGs: 5 – Boikin Dagua Rural, Turubu Rural, Wewak Islands Rural, Wewak Rural, Wewak Urban
Number of wards: 108

Population

		Male (%)	Female (%)
Total	63965	51.5	48.5
< 15 years	26789	52.4	47.6
15-64 years	35733	50.8	49.2
> 65 years	1443	52.7	47.3
Citizen households	11007		

Area and population density

Area (km ²)	2284
Occupied area (km ²)	1775
Population per km ²	28.0
Population per km ² of occupied area	36.0

Electoral statistics

Eligible voters (2000 Census)	32556
Number of votes cast (2002)	24864
Number of votes cast (2007)	29600



About Wewak

Wewak District runs along the strip of land on the northern coast of East Sepik Province, on the north side of the Alexander Range. It also includes the islands close to the coast of which Mushu and Kairiru are the largest, as well as the Shouten Islands further offshore.

The district member is Mr. Jim Simatab who ran for election as an independent. However, then joined the National Alliance Party. The member between 2002 and 2007 was Mr. Kimson Marcus Kare.

Wage employment and a large market are available in the Wewak town centre. Moderate incomes are available from the sale of copra, fish and fresh food on Shouten Islands but much of the rest of the district has low incomes.

Education

Type and number of schools

Elementary	43
Community	6
Primary	39
Provincial high school	3
Vocational	4

Universal basic education indicators

Net admission rate	0.5%
Gross enrolment rate	76.0%
Net enrolment rate	48.2%

Literacy rate

Total	Male (%)	Female (%)
78.7	82.7	74.6

Health

Number and population per officer

Medical officers	14	4569
Nursing officers	96	666

Number and population per facility

Health centres	7	9138
Aid posts	19	3367

Infrastructure

Road access

A road runs through Wewak from Angoram to Aitape. However, it is often subject to flooding. The coastal plains and the Shouten Islands require up to eight hours travel to get to Wewak. Water transport is important for all coastal areas.

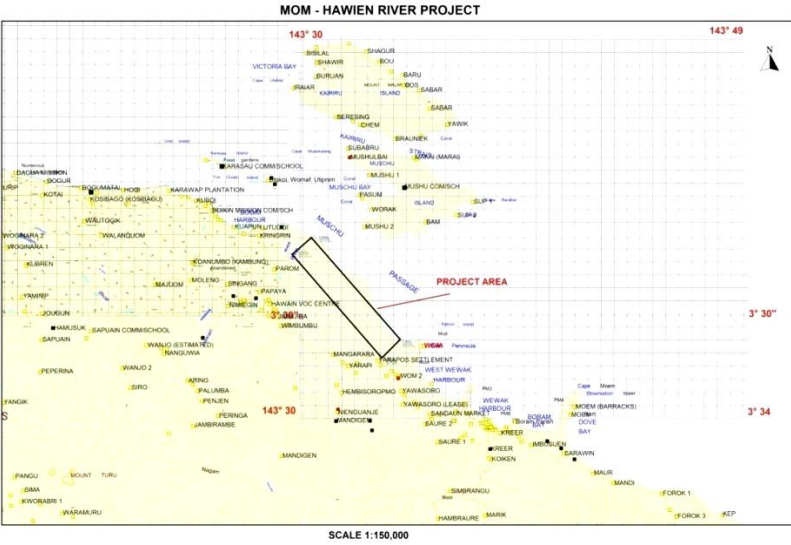
Economic Activity

Top agricultural activities of citizen households

	% engaged	%* engaged for cash
Betel nut	69.1	29.3
Coconut	66.8	36.3
Food crops	62.5	11.4
Cocoa	50.4	49.5
Fishing	29.6	4.0

*of total citizen households

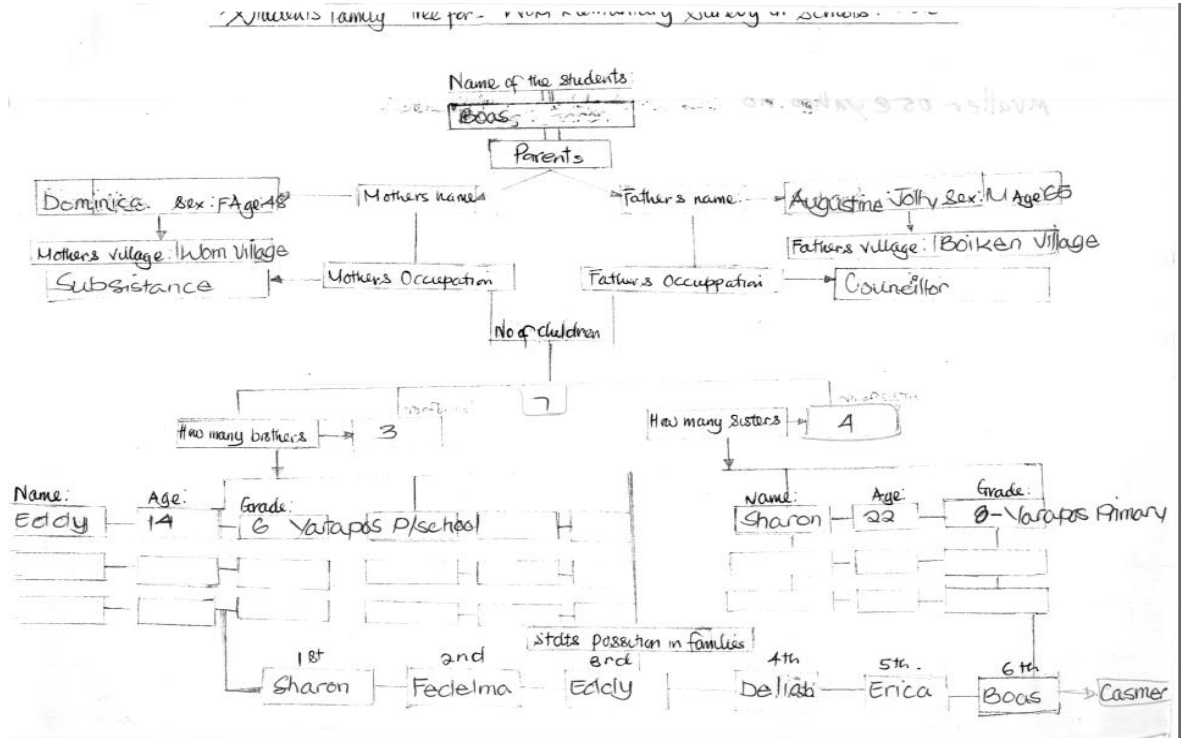
APPENDIX 5 – MORE INFORMATION ABOUT AQUAPOLIS



THE WOM PROJECT SITE

APPENDIX 6 – WOM ELEMENTARY SCHOOL PROJECT- FAMILY TREE

Sample:



Mother Father

PLACE OF BIRTH:

From Wom	11	9
From other places	8	10

OCCUPATION:

Kina shell collector

/Subsistence

farmer/gardener	11	2
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House wife	5	
------------	---	--

Tuna factory	1	
--------------	---	--

Fishermen		6
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Teacher		2
Guard Dog security		2
Councillor (Augustin)		1
Announcer		1
Carpenter		1
Guest house		1
No answer	2	3

Appendix 7- INTERVIEWS OF LIM, BYGDÅS AND NØRBECH

Skype-interview with DJames Lim, CEO of LSO, January 10th, 2011:

Lim's explains his understanding of a social entrepreneur and a social enterprise; "Trying to give poor people a chance of a livelihood, which is sustainable. And to achieve a domino effect. I see myself as a social developer. I don't look at this as an aquaculture business. I look at this as a concept that can be multiplied and duplicated. It is a good model, anywhere in need to eradicate poverty and create jobs. We are setting up companies in different countries, and are helping Governments. Different countries and their leaders wants us to share with them.

TRANSFERRING THE CONCEPT TO SEVERAL COUNTRIES

When transferring the concept to other countries, like Sri Lanka, Uganda and Timor Leste, there are different conditions; like culture, climate, tides, species. Not restricted to that, but basic model, purpose and standard process are the same: Eradicating poverty, providing a livelihood, micro financing for units, teach them how to grow, help with technology, reach the market etc. Lim continues; "In Africa there are different needs and challenges, and it is politically different. Here we are dealing with different nationalities and tribes. We need to address each country and case differently, tailor make it to their conditions." He provides an example; "PNG is different as most of it is tribal land. The land issue is the biggest challenge."

APPROACH WHEN DEALING WITH DIFFERENT COUNTRIES

Lim says that they are all are considered as clients. He explains "We map and interview them in depth and talk to the prime minister. We ask about their goal and expectations, their desired annual income for the people, the social welfare system and needs. We ask for their development plans for the next 5 yrs and 10 yrs, both politically, economically and environmentally. When we

have the whole picture we see how to develop this. Once we identify where the land is going to be we send the technical team.

METHOD TO ENSURE LOCAL OWNERSHIP AND INVOLVEMENT

Our method to ensure that locals can run and own this project is to educate and train them well. They think differently. By studying what and how they think, we should blend in instead of changing them 100 %. I think it is the wrong way to just *tell* them how to live life, (laughter). Then I think they will reject us.

Lim refers to their experience of the aqua city in Indonesia. He continues; “In Indonesia we really need their dialogue and involvement with us, as it is a city/township. Social needs and maintaining an equal balance are important. We are not the government; they have their own Town council and elections. They take care of most things themselves. They have political parties, activities and so on. They are migrants from Java, but have integrated themselves into Sumarta.

When asked to describe the reference aqua city in numbers, he adds; “It is 2 times the size of Singapore with approx. 100 000 hectar. More than 300 000 live there, and 1 million ppl are benefitted, including those indirectly involved, like suppliers and other people setting up business in the city. During mid 80ies and early 90ies they were the largest exporter in terms of money, outside oil and gas. Their annual GDP turnover was 7-800 mill US doll annual in export. In total including the spin-off; there was more than a billion.”

He concludes the transfer point with the following comment; “When we started in the late 80ies, 100 % of our top management were from overseas, like England, The Philippines, Malaysia, Singapore. Today not many foreigners are left. Perhaps max ten. Now there are 300 000 Indonesian, a lot in top level. So you can see the drastic change when it comes to technology and management right transfer.”

COASTAL, HIGHLAND AND SETTLERS – DIFFERENT MOTIVATIONS

In PNG; the Highland and coastal people are very different. We cannot say PNG people are all the same. The Chinese and westerners in Wewak tell me the coastal people perceive to have better lives than in the Highland. They have everything; the fish, the sea etc. Many don't really see livelihood as a problem. But the migrants/settlements do, they don't have land, etc. So the local tribes don't like the settlements, they think they are there to steal etc. And I guess it is true in some way. But we will try to let them blend in with the locals. The settlements are the people willing to work. If they don't they won't survive. But the locals are a more easy going type; “we can fish, no need to work”. We have a problem if there is too much of this attitude. We will offer the local tribes units first. But tell them; “if you rather fish in the sea, you can. If you don't want to join the Aquapolis project, then we will give it to the settlements. Because we don't want to offend the locals.

Interview of Arne L. Bygdås, via Skype, January 18th. 2011.

Arne L. Bygdås is research manager for the department Kunnskaping (=”knowledging”), at SINTEF in Oslo.⁵³ Arne shares his experience from field work on knowledge transfer for Hydro, a Norwegian MNE (multinational enterprise), from Norway to China and Spain.

KNOWLEDGE TRANSFER AND DIFFUSION

Bygdås starts like this; “you have knowledge between individuals, or between groups. Moving individuals is easy, but moving groups is not. You have knowledge or technology that can easily be transferred. Some is documented and codified, like routine descriptions.” He continues that “involvement and information are very important when doing deals with partners. Responsibility etc. need to be clear and concretely defined. It doesn’t help having a two-way dialogue without ensuring ownership of the project. With knowledge diffusion you try to recreate actively something that exists; the learning of something which originated in a different place.

You also have the quite standardised model, sometimes used by companies from USA. They call it a “roll out” strategy, a copy-paste model; used the exact same way regardless of where it is rolled out. It is dependent on rigid discipline and quality assurance.

GENDER

He says he has observed women networks which have been quite effective and constructive, but that they get a bit invisible outside the more formal positions. So he recommends the inclusion and encouragement of women groups, preferably allow them to get formal positions.

WORK CULTURE

Some of the foreign employer informants in PNG complained about the challenges of training, knowledge adoption and establishing motivation with many local employees. Bygdås comments on this issue the following way; “Hydro in China learnt that using a “culture and local knowledge interpreter”, a bridge builder, was their success factor. They invited a Chinese with experience from Norway, but he was originally from the same area as the local employees, and thus had their respect and could easier achieve understanding. He shared language and culture with them and thus functioned as a mediator.

The hypothesis ”a translator of culture with a foothold in both worlds is a key to success in transferring knowledge from one place to a culturally different” was confirmed by one of our expat informants.

A piece of warning that Bygdås provided was that it is easy to think that everything should be tailor-made and adapted to the local settings and preferences. The local might, however, expect something grander and different when an international party is the initiator and developer. They

⁵³ <http://www.sintef.no/Home/About-us/>

might expect foreign leaders and want a different management style. This was his finding when doing research in China. The employees wanted a softer Scandinavian management style than what they were used to.

Bygdås concludes that is important to get into dialogue with the target groups, especially map their expectations.

**Interview of Bjørn Christian Nørbech -
an expert on “culture translation/interpretation”, 22nd of March 2011.**

THE NEED OF CULTURE KNOWLEDGE

INTRODUCING BJØRN CHRISTIAN

“Bjørn Christian Nørbech is a so-called interculturalist, and the founder of Kulturfolk (= Culture Interpreter). Nørbech is a native Norwegian, but has 14 years outside Norway, and grew up in an “expatriate family.”⁵⁴ BCN has worked with the culture researcher Geert Hofstede (referred to in the Knowledge section) and one of Kulturfolk’s clients is the International Olympic Committee.” Nørbech claims; “human beings don’t make decisions based purely on rationality, but also based on experience, emotions and their cultural background.”

CULTURAL IDENTITY

Nørbech argues that even though we are a “flatter world” (a term from Thomas Friedman), we are now more conscious of our national cultural identity than ever before, as we have the chance to travel and be exposed to other cultures through the internet and media, and thereby compare those cultures with our own. As an example, there is a study which confirms that French businessmen become more “French” when working in an international environment than when working domestically. Nørbech adds that the main reason is a need for safety and belonging. On the other hand, like for most PNG’ians, the percentage of us being able to travel abroad and get to this stage is very small. I reflect on this point and come to the hypothesis (not testable in this study) that since PNG consists of 800 languages/cultures, they must be quite used to this consciousness around their cultural identity - for better and worse. Nørbech adds that cultural competency should be developed and built in both sides if knowledge transfer is to be successful. There should be a mutual culture exchange.

ACHIEVING LOCAL OWNERSHIP AND MUTUAL MOTIVATION

Nørbech further stresses that “If the purpose of the project is to achieve local ownership, it should be on the local people’s premises. It is imperative for the motivation of the local people running the project. If there is no shared motivation and goal, and no local understanding of how it all is connected, it will not succeed. Achieving trust, ongoing dialogue and patience are other success factors.

⁵⁴ <http://www.kulturfolk.no/en/who>

SUCCESS WILL BE CONTAGIOUS WHEN REPLICATING TO MORE COUNTRIES

Djames Lim and the social enterprise has a dream, and there are many obstacles to overcome. But if the project succeeds, it will become a leading star for subsequent similar projects, also when LSO continue replicating the concept to others countries. Nevertheless, the starting point should be the local people's dreams. And mapping the most concrete challenges and overcoming them. Bjørn Christian Nørbech concludes; **If the will, persistence, and courage are present and adequate in *all parties*, you will win in the end.**

APPENDIX 8 - NEW METHOD DEVELOPED

The HOW

The “skeleton of the SIA”, the methodology and *how's*, will be presented here.

Study of the country/area you will venture into, *before* field work;

- Desk top studies; demographic and development statistics, both national and international (to compare), articles referring to other similar development projects, learning from them etc.
- Interview of people who has knowledge of the country or area in question, preferably relevant to your field and topics in need of being mapped

During field study:

- Partner up with local expertise, stake holders and bridge builders relevant to your area
- Establish a youth panel, representative of beneficiaries and potential stakeholders
- Do a survey of local school class(es), representing the future work force and opinion holders/shapers. They can also provide a snap shot of social structures and mindsets.
- Foresight workshop of active stakeholders to map future SWOT and methods. This also encourages ownership and allows a sense of being respected for their opinions.
- Observe and interact with key openers and beneficiaries
- Ensure the presence of a proactive local dialogue enabler and bridge builder / cultural translator, who both understands you and the locals
- Keep an open informative inclusive style when detecting potential challenges, developing constructive methods of overcoming them, also to unleash potential
- Have a plan and strategy of local ownership feeling and take-over
- Document well with pictures, videos, interviews, surveys, media clips etc.

After field study:

- Assemble your findings, recommendations and analysis into a report and highlight further studies and active steps.
- Map and overcome bottlenecks for the implementation of next steps of the development project
- Keep a regular dialogue with the local bridge builder and key stakeholders

The WHAT (to map)

EDUCATION, UNIONS AND POLITICS

- Statistics on education level and attendance, according to age and gender
- Attitudes towards and perceived relevance of education
- Education system, future plans and reforms
- Access to education. How much capacity in terms of eg. space, finance and teachers
- Are there active and functioning teacher and student unions?
What are they concerned about?
- How is the political system in a national and local context?
- How is the general population's view on corruption and politicians' promises?
(Especially important if a PPP is part of the strategy)

LAND

- If the social enterprise requires land, the land laws and regulations should be mapped.
- Check if the land in question is customary land, if it is registered and get in dialogue with the owners and neighbouring land owners.
- Are there other traditional customs related to land?
- How is the awareness of climate change and other relevant natural science knowledge

SOCIAL STRUCTURE

- Map whether there is a patrilineal or matrilineal society.
How does it influence the social structure -and potentially the development project?
- Gender issues
- Family structure, size, interdependence, planning, hopes and fears
- Collectivistic or individualistic society
- Short/long term thinking and life skills knowledge
- Social challenges
- Social activities, views on politics and usage of media

- Smoking and drinking pattern
- Attitudes and knowledge of acclaimed target group of social challenges
- Knowledge transfer between generations
- View, expectations and usage of money/income

JOB STRUCTURE AND WORK MOTIVATION

- Workers' rights, like wages and holiday
- Income generating opportunities
- Map what happens to the educated. Is there brain drain / unemployment issues?
- Work preferences, dream jobs, work motivation and productivity
- Entrepreneurial spirit and potential obstacles to start-ups

CHANGE AND CULTURAL DIVERSITY

- Monetary system and tradition
- Fears and hopes related to changing times
- Potential traditional culture loss and their perceived reasons behind it
- Cultural diversity experience and tolerance
- Relocation/moving experience

FUTURE SCENARIOS INDICATING CHALLENGES AND OPPORTUNITIES

- Future hopes/dreams and fears, especially of the youth/students
- Future shaping factors
- Do a foresight workshop to map expert panel/stakeholder representatives' scenarios and driving forces
- Perceived negative and positive impact of the development project

I hope that pointing out these topics in need of being mapped, and the model of methodology when learning to know the place and its people are useful to your enterprise, agency, institute, NGO in the process of upscaling and venturing a developing concept into a new culture.

LITTERTURE LIST

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