

Business at the Base of the Pyramid - Sustainable Business Approaches to Combat Malnutrition.



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Abstract

Malnutrition is one of the most severe problems in developing countries. Based on this background, this paper tries to give an overview of the newest developments in theory and the practice of the business at the Base of Pyramid (BOP) approaches. The practical part deals with two case studies that aim to combat malnutrition with BOP approaches and shows their strengths and weaknesses. The paper concludes that there is not yet a clear answer to the question if there are sustainable business approaches to combat malnutrition among people at the BOP. Nevertheless, valuable insights are obtained from the two cases, which are at the forefront of the combat against malnutrition.

Keywords: Business at the Base of the Pyramid (BOP); Malnutrition; Development; Business Strategy; Prahalad

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Glossary

AGT	Antenna Green Trust
AMCSS	Antenna Micro Credit Support System
ANT	Antenna Nutritech
AT	Antenna Technologies
ATI	Antenna Trust India
BDT	Bangladeshi Taka
BOP	Base/Bottom of the Pyramid
BWI	Bretton Woods Institution
CCC	Copenhagen Consensus Center
CCF	Christian Child Fund, India
CSR	Cooperate Social Responsibility
FAO	Food and Agriculture Organisation
FDI	Foreign Direct Investment
GAIN	Global Alliance for Improved Nutrition
GDFL	Grameen Danone Food Ltd.
IFC	International Finance Corporation
IIMSAM	Intergovernmental Institution for the use of Micro-Algae Spirulina against Malnutrition
ILSI	International Life Science Institute
INR	Indian Rupee
JV	Joint Venture
MNC	Multi National Corporation
MSF	Médecines Sans Frontières
NGO	Non Governmental Organisation
ODA	Official Development Assistance
PPP	Purchasing Power Parity
PRSP	Poverty Reduction Strategy Paper
ROI	Return on Investment
SAM	Sever Acute Malnutrition
SHG	Self Help Groups
RUTF	Ready-to-Use Therapeutic Food
WB	World Bank
WFP	World Food Program

WHO

World Health Organisation

WRI

World Resource Institute

UN

United Nations

USD

US Dollar

1. Executive Summary

The 192 member of the United Nations used the symbolic occasion on the turn of the millennium to formulate the 8 Millennium Development Goals [MDG]. Among others, the governments of the nations aimed to eradicate extreme poverty and hunger by the end of 2015. Malnutrition is one of the most severe problems in the developing world and is closely interlinked with poverty. It is especially disastrous among infants because it can lead to irreparable damages on health and cognitive damages. This affects the income potential and poverty negatively and leads to a vicious cycle of malnutrition and poverty. Nine years after the summit the achievements are ambiguous and most of the development countries will certainly fail to meet the MDGs. On the one hand, the recent crises, such as the food, the financial and real economy crises add their share to such future failures. On the other hand, the classical top down development aid regime is under pressure. First, the official development assistance is decreasing. Second, critiques challenge the Top Down concept and the effectiveness of official development assistance in its fundamentals. There is a growing belief that private imitative and business can do more by making development from the bottom up. In this context emerged the “the Bottom of the Pyramid” [BOP] approach. Prahalad’s proposition estimates that there is a great potential at the BOP, which can successfully worked by Multinational Corporations [MNC]. In order to do so, MNCs should alter their assumptions of the BOP and perceive people at the BOP as consumers. Furthermore, MNCs have to reformulate their business models radically to be capable of working these markets successfully because the challenges at the BOP are enormous. These markets usually lack basic infrastructure, such as transport system, media coverage, legal frameworks and so forth. By working BOP markets MNCs are not only supposed to make profit through high volume businesses, they are also supposed help to improve the situation of the poor at the BOP. By bringing them more and higher quality products, integrating them in supply chains and making products more affordable, MNCs help to alleviate poverty. Prhalad’s proposition received an enormous feedback. Critiques pointed at flaws in calculations of market sizes at BOP and therefore questioned attractiveness of such markets per se. Serious doubts have been raised about the evidence, which Prahalad uses to back up his proposition. There are hardly any cases, which bear up under close scrutiny. However, such debates and critiques haven not resulted in a cul-de-sac, but lead to broad activism in research and theory, as well as in practice. In consequence, the BOP concept evolved to a second generation. It changed from a top down sales-focused concept to a system of “co-creating” and “co-venturing” embedded in local circumstances, which focus on the people at

the BOP more as productive business partners than as consumers. This new focus on partnership and conceptual equalisation found expression in the reformulation to base of the pyramid because of the negative connotation of bottom. The altered concept is also called BOP version 2.

The paper features two case studies of BOP business that aim to combat malnutrition. The joint venture between the Bangladeshi Grameen and the French Danone has been one of the most celebrated examples of two MNCs marrying their capabilities to work the BOP market. Danone brought in its expertise as one of the world leaders in fresh dairy products. Grameen had already the knowledge how to reach the Bangladeshi BOP market and an established network of sales women to rely on. The resulting Grameen Danone Food Ltd [GDFL] was established in 2006 in Bangladesh in a 50:50 partnership.

The business model is based on proximity. The core idea is to have various small factories, which rely on a deskilled production technology. On the one hand, this should create local labour. On the other hand, the production tries to rely on local resources, such as locally produced milk or molasses. The proximity is supposed to overcome the challenge of a missing cooling system and deliver the product, a micronutrient enriched yoghurt, without any spoiling through its net of sales ladies. Hence, GDFL created a holistic value chain. Although GDFL looks very promising, it has still to prove that it is able to combat malnutrition on sustainable grounds. The venture has not yet been financially successful. The Bangladeshi food crisis raised input costs significantly and led GDFL to increase its consumer prices. This in turn led to a break down in the, by then growing, consumer demand. GDFL had to redesign its product and price policy. It also changed its strategy to more expansion in order to reach other markets and use its overcapacity. This expansion targets, in consequent, also more urban markets. The GDFL management aims to be profitable by 2010. Hence, although very promising, GDFL has still to proof its financial stability and impact on malnutrition.

The second case study is on Antenna Nutritec [ANT]. It is an Indian branch of the Swiss based NGO Antenna Technologies that aim to bring technologies to the developing world in a form that is tailored to local needs and circumstances. In order to combat malnutrition it advocates Spirulina, an algae that is very rich in the most needed micronutrients.

The business model foresees that ANT acts as a marketing company for Spirulina producers to ensure their production. It also adds value to the Spirulina by processing the raw material to products such as tablets, capsules and candies and more. It sells to three different markets

including the BOP market of rural poor with focus on children and women. The other two markets are supposed to create a more sustainable demand and be so profitable to cross subsidy the activities at the BOP.

ANT aims to reach the BOP by the already established network of NGOs and SHGs of an Antenna sister organisation that work with micro credits. The SHGs ladies are not only a means to sell Spirulina; they also represent a primary target group. The idea is that sales ladies can promote Spirulina from peer to peer and generate inter and intra group sales. ANT recently developed a nutritious candy, which can be the missing link to successfully reach the poor. It has a predetermined price, which is limited by its symbolic of 1 INR for a sweet. It is therefore competitive and very affordable and therefore might represent a business opportunity for the SHG sales ladies. However, although the candy is very promising, ANT has not yet achieved to design production processes that are profitable. The ANT management believes to be capable of making the candy profitable by increasing the sales volumes due to effects of economy of scale. Furthermore, ANT faces the challenge to create markets for its Spirulina candy. Therefore it has to educate potential consumers in the first place. In the face of poor media coverage and very poor literacy rates, ANT cannot rely on traditional media. It conducts awareness programs and cultural campaigns. First trials show that it is promising to reach rural poor through such means, which aim to spread their messages emotionally.

ANT recently partnered with a local NGO and established a framework that aims to create a market and set up trained SHGs to take up the Spirulina business. Past sales figures on BOP products do not draw a clear picture yet if sales efforts are fruitful. Furthermore, it is too early to assess if the candies or the more structural partnership can reach the BOP segment on a financially sustainable base.

Therefore the paper concludes that there is not yet a clear picture to draw if there are sustainable business approaches to combat malnutrition among BOP consumers. However, it shows the unique challenges. It does so on theoretical base, but also gives insights on two cases, which are at the forefront in the combat against malnutrition

2. Introduction

The turn of the century and the beginning of a new millennium marked a new chapter in the history of humankind. Although more symbolical than evolutionary, it was an opportunity to reflect about the recent developments of and challenges on the course of mankind.

The 192 member of the United Nations [UN] used the symbolic occasion to formulate the 8 Millennium Development Goals [MDG], which include to eradicate extreme poverty and hunger, to achieve universal primary education, to promote gender equality and empower women, reduce child mortality, improve maternal health, combat HIV/AIDS, malaria and other diseases, ensure environmental sustainability and to develop a global partnership for development by 2015. The UN Millennium Development Goals Progress Report 2009 (UN, 2009) draws a mixed picture on the progress made so far. Although there have been remarkable achievements in some regions and on some goals – e.g. the impressive reduction on poverty and hunger in China -, other countries lack behind benchmarks and will almost certainly fail to achieve the MDGs. In general, the progress in Sub-Saharan African countries especially with regard to the reduction of poverty levels and to the combat against hunger is rather poor and in some countries even negative. Moreover, the recent world food crisis, the financial crisis and the economic recession, will affect MDGs negatively and stall overall progress.

Beside the struggles to achieve the MDGs, there is also a discussion about the contribution of developed countries to development assistance. Although they agreed in 1970 to contribute 0.7% of the GNP to development assistance, no country achieves this target except for Sweden, Denmark, Norway, Luxembourg and the Netherlands. Whereas Jeffrey Sachs and the UN development agencies call for more aid, other people, such as William Easterly, challenges the effectiveness of official development assistance in its fundamentals. To the extreme, some of the critiques of development assistance call for a fade out. Besides, there is a growing belief that private persons and businesses can contribute effectively to development. In this context, there emerged the “Base” or “Bottom of the Pyramid” approach, most prominently pioneered by Harvard scholar C.K. Prahalad, which aims to do business with the poorest and thereby helping them to reduce poverty.

Another side effect of the global financial and economical crises is that a lot of Non Governmental Organisation [NGO] projects will get fewer funds. This will force the majority of such projects to reduce their activities or even to stop them. Consequently, this might undermine or even reverse past achievements. Such existential financial dependency opposes

the idea of sustainability. Therefore, the idea of business ventures in the context of development is worth exploring for NGOs, which aim for financial independency in their efforts to accomplish their philanthropic missions.

This paper aims to bring light in the role of business approaches in development and what it can contribute to combat malnutrition or hunger. Therefore it examines in a first chapter the phenomenon of malnutrition and its impact on poverty. It then turns to development strategies and covers the debate on Top Down and Bottom Up approaches. In the next chapter, the paper assesses the Bottom of the Pyramid approach of C.K. Prahalad, gives a critical account and shows the recent evolution in this field. The paper then turns to two case studies, which are analysed by the marketing framework of the 4 Ps. The first investigates Grameen and Danone, two Multinational Cooperations [MNC], which form Grameen Danone. This venture aims to combat malnutrition in Bangladesh. The second case study features Antenna Nutritech, a branch of the Swiss based NGO Antenna Technologies, which intends to fight malnutrition in South India. The focus lies on this last case study because the author of this paper worked for this project for 6 months. The paper will draw a conclusion in the last chapter.

3. Malnutrition and Development

3.1 Malnutrition

3.1.1 Definition and facts

„Hunger and malnutrition are the number one risk to the health worldwide“. This statement of the World Food Program [WFP] (2009) illustrates the severity of malnutrition. Malnutrition can be described as “various forms of poor nutrition caused by a complex array of factors including dietary inadequacy, infections, and sociocultural factors” (Baudouy & Sarbib, 2006, p. xvii). Malnutrition consists more precisely of three different phenomena¹. First, the deficiency of calories and protein intake, which is called undernutrition or hunger. Second, the deficiency of vitamins and minerals, which is called micronutrient deficiency². Third, an excess of calories often accompanied by deficiency of vitamins and minerals. Illustration 1 gives an overview on the different types of malnutrition and the number of affected people on a global level.

Type of malnutrition	Nutritional effect	Number affected globally (billions)
Hunger	Deficiency of calories and protein	At least 1.1
Micronutrient deficiency	Deficiency of vitamins and minerals	2.0-3.5
Overconsumption	Excess of calories often accompanied by deficiency of vitamins and minerals	At least 1.1

Illustration 1 (Heierli, 2006, p.8). *Types and effects of malnutrition and their global prevalence.*

In accordance with the topic of this treatise, the paper focuses on the phenomena of undernutrition or hunger and micronutrient deficiency in developing countries. Worldwide, there are one billion people who face hunger and there are at least two billion people that face micronutrient deficiencies. There has been good progress reducing hunger in the 1980s and the first half of the 1990s, but, with the exception of Latin America and the Caribbean, the number of hungry people increased in all regions in 1995-97 and 2004-06 (WFP, 2009). Furthermore, the current food crisis, which resulted in a sharp increase in food prices, coupled with the economic downturn, reversed the positive, over all trend in reducing hunger and

¹ Definitions on the phenomenon of malnutrition vary. Whereas Baudouy and Sarbib (2006, p. xvii), as well as Heierli (2006, p.8), use malnutrition as an umbrella term for hunger/undernutrition, micronutrient deficiency and overconsumption, the WFP (2009) takes malnutrition and undernutrition as synonyms. This paper uses the definitions, which are featured in Illustration 1.

² The body needs essential vitamins and minerals, such as vitamin A, iodine and iron, in minute quantities. These so-called micronutrient is essential for growth, development and maintenance (FAO & LSI, 1997, p. 1).

added millions to the number of undernourished in all developing regions in the world (FAO, 2008, p.1).

The Map of Hunger (illustration 2), or undernutrition, gives an overview of the severity of malnutrition and shows that the severest cases of malnutrition appear in developing countries. Sub-Saharan Africa is especially affected. The map of micronutrient deficiencies is almost identical, although South East Asian countries are relatively more affected by micronutrient deficiencies than one would expect given the availability of food (in terms of calories and proteins) and economic development (Heierli, 2006, p.8)³.

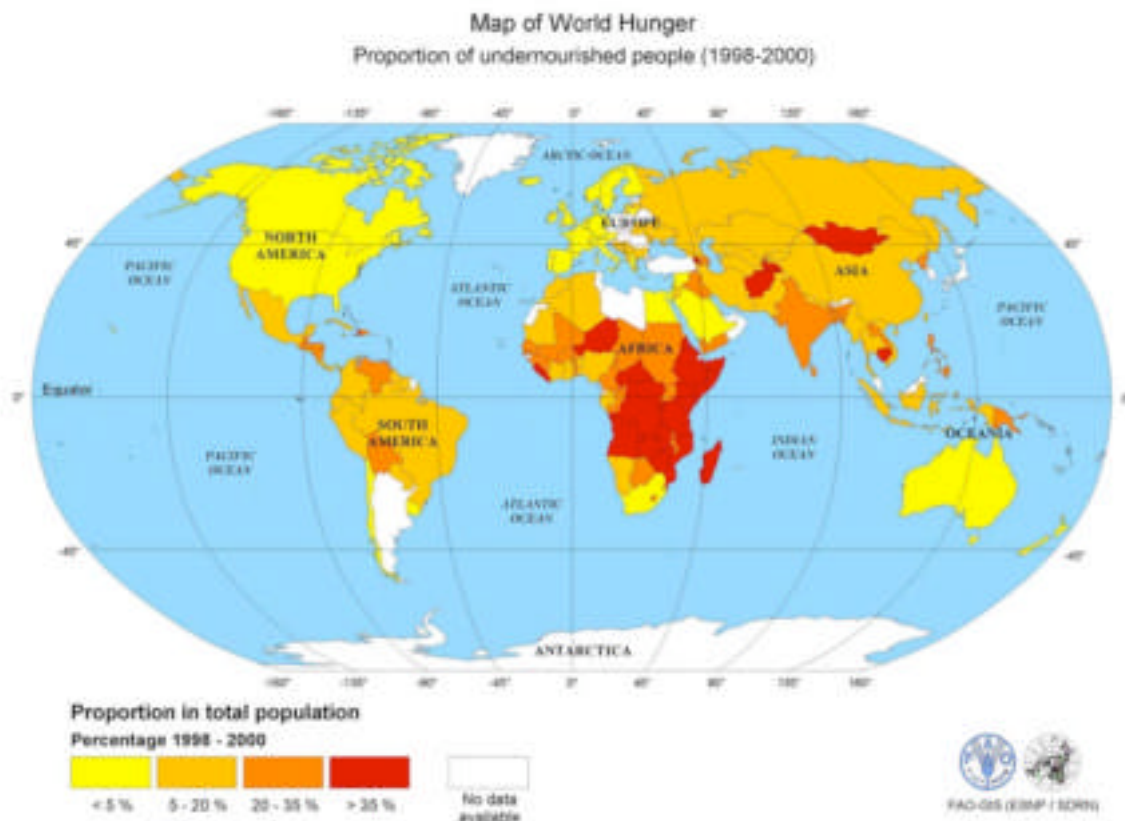


Illustration 2 (FAO and FMFH Partners, 2006). *The Map of World Hunger. Portion of undernourished people (1998-2000).*

Typically, the most vulnerable groups are women and children. E.g. more than 60% of the chronically hungry are women (WFP, 2009). There are about 200 million children under five years that suffer from acute or chronic malnutrition (FAO & FMFH Partners, 2006).

Malnutrition and related diseases cause about a quarter of the 12 million child deaths per year (FAO, 2002).

³ Whereas poverty rates decline as twice as fast as income growth, malnutrition declines only half rate of the per capita GNP growth. Hence, although the trickle-down effect of increasing income is positive, it is slow, long and indirect (Shekar & Lee, 2006, p.3).

Page (2007) points out, that malnutrition in India is similar or worse to some African countries, such as Ethiopia or Burkina Faso. However, Page misses to distinguish between undernutrition and micronutrient deficiencies.

There is a wide spectrum of different forms and severity of malnutrition. However, basically there are two forms: the severe acute, and the chronic malnutrition. Whereas the first is an acute life threatening condition, which requires therapeutic treatment, the latter leads to anaemia, inappropriate development and to fragile immune systems, which affect people in the long run. Besides of protein and calorie deficiencies, the FAO identifies three major micronutrient deficiencies, which are of greatest public health significance: those of vitamin A, iron and iodine⁴. “Vitamin A deficiency is most common in young children. Untreated, it can lead to blindness and death. Iron deficiency is the most common dietary deficiency globally, affecting mostly children and women of childbearing age. It leads to anaemia, which contributes significantly to maternal and neonatal deaths. ...[Iodine deficiency disorder] is the most common cause of preventable mental retardation, including low IQ (intelligence quotient). Severe iodine deficiency can lead to cretinism, stillbirth and birth defects” (FAO & LSE, 1997, p.1-2). Such harm is worst when it occurs in the womb and during the first two years of life because the damages are irreversible and lead to impaired physical and psycho-intellectual development. Moreover, people who suffer from vitamin and mineral deficiencies are more susceptible to infection. That in turn reduces productivity, slows down economic growth and preserves poverty. That may result in a vicious cycle that passes malnutrition from generation to generation because malnourished mothers are more likely to give birth to underweight and raise malnourished children (Baudouy & Sarbib, 2006, p.x). Micronutrient deficiencies result in poor resistance and predisposition to infections. This is especially severe in the case of HIV where it results in a faster course of the disease. This is especially tragic in Sub-Saharan Africa, where the HIV epidemic has spread enormously.

3.1.2 Strategies to combat malnutrition

It is almost impossible to give a clear structured and conclusive overview on the existing strategies to combat malnutrition, given the different definitions and assessment of the matter, the different scope and scale of programs at operation and the wide range of different organisations and institutions conducting such programs. However, following the distinction between severe acute and chronic malnutrition, the papers distinguish between short-term strategies to fight acute threats of malnutrition, and long-term approaches aiming to reduce chronic malnutrition. Short-term approaches tackle threats to the nutrition levels on an emergency basis. They include general food distribution and selective food programs. The

⁴ There is a growing interest in the role of zinc deficiency and its impact on health and development (Harton et al., 2008, p.2).

latter consists of supplementary or therapeutic feeding programs (Heierli, 2006, p.8). The worst case of acute malnutrition is severe acute malnutrition [SAM], which is a life threatening condition. In this case, patients need medical treatment to be cured. Traditionally, such cases were treated as in-patients in hospitals under medical care with therapeutic milk, such as F75 and F100⁵. Capacity for such treatment is limited by the infrastructure, such as available beds and staff. There has been a development to community-based approaches, where children are identified and treated before the onset of SAM. Additionally, the development of ready-to-use therapeutic food [RUTF], such as Nutriset's Plumpy'Nut or Plumpy'Doz⁶, allow for home treatment. Although the most severe cases have still to be treated in hospitals because these patients are not able to eat or they have other medical complications, 80% of SAM cases can be cared for at home (WHO et al., 2007, p. 2-3). RUTF is used by a broad spectrum of international organisations – the UN organisations WFP and UNICEF, or other international actors such as Médecines Sans Frontières [MSF] - and has gained wide acceptance.

MSF, e.g., has started to use RUTF on a broader scale including moderate cases of malnutrition. However, the cost of RUTF, at least of the popular Plumpy'Nut, is a matter of concern⁷. Therefore other NGOs, such as Save the Children and Action Against Hunger, are reluctant to use RUTF on a larger scale. The cost is about three times as high as in traditional therapeutic feeding (Haoussa, 2006).

Short-term strategies are very important because in most of the cases it is a life or death matter. However, long-term solutions and prevention approaches are essential to tackle the problem on a sustainable basis. One of the most fundamental challenges is to increase income of malnourished people. Other challenges are the reforms in the agricultural sector, as well as in the food processing industry in order to ensure the quality and the availability of nutrition

⁵ F75 and F100 are therapeutic milk products, which are very rich in energy and proteins. They are designed to help patients to regain appetite and the ability to eat. The products come in form of powder and have to be mixed with water. This is a major downside regarding the water conditions in developing countries and humanitarian emergencies.

⁶ The Plumpy'Nut and Plumpy'Doz consist of peanut butter paste, sugar, vegetable oils, minerals and vitamins. They are therefore very rich in nutrients, especially in proteins and energy, but also essential vitamins and minerals. The fact that these products don't need water for preparation and have a shelf life of about two years make them very useful on an operational level.

⁷ Michele Falavigna, head of the United Nations Development Programme (UNDP) in Niger, also raised concern about a possible new dependency of developing countries from such RUTF products. However, Nutriset, the French based producer of the Plumpy'Nut and Plumpy'Doz, aims to target such concerns of new dependencies and costs by a franchise system, which enables local producers or NGOs in developing countries to produce such products (Lescanne, 2005).

rich food (Baudouy & Sarbib, 2006, p. 10). Additionally, an improvement in education and status of women should also contribute to reduction in malnutrition given their role in families and the linkage between the health status of children and mothers. However, these are long-term approaches and need time and political will to implement. The experiences of the last decades show that progress in such areas is very hard to achieve. Furthermore, the Copenhagen Consensus Center [CCC] (Harton et al., 2006, p.28) distinguishes between supplementation and food-based approaches. The latter can be divided into food fortification and behavioural changes⁸. Changes in behaviour can be addressed through educational approaches to nutrition and health knowledge and practices, such as breast-feeding, complementary feeding practices, birth spacing and so forth. Social marketing plays an important role in this context. Another popular approach is food fortification. The Copenhagen Consensus Center and other studies (FAO & ILSI, 1997) have shown that food fortification strategies have very effective cost-benefit relations on the reduction of micronutrient deficiencies. However, such approaches need careful planning in order to ensure that selected food vehicles for fortification effectively reach the targeted population. It may also be difficult to ensure that people facing issues of malnutrition consume adequate quantity of fortified food. Because fortified food tends to increase costs and therefore consumer prices, planners and regulators have to think about subsidizing inputs or such fortification ventures. Although fortified foods do not necessarily need consumer education, social marketing efforts to promote such food might also be considered (FAO, 1997).

As pointed out above, there are clear advantages of food fortification⁹. The downside of the story is that, the fortification of food usually leads to centralization of production and therefore to centralized distribution systems. However, developing countries usually lack infrastructural facilities, which is needed for centralized production and marketing¹⁰. This hinders reaching consumers on a cost-effective base and therefore impedes private business initiatives to step in. Furthermore, the big majority of people facing malnutrition are self-

⁸ The FAO and ILSI (1997) use a similar categorisation. They also point out the essential role of food fortification and education or communication strategies. However, they also add in food production and processing, food storage and preservation, and plant selection and breeding. Because this paper already summarized these approaches under structural challenges, it will follow the framework of the Copenhagen Consensus Center.

⁹ There are also gene-manipulated products, which help to increase productivity or enrich different grains or rice with additional vitamins and minerals. E.g. the Swiss Institute of Technology developed vitamin A enriched rice, the so-called „golden rice“. Most recently, it also developed a rice variety that contains six times more iron than normal rice. Although such products are very promising, testing and successful proliferation usually take years because of the problematic of gene-manipulated products and their possible impact on the environment (Tagesanzeiger, 2009).

¹⁰ Chapter 4.1.4 on page 27 covers the characteristics of markets in developing countries in more detail.

supporters. Therefore, fortified food does not reach these people¹¹. Reaching the right people is a major challenge. India for example has set up the Integrated Child Development Services program, which is very successful in many ways. However, it has not been overly successful in reducing malnutrition. Among others, it targeted school kids with noon meals rather than malnourished pre-school children up to three years of age for which malnutrition causes the most severe damage because it is irreversible afterwards (Gragnotati et al., 2005, p. 30-61). The same can be said for other countries. Especially in Sub-Saharan countries, school attendance is rather low, which makes such efforts less effective.

3.1.3 Malnutrition and Poverty

There is a clear connection between poverty and malnutrition. The Global Hunger Index 2008 clearly shows that the most severe cases of hunger are in low-income countries (Von Grebmer et al., 2008, p.19). The aim of this paragraph is to show how these two phenomena are interlinked and how much malnutrition affects poverty.

Most basically, an improvement in nutrition, which leads to better health, is by itself an indicator of welfare or a reduction in poverty (Wang & Taniguchi, 2002, p.41). As poverty is most commonly defined and measured in economic terms, the examination of the relationship between economic growth capacity and malnutrition is of importance. Shekar and Lee (2006, p.2) point out that the relationship between economic growth and (mal-) nutrition is bidirectional. That means that an improvement of nutrition levels is not only an expected outcome of income, but also a possible and powerful driver of economic growth (Shekar & Lee, 2006, p.2). Furthermore, they categorize these effects into three different forms. First, improved nutrition leads to better physical condition. That, in turn, increases productivity directly. This is especially true in developing countries, where most of the population, especially among the malnourished, earn their living in the agricultural sector. Secondly, improvement in the nutritional status can add indirectly to productivity due to the nexus of nutritional status and performance in human capital building. Better nutritional status leads to earlier schooling and better school attendance, as well as better overall cognitive development. Haddad (2002, p.2) adds that the “premium” on creativity and innovation in a globalized world is higher than ever, and it is important for a country to get involved and take advantage of the dynamics of globalization. Third, there are savings of resources, which are

¹¹ Chapter 4 on Business at the Base or Bottom of the Pyramid features the case of Hindustan Lever LTD's iodine enriched table salt and shows that the product fails to reach the most vulnerable or affected group of the poor because the table salt has a price premium of about 250% compared with locally produced products.

currently directed to health care, disease treatment and other problems caused by malnutrition (Shekar and Lee, 2006, p.2). Finally, the vicious cycle of malnutrition and poverty, which leads to poor and malnourished adults giving birth to malnourished children, clearly hampers the pace of economical development.

Although no economic analysis can tackle the impact of malnutrition on economic development in full depth, which would also include measures on sustained mental, physical and social development; there are several studies on the economic losses of malnutrition. On a country level, the WB estimates that developing countries' losses due to malnutrition run between 2 and 3 percent (Baudoury and Sabbib, 2006, p.2).

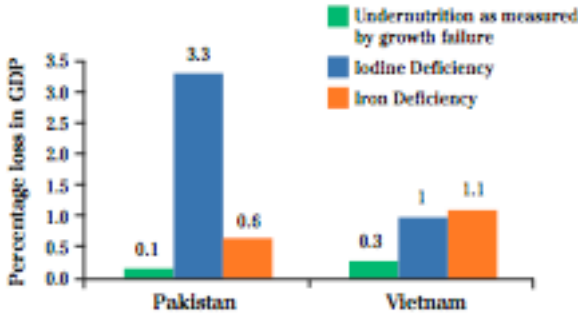


Illustration 3 (Haddad, 2002, p.2). *The impact of some forms of micronutrient deficiencies on GDP during the 1990s.*

However, Haddad (2002, p.2) argues that such estimations are undercounts because they leave out some important aspects of malnutrition such as vitamin A deficiencies or diet-related chronic diseases. Illustration 3 gives an overview of the impact of different micronutrient deficiencies on the GDP of Pakistan and Vietnam. It shows that several micronutrient deficiencies have different impact on GDP growth and that different regions or countries face different challenges of malnutrition. The WB estimates further that iron deficiency in adults can decrease productivity by 5-17%, depending on the nature of the work performed. The effect of iodine deficiency disorders on cognitive development has been estimated to cause a loss of approximately 10 percent of GDP (Baudoury and Sabbib, 2006, p.2).

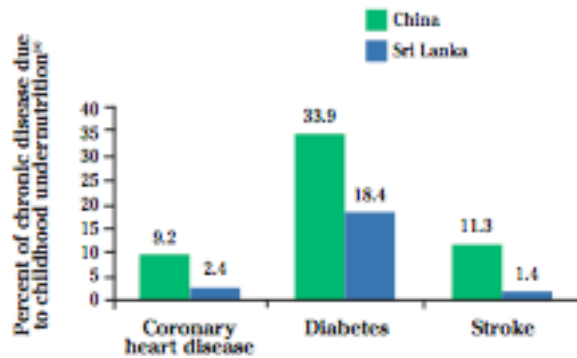


Illustration 4 (Haddad, 2002, p.3). *Percentage of chronic disease due to childhood malnutrition.*

Illustration 4 shows that the impact of childhood malnutrition on chronic diseases in the case of China and Sri Lanka. It is clear that this affects the economic performance negatively. Micro-economical studies show that productivity and thus income losses to individuals are even higher. The WB estimates that affected people lose up to 10 percent of their lifetime earnings due to malnutrition (Baudouy and Sabbib, 2006, p.2). An improvement in the nutritional status of an individual increases its capacity to do physical work and thereby increases its earning power. E.g., the CCC reports that a “1% increase in height (associated with improved nutrition) leads to a 2-2.4% increase in wages or earning” (Behrman et al., 2004, p. 3).

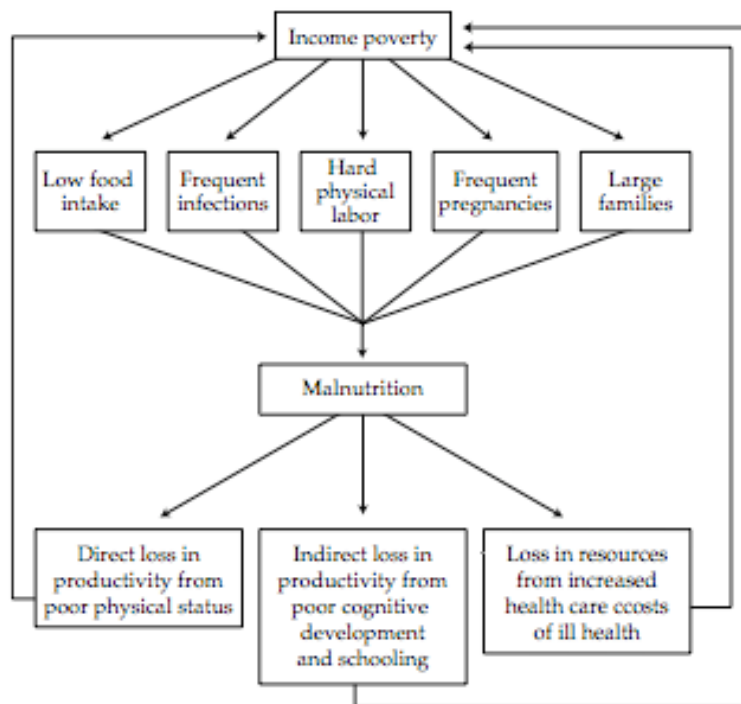


Illustration 5 (Baudouy & Sarbib, 2006, p.24). *The nexus between malnutrition and poverty.*

The disproportional increase in earning power due to improved nutritional status makes approaches aiming to improve nutrition clearly pro poor strategies¹². Illustration 5 exemplifies the nexus of malnutrition and income poverty.

The bidirectional relationship between nutrition and (economical) development, as well as the assessment of the cost-efficiency of means to combat micronutrient deficiencies, has brought more focus to development approaches with impacts on nutrition components¹³. The next section will highlight the ways and means of traditional development and new approaches.

3.2 Development Strategies: General approaches and the role of business

Development aid or assistance is very multifaceted and the subject to controversy. There are a lot of different actors, which engage in different fields of development on the base of different motives and philosophies. However, to make a long story short, the contemporary “development regime” has emerged in the aftermath of the Second World War. Despite countries engaging in development activities on a bilateral or multilateral base, e.g. the prominent and highly successful Marshall Plan for Europe, the Bretton Woods Institutions [BWI] as well as UN agencies have been created. However, the cold war, which emerged with the Truman doctrine in the aftermath of the end of the Second World War, exploited development aid in a majority of cases to a means of increasing the sphere of influence. The focus of development, exemplified by the policies of the World Bank [WB], has been changing during the course of time¹⁴. In the 1950s and 60s, the aim was to overcome the poverty trap by additional, exogenous capital in form of foreign development assistance¹⁵. Later, in the 1970s, the focus of development assistance shifted to the satisfaction of basic needs and direct tackling of extreme poverty because of a lack of the “trickling down” of the development efforts to the most vulnerable groups. The rise of neoclassical economic theory in the 1980s altered the focus of development efforts to structural challenges. Therefore,

¹² Although the correlation between improved nutrition and economical improvement is positive, Wang and Taniguchi (2002, p.41) point out, that short run effect are rather ambiguous because it is not uncommon to observe a strong, positive effect on population growth. Therefore it is important to control the population growth effect.

¹³ A review of the WB’s Poverty Reduction Strategy Papers [PRSPs] shows that majority of PRSPs recognize that malnutrition affects economic growth negatively and try to address them (Shekhar & Lee, 2006, p.23).

¹⁴ It is impossible to cover the complete scale and scope of development assistance in this paper.

¹⁵ A poverty trap is a situation where a country is in a situation, in which it has not enough internal resources to save and therefore to start on a positive economic development (“take off”).

development assistance, especially from the BWIs in form of loans and alike, was given under conditionality. Government activity was increasingly seen as suboptimal because it leads to inefficient allocation of resources. Therefore, the role of the government was intended to be limited to provide essential infrastructure. However, the neoclassical approach towards development, which was advocated most prominently by the “Washington Consensus”, came under substantial critique¹⁶. The end of the cold war led the development community to focus more on “good governance” and “effective state”, which aimed to improve functionality, accountability and transparency, effectiveness and efficiency in the public administration and sector. There have also been other approaches and emphasises in development policies. For example, the United Nation Conference on Environment and Development in Rio de Janeiro 1992 introduced the concept of Sustainable Development (Wheeler & McKague, 2002, p.2). This concept expanded into the philosophies and practices of the great majority of development actors, such as the BWIs.

The effect of the development efforts has been ambiguous, if not to say disillusioning. There is a growing discontent with the performance and philosophy of the BWIs regarding development and management of crises¹⁷. Even insiders such as Stiglitz, Easterly, Sachs and Sorros have criticized the BWIs (Simanis & Hart, 2008, p.1). One of the most fundamental and prominent debates on development assistance is the question of effectiveness. Whereas some, like Jeffrey Sachs, call for more development assistance in order to achieve the millennium goals, others, including William Easterly, question its effectiveness and still others even call for a stop of development assistance¹⁸. Easterly (2008, p.1-5) criticizes

¹⁶ One of the most prominent critics is Joseph Stiglitz, former chief economist of the WB and Nobel price winner 2001. In the second half of the 1990is, the East Asian Financial Crises raised fundamental critiques on the BWIs and its neoliberal policies, which were mainly connected to conditionality. The recent financial and economical crisis shakes neoliberal policies to its very foundations. This has to be especially true for development. China’s model, which had the biggest growth rates in recent decades and was not as bad affected by the current economic downturn, has gained a lot of attention. Furthermore, China has emerged as an important developing aid partner, especially in Africa.

¹⁷ Hunger and the ineffective WB projects in the agricultural sector are a good example. Whereas the WB aims to push capacity building and infrastructure to let the forces of the market to play freely and is therefore reluctant to take actions, which intervene in markets, the government of Malawi did exactly the opposite. After a grave drought, which led Malawi to import food, its government decided, against the advice of international lenders, to subsidize fertilizers. In consequence, Malawi turned from a net food importer to a food export country. The fact sheet for the UN “High-level Event on the Millennium Development Goals”, which was held on the 25th of September 2008, listed the case of Malawi of one of the few success stories in development (UN, 2008, p.2).

¹⁸ Dambisa Moyo calls in her recent published book “Dead Aid” to fade out development aid within the next 5 years. Although there are other very prominent experts, who argue on the same bases, e.g. Paul Collier, William Easterly among others, Moyo’s book has caused special attention because she is a black, Sub-Sahara African economist. However, there are not only experts expressing such critiques or concerns about the impact of development assistance, surveys point in the same direction. Although not very representative, the Economist (2009) debate on “The private sector and international aid” shows that 70% of the participants believe that

development assistance for its Top Down approach on theoretical and empirical grounds. He dismisses the Top Down approach as naïve and dangerous because institutional change can not happen due to actions from the top, by political leaders, but develop gradually under the constraints of bottom up evolution. Top down approaches are not only inefficient and inflexible, they might also hamper development because they set the wrong incentives. Seitz (Der Standard, 2009) observes that development assistance leads to less individual initiative and responsibility, as well as to a consumer mentality of governments in developing countries.

Although this is a very important and valuable debate, which has the potential to contribute to necessary improvement in the effectiveness and efficiency of development assistance if conducted on constructive grounds, it has actually brought more heat than light to the subject. The real questions are what really works and what might be counterproductive due to setting the wrong incentives. This debate is too complex and controversial to be discussed here. Nevertheless, this paper takes the position that although development assistance can be improved, it is still very important, especially for large development projects like infrastructure construction. On the other hand, there is a growing belief that bottom up approaches, especially business driven approaches, can deliver more sustainable and better development. This paper argues that both approaches do have their strengths and should be applied based on their core competencies.

In the face of the nexus between globalization and MNCs on the one hand, and such impacts on economic development on the other hand, the role of business has come under greater scrutiny. This is especially important due to the fact that FDIs outpaced ODAs in the last two decades, as illustration 6 shows. This makes private capital flows factually to a very important factor of development. Capital market liberalisations, especially in the 1990s, and the search for lucrative investment opportunities in emerging economies, global diversification of supply chains and outsourcing¹⁹ into cheap labour countries contributed to this trend.

“entrepreneurs and charities can do more for the poor than official aid”. In Riz Khan’s show on Al-Jazeera 58% of the audience believed that foreign aid actually hurts Africa (Khan 2009).

¹⁹ Outsourcing theoretically does not involve FDIs because outsourcing means subcontracting services or processes to a third party. However, practically outsourcing happens usually in form of sub companies, which then in turn is usually financed by FDIs.

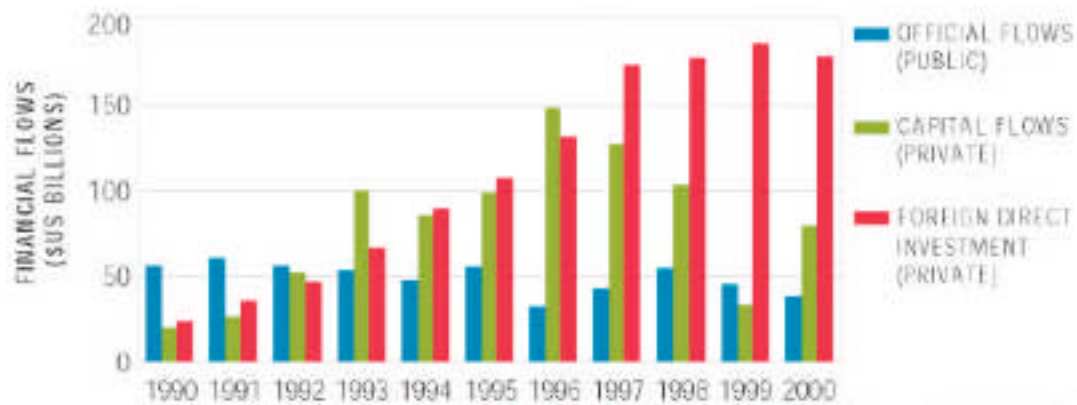


Illustration 6 (Wheeler & McKague, 2002, p.5). *Foreign Investment Flows to Developing Countries by Type during 1990 and 2000.*

Wheeler and McKague (2002, p.5) show that, although such capital inflows are a significant part of GDPs in developing countries, the biggest contributor to the Gross Domestic Product being trade. Due to their nature, MNCs are especially important for trade. They account for one third of the world's GDP and for two third of world's trade. Beside these observations, there is also a development of MNCs towards more corporate social responsibility [CSR] – either out of an increased sense of responsibility or, more likely, because of public expectations. Wheeler (2002, p.2) shows that 88% of the US Americans believe that the role of MNCs goes beyond the simple task of making profits within the boundaries of law. MNCs are expected to set higher standards and build a better society. Such alternations in the expectation lead companies and especially MNCs to take positive or negative impacts of their activities into considerations (CPSD, 2004, p.35). Furthermore, there is also a strong belief that MNCs and business can effectively contribute to development. E.g. Prahalad (2005) wrote his book “The Fortune at the Bottom of the Pyramid” out of the motivation to improve the situation of the poor.

4. Bottom of the Pyramid approaches

4.1 Prahalad's proposition or BOP Version 1

The approach by C.K. Prahalad bears a pioneering role in the field. He starts his approach with the observation that, after the collapse of the Soviet Union and the end of the Cold War, the vast majority of the developing countries, including China, Russia, Brazil and India, have opened their markets and entered into the global economy. The potential of these markets seemed to be promising, especially in the light of saturation in most of the markets in developed countries. Consequently, many MNCs invested into countries like China or India

on a big scale. Nevertheless, the enthusiasm for expanding in such countries has diminished recently – even more so after the financial crises in the late 1990ties. MNCs have yet only served the elite of such countries successfully. However, Prahalad argues that MNCs miss a great potential market by ignoring the low-income segments of the poor in such developing countries. He calls such markets the Bottom of the Pyramid [BOP] markets²⁰. The main reasons why MNCs don't target these markets is that the developed world, but especially MNCs and their managers, have false or outdated perceptions of the realities of the BOP markets in emerging economies (Prahalad & Hart, 2002, p.2). They assume that people in such developing countries have no money to spend beside their expenditures for basic needs. Furthermore, they think that there are various barriers to commerce in such markets – such as corrupt governance structure, illiteracy, nonexistent or inadequate infrastructure, currency fluctuations, bureaucratic red tape and tribal, racial and religious tensions (Hammond & Prahalad, 2002, p.49). Prahalad argues that some of these perceptions are simply wrong and there are very potential markets to be worked. Furthermore, he thinks that MNCs are capable of overcoming the challenges of serving BOP markets because MNCs have immense resources and capabilities – such as financial assets, technology, management skills and so forth. MNCs have also global reach. By definition, they work in several markets all over the world, including markets in developing and developed countries. Additionally, MNCs are capable of bridging and bringing resources together – internal and external ones. E.g. MNCs can facilitate the cooperation among external partners, such as NGOs, local governments and entrepreneurs. Additionally, they are able to leverage gained knowledge at BOP markets to other BOP markets or transfer such knowledge to the developed world. Hence, BOP markets are in a way testing ground for MNCs (Prahalad & Hart, 2002, p.11). There is also a normative component to the approach of Prahalad regarding the engagement of MNCs in BOP markets and the alleviation of poverty. This chapter starts with this normative component, assesses the potential of the BOP markets and then quickly looks at the markets as opportunities for MNCs as testing grounds. It then examines the challenges of serving such markets and the strategies to overcome them.

4.1.1 Doing well by doing good

Prahalad wrote his book “Fortune at the Bottom of the Pyramid” explicitly with the intention to contribute new approaches to combat poverty. He aims at marrying the capacities of

²⁰ The definition of BOP markets will be given in the section 4.1.2 „BOP Market Volume“ on page 24.

MNCs, the entrepreneurship qualities of local business and the commitment of NGOs (Prahalad, 2005a, p. xi ff.). He argues that if MNCs treat the BOP as a market, their business activities can reduce poverty: first, quality and quantity of products and services available at the BOP are generally low. Therefore, MNCs can enhance the quality and availability of products and service offered. E.g. Hindustan Lever Limited successfully developed an iodine-enriched table salt, which endures the harsh condition of the Indian supply chain and the Indian cooking process. Iodine salt helps to combat iodine deficiency and therefore clearly improves the quality of life of the poor. Second, inclusion of BOP people and entrepreneurs in supply chains creates employment and generates income. Third, on the consumer side, Prahalad mentions different ways to increase the purchasing power of the poor. He mainly refers to micro financing²¹, selling small quantities of products²² or provide costumers with the possibility of paying on credit²³. Fourth, treating the poor as consumers and not as victims restores their dignity and bring them choice. Prahalad argues for example that the inclusion of SHGs in micro finance schemes has given them a new sense of personal worth (Prahalad, 2005a, p.20). Fifth, MNCs help including informal economic activities by establishing business friendly frameworks through business practices and code of conducts. Finally and in a broader sense, Prahalad argues that MNC investment at the BOP means lifting billions out of poverty and helps thereby also resolve some of the gravest problems the world faces up to today, such as “poverty desperation, averting the social decay, political chaos, terrorism, and environmental meltdown that is certain to continue if the gap between rich and poor countries continues to widen” (Prahalad & Hart, 2004, p.3).

4.1.2 BOP Market Volume

Prahalad (2002, p.3-5) segments the world market into four tiers based on the income levels in purchasing power parity, based on the USD. The result is an economic pyramid that has the richest 75 - 100 million people of the planet on top. In that tier 1, people earn more then 20'000 USD a year. They are the middle and upper income classes in developed countries, as well as the elites of developing countries. Tiers 2 and 3 consist of 1500 to 1750 million people

²¹ E.g. the Grameen Bank, founded by Muhammad Yunus, in Bangladesh has developed micro credit systems for poor, which were not able to participate in credit schemes of traditional banks. Thereby, the Grameen Bank helped poor to avoid lending from local moneylenders, which usually charge extraordinary interests. The model is very successful in both: achieving impressive payback rates and effectively fighting poverty. In consequence the model has been adapted and there are similar micro credit institutions for poor all over the developing world.

²² E.g. single serving shampoo of Hindustan Lever, India. For further detail, please look at the paragraph Price Policy on page 30.

²³ E.g. Casas de Bahia in Brazil offers purchases on credits based on their credit history rather then their formal income, which are often not available at the BOP (Prahalad, 2005b).

who earn between 1500 and 20'000 USD. They represent the poor consumers in the developed world and the rising middle class in developing countries; they are the middle of the economic pyramid. Tiers 4 and 5 are the poor who earn less then 1500 USD a year. They represent around 4 billion people. Roughly a quarter of these 4 billion people earn less then 1 USD a day (Prahalad & Hart, 2002, p. 3). Prahalad calls these tiers the “Bottom of the Pyramid” [BOP]. Illustration 7 illustrates the economic pyramid.

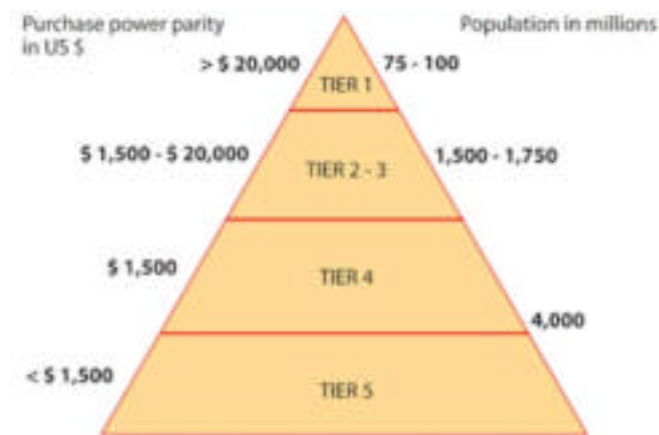


Illustration 7 (Perera, 2009). *The Economic Pyramid*. Prahalad segmented the world population due to their purchasing power based in USD.

Prahalad argues that although the individual consumer in these markets has very little purchasing power, less than \$1500 per year or even less then \$1 per day, the quantity of these consumers creates enormous markets. Prahalad estimates that the BOP is roughly a 13 trillion dollar market (Karnani, 2006, p.5). Furthermore, the BOP market is expected to grow to 6 billion people by 2045 (Prahalad & Hart, 2002, p. 3). Besides the potential of the markets, the expected growth is also highly promising, because these markets are at early stages and therefore growth can be expected to develop rapidly (Prahalad & Hammond, 2002, p.50). Furthermore, Prahalad points out that the assumption that BOP consumers have no money is wrong because although an individual low-income household may have little money to spend, they collectively posses most of the buying power in emerging economies. Illustration 8 exemplifies that poor households control a significant portion of national income in developing countries such as China or India.

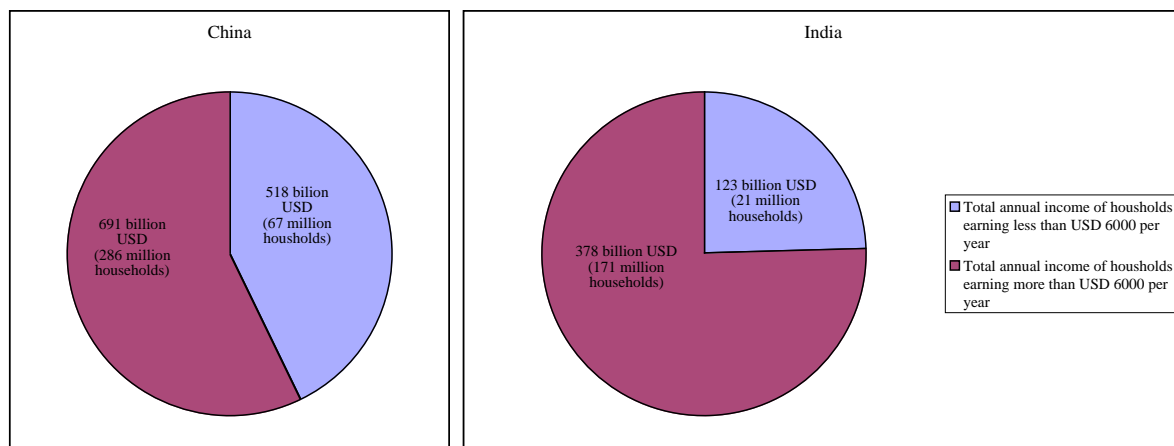


Illustration 8 (based on Prahalad & Hammond, 2004, p.35). *The share of poor households on the GDP for India and China²⁴.*

London and Hart (2003, p.351) suggest that the BOP markets might be even bigger. They argue that the vast part of the economic activities take place in the informal sector of an economy and are therefore not part of the official statistics like GDP accounts or PPP calculations. E.g. in Mexico some 30 to 40% accounted for the informal sector of the economy in the 1980s, and it has been growing rapidly since. Another example is Egypt, where the informal sector employs about 8 million people or 40% of the total workforce and has hidden assets, which exceed the value of all companies registered at the Cairo Stock Exchange by about 30 times (CPSD, 2004, p.9).

Furthermore, Prahalad and Hammond (2002, p.50) argue that contrary to the general assumption that BOP consumers are too concerned with fulfilling their basic needs and ensuring their survival, they are able and willing to use their resources for more than just satisfying basic needs. “They [the BOP consumers] accept that reality, and rather than saving for a rainy day, they spend their income on things they can get now that improve the quality of their lives” (Prahalad & Hammond, 2002, p.50). However, poor households spend most of their income “on housing, food, healthcare, education, finance charges, communications, and consumer goods” (Prahalad & Hart, 2004, p.33). Hence, Prahalad concludes that there is a fortune to be made at the Bottom of the Pyramid.

4.1.3 Testing Ground

The volume of the BOP market is not the only argument for Prahalad to invest in such markets. BOP markets also represent a testing ground for MNC. First, serving BOP markets

²⁴ These „poor“ households are not necessarily BOP people because they earn up to 6000 USD annually.

requires radical new thinking and redesign of business models in order to achieve competitive prices at the BOP. Second, MNCs can and have to incorporate new technologies to overcome structural challenges – such as infrastructural deficits or environmental challenges. Contrary to conventional wisdom, BOP markets are wide open for technological innovation²⁵ (Prahalad & Hart, 2002, p.4). Such improvements and gained knowledge can be transferred to the developed markets and form the base of comparative advantages.

Hence, Prahalad identifies an enormous potential at the BOP - first on the market side and second on the prospects for innovation. However, although the market has immense potential, there are also several challenges. The next paragraph will look at the most important BOP market challenges and at the strategies, which are supposed to overcome these challenges.

4.1.4. BOP Market Challenges and Strategies

4.1.4.1 Institutions

As pointed out before, economic activities in developing countries take often place in a mix of the formal and informal sectors. This reflects the lack of an existing and functioning legal infrastructure and makes social institutions and contracts, which dominate relationships in the informal sector, much more important (London & Hart, 2004, p.352). On the one hand, this makes services and products more expensive because market mechanisms are not free to play. On the other hand, it hinders economic development because “the vast majority of microenterprise owners and small land holders do not have legal recognised and protected property rights (i.e. they have houses but not titles, crops but no deeds, businesses but no legal incorporation), they are unable to use these assets as collateral or to attract additional investments” (de Sotro in Wheel & McKague, 2002, p.7). Furthermore, developing countries usually have very weak institutions in terms of administration. They simply do not exist or are red taped – meaning rigid, inflexible and slowly working. This makes administrative dealing costly and protracted. De Sotro (in London & Hart, 2004, p.352) found that a company registration in Peru takes 289 days and costs about 1231 USD. Additionally, the administrative and legal institutions hardly reach slum and rural areas where the population of the BOP live. In order to overcome such challenges Prahalad (Prahalad & Hart, 2002, p.13) suggest involving multiple players and forming new alliances. Besides the traditional partners to enter new markets, which consist normally of domestic corporations, he proposes to widen

²⁵ A recent example for innovation is the evolution of the Internet. According to Steve Sonders of Internetevolution.com the next Internet evolutions will not happen in high-tech clusters in sights like the Silicon Valley, but in Africa (BBC, 2009).

the cooperation to local firms and cooperatives, as well as local and international NGOs. Such organisations should have a better understanding of local conditions and more experience with dealing with social institutions that dominate the informal sector. Additionally, Prahalad suggests that MNCs should rather work with local and regional governments than with their central or national counterparts²⁶.

4.1.4.2 Product Development

Although there is an immense market at the BOP, the individual consumer has a very restricted budget to spend. Therefore, it is clear that MNC have to offer products at lowest prices to reach the BOP segment. However, for Prahalad (2005, p.25) serving the BOP market is not just reducing prices for existing products or solutions or a product redesign with old and cheap technologies, but creating a new price-performance envelope. This requires innovation and usage of new technologies. Prahalad offers mainly three strategies: product development, price policy and process innovation.

Successful product development at the BOP requires a deep understanding of the needs of the customers and the local circumstances in order to develop functionality-focused solutions, so that critical features can be incorporated into the design of the product or service²⁷. Therefore, developers and managers have to invest resources to gain such a granular understanding of the dynamic needs of the consumers and how to cope with the required technology (Prahalad, 2005a, p.36). Products not only have to satisfy a need in a new and innovative way, they also have to survive in “hostile” environments²⁸ - e.g. electrical devices have to cope with unreliable power supply systems or dairy products have to be designed to endure in markets without cooling facilities. However, Prahalad identifies that MNCs lack such ability to develop products for the BOP and calls for a change in attitudes and practices. He suggests that MNC should develop the necessary manager skills through education and training. Additionally, MNCs should incorporate special business development task forces, which try to work company-wide and bring such internal resources together. Furthermore, such task

²⁶ Although Prahalad (Prahalad & Hart, 2002, p. 13) is not very specific on the reasons, his example of ‘large infrastructure development’ suggests that he believes that cooperation at that level of governments are very resource intensive.

²⁷ This differs from product development in developed market where the form of a product is at least as important as the functionality (Prahalad, 2005a, p.25-37). The success of Apple products for example is very much based on their designs and forms of their products.

²⁸ In India, iodine deficiency is a severe problem. Iodine in salt usually gets lost due to transportation and storage, and disappears in the Indian cooking process. Therefore Hindustan Lever Ltd., a subsidiary of Unilever Corp, has successfully developed an iodine-enriched table salt, which endures such conditions (Hammond & Prahalad, 2004, p.34).

forces should also include a wide range of external partners with the necessary expertise – such as business partners, NGOs, local community governments, scholars and so forth.

4.1.4.3 Access to Markets and Process Innovation

The access to BOP costumers requires a radical redesign of product distribution systems and process innovation. Generally, the markets at the BOP can be categorised into two types: the urban and the rural markets. The first ones are found in the slums of the cities in emerging countries and marked by a high density of BOP costumers. This allows for intense distribution opportunities (Prahalad, 2005a, p.12). This trend of urbanisation should go on in the future and increase the urban BOP market. The Committee on Population of National Research Council of the US estimates that roughly 4 billion people live in urban areas by the end of 2030 (Cohen, 2006, p.68). Contrary to urban areas, the rural markets are geographically widespread and economically isolated²⁹. Therefore reaching people and serving markets via conventional distribution is very challenging and cost intensive. Prahalad argues that technological innovation and a radical reformulation and redesigning of business models in general, but especially distribution systems or broader the supply chain, are the keys to overcome such limits and grievances. His favourite example for such improvements is communication technology, such as wireless Internet or mobile phone networks. One of the most cited and very impressive examples is “e-Choupal” of ITC India. It is an initiative in the agricultural sector that aims to connect suppliers (farmers) and consumers (ITC and other potential costumers) directly through the means of Internet or telecommunication services. Such services are provided through village kiosks (so called e-Choupal) and bypass thereby local intermediates or middlemen (mandis). That way, farmers get better prices and minimize transaction costs³⁰. Besides the information on prices, weather forecasts, best practices in farming, but also entertainment, these e-Choupals also supply fertilizers. Hence, ITC's e-Choupal system is transforming India's agricultural supply chain, reducing systemic corruption and giving farmers better prices for their crops (Prahalad, 2005b)³¹. Arvind Mills,

²⁹ In rural areas basic transportation infrastructure is often of very poor quality or simply missing.

³⁰ Local middlemen weigh the corps in bags with their own traditional balances with manual scale. The repackaging into bags results in a considerable loss of corps, which has to be borne by farmers. Additionally, they have to pay the weighers. Furthermore, the middlemen tend to weigh in their favour, decreasing the price per tons paid to farmers (Prahalad, 2005b).

³¹ The e-Choupal initiative has been launched in June 2000. ITC (2009) states that it „has already become the largest initiative among all Internet-based interventions in rural India. ... 'e-Choupal' services today reach out to over 4 million farmers [600'000 farmers in 2002] growing a range of crops - soybean, coffee, wheat, rice, pulses, shrimp - in over 40,000 villages [5000 village in 2002] through 6500 kiosks [970 kiosks in 2002] across ten states (Madhya Pradesh, Haryana, Uttarakhand, Karnataka, Andhra Pradesh, Uttar Pradesh, Rajasthan, Maharashtra, Kerela and Tamil Nadu).

one of the five largest denim manufacturers in the world, successfully introduced a distribution system capable of reaching the rural areas in India effectively. They created a “ready-to-make” kit of jeans components (denim, zipper, rivets and a patch), which enabled local tailors to construct the jeans. This change in the supply chain made jeans cheaper and thereby made them available for a larger market.

Although there are significant differences between these two examples, there are also similarities. Supply chains have to be organised in an efficient way and tailored to local circumstances. Furthermore, each step in the supply chain has to be deskilled in order to guarantee a functioning process based on the human capital available at the BOP (Pralhad, 2005a, p.38).

4.1.4.4 Price Policy

Price policy is another important aspect of BOP products and services. Because people at the BOP have individually little money to spend, such markets do not allow for the traditional pursuit of high margins. Instead, profits are driven by volume (Pralhad & Hart, 2003, p.5). Furthermore, Prahalad suggest that the price building process should be reversed. Instead of calculating cost and adding a margin, managers should rather start from the sales price and recalculate costs accordingly. It is clear that this approach is not enough. There is a need to redesign entire business processes to cut cost significantly. Prahalad and Hart (2002, p. 13) estimate that costs have to fall to 10% of current costs of MNCs. Another crucial aspect of price policy is affordability. Poor often do not have the resources to buy big size units. Instead, they can only afford to buy products to satisfy an instant need. Therefore, different companies scaled down their product’s units. In India, for example, Hindustan Lever, Procter & Gamble, and most of their competitors sell “single-serving” shampoo units instead of the whole bottle. “More than 60 percent of the value of the shampoo market and 95 percent of all shampoo units sold in India are now single-serve” (Hammond & Prahalad, 2004, p.35). Another example is a Mexican retail chain that started to sell parts of a chicken instead of the whole chicken. Examples can also be found in the telecommunication sector that had to

Eid Parry (Annamalai & Rao, 2004) and DuPont, in form of the Pioneer Hibred Company, have launched similar initiatives (Pralhad & Hammond, 2002, p. 52). Another example of designing the supply chain in way that increase infrastructure efficacy is Amul. Amul is a large cooperative that achieved to establish system that allows collecting 12 million litres of fresh milk from Indian farmers in 100’000 villages twice a day. This is remarkable because such farmers usually possess only a few cows or oxen and there are hardly any cooling systems for fresh milk. Amul started to sell milk, but moved into more value added products, such as butter, cheese, milk powder and so forth. Amul, which is owned by the poor in form of a cooperative, buys from the poor (farmers) and sells to middle and upper income classes or exports its products. That way, it successfully eliminated rent-seeking middlemen and made the supply chain more efficient (Karnani, 2006, p.20).

reduce the amount on prepaid cards in order to be successful³². Hence, the idea is to scale down the unit of the product sold to an amount that the poor can afford.

4.1.5 Promotion and Consumer Education

In order to develop markets at the BOP, consumers often have to be educated. On the one hand, such educational efforts are very challenging because people have to be educated on cause-effect relations (e.g. between the lack of hygiene and diarrhoea), product or service benefits and so forth. This seems more difficult than simply to activate a latent need. On the other hand, rural BOP markets do not have the adequate infrastructure to convey messages by western means like radio and television. In India, for example, 40% is media-dark (Pralhad, 2005a, p.40). Therefore, innovative approaches and different formats have to be used to access and educate potential customers. Such different approaches often include working with other partners who share similar interests. “Health in your hand”, for example, was an initiative conducted in India to encourage people to wash their hands with soap. On the one hand, the WB, WHO, other international development and health organisations, as well as national and local governments aimed to reduce diarrhoea, related diseases. On the other hand, Hindustan Lever Limited, which also participated in the initiative, aimed to develop new markets for their soap “Lifebuoy” and increase sales. The efforts of these organisations were bundled to educate people. However, it was difficult “to educate people on the need for washing hands with soap and to convey the causality between ‘clean-looking but unsafe hands’ and stomach issues” (Pralhad, 2005a, p.41). Therefore Hindustan Lever Ltd. decided to conduct demonstrations in rural schools using ultraviolet dirt and bacteria detectors in order to show the need of washing hands with soap. Hence, the public-private collaboration to educate people and develop a market was a win-win situation because the institutional partner of the campaign successfully conveyed their message of using soap to wash hands and Hindustan Lever was able to increase sales and transfer some of the social marketing costs to its institutional partners.

4.1.6 BOP Strategies and Approaches

As pointed out before, Prahalad emphasises the crucial need to reshape the perception regarding BOP markets and the necessity for a radical rethinking of the business approaches to serve them. Rather than trying to adapt global business strategies to national circumstances,

³² US-based Bell-South had to reduce the value of their prepaid card from 10 and 20 USD to a 4 USD (Hammond & Prahalad, 2004, p.34).

which is currently the predominant strategy among MNCs, business approaches have to follow completely new patterns. BOP markets function radically differently and are not just underdeveloped markets at an early stage, which will continuously evolve towards Western style markets. Hammond and Prahalad (2004, p.34) exemplify that by the cellular phone industry that had to change their business model of serving wealthy customer with subscribed services to prepaid models. The latter dominates the global market nowadays.

Furthermore, MNCs should have a holistic approach toward business at the BOP, which fits the need and challenges of the BOP market. Prahalad suggests that MNCs need to develop a “Market-Oriented Ecosystem”. This is a “framework that allows the private sector and social actors, often with different traditions and motivations, and of different sizes and areas of influence, to act together and create wealth in a symbiotic relationship” (Prahalad, 2005a, p. 65). Illustration 9 shows the constitutions of such a framework. MNCs have to create value-added processes in such eco-systems.

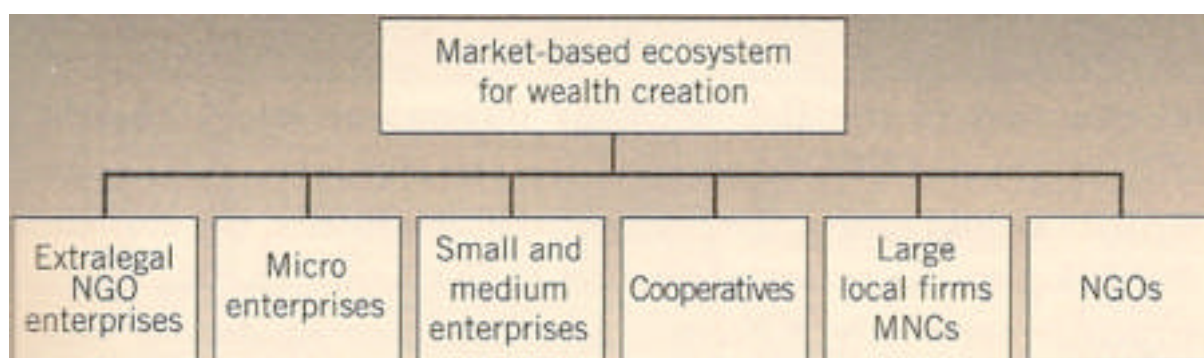


Illustration 9 (Prahalad, 2005a, p. 65). *Components of the market-based ecosystem..*

However, although Prahalad ascribes MNCs a leading role in creating such a framework, he also points out that creating a market based ecosystem can not be done unilaterally but needs multiple players, including local governmental authorities, nongovernmental organisations (NGOs), communities, financial institutions, and other companies. Creating such an infrastructure must be seen as an investment, much like the more familiar investments in plants, processes, products, and R&D. ITC successfully developed such an infrastructure with its e-Choupal initiative (Prahalad, 2005a, p.63).

The foregoing account can be summed up into a strategy framework for the development of the market-based ecosystem, which consists of four major components: There is the aspect of creating buying power at the BOP. The main means are micro credits or purchasing on credit, as well as income generation. Furthermore, developing such an ecosystem means to improve access to the BOP. As been pointed out before, this means to alter established supply chain

models to overcome infrastructural deficits. This is especially true for rural areas. Furthermore, aspirations have to be shaped through consumer education and solutions have to be tailored to local circumstances. This is especially true for product development, but also for process innovations. Illustration 10 illustrates this framework.

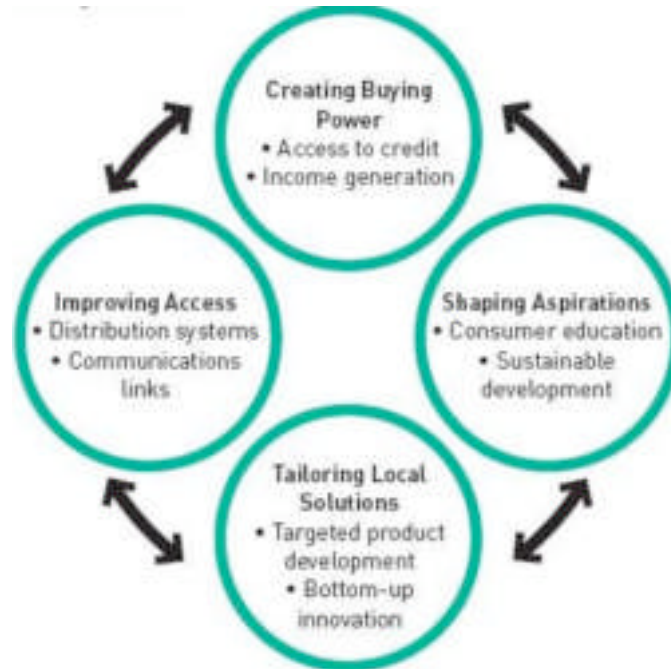


Illustration 10 (Prahalad & Hart, 2002, p.8). *The framework for the market-based ecosystem development.*

4.2 Critical Assessment

There have been various criticisms of Prahalad's proposition. Most prominent has been the debate between Prahalad and his fellow academic at the Stephen M. Ross School of Business at the University of Michigan, Aneel Karnani. However, there have also been other criticisms. This paper examines the most important ones: first, it looks at the financial dimension of the markets at the BOP. Second, it turns to the case studies Prahalad uses to make the case for his proposition. Third, it discusses the role of MNCs to lead the way at the BOP. Fourth, it assesses the link between doing business at the BOP and the reduction of poverty. Fifth, it tries to appreciate Prahalad's contribution to the effort to reduce poverty and increase the welfare at the BOP.

4.2.1 The Financial Dimension of the BOP

There are doubts about Prahalad's assumption on the BOP markets' financial dimensions.

Karnani (2006, p.4-6) points out that Prahalad exaggerates market potential by not being consistent how the poverty line or the bottom of the pyramid is defined³³. Prahalad and Hart (2002, p.3-4) define the BOP as people with a per capita income less than 1500 USD per year³⁴. In the next paper, which was published in the same year, Prahalad and Hammond (2002, p.49) define the BOP as people with an annual income below 2000 USD.

Consequently, there is inconsistency on market potential – meaning how many persons are in the market and how much purchasing power they possess. Karnani (2006, p.5), which rely on the most conservative data of the WB, estimates the market potential, using 2 USD incomes a day, to a volume of roughly 1,2 trillion USD consisting of 2,7 billion consumers. However, MNCs of developed countries that sell to emerging market countries, profits will be repatriated at the financial exchange rates, and not at PPP. This makes markets even less attractive. Taken such financial exchange rates into account, Karnani (2006, p.5-6) calculates that the BOP market is about 0.3 trillion USD. Prahalad (2006) counters such doubts in a direct answer to Karnani. He argues that there is a potential of four billion people and a vast market. In order to underpin his position he refers to the survey of Hammond (Hammond et al., 2007) that there are 4 billion people in the market, that people at the BOP get a lot of remittance of expatriates and there is a lot of income available at the BOP, which has been earned in the informal economy and therefore does not show up in official statistics (Pralhad, 2006, p. 2). However, the quoted survey conducted by Hammond defines the BOP segment as people with an annual income of up to 3000 USD (Hammond et al., 2007, p. 1). This in turn leads to a market of 4 billion people. This argumentation does not really hold water, since expanding the BOP segment to people that have more purchasing power simply misses the point of serving the poorest at the BOP³⁵.

Besides this structural critique on the real size of BOP markets, there is another important point to highlight. Prahalad emphasizes that BOP consumers are able and willing to afford products of MNCs, which may be more expensive but provide higher quality. This assumption that is quite questionable. Karnani (2006, p.6) shows that the budgets of BOP consumers in India are almost entirely allocated to the satisfaction of basic needs. Food, clothing and fuel costs account for more than 80% of the available budget. This clearly leaves

³³ Despite of the inconsistency of Prahalad definitions on the poverty line and on purchasing power, Karnani (2006, p.4) emphasises the difficulty of measuring poverty in general.

³⁴ As pointed out before, these calculations are based on PPP.

³⁵ The BOP definition could also be altered to a per capita income of 100'000 USD. This would include the majority of the population of the world and make the market even more lucrative.

little room for relatively expensive, high quality goods and products. Illustration 11 shows the consumption patterns of the different income segments at the BOP. It shows that the poorer the people, the less money they have to spend on products which do not cover their basic needs.

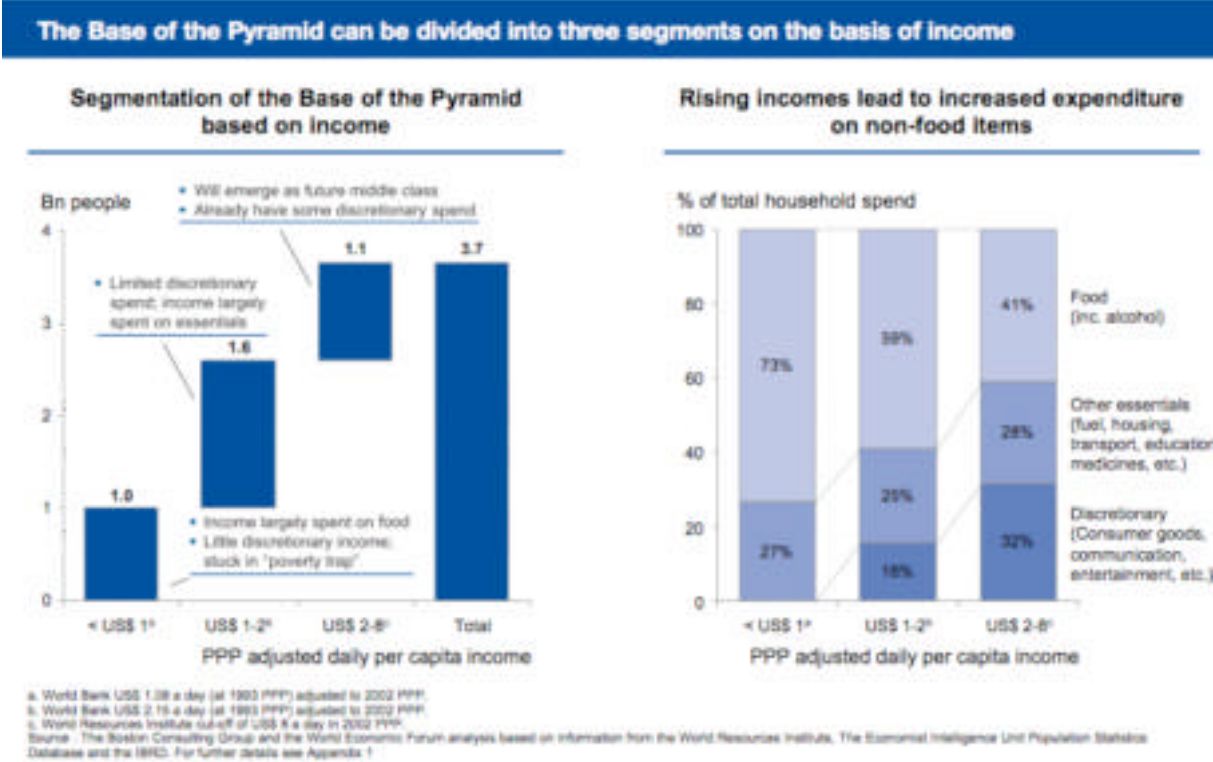


Illustration 11 (WEF, 2009b, p.10). *Segmentation of the BOP population and consumption patterns.*

Although there are some valid doubts about Prahalad’s estimation on the financial dimension, there might be a potential at the BOP, as newer calculations show. The WEF (2009a, p.39-41) estimates the BOP markets to volumes of 2.3 trillion USD in 2008³⁶. Furthermore, the editors of that report calculated an annual growth rate of 8% for the BOP market between 2002 and 2008. This clearly outperforms growth rates in developed countries. Although aware of the global economic downturn in 2008 and its aftermath, such as a very slow recovery, the report estimates BOP market to grow to a volume of 4 trillion by 2015 (WEF, 2009a, p.10).

³⁶ Although the calculations of this report (WEF, 2009a, p.39-41) overcame most of the shortcomings of the calculations by Prahalad, Karnani’s objection, that profits of MNCs is lowered significantly because they have to be repatriated, is still valuable.

4.2.2 Evidence

Prahalad uses a wide range of case studies to underpin his arguments. He presents cases from different parts of the world such as Asia, Africa and Latin America, different branches, such as consumer goods industry, housing, agriculture, telecommunications and so forth and of different organisations – like MNCs, national corporations and NGOs. Although there seems to be a lot of positive case studies at a first glance, this paper argues that the vast majority of the presented evidence does not really hold water. First and most importantly, Prahalad (2005, p.xii) states that his „book is concerned about what works. ... I am [Prahalad] even less concerned about what may go wrong. Plenty can and has. I am focused on the few experiments that are going right“. Walsh et al. (2005, p.477) correctly point out that if there are few success stories, it is even more important to look at why other initiatives have failed and to identify the factors for success. Furthermore, there has been a tendency in the BOP field to lean on case studies instead of quantitative research. On the one hand, it is difficult to find criteria and benchmarks for a wide range of cases, because such cases differ in many aspects – such as organisations involved, characteristics of place and time, and so forth. On the other hand, a majority of case studies tend to be anecdotes and „feel good“ stories in order „to demonstrate its results to sponsors and other stakeholders. These ventures often use anecdotes to highlight how they’re helping families build houses in Latin America, providing health-related products to children in Africa, or linking farmers in rural Asia to new markets (London, 2009). There are initiatives to overcome such shortcomings. London (2009) has developed the Impact Assessment Framework in order to measure the impact of BOP initiative on stakeholders with a framework that allows for comparison. Furthermore, although Prahalad shows a lot of innovative business approaches, such as the “Ruf & Tuf” initiative of Arvin or the iodine enriched salt of Hindustan Lever LTD, he does not provide a lot of financial evidence³⁷. Most of his main examples, such as the ice-cream case of Amul or the E-Choupal initiative of ITT, are financially not successful³⁸. The only case study that clearly supports Prahalad’s statement that BOP markets can be served

³⁷ Annapurna, Hindustan Lever LTD’s iodine enriched table salt, is sold at a price premium of 250% compared with local, unbranded salt. Karnani (2006, p. 7) doubts if poor are willing to afford such a price premium.

³⁸ Although E-choupal provides real value to farmers, it is not a profitable business yet. Additionally, the case study on Amul’s ice cream business does not really make a strong case for successful business at the BOP. First, there is inconsistency about the prices charged for a serving ice cream on the BOP. According to Karnani (2006, p.8), such a serving would be about a quarter of the daily available budget of a BOP consumer. Furthermore, Hindustan Lever, one of the dominant firms in ice cream business, has only made profits when focussing on the wealthiest customer segments and concentrated on geographically clear defined markets – notably to six cities or about 60% of the Indian ice-cream market. This market is definitively no BOP market in the sense of Prahalad’s approach.

profitably is the case of Nirma and Hindustan Unilever³⁹. But also this case has some shortcomings in backing Prahalad's approach. First, Nirma is a local firm. This does not undermine Prahalad's approach fully, but conflicts with his statement that MNCs are best to serve BOP markets⁴⁰. Second, rather than finding new ways, such as redesigning business models or achieve significant technological innovation to make the high quality products of Hindustan Unilever less costly to produce and thus lower the prices, Hindustan Unilever reduced product quality significantly in order to reach the BOP segment.

4.2.3 Focus on MNCs

Relying on the last argument it can be argued that MNCs should try to reach BOP markets by lower quality goods. Consumers at the BOP or consumers in general face a quality-price trade off. Karnani (2006, p.12) argues that rather than focusing on future improvements in technology in order to become able to serve BOP markets with high quality products, firms should target a cost-quality trade-off with their given technology and bring them in balance with the quality-price trade off faced by consumers of the BOP segment. Although Karnani clearly has a point, this paper takes the point of view that fundamental reduction in cost structure can profit from both approaches – altering the cost-quality relationship or invest in R&D and technology. The target to reduce costs to 10% in order to be capable of serving the BOP successfully is enormously challenging.

Furthermore, centralized production and therefore economy of scale are not seen as very promising approaches for BOP markets because such markets are physically and economically isolated. Therefore costs of serving and marketing costs per se tend to be high, which in turn disfavours central production. Another aspect is that MNCs often produce standardized products for global or regional markets. This is not adequate for BOP markets where successful products and services have to be tailored to local needs. In order to be able to produce products with features that satisfy local needs and reduce marketing costs, newer BOP literature suggests relying on local producers and bringing production units nearer to the targeted markets. This approach is called scaling out (WEF, 2009b, p.20-27).

³⁹ While Hindustan Lever offered a high quality product, a local competitor, Nirma, entered the market in the BOP segment with a low quality product. It reformulated the product and thereby lowered production costs and thus prices, and established its own business system. The great success of Nirma in a segment, which was firstly rejected by Hindustan Lever, enforced the company to develop a product on a similar quality and price level - the "Whell". However Nirma leads in its segment market by total sales, about 150 million dollars, and outstanding ROCE of 121% (Prahalad & Hart, 2002, p7).

⁴⁰ Regarding to Prahalad & Hart (2002, p.7) Nirma leads clearly in total sales and ROCE over the "Whell" product line of Hindustan Lever.

Additionally, Prahalad postulates that serving BOP markets requires new management skills and MNCs should train their managers accordingly. Furthermore, MNCs should redesign business models and overcome inner organisational constraints for a sustainable business commitment to the BOP markets. Although this paper acknowledges such requirements in as necessary for serving the BOP markets successfully, it doubts that MNC can do so by relying on their core competence. But if MNCs cannot rely on their comparative advantages, such as technology, economy of scale, management skills and experience, why should they try to enter such markets? The fact that only few case studies of Prahalad underpin the urgency for MNCs to enter such markets fuels doubts that MNCs are predestined to lead the way at the BOP. Some of his favourite case studies – such as Aravind Eye Care Systems, the Jaipur Foot among others - are not carried out by profit organisations (Walsh et al., 2005, p.476).

4.2.4 BOP approach and the link to poverty reduction

The link between the investments of MNCs in order to target people at the BOP as customers and poverty reduction is not quite clear. The most important point in poverty alleviation is to increase the real income of the poor. This is possible by first; lowering the prices for products of the same quality⁴¹, second, increasing quality of a product while selling for the same price, and third, increasing earning possibility (Karnani, 2006, p.13). However, it is not very clear how selling TV sets, furniture etc. helps to reduce poverty (Walsh et al., 2005, p.478).

Additionally, although access to micro credit systems or purchasing on credits, can increase consumption in the short run, it is essential that such products and services are either consumed in a way that enhances productivity or become productive assets. Otherwise, the poor could end up consuming too much and saving too little for the future and, even worse, getting into a debt spiral⁴². However, lending at the BOP is a reality, therefore Prahalad (2006, p.3) recalls correctly that access to micro credit system can improve the situation of the poor because they do not have to rely on local money lenders, who charge usurious interests. Furthermore, Karnani (2006, p.16 ff.) points out that the poor could also end up consuming inappropriate products such as low priority products (such as shampoo) instead of higher

⁴¹ Although it is (theoretically) correct that a reduction of prices leads to an increase in real income when holding the quality the same, this paper suggests that the most important aspects of quality at the BOP is the functionality of product to satisfy a certain need. Therefore functionality seems to be the most important aspect.

⁴² Karnani (2006, p.13) suggests that rather to look people at BOP as consumers it is more important to look at them as producers to improve their income potentials.

priority products (such as soap or nutritious food), and even harmful products (such as tobacco and excessive alcohol)⁴³.

One of the most celebrated concepts of serving the poor is the so called “sachet revolution”⁴⁴. Making single-serve units of products is supposed to make them more affordable to the poor. However, this is not exactly true. “Putting products in small packages ... does improve convenience and cash flow management, but not the real affordability” (Chowdary, 2008). On the contrary, packaging costs, distribution costs, transaction costs and so forth are clearly higher with small packaging. Higher volumes, which are possible by reaching the poor through sachet units, might counterbalance such additional costs. But as pointed out before, economy of scale at BOP markets is only a limited option (compare paragraph *Focus on MNCs* on page 36). However, although such objections are valuable and it clearly would be better for the poor that prices per volume stay the same or even fall with single-serve units, this paper appreciates the sachet packaging because it decreases the upfront investment for a product and makes certain products accessible for the poor in the face of their limited cash flow capacities.

4.2.5 Appraisal

There are some underlying flaws in Prahalad’s BOP approach. Indeed, the financial debate about the attractiveness of the BOP markets is fundamental and especially important for the role of business⁴⁵. However, the paper argues that it should not lead to a „cul de sac“ of a debate on the definition of poverty lines and measurement practices. This is for another discipline to achieve. It is more important to know where the BOP markets are which have the potential that business opportunities can be realized. More sophisticated and segmented market research studies are needed. The study “The Next 4 Billion: Market Size and Business

⁴³ There is a debate between Karnani and Prahalad regarding the products that should be offered to BOP consumers. While Prahalad argues that poor people should have their own, free choice about which product they buy, Karnani takes the position that poor not always make the best decisions for themselves and are especially vulnerable because markets at the BOP lack essential mechanisms and institutions of consumer protection and alike.

⁴⁴ Although Prahalad celebrates the sachet revolution it also runs counter to his demand that business approaches at the BOP have to be environmentally stable.

⁴⁵ MNCs or enterprises per se face the requirement of making profits. Mark O’Connor of Pfizer Global (in Arorja & Romjin, 2009, p.16) points out that "Operational units need to generate a return on investment in order to achieve buy-in, both internally within the management structure of a company, as well as, externally with its stockholders ... The fact is that a loss, cost, or net-zero balance will simply not achieve [this]". This statement exemplifies that profit making is essential for a MNC to mobilize its external and internal potential and commit itself sustainable to BOP initiatives. This is especially problematic at the BOP because markets first have to be developed, challenges in basic infrastructure have to be overcome and so forth. Such preconditioned investments, which have to be assured over a relatively long-term period, do not make profits very feasible in a short and middle term.

Strategy at the Base of the Pyramid” of Hammond (2007) points in the right direction. The case studies presented by Prahalad do not really underpin his arguments and it is difficult to comprehend why MNCs should take such pioneer roles. There is a serious lack of the financial attractiveness of such ventures. However, they do show improvements in the livelihoods of the poor. The services of Aravind Eye Care Systems or the Jaipur Foot, the iodine enriched salt or the soap campaign of Hindustan Lever LTD help to improve health conditions at the BOP. This is essential for the productivity and thus for the earning potential of the poor. Furthermore, it reduces loss of earnings or absences in education and schooling caused by health problems. Additionally, there is a great potential for the usage of technology at the BOP. Telecommunication and Internet are such examples. However, there seems to be an even more vast potential for less high technology in the agricultural sector, which can increase productivity of smallholders, e.g. drainage techniques, treadle pumps and so forth. Finally, this paper also appreciates the role of Prahalad’s work as a cornerstone in the field of the BOP approaches and concepts. After the publication of the paper “The Fortune at the Bottom of the Pyramid” in 2002, there has been a boost to BOP research, new conceptual designs, new BOP ventures and so forth. Although not all the statements in Prahalad’s work is revolutionary, such as public-private partnerships or the success of micro finance systems, his work is sincerely meant to effectively reduce poverty.

4.3 The Evolution from BOP1 to BOP2

In the aftermath of the first publications by Prahalad and his colleagues, the interest in the BOP approaches has been growing steadily. There has been an enormous expansion in research; chairs and institutions have been established, new initiatives and ventures have emerged, new alliances between new partners have been built and new projects have been started. This activism led to a vast diversification of the BOP field. Consequently, the BOP researchers were not able to generate a clear core theory and there are no precise definitions – e.g. what business at BOP consists of exactly⁴⁶. What emerged however is a global network of different “Base of the Pyramid Learning Labs⁴⁷” of different universities, institutions and

⁴⁶ There is no consensus of definitions of the BOP. There are different authors and institutions, which define BOP as people who earn less than 1500 USD, 2000 USD or 3000 USD (in PPP) per year. Another debate is the question if business at the BOP has to fulfil specific criteria regarding the business model or if the impact on the poor is the defining property. Muhammed Yunus, founder of the Grameen bank, criticized the Mexican Micro Credit Bank, Copmartamos, for their business strategies and their interest policies (BusinessWeek, 2007).

⁴⁷ „BoP Learning Labs are learning communities of leaders from companies, NGOs, multilateral organizations and universities. Members work together to generate and disseminate knowledge about the concepts, theory and practice of creating business opportunities in BoP markets“ (Emergia Institute, 2009).

companies from all over the world – such as in the US, Brazil, Mexico, Argentina, Spain, South Africa, India, the Netherlands, Sweden, Germany, France and China (CSGE, 2009)⁴⁸. Although there is a lack of a common core theory or definitions⁴⁹, there has been an evolution of the BOP concept towards a second generation. Simanis and Hart (2008) have most prominently articulated this BOP 2 concept in the “Base of the Pyramid Protocol⁵⁰”. The most obvious change is in terminology, which uses the term “base” instead of “bottom” of the pyramid due to the negative connotations of the latter (Hart & Simanis, 2008, p.1). The most profound change, however, is the change from a top down sales-focused concept to a system of “co-creating” and “co-venturing”, which are driven by local needs and circumstances⁵¹. Interactive and mutual learning, close and deep dialogue with BOP communities and other stakeholders should enable MNCs to gain such insights⁵².

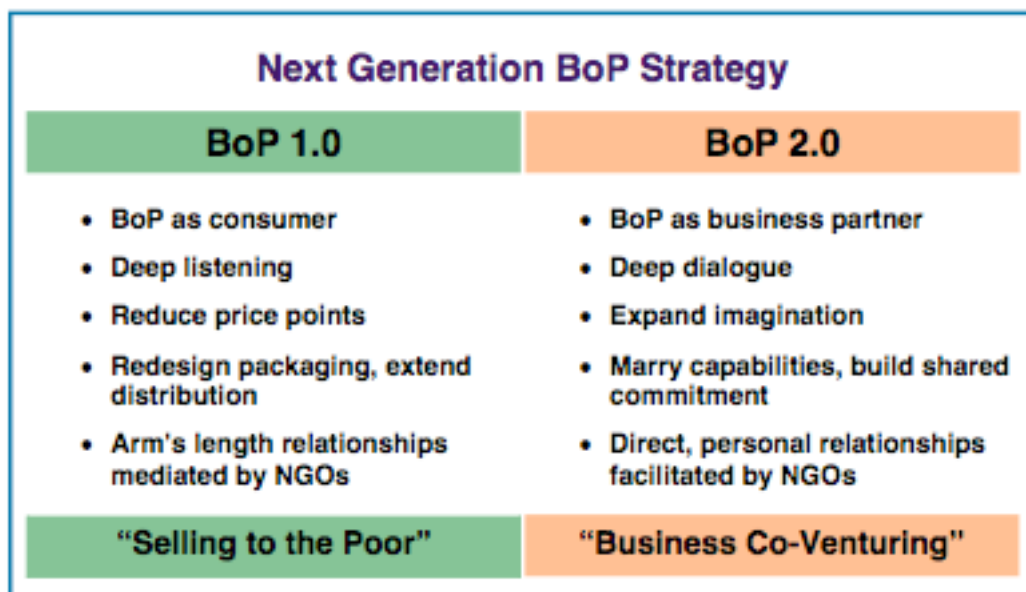


Illustration 12 (Hart & Simanis, 2008, p.2). *The evolution from BOP 1.0 to BOP 2.0.* The illustration summarizes the most fundamental changes from BOP 1.0 to BOP 2.0.

⁴⁸ Additionally, the „next billion“ network, which was launched by the World Resource Institute in 2005, is also worth mentioning.

⁴⁹ E.g. Hart of the Cornell University and founder of the first learning lab takes the definitions and figures of Prahalad and Hart (2002) whereas the German learning lab „Emergia“ follows the BOP market estimations done by Karnani (2006). The South African learning lab even features a case study on DANONE, which uses the definition of BOP market as people with a monthly average income of about 300 USD (Fact Sheet, 2008, p.2).

⁵⁰ The BOP Protocol is a „pioneering business incubation process that enables multinational corporations to generate new business opportunities at the BOP“, which has been established by Hart, Simanis and Enk of the Cornell University and its partners that consisted of four companies, such as S.C. Johnson, Inc, and five institutions, such as entities of the University of Cornell and Michigan (Base of the Pyramid Protocol, 2009).

⁵¹ The focus on locality and its implication as a fix point for business model creation fuels doubts that successful business models can be scaled up or replicated across “different communities, localities, regions and countries. Early evidence about intra-country heterogeneity seems to suggest that this issue could become highly problematic (Arora & Romijn, 2009, p.13).

⁵² Simanis and Hart (2009) develop their Embedded Innovation Paradigm (EIP) in the paper „Innovation From the Inside Out“.

“By becoming embedded, companies and communities can jointly build a new, shared identity. That closeness and mutual commitment to one another constitutes business intimacy, which becomes a source of value — and a barrier to competitors (Simanis & Hart, 2009, p.82). This is seen as a more bottom-up approach, which centres about the community at the BOP (Arora & Romijn, 2009, p.12). Hence, people at the BOP are not only consumers; they are seen as integral parts of a possible supply chain. Consequently, people at the BOP are also seen as producers and entrepreneurs. Furthermore, there has also been more emphasis on a broader array of partnerships in such ventures at the BOP. Although the BOP 2.0, which is formulated by Hart and Simanis from the Cornell University and supported by business – e.g. by the WEF -, still assigns a very prominent role to the MNCs, communities, local (, social) entrepreneurs and NGOs have become much more important. This paper appreciates these more prominent roles and argues that the involvement of MNCs is not necessarily a constitutional element of a BOP business model.

The next part of the paper features two big case studies in the next part. The first will deal with two MNCs coming together to do business at BOP – the Bangladeshi Grameen and the French Danone. The second assesses a case study of the international NGO Antenna Technologies aiming to set up a business model in India.

5. Case Studies

5.1 *The case of Grameen Danone Foods Ltd*

The case of Grameen Danone Foods Ltd [GDFL] is already one of the most celebrated examples of approaches that involve business in development, such as combating poverty or malnutrition. However, since the venture started its production only 3 years ago, the project got more credit for the promising idea than for what it actually achieved. This section will start with an overview and background section, which is dedicated to the foundation, the main objectives and evolution of the project. It then turns into more detail with a closer examination of the supply chain and production aspects. Furthermore, it assesses the 4 Ps of marketing and gives an overview on financial aspects. It concludes this section with the strengths and weaknesses of the project.

5.1.1 Background and overview

The foundation of the GDFL reads like a fairy tale. Danone, with 13 billion USD sales one of the largest food conglomerate in the world, and Grameen, the legendary group of micro credit pioneer and Nobel price winner Dr. Muhammed Yunus, which dedicates its activities to the improvement of the poor's lives, combined forces to combat malnutrition among the children of Bangladesh and to create employment for rural people. The idea of forming a joint venture [JV] emerged when Yunus and Franck Riboud, Chairman and CEO of the Danone Group, met in October 2005 in an informal business lunch. But rather than setting up the JV under the umbrella of a CSR program, the aim was to integrate a social cause into the primary business of Danone and form a social business, which could become an example for the concept of Social Business⁵³, which is promoted by Yunus, and should inspire other companies to follow (ICMR, 2007). After a workshop of teams of both companies a month later, GDFL was founded and established under law in March 2006. Subsequently the land was purchased for a factory in Bogra and the production of the micronutrient-enriched yoghurt "Shoktidoi", was launched in February 2007.

The mission of the GDFL "to bring daily healthy nutrition to low income, nutritionally deprived populations in Bangladesh and alleviate poverty through the implementation of a unique proximity model" (Yunus et al., 2009, p.6) can be broken down into 4 concrete

⁵³ Yunus et al. (2009, p.4-9) locate the concept of Social Business between the concept of profit maximizing businesses, whose purpose is to create shareholder value, and non-profit organizations that exist to fulfil a social objective.

objectives: “first, to bring health through nutrition at very affordable price for all children; second, to improve living conditions of the poorest of the community by involving them in all stages of the business model (supply, production, sales), creating jobs and improving local competencies; third, to preserve non-renewable resources as much as possible; and forth, to be profitable to ensure economic sustainability” (Danone.communities, 2009, p.5).

In the first phase of the project, starting in early 2007, GDFL was able to increase sales around its factory in Bogra. A full time executive director joined the company, the number of sales ladies (as part of the distribution channel) was increased and sales expanded quickly to reach 350'000 cups per month. However, in April 2008, raw material prices started to soar. In turn, milk prices doubled. In consequence, the GDFL board decided to raise prices to stay in business. Thereupon, the demand completely collapsed. GDFL was able to recover the market by a product reformulation and mini promotions. Additionally, it decided to expand the geographical coverage to Pabna and Rajshahi. Then, in November 2008, the GDFL board decided to implement an expansion strategy in order to cover Dhaka and thereby use the excess capacity in its factory in order to bring down the share of fixed costs per unit. The capacity used at the Bogra factory was about 25%. Although not profitable yet, the GDFL plans to open a second factory in proximity of Dhaka. The vision aims to operate 50 plants by 2020 (Danone.communities, 2009a, p.11-13)⁵⁴.

5.1.2 Production and Supply Chain

The strategy of GDFL is based on the concept of proximity⁵⁵. On the supply side this concept aims at relying on local supply rather than on sources from other parts. This should reduce costs of raw material because there are no import fees and relatively simple logistics. Furthermore, it contributes to the commitment of environmental stability because less fossil energy is involved by reduced transportation. Finally, local community development is promoted (Yunus et al., 2009, p. 10). Consequently, GDFL imports only the micronutrition and cornstarch for the yoghurt enrichment and for the packaging respectively. Molasses and milk are both sourced locally. Milk is the main ingredient of Shoktidoi and therefore its cost is critical for the economical sustainability of the project. To avoid competition with other

⁵⁴ In terms of employment the project envisages to create 25'000 jobs in farming and 50 to 100'000 jobs in distribution. In terms of reach, the 50 proposed plants should cover half of the Bangladeshi villages (Danone.communities, 2007, p.13).

⁵⁵ This concept of proximity is very similar to the concept of scaling out. Compare chapter 4.2.3 „Focus on MNCs“, page 37.

milk purchasers, which would be likely to result in an increase of prices, GDFL decided to build up their own supply network. The aim is to establish 500 to 3000 micro farmers, which provide a grand share of the required milk. This framework guarantees farmers access to credits (through the Grameen Bank), fixed prices for the milk, as well as support in form of training and consultancy. The GDFL works with the cooperative Grameen Livestock in this matter, but also with other partners (Inter Cooperation), which help to organise farmers⁵⁶. However, the soaring milk prices in 2008 let the GDFL to buy from the existing milk groceries rather than from the planed micro-farms (Yunus et al., 2009, p.16-20)⁵⁷.

Relying on their experience and expertise, Danone constructed the GDFL factory in Bogra that allows for a simple, easy to handle production process, without jeopardizing the quality of the product (Danone.communities, 2009b). Rather than relying on high technology and automation, the architect, Guy Gavelle, tried to simplify the production process to the extreme and to involve more manual labour. The idea is make the production as cost-effective as possible and to create more local employment (Pfitzer & Krishnasway, 2007, p.31). Furthermore, maintenance costs for repair work and spare parts, which are hardly available in Bangladesh, should be lowest. The factory employs between 40 and 50 people⁵⁸. Furthermore, the factory is constructed to meet the goal of environmental stability. Therefore it runs on solar energy and natural gas, and uses a rainwater recycling facility. Additionally, the cup of the yoghurt is made of cornstarch and therefore “entirely biodegradable when placed in a specific milieu respecting hygrometric and temperature constraints” (Yunus et al., 2009, p. 20).

5.1.3 Marketing

This section is dedicated to the classical P’s of marketing. However, it starts with the segmentation of the market because such segmentation is a precondition for the formulation of any marketing instrument.

⁵⁶ 90% of the milk market in Bangladesh operates on an informal basis. Therefore, organizing, especially the collection of milk and its delivery to the plant is very challenging (Danone.communities, 2009a, p.7).

⁵⁷ If the original strategy of developing and relying on these micro-farmers will be redeployed is not very clear. But the mission and objectives of GDFL implies so.

⁵⁸ The information about the employees working in the Bogra factory depends on the source. Whereas some sources such as the Danone homepage (Danone, 2009a) and Yunus et al. (2009) state the amount of 50 employees, the company presentation of July 2009 (Danone.communities, 2009a) submit a factory work force of 40 people.

5.1.3.1 Segmentation

By relying on the strategy of proximity, the market is already geographically segmented. The market therefore stretches out over the radius of 30 km around the factory (Pfitzner & Krishnaswamy, 2007, p.31). In the course of the expansion strategy, the markets of Pabna, Rajshahi, and Dhaka have been added. Beside the geographical parameter, the market has been segmented based on socio economical factors. The result is featured in illustration 13.

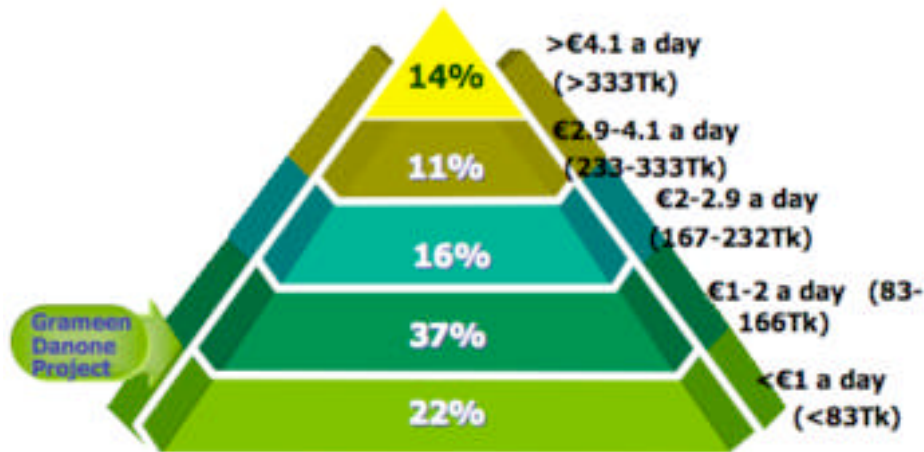


Illustration 13 (Danone.communities, 2007, p.2). *Socio economical segmentation of households.*

The Grameen Danone Project aims at targeting the households that live with less than two Euros per day (Danone.communities, 2007, p.2). This is about 60% of the total population. The mission of GDFL is to bring daily healthy nutrition to low income, nutritionally deprived populations in Bangladesh. However, children are the main target group (compare goals of GDFL).

5.1.3.2 Product

In order to “bring health through nutrition” to the target groups, GDFL developed the Shoktidoi. This yoghurt consists of cow milk, date molasses and sugar, which contain essential nutrients such as protein and calcium. Additionally, it has been enriched with essential micronutrients such as vitamin A, iron, zinc, and iodine. As a result the Shoktidoi covers 30% of daily nutritional needs of a child.

However, the product development was not easy to achieve. First, although Danone has a very rich expertise in development of food products, it lacked specific knowledge about nutrition in developing countries. Therefore, a partnership with the Swiss based NGO Global Alliance for Improved Nutrition [GAIN] has been established. However, the product development efforts faced some challenges. First, it was not easy to develop a procedure for

successful enrichment of the micronutrients under the constraint of simplicity and cost-effectiveness of the overall production process (Danone.communities, 2009a). Second, the taste of the yoghurt had to match with the taste of children. The original formula had to become sweeter. The reformulated product was introduced in mid 2008 (Danone.communities, 2008). Third, the team has still to achieve product stability in the face of lacking cooling systems, especially in distribution channels. A challenge is the consistency, which liquefies when exposed to increasing temperatures. Runny yoghurt is perceived as low quality yoghurt and disliked by the consumer. Ghalib and Hossain (2008, p.10) identify this as one of the major challenges that GDFL faces and has not yet been solved. The expansion strategy, which was formulated to ensure economic survival in 2009, not only covered geographical expansion, but also the development of additional products: a mango flavoured version of the Shoktidoi and a flavoured drink.



Illustration 14. *Product designs and logo of the Shoktidoi.*

The yoghurt has been branded as Shoktidoi, which means “yoghurt that makes one strong” in Bangladeshi (Yunus et al., 2009, p.9). Rather than relying on a foreign brand or English spelled brand name, the product has a vernacular name. The brand has been supported by the creation of a mascot – the Shoktidoi lion. The promotion features both the lion and the brand name prominently.

5.1.3.3 Price

Although the price policy is not explicitly outlined, it can be assumed that the GDFL aimed at reaching a predetermined price point, which is affordable for all Bangladeshi children.

Contrary to more traditional price policy, where the price is determined by the coverage of production costs and added margins, this price policy needs a consistent consequence alignment in product design and organisational structure⁵⁹. The price target for the Shoktidoi was the amount of a normal snack in the market – about 0.15 USD or 10 BDT or less (Fernando, 2007, p. 7). Therefore, GDFL introduced the Shoktidoi yoghurt with a price of 0.07 USD (8 BDT) for a cup of 80gram (about 2.8 ounces) to the market in Bogra. As milk

⁵⁹ This is very consistence with the price policies formulated in the BOP approaches. Compare chapter 5.1.3.3 on Price Policy for further details.

prices soared, the GDFL board raised prices from 0.07 to 0.12 USD or by 70%⁶⁰. In consequence, the demand collapsed immediately. In order to recover market shares GDFL developed a smaller product of 60gram (2.1 ounces), which maintained the amount of micronutrients of 30% of the daily needs of children. This alteration of the product helped to bring down sales price to 0.09 USD. This is slightly more as the original price of about 0.06 or 0.07 USD, which Yunus et al. (2009, p.9) described that can be purchased on a regular basis even by the poorest Bangladesh family.

Part of the expansion strategy was to reach Dhaka as a market. The GDFL decided to price the 80gram Shoktidoi at 0.17 USD for Dhaka. Although not explicitly stated, this price discrimination based on geographical distance of the different markets, clearly aims to skim the bigger purchasing power in Dhaka. The two new products, which were introduced in the course of the expansion strategy, were priced at 0.10 USD for 60gram and 0.17 USD for the 80gram in case of the mango Shoktidoi and at 0.07 USD for 48gram, and 0.10 USD for 68gram for the flavoured drink. Illustration 15 gives an overview of the pricing.

Shoktidoi	0.09 USD for 60gram	0.17 USD for 80gram
Mango Shoktidoi	0.10 USD for 60gram	0.17 USD for 80gram
Flavoured drink	0.07 USD for 48gram	0.10 USD for 68gram

Illustration 15 (Danone.communities, 2009a, p.11-13). *Overview of GDFL's current product pricing.*

5.1.3.4 Place or Distribution

One of the main challenges for GDFL with respect to delivery is the lack of cooling systems in the distribution network. However, the proximity strategy helps to counter this challenge because production, storage, distribution and consummation take place in a narrow area. This should diminish the need for cooling because the distributor can source fresh products on a daily basis directly from the factory or products are delivered to their doorsteps (Ghalib & Hossain, 2008, p.10).

⁶⁰ These figures have been taken from the presentation of Danone.Communities (2009a) on the progress of GDFL. However, in the original, the presentation states an increase in price by 60%. But this is simply a flawed calculation. Apart from that detail, the paper outlines that not all the figures are consistent: whereas both Danone.Communities (2009a) and Ghalib and Hossain (2008) talk about a sales price of 0.07 USD, Yunus et al. (2009) submit a sales price of 0.06 USD. This inconsistency holds also when the sales price is expressed in BDT. Whereas Yunus et al. (2009) states that the sales price was 8 BDT on the time of product launch, Ghalib and Hossain (2008) give the figure of 5 BDT per sales unit. This is confusing because the difference is even higher when one compares the ratios of USD to BDT prices of both authors.

This paper follows the financial details of Danone.Communities (2009a) because it is published most recently – in July 2009. The work of Yunus et al. was published in February 2009, whereas Ghalib and Hussain published in 2008.

The distribution is mainly based on two channels: the „door-to-door“ sales and the sales through little shops and stores. The „door-to-door“ sales are ensured by the „Grameen Ladies“⁶¹. The ladies receive a one-day training, which trains them in sales skills, knowledge on health and hygiene, and cool chain management (Danone.communities, 2009b). They are supplied with yoghurt in a branded cooling bag on a one-day micro credit base. The Grameen Ladies sell the GDFL products with a little margin. However, they are not employed by the GDFL and their unsold products are not taken back (Yunus et al., 2009, p.11)⁶². There is no clear picture to draw when it comes to the income of such Grameen ladies. Whereas the GDFL states that a sales lady can earn between 1.23 and 1.45 USD per day by selling 50 cups, Ghalib and Hossain (2008, p.10) submit that profit margin per cup is only 0.5 BDT per cup. Consequently, selling 50 cups would generate a net income of 25 BDT (about 0.3 to 0.4 USD, depending on exchange rates), which is far less than 1.23 USD.



Illustration 16 (Danone.communities, 2009a & Danone.communities, 2007). *Grameen Ladies selling from door to door with cooling bag.*

The number of Grameen Ladies selling Shoktidoi increased very fast in the beginning. It went from 29 in September 2007 to 270 in March 2008. However, during the crisis, which led to a collapse in consumer demand, the sales ladies' network disintegrated completely. After the recovery of the market, GDFL worked with a small and effective, more professional network of 35 ladies⁶³. GDFL aims at reaching 500 sales ladies at the end of 2009. This “door to door” selling channel covers slightly more than 20% of the sales (Danone.communities, 2009a, p.9). GDFL concludes as a lesson learned in the early stages of the project that it is essential for the recruitment of sales ladies that the husband or son approve of their activity.

⁶¹ Grameen Ladies are women, who have already participated in income generation programs of the Grameen family – such as micro credit lending with the Grameen Bank.

⁶² Although it is clear that such a framework ensures incentives to resell the purchased products, it also shifts part of the risk of product loss due to the lack of adequate cooling facilities to a very vulnerable group.

⁶³ These 35 ladies work on average 17 days per month and sell 50 cups a day (Danone.communities, 2009a, p.12). The lack of professionalism in the sales force has been pointed out as a major challenge by the managing director of GDFL in the assessment of Ghalib and Hossain (2008, p.10).

The other significant distribution channel is little shops and stores, as well as village kiosks. Although there is also the challenge of very weak cooling facilities in this channel, the endowment seems to be slightly better. Illustration 17 shows two typical village kiosks. One of them stores the Shoktidoi in his Pepsi fridge alongside some beverages.



Illustration 17 (Danone.communities, 2007 & Danone.communities, 2009a). *Examples of typical small village shops and kiosks.*

This distribution system covers almost 80% of total sales and therefore is the most significant sales channel.

In the course of the expansion strategy, which aims to use the overcapacity of the factory, a refrigerated lorry carries twice a week a load of Shoktidoi to Dhaka town.

5.1.3.5 Promotion

Due to the inadequate conventional media coverage and the high illiteracy of Bangladesh people, especially in rural areas, conventional promotion through media as television, radio and print material is not very promising and had to be questioned (Yunus et al., 2009, p.11). In consequence, advertising and promotion is primarily done by word of mouth, through centre meetings, and branch network. GDFL works a lot with images to convey messages in form of billboards and posters. E.g. they illustrate the importance of iron as energy source through the image of a child that is juggling and having fun (Danone.communities, 2008). Although these campaigns have been assessed as cost-effective and to have a powerful impact, they have failed to cover large areas, because health benefits cannot be fully conveyed through such means (Ghalib & Hossain, 2008, p.10).

In order to draw a more concrete picture of the sales activities of GDFL, the promotion activities to re-establish the consumer demand in Bogra after the crisis in mid 2008 and to introduce the sweeter Shoktidoi can serve as examples. GDFL selected the 20 best and most

promising sales points in Bogra and set sales targets. They promised them a sales price when reaching the agreed quantities of sales. Alongside, they supported such shops with banners, garlands and posters in the colours of and with pictures of the Shoktidoi. Illustration 18 shows such shops.



Illustration 18 (Danone.communities, 2008). *Examples of Shoktidoi promotion in village shops.*

Alongside the shop sales promotion, GDFL launched a campaign to introduce the new and sweeter flavoured Shoktidoi. They distributed samples of the reformulated product. Therefore, they installed stands in front of shops, but also in highly frequented public places like the attraction park of Bogra or the village museum. Nurses and health workers, who explained the health benefits of the Shoktidoi to the public, especially to mothers, supported the GDFL promotion force. The Shoktidoi lion was also part of the promotion team and children enjoyed his presence very much (Danone.communities, 2008).



Illustration 19 (Danone.communities, 2008 & Danone, 2009a). *The Shoktidoi lion in action.*

In the course of the expansion strategy GDFL produced and launched its first television advertising in March 2009⁶⁴. Both commercials, the English and the Bangladeshi, cover the nutritional value of Shoktidoi regarding the development and wellbeing of children. They both work very much with emotional pictures.

⁶⁴ The GDFL advertising can be watched on youtube under the URL:
<http://www.youtube.com/watch?v=KzsJAF1uD7g> or <http://www.youtube.com/watch?v=Nsf89OIRPMg>.

5.1.4 Financial Aspects

GDFL has been established on a 50-50 joint venture between Danone and the Grameen Bank group with an authorised capital of 3.67 million USD and a paid-up capital of 1.103 million USD. Danone is only allowed to take out its initial cost of capital of USD 500'000 after three years⁶⁵.

GDFL explicitly follows a social business model, which operates does not operate on the sole objective of maximizing financial profits for its shareholders. Based on the restriction of no-loss, it aims to maximize social benefits for its stakeholders. Therefore any profits, beside the cost of capital, will be invested in the growth and development of the company (Ghalib & Hossain, 2008, p.5).

The sales performance of GDFL is developing positively on an annual level, although the sales curve is very bumpy when looked at on a monthly base. The crisis in mid 2008 and the expansion strategy contribute very much to this development (Danone.communities, 2009a, p.17). Illustration 20 shows the sales performance per year in tons and USD.

	2007 ⁶⁶	2008	2009 (until mid)
Sales in tons	86.1	164.95 (+92%)	551.2 (+234%)
Sales in USD	70'852	184'392 (+160%)	833'393 (+352%)
Cups sold per day	3414	6532 (+91%)	22'894 (+250%)

Illustration 20 (Danone.communities, 2009a, p.17). *Overview of the sales performance of GDFL between 2007 and 2009.*

Although the sales performance looks very promising – with higher growth rates in USD sales than units or tons respectively –, GDFL has not yet reached break even. GDFL identifies the food crisis in Bangladesh in mid 2008 as a main cause for this development. However, the period of 2009 started better and based on the acceleration of sales volumes since October

⁶⁵ In the long run, it is difficult for companies to finance such ventures because the managements face the obligation to report its activities to its shareholders. It is impossible to show how such ventures will increase profits or the shareholder value in the middle and long run, and there is not a lot of evidence supporting that CSR programs affect company performance positively. However, Danone found an innovative form to fund such projects. It created the „Danone.Communities“ fund, which aims invest 90% in common financial market operation to generate return on investment. The remaining 10% is invested in social businesses, which do not pay any ROIs. Over 30% of Danone employees have already opted to invest part of their profit-sharing income in the fund. It already raised some 135 million USD (Yanus et al., 2009, p.18).

⁶⁶ The fiscal year in Bangladesh is from the first of July of the base year to the 30th of June of the following year. That means that 2007 in this table covers the period of 1st of July 2006 until the 30th of June 2007.

2008, GDFL estimates to reach profitability at the Bogra plant in 2010 (Danone.communities, 2009a, p.18). There are other indicators, which lead to the conclusion, that GDFL might reach profitability soon. GDFL plans to build another factory in 2010 (Danone.communities, 2009a, p.18) and Danone plans to implement its Bangladesh experience in their dairy strategy in India in order develop a business model accordingly (Business Standard, 2009).

5.1.5 Strengths and Weaknesses

The GDFL has successfully married competencies of its two parent organisations and was thereby capable of creating a holistic value chain process. On the one hand, it was able to establish a very valuable product. Additionally, it redesigned its production process in a manner that relies on simplicity and deskilling for more manual labour. Furthermore, the production is aligned with locally available resources or with a framework to establish local capacity to do so, such as in case of milk and date molasses production. On the other hand, Grameen's involvement allowed for effectively reaching the target population and relying on already established capacities, such as organisational capacity, milk producers (Grameen Livestock and fisheries), distribution networks (Grameen Ladies), and others.

Furthermore, the JV is clearly based on a mutual understanding of its mission and financial agreements. This guarantees that GDFL serves a social cause and will be managed in this sense in the future⁶⁷.

The mission of GDFL to bring health through nutrition to Bangladesh people, especially to its children, is very valuable. The major strength of GDFL lies in its commitment to financial stability, which ensures the continuity and therefore a base for sustainable efforts to combat malnutrition and poverty. Although the development in sales volumes is clearly positive, GDFL has not yet achieved financial stability. Therefore, the venture is not yet financially successful. However, due to the nature of social business, overall success is not only determined by financial performance, but also by social development – regarding poverty or health levels. Such developments are hard to assess, since projects in the context of BOP

⁶⁷ Grameen has teamed up with the Norwegian Telenor in form of Grameen Phone. This venture aimed to bring affordable mobile telecommunication to the poor of Bangladesh. The venture has been very successful in financial terms and has been celebrated as a successful BOP approach (Seelos, 2008). However, when Grameen wanted to convert Grameen Phone into a social business by giving the poor the majority of shares in the company in order that they benefit from the soaring profits, Telenor refused to sell its share (Yunus et al., 2009, p.12-13). Although Telenor hasn't agreed to sell its shares, the business did contribute to wellbeing of the poor by bringing them affordable telecommunication and creating local employment. Therefore this paper takes the point of view that the Grameen Phone venture is a successful BOP business although it might not meet the requirement of Yunus' concept of social business.

usually lack a conclusive framework and adequate metrics⁶⁸. However, GDFL has started to assess the impact of the project on their sales ladies, relying on 10 indicators that are also used by the Grameen Bank (Danone.communities, 2009a, p.15). This is necessary since there are serious doubts about the potential for income generation for the sales ladies. However, in order to have a more accurate picture, such assessments should also be applied for the supply chain, such as the micro farmers. Another important aspect is the impact of Shoktidoi on health and development of children. GDFL started a study, conducted by John Hopkins University, USA, in this matter. Results are expected at the end of 2009 (Donone.communities, 2009a, p. 14)⁶⁹. Regarding health, there are two aspects, which seem worth discussing. First, it has to be seen how the (necessary) price increase would affect the reach of the poorest of poor because of their price sensibility. Although the increase seems marginal in absolute terms - it increased from 0.06 or 0.07 to 0.09 USD -, the relative increase is considerable. The price for a Shoktidoi soared by 33% or by 29% for a smaller unit. However, the micronutrient value has been kept. Second, it is not clear if Shoktidoi can successfully combat malnutrition among the youngest. As pointed out in the section on malnutrition, such deficiencies are worst for children up to 2 years, because damages are irreversible. Therefore, efforts to combat malnutrition are most effective when they reach this vulnerable group. However, as Shoktidoi is a yoghurt and yoghurt is generally not recommended for infants⁷⁰.

There are other aspects worth to discuss. As pointed out before, GDFL has produced TV commercials, which were launched in March 2009. However, Yunus et al. (2009, p.11) have pointed out that TV coverage is rather weak, especially in rural areas. Therefore, it is difficult to understand why such a TV campaign has been launched. It might be related to the plans to expand further to Dhaka, either by more supply from the Bogra factory or the planned construction of a factory in Dhaka in 2010. Therefore it might make sense to increase visibility in a market where TV coverage is significantly higher. However, people having access to TV are in general not the people at the income levels, which have been targeted

⁶⁸ Compare section 42.2 on Evidence for further details.

⁶⁹ The study, which is financed by GAIN, assesses the development of children over a period of 6 months on the criteria of morbidity, growth, cognitive development and status indicators. It will have one Shoktidoi test group, which will be compared to the control groups of children, consuming regular, unfortified yoghurts and another group having no yoghurts at all. However, Yunus et al. (2009, p.21) point out correctly that such indicators suffer from greater time lags and the impact of health on children might only be measurable in a couple of years.

⁷⁰ Although there are no details available to this paper that show that the Shoktidoi is edible for children from 0.5 to 2 years, Yunus et al. (2009, p.19) state that nutritional profit or benefits should be strong for children between 3 and 15 of age. Therefore it can be assumed that the Shokidoi targets this age group.

through the project, and supplying Dhaka town from Bogra runs counter the strategy of proximity. Therefore, this arouses suspicion that some of the social priorities are sacrificed for the sake of financial stability.

Furthermore, promotion for nutrition and healthy habits requires basic education on nutrition, which is a public good and might be a task for a social marketing by government authorities or development agencies. Because of the strong consensus about the impact of malnutrition on the development of children and its negative contribution to poverty, it might be possible for GDFL to get the support of international development agencies. The objectives and status of GDFL that profits are not paid to its shareholders should facilitate this matter. On top, Yunus is a highly respected person in the development community and might be the perfect ambassador to launch such an initiative. Such a public private partnership could contribute significantly to the social and financial performance of GDFL⁷¹.

In conclusion, the paper appreciates GDFL for its contribution to combat malnutrition and its holistic value chain approach, which both aim to reduce poverty. Additionally, this paper believes that GDFL can achieve financial stability. Therefore, GDFL can contribute a sustainable effort in development and lead the way for other ventures to follow.

5.2 The Case of Antenna Nutritech

The case of Antenna Nutritech has been chosen because of the author's hands-on experience in the project. Such experience should contribute to the value of the paper and show the challenges, which such a project faces up to at the forefront of combating malnutrition. Therefore, this chapter is based on the field report of the author, which can be found in the annex A.

5.2.1 Background and overview

Antenna Technologies [AT] is a Swiss based NGO, which aims to cover the basic needs of people in developing countries by innovating and simplifying certain technologies in order to adapt them and make them available to the socio-cultural conditions of these people. Such technologies cover the areas of "Energy and Lighting", "Drinking Water", "Medicine" and

⁷¹ Hindustan Lever teamed up successfully with development agencies such as the WHO and government authorities to promote soap use in rural India, helping to increase sales in their dedicated soap product (compare section 4.1.3 on Promotion and Consumer Education for further details).

“Malnutrition”. In order to operate projects in these areas, AT cooperates with local NGOs in developing countries (Antenna Technologies, 2009).

In order to contribute to the combat against malnutrition, AT works in 12 countries introducing Spirulina as an effective tool for such efforts. The involvement of AT in India dates back to 1995 when AT started the partnership with Antenna Trust India [ATI] to “enable rural women and children to progress towards minimal required level of individual nutrition status through Spirulina production and distribution” (Antenna Trust India, 2009). Today, Antenna Green Trust [AGT], a sister organisation of ATI, produces Spirulina at two production sites in the surroundings of Madurai, Tamil Nadu, India⁷². In order to increase the impact of the project, AT tried to establish a partnership with Christian Child Fund India [CCF]. Therefore, AT conducted a feasibility study on a scaling-up plan to establish a larger but decentralised production base with some 40 centres and ensure their operation capacities by creating a marketing company that buys the produced Spirulina (Heierli, 2006). However, this project never materialised⁷³. Nevertheless, the idea to set up a marketing company, which aims to ensure production by selling into different markets, remained and led to the foundation of Antenna Nutritech [ANT] in 2008.

5.2.2 Business Model

ANT is part of the efforts by Antenna to combat malnutrition. In order to place such efforts on sustainable grounds, the AT management created ANT on the basis of the logic of BOP approaches⁷⁴. Hence, ANT covers the commercial side of the Spirulina project and thereby ensures sustainable production of Spirulina by AGT, but also by other partners. Illustration 21 shows the role of ANT as a link between the production side and the markets. It buys the Spirulina production of ATG and its partners in raw form and ensures the processing of Spirulina into value added products, such as pills and capsules for example. It is thereby an essential part of value chain of Spirulina.

⁷² A new production site has been developed in 2009. However, it has not yet been operative on a significant level.

⁷³ Although Child Fund India has not realized the project of the 40 Spirulina production centres, some of its local partner organisations have been convinced by the benefits of Spirulina. They have been trained by AGT and started to produce Spirulina. They are still part of the Antenna Spirulina network and Antenna Nutritech purchases regularly from them.

⁷⁴ AT emphasis that such needed business approaches should take place in a socially oriented framework and not be the part of market expansion (Heierli, 2006, p.1). Therefore, this approach is congruent with the BOP 2.0 approaches and also very similar to Dr. Yunus model of Social Business (compare the case study on GDFL).

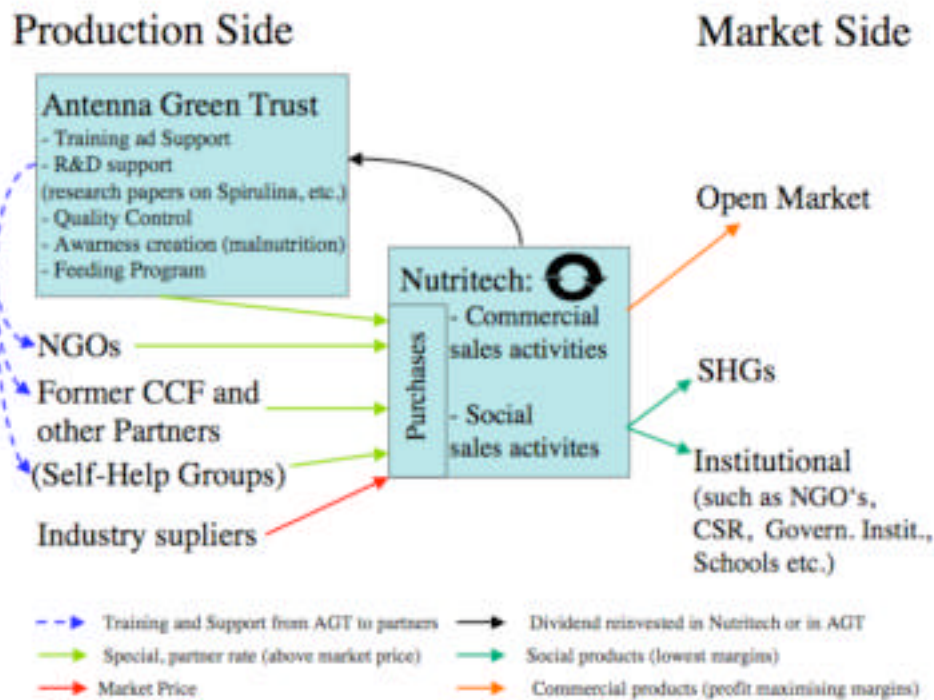


Illustration 21 (Annex A, p.96). *The role of ANT as a link between producers and markets.*

On the supply side, the business model relies on local sourcing. On the one hand, AGT favours a “deskilled”, small-scale production process over automatised⁷⁵. This suits local labour conditions and creates employment. There are currently two production sites. The first one at Kadachanenthal consists of around 30 Spirulina tanks, which cover the around 500m². The second production unit is planned to nearly double the production capacity to around 980m². AGT works exclusively with women in its Spirulina production. The process is relatively easy and straightforward, but it requires a wider range of skills to handle purely manual work, which consist of harvesting, stirring water, drying, managing water and fertilizer levels among others (Heierli, 2006, p.15)⁷⁶.

⁷⁵ Although this holds for the original production site with the training facilities at Kadachanenthal, there are plans to implement more automated process in the newly developed production site.

⁷⁶ This paper does not cover very detailed insights in the production of Spirulina. For further information, the paper recommends to consult the feasibility study of Heierli (2006) or visit the Intergovernmental Institution for the use of Micro-Algae Spirulina against Malnutrition [IIMSAM] homepage under <http://www.iimsam.org/index.php>.



Illustration 22 (Heierli, 2006, p.26-27). *Pictures of the Spirulina production site at Kadachanenthal.* From left to right: Spirulina tanks, a woman at harvesting, a worker measuring the required amount of fertilizers.

However, there are plans to make the production less labour intensive and implement more automated process steps in the newly developed production site. This should contribute to decrease production costs⁷⁷.

This business model, which is based on small scale Spirulina production, has two main advantages: first, “it is possible to build up sustainable production and distribution with very small investments” (Heierli, 2006, p.9). Second, Spirulina is a very cost-effective mean to combat malnutrition due to the ratio of production costs and its nutritional value.

Furthermore, it is easier to impart such deskilled production procedures to other NGOs and partner organisations. Additionally, low upfront investments for production make partnerships with other NGOs more likely. On the other hand, local production enables to customize and develop products to local needs, thereby relying on locally available resources. Besides including local resources, product development that is based on local needs can also enhance product acceptance among the target groups. The “Spirulina chikkies” or the recently developed Spirulina Candy (Green Tongue) can serve in this context as good examples (Heierli, 2006, p.14).

On the market side, the business model identifies children and women as the primary target group. However, in order to make products as affordable as possible for these vulnerable groups (BOP), the venture also target markets with more purchasing power for reasons of cross subsidizing⁷⁸, e.g. the institutional and open market. However, it is a very hard task to

⁷⁷ AT tests such alternative production processes in Africa. Once, it gained sufficient experience, this knowledge is supposed to be transferred to India (Annex A, p.103).

⁷⁸ Cross subsidies might be used to cover common fixed costs. However, any product should be at least marginally profitable and not generating losses. Otherwise, such products clearly put the sustainability of the ANT at risk.

reach the real needy. Therefore ANT aims to involve SHGs into its value chain. Thereby ANT not only aims to reach women and mothers and their children, but also to generate income opportunities. In order to reach such SHGs successfully ANT works with Antenna Micro Credit Support System [AMCSS] and its local partner NGOs.

Selvendran Duraikannan, the current manager, has established ANT in 2008 and has operated the company since then. He owns the company completely and has financed working capital and assets with his private savings. Although there is a clear aim that AT gets ownership of the company and Selvendran Duraikannan acts as a Managing Director with a regular salary, the company registration, which is a precondition for FDI, has been very cumbersome and has not yet been completed. The main challenges of company registration lie first in the difficulty to find an adequate lawyer. The hybrid concept of a social company, which aims to make profits, challenged lawyers in both finding an adequate company form and having the knowledge and the connection to the Indian authorities to successfully register it. Regarding to the form of the company, there was the question if either a private company registration or a Section 25 company suits better for ANT. The first would have offered quite an independent management of the company, but faced the restriction that a local Indian citizen should own 26% of the company. Additionally, the Indian government would have claimed a share of the FDIs in ANT. Therefore AT and ANT decided to register for a Section 25 Company under the Companies Act of 1956. However, this type of company also faces some restriction, which will constrain the management of ANT in the future. E.g. the company needs a special approval to reimburse its directors or consultants. Therefore, Selvendran Duraikannan, the future Managing Director of the company, as well as other directors and consultants, need such a special approval for regular salaries or even nonrecurring reimbursement. On the other hand, there are no restrictions regarding ownerships and FDIs. Furthermore, the social mission of the company is fixed in the articles of association. Therefore the company is not allowed to pay its shareholders dividend, but has to use its profits for future company development or social purposes, which are connected with its mission. This is a very important point for further, possible partnerships. First, aims and goals are clear⁷⁹.

Furthermore, it eases the partnership with other NGOs, development agencies and private

⁷⁹ Such clarification avoids future conflicts between partners. Such conflicts erupted in the case of Grameen Phone. The two partners, Grameen Bank and Telenor, have different conceptions what to do with the soaring profits. Whereas the Grameen Bank wanted the poor to participate in the profits by handing them over the shares, Telenor refused to sell its shares (Yunus et al., 2009, p.12-13).

donors. Such actors face accountability restrictions to their principals and it is easier to legitimate contributions to such a Section 25 company than to a privately owned one. E.g., the Volkart Foundation seemed to be reluctant to support ANT in case that Selvendran Duraikannan would hold any shares (Annex A, p.100-101).

Furthermore, it was a challenge to find adequate persons for the board and as members, who were required to initiate the company registration process. Such persons should be capable of meeting their obligations and have some experience in the field of nutrition or development or social work. Additionally, AT's preference to have as many women as possible in the company, posed further challenges to the registration process⁸⁰. The process has been initiated in April 2009 and is not expect to be completed before the beginning of 2010.

5.2.3 Marketing

This section is dedicated to the classical 4 P's of marketing. However, it will also include the additional P of people in order to emphasise the importance of people in the context of the combat of ANT against malnutrition. It is integrated in the part on promotion. Nevertheless, it starts with the segmentation of the market because such segmentation is a precondition for the formulation of any marketing instrument.

5.2.3.1 Segmentation and Positioning

ANT distinguishes between several marketing parameters. First, it segments the market based on demographical criteria – such as socio-economical factors, age and/or gender. Furthermore it defines markets by geographical characteristics, such as distinction between rural and urban areas. An additional criterion is the grade of organisation and institutionalisation of consumers – e.g. NGOs, governmental organisations, SHGs, or regular consumers. This leads to three market segments. First, there is the open market in urban areas, where people are able and wiling to invest in micro nutritional products like Spirulina. Second, there is the institutional market, which includes NGOs, governmental organisations, developing agencies, CSR programs and alike. Actors of this segment usually conduct relatively large-scale feeding programs for their “clientele”. This can be, for example, a (therapeutic) feeding program for HIV infected people or a feeding program for children within the framework of a CSR

⁸⁰ It is already challenging to find men that have an adequate education, speak English, have both social and business skills and are willing to participate in such a project. This is even more challenging for women, giving their inferior level of education and their social status. E.g. a promising candidate could not become member of ANT because her brother refused to give her his approval.

program. The third identified market results from the “raison d’etre” of ANT, which defines also its social mission of combating malnutrition of women and children. These people are among the poorest and most vulnerable and live predominantly in rural areas and urban slums. These people represent the BOP market. Based on the underlying subject of the paper, this part of the case study on ANT focuses on the BOP market and covers the aspects of the other markets where necessary.

ANT faces the challenge of positioning itself in these markets in the most adequate way. It has to carefully avoid to be linked with the treatment of diseases such as HIV/Aids, diabetes and so forth and to be considered as a product for the morbid. In any case, it is not a medicine and ANT lays emphasis on not being recognized as such. Hence, it has positioned itself as a “natural supplementation”. Additionally, ANT also avoids to be seen as a product for the poor, which might lead to reluctances of potential buyers (Heierli, 2000, p.23). Hence, since price is considered as an important indicator of quality, pricing seems to be very important and it makes no sense for a business based development project to give any products for free⁸¹.

ANT has already a rather broad product portfolio. Illustration 23 gives an overview of the identified markets, the existing product portfolio, distribution policy and the prices, which can be realised by ANT or have to be paid by the end customer respectively.

Market	Product	Place (Distribution)	Price ANT receives (in INR)	Price for the consumer (in INR)
Open Market	Tablets 100	Indirect	120	275
Institutional/Open Market	Capsules 100	Direct Indirect	Order related price 90	275
Open Market	Strips	Indirect	120	275
Open Market	Drum (Tablets)	Direct	33’000	33’000
Open Market/ Institutional	Powder	Direct	750-1500, depending on quantity	750-1500, depending on quantity
Institutional	Tablets 180	Direct	200	200
Institutional	Chikkis	Direct	n.a.	n.a.
SHG	Tablets 60	Indirect	69	99
SHG/Institutional	Juice ⁸²	In trial	5/10	5/10
SHG/Institutional	Candies ⁸³	Indirect	35	50

Illustration 23 (Annex A, p.114). *Overview on the existing product portfolio and the corresponding distribution and price policy.*

⁸¹ Kotler and Roberto (1991, p.198) point out that consumer can perceive the quality of a product as inferior or lose interest when prices are too low.

⁸² There are two different juices, which have been tested: Spirulina limejuice and Spirulina Hibiscus Juice. The first has been sold for 5 INR and the latter for 10 INR.

⁸³ The Spirulina candies are sold in packages of 50.

5.2.3.2 Products

All the products of ANT are based on Spirulina. This micro-algae is very rich in micro nutrients. It has a protein content of 50% to 70% and is therefore an excellent source of protein⁸⁴. Additionally, Spirulina contains all the important vitamins, less vitamin C⁸⁵. It has a very high content of vitamin A. As pointed out before, vitamin A deficiencies are one of the severest problems of malnutrition. Just one gram of Spirulina has enough vitamin A to cover the daily requirement of a person. Regarding minerals, Spirulina contains of both iron and zinc among others. The iron content is very high and Spirulina is therefore an effective tool to combat the highly widespread iron anaemia. Such deficiencies are especially severe among pregnant women and children, and even worse in cultures, which are traditionally based on a vegetarian lifestyle, such as India. The natural levels of zinc in Spirulina are not very high. However, AGT successfully enriches its Spirulina with additional zinc⁸⁶. Hence, Spirulina is a very effective and cost-efficient tool to combat malnutrition (Heierli, 2006, p.10-13) because it can contribute successfully against the most severe forms of malnutrition, such as vitamin A, protein, iron and zinc deficiencies. However, Spirulina does not contain iodine and therefore does not help to combat such deficiencies.

As Spirulina is an alga, it has a very strong and fishy taste. This clearly represents a product hurdle, as most people dislike this specific tang. Therefore one of the main tasks for Antenna Nutritech is to establish value added products, which avoid or minimize the fishy taste. A second challenge is the colour. The typical Spirulina colour is as a toxic green and underpins the alga or fishy its appearance. Raw powder is sticky, especially if it gets in contact with water. Further, it is not easy to manage to intake the exact amount of the recommended daily dose when it comes to raw powder. For these reasons, Spirulina has to be transformed in products, which are easy to consume, such as pills or tablets, capsules, sachets, juice and candies (Annex A, p. 105).

ANT has mainly two products to work the BOP market. First, there are flasks featuring 60 tablets of 750mg. Such tablets are also sold in the open market and represent a USP due to its

⁸⁴ Heierli (2006, p.33) points out that although Spirulina is a very good source of protein, it is rather a supplement and not a replacement of other sources. Spirulina consists of 50% to 70% of proteins; the daily required intake is therefore too big that Spirulina could satisfy all of the daily needs. Otherwise a person has to intake about 20 grams of Spirulina.

⁸⁵ This paper recommends the homepage of IIMSAM for further details on Spirulina.

⁸⁶ Horton et al. (2008, p.3) point out that zinc is important for treating diarrhoea. Additionally, zinc has been seen important on its positive effect regarding morbidity, mortality and growth.

size and quality⁸⁷. The products are more or less the same. The most important difference is the quantity a flask features, e.g. 60 instead of 100 tablets, because of aspects of affordability.



Illustration 24. An example of the Spiru Power 60 tablet flask.

Illustration 24 shows ANT's flask of 60 tablets. It has been featured under the same brand as the product in the open market, Spiru Power.

In the context of combating malnutrition among children, ANT developed the Spirulina enriched Chikki⁸⁸. Although the Chikki seemed very promising at the beginning, the main reason why the chikkis are not used or sold on a larger scale is their shelf life. According to Arthi Duraikannan, head of AGT and technical expert on Spirulina, and Selvendran Duraikannan the shelf life of such Spirulina enriched Chikkis does not exceed a month. Therefore, Chikkis are good products for feeding programs, where the planning allows for limiting the time gap between production and consumption. However, the short shelf life poses major challenges on decentralised distribution systems, such as door-to-door selling by SHGs. In consequence, ANT developed a product, which has a long life, which children accept easily, and which is also cost-efficient: a Spirulina enriched Candy. After a trial of different flavours, ANT plans to produce mango, vanilla and natural candies.

⁸⁷ „Competitors sell tablets or capsules at 500mg per unit. Perry e.g. sells capsules at 500mg. Furthermore, the purity or quality of Spirulina, in form of colour, structure and taste, can be “seen” or “touched” easily when it comes to a tablet. Such details are not as tangible in a capsule“ (Annex A, p.105).

⁸⁸ The Chikki is a good example of product development based on local needs and resources. A normal Chikki is a kind of energy bar, usually based on peanuts, and one of the most popular snacks for children. Therefore it is already widely accepted. Furthermore, the Spirulina enriched Chikkis lost their fishy taste and were easy accepted by children. ANT used the Chikki in various feeding program, e.g. in a CSR program, originally started by Switcher. Due to the acceptance of Chikkis and its nutritional value – peanuts are one of the best energy sources -, the Chikki has been one of the most promising tools for the combat of malnutrition (Heierli, 2006, p.21 ff).



Illustration 25. Examples of the different Green Tongue Candy wrappers.

The candies are branded as “Green Tongue” or Sathu Mittai, which means “nutritious Candy” in Tamil. The wrapper and brand is aimed to emphasize the effect of Spirulina giving a green tongue and thereby making it very popular, especially among children.

The candies are still in development. The “Spirulina –Rural promotion strategy meeting“, held on 12th of October 2009 in Madurai, suggested to use an eco-friendly packaging and to increase the nutritional value of the candy by adding more proteins (Appendix C, p.136)., There have been candy trials during the cultural campaign of AMCSS in June to August 2009. The feedback has been good and the first sales of the trial candies have been promising (Annex A, p.115)⁸⁹.

5.2.3.3 Price

As pointed out before, pricing is essential for reaching the BOP market successfully. Affordability is crucial in this context. This can either happen through making packages and consumption units smaller or cutting costs significantly. The Spiru Power 60 flask has been priced based on the concept of reducing the size of package. It reduced the number of tablets per flask from the original size of 100 tablets, which is sold in the open market, to 60 and reduced prices disproportionately, from 275 to 99 INR for end consumers. This reduced net margins significantly to some 16% and is the lowest in ANT's product portfolio (despite the candies). Even now, the 60 flask is relatively expensive for BOP consumers, which usually do not earn 99 INR a day (Annex A, p.109). However, Selvendran Duraikannan thinks that it is important that costumers buy such quantities because Spirulina has no immediate effect after

⁸⁹ The candies have been sold in the first trial phase under existing wrappers of other producers. This helped to keep product development costs and trial phase expenditures as low as possible in face of the fact that the marketing strategy was not developed then.

consumption⁹⁰. In order to show health improvement and thereby the Spirulina effect, tablets have to be consumed for at least two weeks - a period, which the flask of 60 tablets can cover⁹¹.

	ANT			Partner NGO			SHG's		
	Costs	Price	Margin	Costs	Price	Margin	Costs	Price	Margin
Candy	0.89	0.7	-0.19	0.7	0.8	0.1	0.8	1	0.2
Candy Package	44.50	35	-12	35	40	5	40	50	10
SpiruPower 60 flask	58.30	69	10.7	69	75-80	6-11	75-80	99	19-24

Illustration 26 (Annex C, p.140-141)⁹². *BOP-Pricing with margins for ANT and partners.* The candy has been priced on the concept of inverse pricing. The predetermined price point is 1 INR, which is the upper price range for a regular snack in India, which children can afford with their pocket money. ANT has therefore tried to set up cost and pricing structures accordingly. However, as the newest calculations show, the total costs are still at 0.89 INR per unit⁹³. Due to the distribution model and resulting pricing structure, net margin for ANT is negative - with -27% even highly negative. In the meantime the costs might even increase further. As ANT is going to cross the amount of 500'000 INR sales per year, it has to sell its products with the value added taxes. As the price is fixed to 1 INR, these taxes should be borne by ANT. However, it seems that ANT and AMCSS have found a long-term solution by founding small-scale industry to avoid such taxes. In the short run, ANT should work on promoting candies without any such additional taxes (Annex C, p.140-142).

The management of AT and ANT is confident to cut costs per unit by economies of scale. The main cost drivers of the candy are Spirulina (0.25 INR per unit), the “candy making costs” (0.36 INR) and the margins for NGOs and SHGs. Candy process costs should fall by increasing quantities. Competitive products without any nutritional value are priced at 0.5 INR. Therefore it can be reasonably assumed that such candy making costs are significantly lower by increased quantities⁹⁴. There might be potential to decrease costs of Spirulina production in the recently developed production site of AGT. As trials in Africa show, a more automated process might cut costs by reducing labour costs⁹⁵. Additionally, there are plans to

⁹⁰ Significant health improvement, especially caused by chronic malnutrition, needs some time and depends on the overall health status of a person. However, Spirulina can have an immediate „energy“ effect.

⁹¹ However, it depends on the daily dose of a person, how long such a flask lasts. 60 tablets last 20 days in the case of an adult.

⁹² Prices in the table are in INR.

⁹³ The calculations presented in the „Spirulina –Rural promotion strategy meeting“ were even higher. The reduction of 0.05 INR per unit was achieved by calculating tighter on Spirulina costs. Therefore VC are about 0.79 INR and FC about 0.10 INR.

⁹⁴ Otherwise, competitors would face „candy making“ costs of more than 70% of sales price. This seems unrealistically high.

⁹⁵ This clearly represents a dilemma between the goals of improved nutrition and providing income generating activities for women.

cut input costs by replacing common fertilizer with “struvite”⁹⁶. According to the AT management such fertilizers should be cheaper. Furthermore, increasing value might help to decrease the percentage which NGOs claims for their intermediary activity. It is clear that they have to be reimbursed for their work and expenditures. However, it can be reasonably assumed that such work does not increase at the same pace as quantities and therefore profits for NGOs.

5.2.3.5 Place

Reaching the right people with the right people is key for ANT. This sounds a bit odd, but reflects the challenge for ANT. On the one hand, its products should reach the most vulnerable groups of poor and malnourished children and (pregnant) women. On the other hand, it faces the restriction of creating a sustainable value chain. In this context, ANT aims to distribute through SHGs, mainly by door-to-door selling. This concept has various advantages: first, being part of the value chain, sales activities are an income generating activity. This contributes to women’s empowerment in this very vulnerable group. Additionally, it contributes indirectly to the fight against malnutrition because additional income might result in improved food intake by both women and their children. Second, such SHGs, usually consisting of 10 to 15 women, represent not only a distribution channel, but also potential consumers. Third, women are interested in feeding their children well, if they are aware of what their children really need (Heierli, 2006, p.2). Furthermore, SHGs represent an effective mean of promotion in the BOP environment⁹⁷.

ANT has the great advantage that AMCSS has already an established partner NGO network⁹⁸ and works with the SHGs of such partner in the framework of their micro credit program. Therefore ANT can reach SHGs relatively well and profit from the reputation of AMCSS⁹⁹. These partner NGOs organise SHGs and train and support them based on their mission. Regarding the involvement with ANT, they organise facilities and their SHGs for nutritional awareness activities. Furthermore, they enable sales activities by buying relatively big amounts of Spirulina products, which then in turn can be purchased by SHGs for reselling in smaller quantities. These NGOs get compensated for their services by getting paid directly

⁹⁶ Struvite is a urine-based fertilizer. It can be produced by adding magnesium to urine. EAWAG’s project STUN has assessed the social, economical and social feasibility for production at community level and hopes to achieve improved sanitation, local food security and nutrient independence (EAWAG, 2009).

⁹⁷ The next paragraph on Promotion covers such subjects in more detail.

⁹⁸ These network includes Exist Trust, MMS, DALID Trust, WED Trust, RECARD, DARB, SRED, Centrida, UTM and ICHW.

⁹⁹ Thereby ANT and AMCSS share assets, channels, knowledge and capabilities to paraphrase the World Economic Forum (WEF, 2009b, p.31).

(e.g. by AMCSS for „cultural campaign“ activities¹⁰⁰) or indirectly by percentages from sales activities (in case of ANT) or interests of micro credits (in case of AMCSS). Hence, the partner organisations play the part of active mediators in the supply chain.

A typical SHG in this context consists of 10 to 15 women, which come together to save money collectively and meet on a regular basis in order to discuss group matters, such as mutual help, what activities should be conducted, how group savings should be used etcetera. By showing the ability to save some money and demonstrating some organisational capacity, SHGs get access to micro credits, for which they are liable collectively. They usually come from the same villages or neighbourhoods and share similar social and economic backgrounds. Therefore, they represent a rather homogenous and united entity. The idea of micro credit programs is that group pressure and internal mechanisms ensure repayment rates. As a matter of fact, the repayment rates are usually impressive.

However, although the sales channel seems very promising, the actual sales haven't kicked in yet impressively. The sales performance of the 60 flasks exemplifies such developments (illustration 27)¹⁰¹.

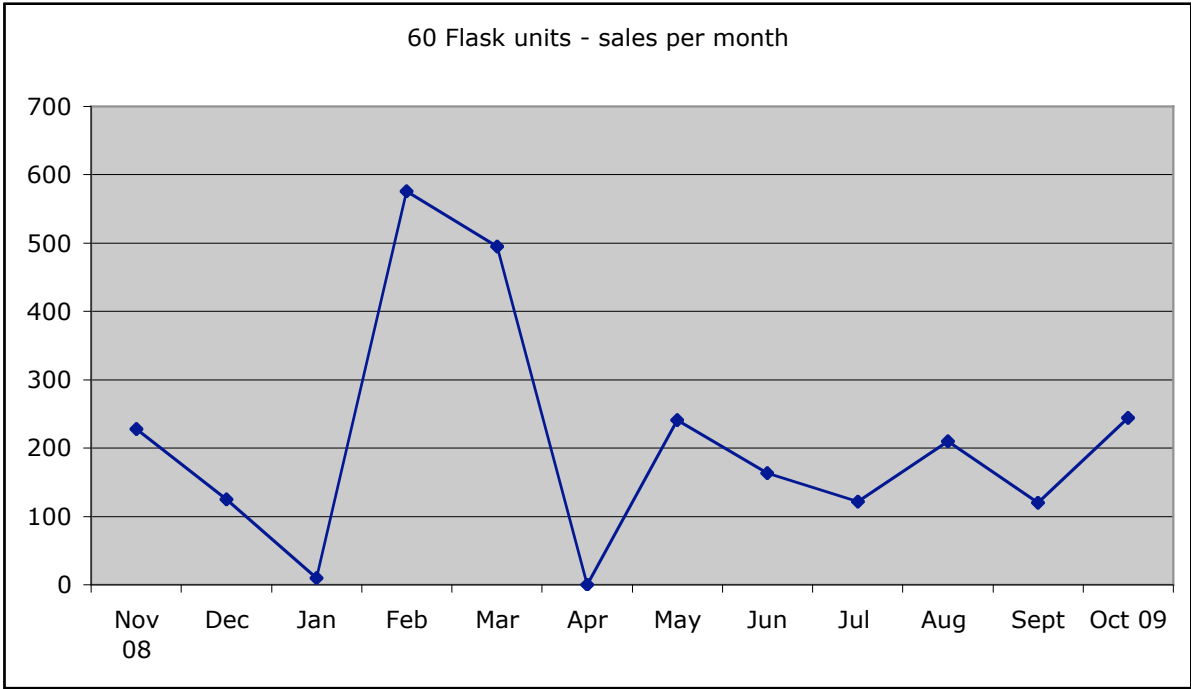


Illustration 27. Monthly sales performance of the 60 flasks in units.

¹⁰⁰ The paragraph on Promotion covers more details on the cultural campaign.

¹⁰¹ However, one should consider that the product has only been in the market for about a year. Therefore, insights on performance regarding trends are rather limited.

There are two main reasons for this. First, although the 60 flask is very valuable product, there was a product missing, which could reach the masses of rural poor. The lately developed Green Tongue candy is aimed to be that missing link. Second, although there have been efforts to establish a SHG sales network, they have not been executed with strong commitment of partner NGOs and based on a holistic sales strategy, which would have synchronized promotion activities and building of sales channels¹⁰². This has clearly changed. ANT and WED Trust set up a strategy and action plan to promote the Green Tongue candies and establish the Spirulina business as an income generating activity. Such efforts are supported by dedicated NGO workers and promotion campaigns. ANT aims to use this strategy and action plan for future partnerships with other NGOs (Annex C, p.137). The first report on such activities shows that SHGs are interested in taking up Spirulina as a business. In consequence ANT aims to support them by special training on Spirulina and sales skills (Annex B, p.132)¹⁰³.

5.2.3.6 Promotion

Creating markets is prerequisite for being capable of working them. Therefore education and awareness creating are essential. However, the scope of such campaigns, that cover a subject like nutrition in a large area, is too big for ANT¹⁰⁴. Therefore, it needs to create promotion programs, which are as educational as persuasive (WEF, 2009b, p.28). As pointed out before, the coverage of conventional media, such as television and radio, is very low at BOP markets. In India e.g. only 41% have access to TV (Anderson and Markides, 2006, p.9). This figure is substantially lower for BOP markets in general and for the rural segment of such markets in particular. Additionally, literacy rates at the BOP are very low, therefore print media, which aim to convince people by information, is also little promising. ANT has two approaches in promotion. In order to create markets and awareness, it conducts awareness meeting with SHGs and cultural campaigns. On a sales level, it has SHGs that sell from door to door. This

¹⁰² With the great exception for Exist Trust, other partner organisations have not taken up the Spirulina business on a significant base.

¹⁰³ Such trainings are supposed to be conducted on a monthly basis for the period of 3 to 5 months (Annex C).

¹⁰⁴ This holds especially true for such a complex subject as nutrition. Education is a public good. Therefore, government institutions or big development agencies should address the subject of nutrition with an adequate social marketing campaign. Such a campaign could create a critical mass, which are necessary to form a market (Heierli, 2000, p.11). However, ANT does not have such means to conduct a large-scale education campaign and might aim to find partners, which are capable of doing so.

Additionally, ANT could itself confront a conflict of objectives. Education on nutrition might also emphasise other means than Spirulina to combat malnutrition. However, if ANT has to finance such campaign by the sales of Spirulina, the aim of being financially stable becomes even more challenging.

sales approach bases on personal persuasion, which has to be supported by promo material, and mouth-to-mouth propaganda.

Although malnutrition or more precisely its consequences create great problems for people at the BOP, they are not aware of the connection of malnutrition and its consequences or simply not able to understand such a problem properly. Consequently, the promotion has not simply to target a latent need and tell people how to satisfy it, it also has to educate people why to invest their very limited resource in Spirulina (Annex A, p.113). Therefore, ANT conducts awareness programs on a regular basis. The meeting are usually held as follows: a partner organisation gathers a bunch of SHGs¹⁰⁵. The organising NGO usually does an introduction. Then the ANT team speaks about Nutrition in general and ask about particular habits of the audience. It then turns to Spirulina in order to explain about its details and benefits. Banners and pictures support such explanations and highlight some aspects, e.g. a picture of the spiral shape of Spirulina, parts of the production process etcetera. Furthermore, the ANT distributes samples of Spirulina.



Illustration 28. *Photos of a typical awareness meeting.* Selvendran Duraikannan explaining about Spirulina and SHG women tasting Spirulina powder.

Newer reports on the consumer behaviour of people at the BOP highlight the importance of such product trials. Since every cent counts for such consumers, they are unlikely to spend money on products they do not trust or understand. Therefore, such awareness meeting should include education, product trials and demonstrations to explain the benefits and product usage

¹⁰⁵ The recently launched Spirulina Rural Promotion Strategy, which is developed with WED Trust, envisions to include other target groups in its awareness activities, such as college students, NGO staffs, Tamil Nadu Integrated Nutrition Program staffs, SHG leaders, Public Health Centre nurses and women entrepreneurs (Annex B, p.131).

(WEF, 2009b, p.11). However, such product benefit demonstrations are relatively difficult because the show effect is limited. Spirulina shows no immediate effect. The supplement needs time to improve health conditions. Furthermore, the effect is gradual. Hence, the effect is not that easily experienced. Additionally, Spirulina faces some product hurdles: the fishy taste, the toxic green colour and the consistence.

The WEF (2009b, p.12) report on BOP business highlights the importance of testimonies in this context. People at the BOP rely rather on the opinions of people they know and trust than on general information because they have limited access to such information or not the intellectual or educational capacities to understand them. Hence, it is much more promising to build its promotion on emotional element than on scientific arguments. Such testimonies might be even more effective or persuasive if they are socially respectable. In India such people can be the village schoolteacher or doctor, or the village (panchayat) president. Apart from persons, there are also respectable institutions, which people trust and therefore might be used in trust building activities¹⁰⁶. ANT aims to feature testimonies of Spirulina in its awareness meeting regularly. However, they have few good testimonies yet. This paper takes the stance that testimonies have a great potential to make a sustainable impact.

The other means for awareness creating is the cultural campaign. It is conducted in form of a theatre or drama. The concept is to convey the messages in stories and connect them to real life situations of their audiences. Thereby it tries to use local dialects and communication codes. The dramas also include dances and songs. Such concepts are influenced or based on the techniques of the “theatre of the oppressed” of Augusto Boal.

ANT was able to participate in the cultural campaign that was led by AMCSS in June to August 2009. The campaign aimed to create awareness in the areas of hygiene, importance of savings and nutrition. The part on nutrition was dedicated to Spirulina. The campaign was conducted in the rural areas surrounding Madurai. The drama group travelled to little villages to perform in schools for children and adolescents in the afternoon and central places and community centres in the evenings for the village people. Usually, a SHG and a staff of the corresponding NGO hosted the group. Additionally, AGT or AMCSS tried to attend the meetings and speak as experts on the different subjects after the dramas. After the meetings, Spirulina candies have been distributed to the audience. The campaign has been assessed as a

¹⁰⁶ However, especially international institutions are hardly known in rural India. Therefore using the reputation of institutions seems limited. Nevertheless, ANT has might be able to rely on the reputation of its partner NGOs and AMCSS.

successful trial and ANT plans to conduct such a campaign in 2010 if it funds are available¹⁰⁷.

Illustration gives an impression of the cultural campaign.



Illustration 29. *Photos of the cultural campaign 2009.*

Both awareness creation tools have to be conducted on a regular basis and over a long period of time to cause any sustainable impacts or even changes in nutritional behaviour. Therefore, they have to be an integral element of any marketing activities and coordinated with other tools. E.g. it does not make sense to create awareness of Spirulina and not be able to absorb the created demand by trained SHG ladies. Therefore the awareness creation tools and the promotion/development of sales channels, in particular SHG ladies, need to part of a holistic marketing approach.

As pointed out before, ANT aims to reach its consumers at the BOP mainly through SHGs. They work mainly by selling door-to-door¹⁰⁸. The main idea is that women can reach women most efficiently because they know best about the needs and problems of other women in similar circumstances. Therefore, women can reach other women in a kind of Tupperware marketing approach from peer to peer. Similar to the Tupperware sales concept, where women successfully convinced other women in Tupperware parties and made them not only consumers, but new agents themselves, SHGs are not only sales points, but also potential clients. As pointed out before, BOP clients are very reluctant to invest in products they do not know. Furthermore, these persons are more likely to trust a friend or family member rather than a sales person they do not know. Leveraging such informal communication networks by mouth-to-mouth advocacy and product trials¹⁰⁹ can be successful sales tools (WEF, 2009b,

¹⁰⁷ A more detailed assessment of the campaign can be found in the Annex (Annex, p. 112-116). It also shows the difficulties and challenges, which the campaign faced up to.

¹⁰⁸ However, there are also SHGs that have a little shop or stand and sell Spirulina that way.

¹⁰⁹ As pointed out before, the product trials face challenges, such as show-effect, unfavourable product features like smell and colour.

p.28). Consequently, such a Tupperware sales and promotion concept, has the potential to successfully penetrate the SHGs themselves by intra and inter group sales, but also reach other people. The strategy also aims to form networks that build up a common understanding of nutrition and especially Spirulina and peer-to-peer pressure¹¹⁰. However, these networks already exist within the SHG groups of the partners of AMCSS and represent a very promising consumer base.

In order to support sales activities, ANT developed a generic sales flyer, which it uses in all the markets. However, it aims to change that and have tailored promotion material for different markets. In consequence, it designed especial sales flyers for SHGs rural promotion. Illustration 30 shows this flyer in vernacular language.



Illustration 30. An example of vernacular sales flyers.

If this Tupperware inspired strategy works, it helps to combat two problems at one blow. On the one hand, it helps to reach the people who suffer most under malnutrition – women and young children. On the other hand, it helps to generate income for the women, who sell Spirulina. However, this distribution channel approach has not yet been established and has to be built. As pointed out before, such efforts should be made in very tight coordination with other promotion tools and activities such as the cultural campaign.

¹¹⁰ The alignment of social relations towards social pressure and in a broader sense social norms and values are sometimes referred to the 5th P in marketing. This P stands for people and aims to underpin the importance of people as a critical success factor. However, there are different concepts and additional Ps to the well established 4 classical Ps. Therefore, this paper aims to rely on the 4 classical Ps and include such consideration into this paragraph.

5.2.4 Strengths and weakness

ANT is a very crucial part in the value chain of Spirulina. It is the link between the production side and the markets. By creating value added products and selling them to the markets, it ensures the sustainability of the Spirulina production from ATG, but also other partners. These organisations often conduct some feeding programs. Hence, by offering its partners certain stability, ANT allows them for a degree of planning and opportunities to grow¹¹¹. This network structure enables for scaling-up rather easily with different partners that might have rather small budgets. Additionally, the production technology is rather simple and needs relatively little upfront investments. Another advantage of such simple, but sophisticated production methods, is the intensity of labour and therefore the possibility to create employment.

Another strength of ANT is the product development. ANT has developed a 750mg Spirulina tablet, which competitors fail to produce. Furthermore, it has successfully introduced capsules. Another product, 500mg tablets, which are packed in strips, is in the trial phase. The recently developed Green Tongue candy represents another innovative product, which has the potential to reach successfully the BOP markets. This capacity is rather impressive. However, ANT also faces the risk to have too many products, which may lead to dilution of the available and limited resources to the different products of the product portfolio. Furthermore, although the Green Tongue candies have the potential to reach the BOP market and combat malnutrition, they have not yet reached a sustainable cost structure. Confronted with the restriction of not pass 1 INR per candy, costs have to be decreased further, to reach financial sustainability. Although cross subsidising can absorb some of the costs, e.g. fixed costs; variable costs have to be cut. This is especially true for a high volume business as the candies. Another challenge is the measurement of costs. Flawed calculations, even very marginal, can cause rather big losses.

The diversification of different markets, not only helps to cross subsidy, but also to diversify the risk. If certain markets collapse or certain strategies do not materialize successfully, activities in other profitable markets may absorb such negative shocks. This is especially important in the case of working BOP markets where business ventures are rather risky. Therefore, this clearly contributes to the sustainability and financial independence of ANT.

¹¹¹ Although ANT is basically open for such partnerships, the precondition is that potential partners master the Spirulina production and are capable of producing a certain quality of Spirulina.

ANT has not yet achieved to establish the SHG sales channel at the BOP. However, ANT has been formed in 2008 and therefore there was probably simply not sufficient time for doing so. Additionally, there has been no holistic strategy to establish such SHGs and a lack of resources to do so. However, the resource problematic might wane. First, the ANT management has more time to dedicate to this market in the face of the completion of other projects, such as production site development or product development. Second, a successful company registration will trigger direct investments from AT. Furthermore, ANT has the possibility of accessing an already established and supportive network of NGOs and SHGs. It can profit from the reputation of AMCSS within the NGOs and the SHGs. NGOs have monetary incentive to cooperate with AMCSS because they get a third of the interests of the micro credit business. Additionally, SHGs, which have already profited from the schemes of AMCSS, might perceive another Antenna organisation positively and be more interested in working with ANT. There is even the potential to link micro credits with the Spirulina business. However, AMCSS has been reluctant to take up such business because it has been sceptical about the success and the payback of their invested credits. Their experiences in the past have been negative. Hence, there is a potential underlying conflict of objectives within these two organisations. Additionally, the AMCSS partner network has had doubts about the social commitment of ANT because of its private character until now. However, the registration of ANT as a section 25 company and an intensified cooperation should overcome such reluctances.

Creating awareness and creating a market for Spirulina is essential for the success of ANT in both social and financial terms. It is a precondition to establish BOP sales channels, e.g. SHGs, on sustainable grounds. The cultural campaign seems a very promising tool. First, it has been assessed as a success. Second, the head of AMCSS as well as the head of WED Trust, have a very rich experience in such cultural campaign. In the face of the deepened collaboration of WED Trust and ANT, there might be great potential to conduct such cultural campaign on regular basis and as an effective awareness creation tool. As pointed out before, emotional elements in such activities are very important and more promising than more information based campaigns.

6. Conclusion

The foregoing accounts reveal that malnutrition is a very severe problem. Its bidirectional relationship with growth and poverty makes malnutrition a unique challenge to development. In consequence, development efforts centre more and more about malnutrition. However, official development aid has come under pressure. On conceptual grounds, its Top Down approach has been criticized for not being effective or even counterproductive. Additionally, official development aid has been diminishing. In consequence, Bottom Up approaches have gained more attention. Private capital inflows outperform official development aid today. Therefore, there is a growing belief that private and business activities can do more for development than official efforts. In this context, the BOP approach offers a new framework for such private and business ventures.

This paper has revealed the conceptual details and unique challenges of doing business at the BOP in the middle part in order to have a solid framework to assess the two case studies in the last part of the paper. The cases have been chosen because they aim to combat malnutrition on the one hand and try to rely on strict business to ensure the sustainability of their ventures. Especially today, when the world is confronted with one of the most severe financial and real economy crises of the last almost 80 years, which make development aid or charity even more uncertain and unstable, financial stability of such efforts seem extremely important. The GDFL venture can be described as an effort on a big scale. Two MNCs have married their capabilities to combat malnutrition. ANT is a more small-scale effort from an international NGO, that established its branch and works with local and well embedded NGOs to reach its clientele. However, it has chosen a structure that allows for a future up scaling. Although, both ventures have successfully developed products that have the potential to reach the target groups and are therefore very promising to combat malnutrition effectively, they have failed yet to be profitable in their BOP business.

Both ventures face the unique challenge to balance social goals with financial success. This conflict of aims can permeate the whole value chain. E.g. ANT faces the challenge to pay AGT a competitive price, which allows them to pay their workers fair salaries. However, additional labour costs by higher salaries or relying on production techniques that involves more labour, can increase the cost of Spirulina, which in turn increases the sales prices. Higher sales prices clearly hamper the goal of reaching BOP consumers. Another aspect is the margins for NGOs and SHGs. It is necessary that SHGs get an adequate margin to take up

Spirulina as a business and get incentives to reach as many consumers as possible. On the other hand, additional margins increase the sales price. ANT also faces the challenge of allocating its resources to different markets; there is the BOP market, where margins are very small and volumes are hard to achieve because markets have to be created in the first place. On the other hand, there is the open and the institutional market, where margins are higher. Therefore the management performs a balance act to allocate resources to reach as many BOP consumers as possible, but not threaten its financial stability by neglecting the open market or vice versa.

One of the most crucial things is to find ways and means to reach BOP consumers, in the face of the infrastructure deficits that such markets face. Both ventures have chosen SHG sales ladies to sell their products at the BOP. GDFL could rely on an already established sales net of Grameen ladies, which has already sold other Grameen products successfully. ANT, on the other hand, has the potential to rely on an already established network of NGOs and SHGs of its sister organisation AMCSS. However, it has yet to prove that the SHGs are able and willing to take up Spirulina as a business. The recently established partnership with WED Trust can provide such answers. SHG sales ladies seem to be crucial to reach the primary target groups. First, they not only represent sales channels but also potential consumers. Second, as the damages of malnutrition are most severe in the ages of 0 to 2 years, it is important to reach this target group. This is only possible through their mothers. Other efforts, such as midday meals at school, fail to reach those infants. Third, as women they can rely on conveying the message of nutrition from peer to peer. This is especially important in countries where conventional promotion through traditional media is not promising because of its low coverage and the very high illiteracy rates, especially among rural women. Mouth to mouth advocacy from known and respectable people seems especially promising in this context. Additionally, sales ladies can tailor the most important messages to the local circumstances. The needs or most convincing arguments may differ from village to village.

Educating people and creating markets are crucial for the success of both ventures. However, to educate people on micronutrient deficiencies and make them understand the cause-effect relationship from such deficiencies and diseases and even disabilities, is a very challenging task. This must be especially true for the poorly educated people at BOP of rural Tamil Nadu and Bangladesh. In order to teach the importance of adequate food intake, both ventures recognize the importance of conveying such messages by emotion rather than (intellectual)

information. GDFL, for example, works with images in form of billboards and posters, whereas ANT participated in a cultural campaign, which tries to convey messages in form of dramas. ANT aims to launch another campaign in the years to come.

In both cases, two international organisations partnered with local organisation, to bring together technological capabilities with local knowledge and the ability to reach BOP people successfully. Hence the right partnership seems to be another crucial factor of success.

This paper cannot draw or give a complete business model for combating malnutrition on sustainable grounds because such ventures have to be tailored to local circumstances and needs, which vary from situation to situation. However, it has shown insights into such ventures, which act on the forefront in the combat of malnutrition. Although both cases fail to deliver proof of their financial profitability and therefore sustainability, this paper is optimistic that both ventures can become a success in both reaching financial sustainability and combating malnutrition significantly. The author is sure that there will be great many success stories of business at the BOP.

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Eigenständigkeitserklärung

"Ich erkläre hiermit,

- dass ich die vorliegende Arbeit ohne fremde Hilfe und ohne Verwendung anderer als der angegebenen Hilfsmittel verfasst habe,
- dass ich sämtliche verwendeten Quellen erwähnt und gemäss gängigen wissenschaftlichen Zitierregeln nach bestem Wissen und Gewissen korrekt zitiert habe.“

Zürich, 28th of December 2009

Tobias Stahel

Annex A – Report on Antenna Nutritech

Combat Against Malnutrition



Report on my internship at Antenna Madurai, India.

By Tobias Stahel.

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Executive Summary

This report offers an issue-based overview of my civil Service at Antenna Nutritech in Madurai, India.

The management of Antenna Nutritech is very committed and energetic. It has a very good understanding and feeling of its business. There are some very well elaborated plans. However, Antenna Nutritech faces a difficult time of being in company registration process, which lasts for a couple of month and will go on for one or two months at least. This makes planning very challenging and plans have to be altered. Additionally, the strategic priorities and special projects, such as the land development, has not always been very clear to Antenna Nutritech. However, this might change with a more structured communication between the Indian and Swiss management, which has been initiated through different tools, such as the monitoring tool, and means – such as Skype telephone conference.

The process of registering the company is very cumbersome and resource intensive. Although some important steps have been taken, the registration process is not yet complete and the company still needs to be approved by the authorities. Antenna Nutritech has little experience in getting a company registration. Additionally, the information of the lawyers regarding the time schedule of the process is usually far too optimistic or simply not accurate. This causes a sometimes a bit frustrating tediousness of the process. However, such a registration is a precondition for the success and scaling-up of Antenna Nutritech due to the ability to receive FDIs.

The development of the new land was a very intensive project. The land had to be levelled to protect future production sites against flooding. Furthermore, the land had to levelled to get to the height of the adjacent road. In order to produce Spirulina some buildings, a bore well and tanks had to be constructed. Due to the absence of a general constructor, Selvendran had to coordinate between several small construction firms and oversee the construction work themselves. In his absence the construction work hardly progressed. Thanks to such efforts, the construction works were completed before the monsoon season started in August.

Antenna Nutritech works three different market segments: the open market, the institutional market and the Base of the Pyramid (BOP) market. The first is served with several products, mainly tablets, and different promotions, such as special dedicated doctor promotion. The second segment is target with a direct sales strategy and special products like the flasks

containing 180 tablets, but also capsules. The latter is a very challenging market to work. Recently, Spirulina candies have been developed, which contain half a gram of Spirulina and are sold about one INR. This should make Spirulina more affordable for this segment and should also have the potential to reach a lot of people as the latest sales figures indicate.

1. Foreword

This report is based on the experiences of my civil service, which I have served for Antenna Technologies Switzerland in its branch Antenna Nutritech in Madurai, India between April and August 2009. During that period I have supported Selvendran, the head of Antenna Nutritech, and his team in their actions to combat malnutrition. Antenna Technologies advocates Spirulina as an effective and cost-efficient tool to deal with malnutrition. Hence, this report focuses mainly on Antenna Nutritech.

In order to give a little introduction, this report will start with a macro perspective, such as organisation and management structure, and then try to dig deeper under the surface with an issue-oriented perspective. The purpose of this paper is not only to give a report on different issues, but also to make suggestions, how to improve the current situation or to face general challenges. As Antenna Nutritech is in the process of registering as a Section 25 Company under the Companies Act of 1956, this report tries to cover the current situation, but also account for the future status of the company and the foreign direct investments, which will be made by Antenna Technologies Switzerland after the registration.

Such suggestions reflect only my personal opinion and are not the position of Antenna Technologies or its sub entities.

I would like to take the occasion in this forward to express my sincere thanks to Antenna Switzerland and especially to Urs Heierli, who made this civil service in India possible. I also would like to thank Selvendran and his family, as well as Manoharan and his family and the teams of Antenna Nutritech, Antenna Green Trust and Antenna Micro Credit Support System, which supported me always and made this civil service a very unique and rich experience.

2. Organisation

Antenna Technologies Switzerland has several branches in different parts of the world. In India, there is Antenna Trust, Antenna Micro Credit Support System, Antenna Green Trust (AGT), which ensures the production of Spirulina, along with training programs and Research and Development activities and Antenna Nutritech. Antenna Nutritech covers the commercial side of Spirulina. Due to the marketing and sales activities, Antenna Nutritech ensures the Spirulina production of Antenna Green Trust and other partner. It is essential to create local demands and markets in order to make the project financially independent and ensure the sustainability of the efforts against malnutrition.

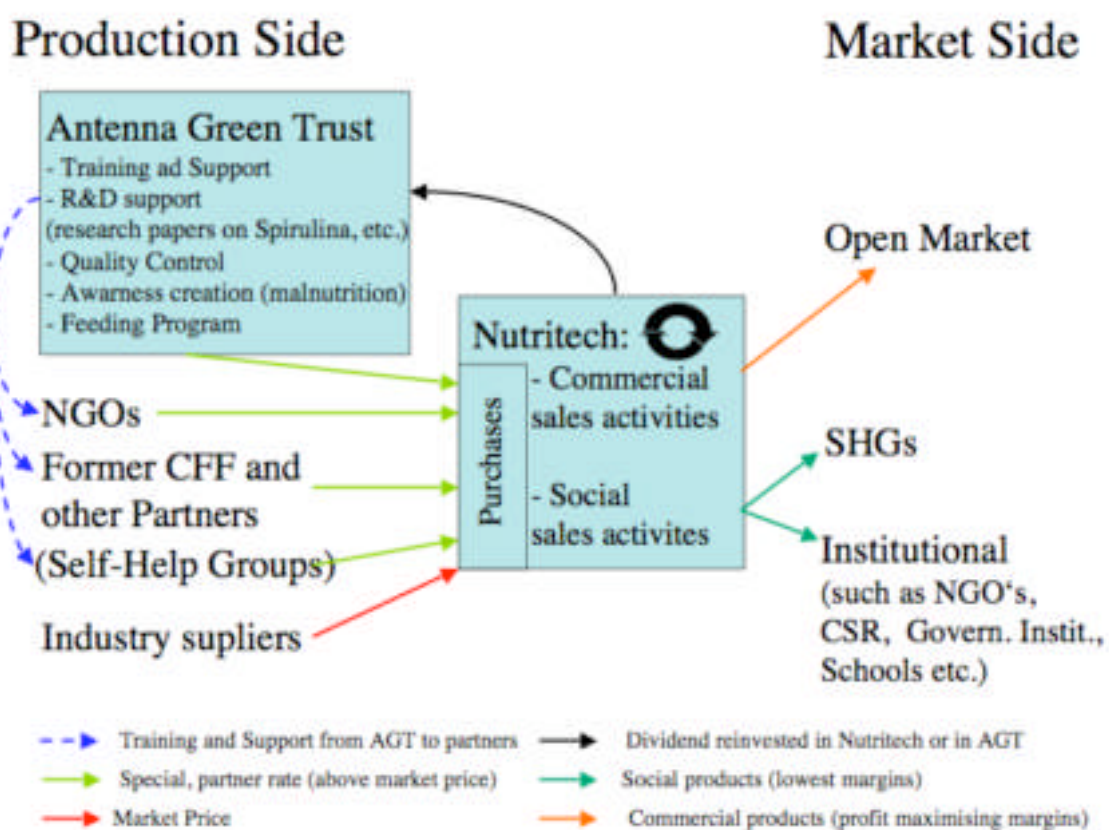


Illustration 1. The role of Antenna Nutritech as the link between Spirulina producers and the markets.

Illustration 1 shows the role of Nutritech. It buys the Spirulina production of ATG and its partners in raw form and ensures the process of Spirulina into value added products, such as tablets, capsules or candies etcetera.

Nutritech targets the different markets of institutions, SHGs and the so-called open market. The possible gains are to be reinvested into the development of the company to ensure its sustainability and are also used to support AGT.

Naturally, there is a strong link between ATG and Antenna Nutritech. Antenna Nutritech and the Antenna Micro Credit Support System work also together. As the Micro Credit programs already reach around 1'000 SHGs or 15'000 SHG members respectively, there is already a strong and established network. Hence, Antenna Nutritech should be able to benefit from such established ties. Such synergies have already been used. E.g. Antenna Nutritech has organised general awareness meetings, such as the meeting with Padigal Trust (23.05.2009) or with MMS (30.05.2009), with the help of Antenna Micro Credit Support System or participated in the cultural campaign on Spirulina promotion and micro credits for rural poor, which was also conducted by Antenna Micro Credit Support System. Although there has been some cooperation between the two entities, there is room to intensify the coordination and collaborations of both organisation and to use such synergies. It might be helpful if Antenna Technologies Switzerland can initiate and/or guide such cooperation.

3. Management

The Antenna Nutritech team consists of two secretaries, a part-time sales man and a part-time financial consultant and a manager. Additionally, Antenna Nutritech hires consultant for different jobs and tasks.

I was (and still am) impressed by the enthusiasm and energy of the management of Antenna Nutritech. Antenna Nutritech was and still is in a quite turbulent (financial) situation because of the still ongoing process of the company registration. Without the registration, it is very cumbersome to make any FDIs in the company and therefore there is a lack of funds. Another challenge was the urgency to develop the new land. It takes a lot of heart, confidence and especially flexibility to keep the company running and to develop the land where an almost 100% presence at the construction site is needed¹¹². This is especially true, when we take into account that Selvendran manages and runs the company in a one-man show.

On the other hand, there is few mid- and long term planning. It is important to know how to allocate its resources and on what priority. In some fields this has been very well achieved - e.g. the doctor promotion campaign: there is a clear idea what should be done when and by whom. There are defined targets and so forth. However, there is not a such clear idea when it comes to the SHG field, NGOs and CSR programs – e.g. what resources does Nutritech need (man power, sales tools etcetera), what are the targets, and what are the action plans to achieve such targets. There are general ideas but not detailed plans. As pointed out before, the current situation makes such planning difficult. Furthermore, the communication between the

¹¹² Without surveillance, the construction works only progressed gradually.

Indian and the Swiss management is not always very clear. On the one hand, the Swiss management wants the India side to act very independently and entrepreneurially. On the other hand, the Indian management acts very autonomous, but it would be good to have some binding, concrete targets and tasks. This is especially important for such special projects like the land development. There was no concrete target, until when the when the land should have been developed. As it became clear, that the land should be operative as soon as possible, because Antenna Switzerland had to show the progress to its donors, land development became the number one priority to the Antenna Nutritech management and Selvendran was fully absorbed. Consequently, there were few resources for progress in other projects and initiatives. If such tasks are clearly defined in advance, it is easier to plan and allocate resource accordingly.

The monitoring tool is a mean to ensure such a communication and to help to define targets.

Strategic Monitoring Nutritech

Sales Per Month		Apr	May	Jun	Jul	Aug	Rps
		Units	Units	Units	Units	Units	
Powder	Actual	0	25	28	21		0
	Plan	50	50	50	50	50	37500
180 fask	Actual	38	210	121	26		0
	Plan	58	58	58	58	58	13600
100 fask	Actual	160	80	129	82		0
	Plan	85	85	85	85	85	10200
60 fask	Actual	0	241	163	122		0
	Plan	66	66	66	66	66	4554
100's Boxes	Actual	0	0	41	40		0
	Plan	0	0	0	0	0	0
Drum	Actual	0	1	0	0		0
	Plan	0	1	1	0	1	33000
Capsules	Actual	0	0	3	6		0
	Plan	0	0	0	0	0	0
Candies	Actual	0	0	0	13		0
	Plan	0	0	0	0	0	0
Total per Month	Actual	198	557	487	297	0	0
	Plan	269	270	270	269	270	98854
Total YTD (Year to Date)		Actual	Plan				
Abs. Units		1538.15	1078.00				
Dif Units (abs & %)		460.15	43%				
Total SRP		274'958.00	329'416.00				
Dif TRP (abs&%)		-54'458.00	-17%				

Table 1. The monitoring tool shows the actual sold products and compares the achieved figures with the planned ones. It shows such progress month by month, but also year to date (YTD).

In the first place, the tool shows the progress of the company regarding sales. It compares the actual sales with the planned sales. This helps to monitor the daily business of Antenna Nutritech, to assess its development, and to define and take actions accordingly. The tool also states the strategic initiatives, which are going on, their status, the targets or next steps and dates of their achievement.

Strategic Initiatives

What	Next Steps	Status
Company Registration	Getting DIN Numbers a	End of July
Land Development	to make the new land r	End of July
Visit NGO Partners	Visit Veerni Project	7 to 11 July
Market Trial of Candies	Trial to children and villages	
Product development	Design of packaging	
Promotion to Doctors	Visiting doctors in the f	ongoing

Table 2. The second part of the monitoring tool shows the strategic initiatives, the next steps and their status or the date of achievement respectively.

The monitoring tool is meant to be filled out on a monthly basis by the Indian management and then to be sent to Switzerland. Furthermore, this report suggests a follow-up call to discuss the monitoring tool, strategic initiatives and developments after having received the monitoring tool. This ensures a structured and regular communication, which helps to clarify expectations, targets and mutual understanding.

The current legal status of Antenna Nutritech hinders FDIs. They have to be made through a partner NGO called SERD. Although the collaboration with this partner is constructive, it is difficult for Antenna Nutritech to claim the money the way it would need. Due to governmental restriction SERD allows payments only to social related expenditures and it is necessary to have bills etcetera of the payments. Although such marketing trial expenditures are also social related, SERD refuses to accept them as social expenditures. Furthermore, not all payments can be documented with a bill – e.g. not all the construction companies give bills. However, Antenna Green Trust has initiated the process of getting governmental permission to receive FDIs and is half through. Therefore, Antenna Green Trust should be able to receive FDIs in the very near future. This should facilitate money claim processes for Antenna Nutritech since these two organisations work very closely together and have special relations. Additionally, the payment procedures for FDIs are not always adequate. Although, it is perfectly reasonable to make such payments through the most economical channels, they should also reach in time. Otherwise, projects might have to be stopped and/or consequential costs might be caused. E.g. during the land development, there was shortage in funds, which had to be bridged with credits. This clearly complicates the management of Antenna Nutritech.

As pointed out before, Selvendran runs the company in a one-man show. Although, he does this very enthusiastically, it will be necessary in the future to hire people, which are capable of overtaking some of his tasks. E.g. Selvendran is not able to manage the company and

execute all the marketing activities. Therefore, it is essential to have a clear idea about what tasks Selvendran can take care of and where Antenna Nutritech needs additional employees. Although Selvendran has a lot of experience in the open market, especially with doctors and pharmacists, this report suggests finding somebody to work in this purely commercial field. First, it might be easier to find people for this more “traditional” work. Second, the Antenna Micro Credit Support System network sees Selvendran as a commercial man because he used to work at Novartis India for years. Therefore NGO leaders are sometimes a bit sceptical about the social side of the activities or the social intentions of Antenna Nutritech. Because the support of this network is essential, especially to reach the Base of the Pyramid market, it might be a wise idea to detach Selvendran from the purely commercial activities of Antenna Nutritech. This might strengthen his position within this network and give Antenna Nutritech more support for its efforts.

4. Company Registration

Antenna Nutritech has been established by Selvendran in June 2008. Selvendran owns the company completely and has financed the assets and working capital of Antenna Nutritech with his own, private savings. Clearly, this situation is suboptimal. However, Antenna Switzerland and Selvendran have been looking how to register an adequate type of company where Antenna Switzerland could have the ownership and Selvendran would manage and get a salary.

The process of registering the company is a very time intensive one. Although Selvendran and Mr. Heierli have met a lawyer during the meetings in Madurai between the 23rd and 27th of April 2009 and explained him the circumstances and needs of Antena Nutritech, it was difficult to find the type of company, which suites best. The first suggestion for a private company would have offered quite an independent management of the company. The down side would have been, that the Indian government claims a share of all FDIs and that 26% of the shares of the new company have to be hold by local, Indian investors. Therefore, Antenna Nutritech decided to register for a Section 25 Company under the Companies Act of 1956. A Section 25 Company faces some restrictions, which complicate the daily business of the company. E.g. the company needs a special approval to reimburse its directors or consultant. Therefore Selvendran would need such a special approval. Additionally, future payment to directors or consultants would also need such governmental approvals. However, there are no restrictions on FDIs and it will be easier for Antenna Nutritech to be viewed as a NGO with social purposes. The latter would have been hard in the case of a private for-profit

organisation. Other NGOs, such as the Volkart Foundation e.g., would not support a private owned, for-profit organisation, even though it would work for social purposes. Another aspect is the composition of the board and the members. As the mandatory board meetings for the minimum of three directors have to be held every three month, it was clear that Mr. Heierli need a proxy in the board. It is quite a task to find persons that are able and will and have experience in the field of nutrition or development/social work. It was also challenging to find the minimum of seven members since Antenna Technologies favours women as members of its companies. Such women should also know something about nutrition and Spirulina, have entrepreneur skills and speak English. Such preferences clearly constrain the availability of the candidates. Nevertheless, the company is in the process of getting the registration.

The registration of the company is the first step in the process to transfer the ownership of Antenna Nutritech from Selvendran to Antenna Technologies Switzerland. The second step is the actual transfer of the assets etcetera. Antenna Technology has actually to bailout Selvendran. It is important to have a clear plan how and what to bailout and under which conditions. Beside the invested capital, there is also the question of the salary of Selvendran. As these are very essential questions for Antenna as well as Selvendran, such matters should be discussed in person in a meeting.

5. Development of the New Land

One of the most time and resources consuming tasks in 2009 was the development of the new land with a basic infrastructure that allows Spirulina production. The construction began in July 2009. The land had to be levelled because it was at risk of being flooded during heavy rains, especially in the monsoon season. There was also a difference in the height of the adjacent road and the land.



Illustration 2. The public notice that was published in Indian Express on the 13th of August.



Illustration 3. A truck unloads another load of soil for the levelling.



Illustration 4. The soil, which had to be added at the main gate to level the land with the road.

Therefore a kind of ramp had to be stratified. This drive-up had to be quite ample in order that trucks and lorries can enter into the new land. The land has also been fenced in order to secure it from unauthorized access from persons and animals.

At the main gate, there has been a security room constructed, from where the whole area can be observed.

The already existing room had to be renovated and another room was added. They were equipped with racks and other storage facilities and serve as storage room and office for the new land. A sanitation room and bathroom have also been constructed.



Illustration 5. The different stages of the construction of the main building. An additional, bigger room has been added to the already existing building.

In order to be able to produce and cultivate Spirulina, there was a clear need for a bore well. It has been drilled and a temporary water tank has been established. This temporary water tank was a cost effective solution for bridging the initial production phase and should be sufficient for the first 5-10 Spirulina tanks. Some three Spirulina tanks have already been constructed and there is material to have at least 10 Spirulina tanks. Because these Spirulina



Illustration 6. The sanitation facilities. On the left there is the toilet. On the right there are shower facilities.

tanks are temporary ones, which are made of concrete pillars, a wood frame and tarpaulin sheets, they can be set up relatively easily and fast. There are plans to construct permanent tanks, but the freshly levelled soil needs to harden and to rest at least one monsoon season before such concrete tanks can be built. Once Antenna Switzerland has gained sufficient experience with the more efficient concrete round Spirulina tanks, which are tested in Africa, this knowledge has to be transferred to India.

The development of the new land was very time intensive. Selvendran had to oversee the construction works. There was no general contractor because the construction works were not big enough and Selvendran tried to minimize the cost. So he had to spend weeks coordinating the different tasks and organizing building workers, suppliers, constructing material and machines, transports and so forth. As the suppliers and special construction companies, such as bore well drillers or the electrician, are



Illustration 7. The soil for the temporary water tank.



Illustration 8. Drilling the bore well.



Illustration 9. Spirulina tanks. On the left, there are the concrete pillars where the frame and the tarpaulin have to be assembled. The other two tanks are ready for the Spirulina production.

rather small, Selvendran had to coordinate between a lot of different persons and companies. He also had to supervise and control the construction workers. The construction works were hardly progressing in his absence.

6. Marketing

This section gives a brief overview on the marketing efforts of Antenna Nutritech. It will start with a segmentation of the market and then reflect the marketing mix.

6.1 Segmentation

There are several marketing parameters when it comes to the segmentation of a market. The classical variables are demographic, geographic, behavioural and psychographic.

Nutritech distinguishes between rural and urban areas. It also segmented the markets on demographical criteria, such as socio-economical factors. Further it also distinguishes between the grade of organisation and institutionalisation of clients – e.g. NGOs, SHGs or regular customers. By doing so, Nutritech identified three main markets: the open market in the urban areas, where people can afford to invest in micro nutritional products, such as Spirulina. Furthermore, there is the institutional market, which includes NGOs, governmental bodies, CSR programs etcetera. Such organisations or institutions conduct usually relatively large-scale feeding programs for vulnerable groups – such as HIV infected persons, malnourished children and so forth. The third identified market is the bottom or base of the pyramid (BOP) market. People or potential clients of this BOP market earn not more than two USD daily. They are hit the hardest by the problems of malnutrition. Such people are predominant in rural areas.

6.2 Marketing Mix

This section will deal with the marketing mix designed by Antenna Nutritech. It will discuss the four Ps. Within each P, each segment will be assessed separately.

Table 3 gives a first overview on the identified markets, the existing product portfolio, distribution policy and the prices, which can be realised by Antenna or have to be paid by the end customer respectively.

Market	Product	Place (Distribution)	Price Nutritech (in INR)	Price for the consumer (in INR)
Open Market	Tablets 100	Indirect	120	275
Institutional/Open Market	Capsules 100	Direct Indirect	Asking price 90	275
Open Market	Strips	Indirect	120	275
Open Market	Drum (Tablets)	Direct	33'000	33'000
Open Market/ Institutional	Powder	Direct	750-1500, quantity depending	750-1500, quantity depending
Institutional	Tablets 180	Direct	200	200
Institutional	Chikkis	Direct	n.a.	n.a.
SHG	Tablets 60	Indirect	69	99

SHG	Juice ¹¹³	In trial	5/10	5/10
SHG/Institutional	Candies ¹¹⁴	Indirect	35	50
SHG	Sachets 5 gr	Indirect	6	10

Table 3. Overview on the existing productportfolio and the corresponding distribution and price policy.

6.2.1 Products

Spirulina is an alga. As a result, it has a very strong and fishy taste. It represents a product hurdle, as most people dislike this specific tang. Therefore one of the main tasks for Antenna Nutritech is to establish value added products, which avoids or minimize the fishy taste. A second challenge is to create products, which are easy to consume. Raw powder is sticky. Further, it is not easy to manage to the intake of the recommended daily doses when it comes to raw powder. Therefore different products have been developed: pills or tablets, capsules, sachets for juice and candies.

Open Market:

For the open market, Antenna Nutritech developed tablets or pills. The 750mg tablet is sold in flasks containing 100 tablets. The size is the unique selling position of the tablets as other producers fail to press 750mg tablets. Competitors sell tablets or capsules at 500mg per unit. Perry e.g. sells capsules at 500mg. Furthermore, the purity or quality of Spirulina, in form of colour, structure and taste, can be “seen” or “touched” easily when it comes to a tablet. Such details are not as tangible in a capsule. Therefore Antenna Nutritech is not too interested in capsules in this segment.

The strips contain 10 tablets of 500mg each and are sold in boxes of 10 strips. However, pharmacies, medical shops and the like can open such boxes and sell a strip of 10 tablets or less. Thereby a daily dose of Spirulina gets more affordable and helps costumers who face very tight budget constraints.

Antenna also sells drums of 30'000 tablets to other producers or resellers respectively, which are interested to sell the tablets under their own brand. Such sales contribute a lot to the sales of Antenna Nutritech. However, Antenna Nutritech has to ensure that such tablets are sold in other, geographically detached markets. Otherwise it helps to create additional competition with its own, unique 750mg tablet.

Institutional Market and BOP market

¹¹³ There are two different juices, which have been tested: a Spirulina lime juice and a Spirulina Hibiscus Juice. The first has been sold for 5 INR and the latter for 10 INR.

¹¹⁴ The Spirulina candies are sold in packages of 50.

The main product Antenna Nutritech uses to serve institutions in their efforts to fulfil their missions, are also the 750mg tablets, which are delivered in flasks of 180. The 180 flask is not branded as Spirupower, but has very neutral Spirulina label on it.

NGOs and the like need tablets in order to ensure that the right doses are given to the right persons. This is especially important for NGOs, which treat very vulnerable people, such as HIV infected people.

AGT also uses Spirulina enriched chikkis for children feeding campaigns. The chikkis have been delivered to a feeding program, which has been established as a CSR program of Switcher in the first place. Today, Switcher does not contribute to this program anymore and the funding bodies are AGT and a supplier to Switcher in the region. AGT conducts several, additional feeding programs.

Although the chikkis have been a great success in Tamil Nadu and children like them a lot, the Veerni Project, which has also conduct feeding programs among children and women in Rajasthan, has a different experience. There, children didn't like like the Spirulina enriched chikkis and the Veerni project has developed other, micro nutritionally rich products – such as jaggery with Spirulina and Soya biscuits. However, the main reason why the chikkis are not used or sold on a larger scale is their shelf life. According to Arhti, the head of AGT and technical expert on Spirulina, and Selvendran the shelf life of such Spirulina enriched chikkis do not exceed a month.

In order to have a long life product, which children accept easily and which is also cost-efficient, Antenna Nutritech developed the Spirulina candy. After a trial of different flavours, such as Vanilla, Mango, herbal and natural, the Mango flavoured and the natural Spirulina candies are planed to be produced on a large scale. These candies have the potential to not only reach needy people through institutional feeding programs, but also through BOP marketing concepts. The candies contain half a gram of Spirulina. The downturn of the product is the amount of sugar such a candy contains.

There have been plans to develop specific wrapper with the brand Spiru Power and a more neutral version only labelled as Spirulina candy. Antenna Nutritech decided to go for the



Illustration 10. The draft for the Spirulina candies wrappers. On the left, there is the Spirulina mango candy. On the right, there is the Natural Spirulina candy without any additional flavours.

latter because Selvendran thought that it would be easier to educate and promote people only on Spirulina, instead of educate people on Spirulina and promote Spiru Power. Furthermore, it is less costly having one design. However, as the wrapper has not yet been developed, the candies are wrapped into an existing wrapper of another candy.

There are other products for the BOP market. There are the five-gram Spirulina sachets and the 60 flask Spirupower tablets. The first has been developed for a customer, which wanted to sell Spirulina on its own. However, the product is very economical to produce and can therefore be a good product for people, who are already used to Spirulina to satisfy their demand. As pointed out before, the raw Spirulina powder has a strong, fishy taste and is not easy to consume. The 750mg tablets are the same, which are produced for the open market. However, they are packed in smaller flasks, which contain 60 tablets instead of bigger flasks of 100 tablets. The reason for smaller packaging is affordability.

The product portfolio of Antenna Nutritech is quite ample. There are even different products for the same markets. In consequence, this report suggests focusing on the existing portfolio to work the markets then trying to develop new products. This is especially true for an organisation like Antenna Nutritech, which has been established a year ago and has still very limited resources. Such resources might be better invested to build up sale capacities. Furthermore, more products for the same segment or market might cause a cannibalisation effect. This might have had happened with the strips and 100 flasks in the open market.

6.2.2 Price

The pricing has been established before I have been working for Antenna Nutritech. There has been a general understanding of cost drivers and their costs, but a detailed analysis and margin calculation was missing. Such tools have been developed and Antenna Nutritech has a clearer understanding of which product contributes what to the success of Antenna Nutritech. However, there have been few past data available on costs etcetera because the company operates only since June 2008. Therefore it is necessary, that these financial tools are revised and recalculated periodically on the base of new data. This is very important because there are some products, which are still in trial phases – such as strips, candies and Spirulina enriched fruit juices. Therefore, cost drivers, prices etcetera are not very clear yet. If a trial is a success, there might be a large-scale production of a product, which usually brings down the cost per unit due to economy of scale. Additionally, the ways in which indirect costs have been allocated to the different products are not perfect and should be scrutinized and checked with reality. Furthermore, costs change a lot and alter margins and thereby calculations. This is

especially true in a country like India where inflation is rather high (between 6.4 and 7.8 for 2007 and 2008 (estim.) according to CIA fact book¹¹⁵). Such efforts should help to know the effective margins of products most accurately and base strategic decisions on it. This is especially important for the BOP market, where margins are lowest and only high sales volumes can realize break-even or profits.

A gross and net margin calculation can be found in the annex.

Open Market

The pricing of the open market is competition based. It has been oriented on Perry's flask, which contains 100 capsules of 500mg. Such a flask is sold at 225 INR in the open market in Madurai. This makes 5 INR per gram. The 750mg Spiru Power tablets of Nutritech, which are delivered in flasks of 100, are sold for 275 INR. This makes 3.67 INR per gram. Hence, Antenna's offer is around 25% cheaper per gram Spirulina. According to Selvendran Antenna Nutritech has to make a better offer since it was only found in June 2008 and other producers are longer in the market and have more established brands. This is not only true for the end customer prices, but also for the prices Nutritech offers to its distributor. The 100 flasks and strips are both sold for 120 INR. This is less than Perry e.g. gets for its rivalry products because they have been in the market for years. Such a pricing is necessary to be able to work with an established distributor and profit from his network and relationships with pharmacies, medical shops and the like. However, both products have respectable gross margins of around 45% and the highest in the product portfolio.

As pointed out before, Antenna Nutritech offers its Spirulina on better conditions than Perry. Therefore this report suggests thinking about emphasising the price per gram more aggressively since it represents a real advantage in a price sensitive market like Madurai. However, such efforts could trigger a price war, which is not interesting for Antenna Nutritech since it tries to maximize its profits in this market to subsidize its efforts in the other, more social markets.

Institutional Market

The main product for the institutional market is the 180 flask. After the first analysis of product margins, the price of this product had to be increased because it showed a negative

¹¹⁵ <https://www.cia.gov/library/publications/the-world-factbook/geos/in.html>

net margin. The price was raised from 180 to 200 INR. However, after a revision and a more profound analysis, which resulted in different allocation of indirect costs to different products the 180 flasks have shown positive margins, including a very good net margin of 33%. This gives room for manoeuvre for big orders, which usually go hand in hand with discounts, subventions for Spirulina based studies and support of social programs or this high margin simply contributes more to the fix costs.

Although capsules still appear in the product portfolio, they have actually been developed to satisfy a big demand of capsules of an NGO at the beginning of 2009. However, they are not a product, which is actively promoted. Therefore, this report won't discuss its pricing in detail. Details can be seen in the annex.

BOP market

There are several products, which are designed for the BOP market. The candies are priced at one INR per unit. This is a psychological limit to the price for a sweet like the Spirulina candy. According to Selvendran, hardly anyone would pay more for such a candy. Although the Spirulina in the candy represents a clear added value, it makes the candy much more expensive to produce - especially as the candy contains 500mg of Spirulina. However, the Spirulina candy competes with other candies without any nutritional value and they are sold for 0.5 INR. The candies are still in trial. Therefore cost and the impact of economy of scale are not yet very clear. According to the first data available, production costs would be around 0.65 INR for each candy. However, such costs are estimation and Antenna Nutritech is optimistic to cope with the costs or even bring them down by producing on large-scale. The candies are then sold at the rate of 0.70 INR per candy or 35 INR for the package of 50 to NGOs. SHGs will then be able to buy them for 0.80 INR (or 40 INR per package) and sell the candies at 1 INR¹¹⁶. Depending on the rate NGOs resell the candies, SHGs are able to realize a margin between 25 and 40%. It is clear, that no strategy for sustainable business approaches can base on loss generating products. However, the candy should be offered at the least possible price in order to make the product affordable for the most people possible and contribute to the social purposes of Antenna Nutritech.

The 60 flask, which is another important product for the BOP market, has a similar kind of pricing. Although it has not as tight margins as the candies, its pricing is also designed that SHGs are able to get a margin of 20-30% on the product, depending on how much the NGO

¹¹⁶ It is quite common that NGOs buy products and resell them to their SHGs. The SHGs then resell them with an added margin. The 60 flask e.g. is sold at 69 INR to the Exist Trust. This NGO then resell the products at 80-85 INR to its SHGs, which resell the flask for 99 INR.

takes. The 60 flasks have a rather low net margin of 16% and this is the lowest among the products (despite the candies). However, as pointed out before, Antenna Nutritech pursues also social aims and the flask 60 is a product, which contributes to such efforts. The price for the end consumer of 99 INR is rather high for BOP consumer since they do usually earn less than 99 INR daily. Especially for BOP consumers, affordability is a critical criterion. On the other hand, Selvendran underpinned the importance, that consumers feel the effect of Spirulina, which is only possible when Spirulina is taken for some time. Although it depends on the nutritional condition of an individual, the intake should at least be around two weeks. The 60 flask contains sufficient Spirulina for about two weeks¹¹⁷. Hence, there is a clear dilemma: on the one hand, it is important to make products as affordable as possible. On the other hand, it is also important, that people take sufficient Spirulina on a regular basis in order to feel the impact on their health.

There is another important aspect to the BOP product portfolio: the price of Spirulina per gram of the three products offered. A candy features half a gram of Spirulina for one INR, which is two INR per gram. The five-gram sachet costs about ten INR, or two INR per gram. The 60 flask is about 99 INR, or 2.2 INR per gram. It is clear, that the last is the most value added product and the most costly to produce. However, it is also worth to try to reduce the price per gram of Spirulina to at least two INR in order to encourage people to buy 60 flasks as well.

6.2.3 Promotion

Antenna Nutritech has two promotion categories of products: there are the Spiru Power branded products – such as the 100 flasks, strips and so forth - and there are the products, which appear more neutral and do not feature a brand. They are just labelled as Spirulina and show the mascot of AGT (a Spirulina alga with face and hands). The first category is made for the open market and somehow also for the BOP market – 60 flasks -, the latter is designed for the institutional market. It is important that different markets



Illustration 11 shows the Spiru Power logo.

¹¹⁷ An adult is supposed to take around 3 to 5 grams Spirulina daily. Therefore a flask of 60 tablets of 750mg is enough for two weeks.

are worked with different products and brands in order to maximise the rents of such products¹¹⁸.

The distinction between the two product categories is rather clear for the open market, as well as for the institutional market. However, this distinction is not yet very clear for the BOP market. The 60 flasks are branded with Spiru Power, whereas the candies are sold as Spirulina candies. Both products are supposed to be sold through SHGs. On the one hand, there is a need to educate people and create local markets in the BOP segment. According to Selvendran it should be easier to promote Spirulina branded candies because the awareness meetings and education campaigns talk about Spirulina. If candies would be sold as Spiru Power candies, there might be a double effort to educate them. This report argues, that this might be true in the first phase, when people have to be educated on Spirulina. However, if the candies are promoted as Spirulina, it surely needs an additional effort to introduce them to Spiru Power and the 60 flasks in a latter stage¹¹⁹.

There has been generic promotion material to support the activities of Antenna Nutritech. E.g. the pamphlet features the Spiru Power brand name, the AGT Spirulina mascot and different products – such as the 100 flasks and the 180 flask. Such generic material made very much sense in the beginning, when there haven't been enough capacities to create different promotion material for different markets. However, specific, tailored promotion material for different markets is essential.

Open market

There have been two different promotion activities in the open market. There is a promotion, which targets pharmacists and end consumers respectively and there is one, which addresses doctors. For pharmacists and other retailers, some tools have been designed – e.g. a little plastic stand, which shows a little board and features three 100 flasks and some little boards. Their main aim is to increase the visibility of the Spiru Power brand and products at and in shops.

The doctor promotion might have been the most continued and structured sale effort of all promotion activities of Antenna Nutritech. There is a part time employee, Mr. Balaji, who is especially appointed for this activity. There is a special designed sales tool as well. It is a 10 pager and features the most important facts and benefits about Spirulina and Nutritech. There

¹¹⁸ Usually rents are measured in terms of monetary profit. In the case of Antenna Nutritech this is true for the open market. In the cases of the institutional and BOP markets, rents have also to be measured in social terms.

¹¹⁹ The candies are very important to promote Spirulina, to reach as many as possible and therefore to combat malnutrition. However, the role of the candies as door openers for the 60 flasks should also be considered – especially in regard of the sustainability of the SHG Spirulina business.

is also a sales plan with a list of different, important doctors, which Mr. Balaji meets on a regular basis. This is very important, since doctors can and do prescribe Spirulina. The crux is, that doctors prescribe the brand name of Spirulina products. Hence, it is crucial that doctors are convinced of the products of Antenna Nutritech and prescribe Spiru Power to their patients. In consequence, these patients buy the prescribed Spiru Power products in the nearby pharmacies. Some doctors are looking for little rewards or presents for their prescriptions. Therefore Antenna Nutritech has designed a Give-Away in form of a key ring. However, doctors, who have their own pharmacies in their surgery or hospital, look rather for good margins and discounts.



The illustration 12 shows Give-Away for doctors from the front and back side.

Institutional Market

The institutional market is worked by direct sales. Such efforts have been undertaken directly by Selvendran. Unfortunately, I hardly experienced such direct NGO visits due to Selvendrains absorption by the development of the new land. Therefore, I'm not able to give an adequate feedback.

I have tried to develop an initiative for the institutional market. The first step was to conduct an Internet based research and to identify potential partners. I have found 130 such organisations in the regions we have already partner organisations¹²⁰. Mission statements have been collected, categorized and prioritized. Contact data such as e-mail addresses, phone numbers and contact persons have also been added. A part of the list can be found in the Annex as an example. The second step of the initiative was to contact the identified organisations. A few NGOs in Pondicherry and Chennai have been contacted by phone in order to make appointment for a visit because we had to visit other organisation, such as the strips and candy manufacturers, in these regions at that time (beginning of June 2009). However, it was hard to reach NGOs by phone because the great share of the found phone numbers were not working and there was no time to contact them by e-mail due to a very tight schedule. Another big share of the identified NGOs have been contacted by mail. There have been four different standard mails, which were designed for one of the different categories of the Internet based research and tailored for each organisation with specific details. Some 35

¹²⁰ Antenna Nutritech has partner organsiation in Pondicherry (Simplicity), Rajasthan (Veerni Project), Karataka (Dhondendling), Andrapradesh (St.Paul Trust) and Orrisa (Dulal).

NGOs have been contacted with such mails. Around five to ten e-mail addresses haven't worked. However, the sobering point was, that not even one NGO reacted to the e-mails. Therefore, it has been stopped afterwards.

It might be more promising to try another approach in the future. Antenna Nutritech has already some partners, which might know other organisations that work in a similar field and are therefore interested in Spirulina. Hence, Antenna Nutritech should try to get access to the networks of its partners. Whenever visiting a partner organisation, this partner should organise a meeting of potentially interested organisations¹²¹. That way, Antenna Nutritech would have the chance to present scientific aspects and the benefits of Spirulina, but also itself as an organisation. It could also introduce the services Antenna offers regarding products (for feeding programs and the like) and technology transfer for Spirulina production in form of training and support. The latter should also feature an overview on different scopes of possible projects (e.g. 1-4 tanks, 4-8 tanks, 10 tanks and so forth) and give a clear idea what are the costs (investments, operating costs and the like) and benefits (in terms of how many children or person can be fed). The possibility that Antenna Nutritech buys a part of the production to ensure the sustainability of such projects could also be discussed. However, such a financing mechanism, which ensures that the project can cover its costs and run on a sustainable base, faces operative challenges. The quality of the Spirulina has to be ensured and prices have to be competitive.

BOP

Promotion efforts in the BOP market are the most challenging ones. First, markets have to be created. Although malnutrition or more precisely its consequences create great problems for people at the BOP, they are not aware of the connection of malnutrition and its consequences or simply not able to understand such a problematic. Therefore the promotion has not simply to target a latent need and tell people how to satisfy it. It also has to educate people why to satisfy it.

I have experienced two major promotion activities: “regular” awareness programs and a cultural



Illustration 13. Selvendran is giving a awareness meeting to SHG members of MMS. The banner with pictures and illustrations can be seen on the left.

¹²¹ I have been to the Veerni project in July 2009. They are interested in the production of Spirulina in Rajasthan and organised a meeting with people of different NGOs, which are also interested.

campaign. The awareness meetings were held in April, May and June, whereas the cultural campaign started at the end of June and was conducted until the beginning of August. There are plans to continue with the campaign after a feedback session and the implementation of such feedbacks.

The awareness programs are bit lecture styled. The experts of Antenna – usually Arthi and Selvendran – explain about Spirulina in front of an audience of SHG ladies, which is organised by a partner organisation. They talk about nutrition, the benefits of Spirulina and how it is produced. They also use a banner with pictures to explain and show some aspects. Furthermore, Antenna distributes always samples in form of powder in order that the audience get to know Spirulina. Although it is a bit lecture styled, there is a lot of interaction and discussion between the audience and the experts of Antenna. At the end, people can buy products – usually from the partner NGO.



Illustration 14 shows SHG women tasting Spirulina powder during an awareness program.

Although the cultural campaign, which was conducted by Antenna Micro Credit Support System, has the same end of creating awareness, its means differ substantially. It is conducted in form of a theatre or drama and tries to adapt to real life situation of their audiences¹²². It is influenced or based on the techniques of the “theatre of the oppressed” of Augusto Boal.

The program consisted of three different parts. Each part dealt with a different subject, which was introduced and exemplified by a drama. After the drama, the expert of the NGO added some additional points and interacted with the audience.



Illustration 15. Prabhaker asks question to the audience about savings and micro credits.

One part of the drama was about the importance of the usage of toilets and other hygienic aspects – such as hand washing. Despite the hygiene, the drama also addressed social problems, which can emerge when public spots are used as toilets. The other part of the drama explained about the importance of savings and how such small savings help rural women to increase

¹²² There are more details on the cultural campaign in the interview with Manoharan, the head of the Antenna Micro Credit Support System, in the Annex.

the family income and make a happy and decent living. The last part was on Spirulina. The script of the drama was more or less the following: it was about a guy who heard about Spirulina and its benefits. However, he thought he could take whatever alga in order to enjoy the benefits of Spirulina. So he ate some alga of the village pond, became sick and developed diarrhoea. He then went to the doctor, which explained about Spirulina and its benefits. At the end of the sessions, Antenna Nutritech provided free Spirulina candies to the audience. At the end of July some 11'200 Spirulina candies have been freely distributed. On the one hand, Antenna Nutritech wanted to test how people receive and like the candies. The response, especially of the children, was excellent. They literally fought for the candies. On the other hand, it also wanted to encourage people to consume Spirulina and NGOs to buy candies. Dalit Trust and Exist Trust purchased some 15 packages of candies by the end of July and WED Trust ordered another 200 packages in August. The recent figures for August show a sale of 1153 packages of candies.



Illustration 16. Manoharan speaks to the audience after the group has performed about the sanitation and hygiene.

Antenna Micro Credit Support System was and still is in charge of the implementation and execution of this cultural campaign. However, Mr. Dharma Neethi of WED Trust, which is a partner NGO of Antenna Micro Credit Support System, has been appointed to organise and train the actors and write the script for the drama because he has a unique experience in such cultural campaign performances. The messages of the drama were discussed in the kick-off/inauguration meeting and the NGO leaders, which were supporting the campaign, gave their inputs. Selvendran has also participated in this meeting and given his inputs for the scripts. Based on this meeting the drama has been designed.

Manoharan assessed the campaign as a success¹²³.

Indeed, the campaign was very good organised and the participation of SHGs, villagers and children was impressive. However, although the dramas themselves were very entertaining and funny, the messages were not always optimal¹²⁴. Although the content that savings are important was easy to get, the message of the health and sanitation was not always very clear.

¹²³ Please see his assessment of the campaign in the annex. The interview gives further insight in his assessment.

¹²⁴ I have to point out, that I didn't understand the text of the plays, but NGO leaders and Selvendran have translated the messages for me on various occasions.

The play was about sanitation and the importance of toilets. However, the emphasis of the conducted messages laid more on social problems related to that issue than on hygienic aspects. The message of the drama on Spirulina was misleading. Indeed, the scenes with the guy who felt sick after consuming the wrong alga were very funny to watch. However, it is arguable if it is best to emphasize the side effects of a wrong alga and not the benefits of the right alga. Although the benefits have been mentioned, the highlight of the play in terms of emotions was the diarrhoea part and people probably remember that the most. Antenna Nutritech discussed such aspects of the campaign internally and gave such feedback to Manoharan. In a feedback discussion with the Exist Trust SHG lady in charge of Spirulina at the end of July, it became clear, that the Spirulina messages were not only misleading, but also contradictory¹²⁵. Some people, especially children, were afraid that Spirulina might lead to diarrhoea. In consequence, the script has been changed and the benefits of Spirulina were clearly showed¹²⁶. There was a scene about a malnourished child and its performances in school. There were further scenes, which showed the impact of Spirulina on women and elderly people.

The changes, which have been made, clearly improved the quality of the drama on Spirulina. The cultural campaign was a trial and the organisations involved have rich experiences in such activities, especially Antenna Micro Credit Support System and WED Trust. Therefore it seems clear, that they should take a lead role. However, the experience with the Spirulina drama also exemplifies the importance of ownership. It is essential, that the organisation, which mainly deals with a matter and therefore has the most profound expertise, is in charge of the content of the script, but also responsible for the message actually delivered to the public. If Selvendran had been in charge of the content of the drama in the first place, the message surely wouldn't have been concretionary. On the other hand, it was and is very important that Antenna Micro Credit Support System was in the lead of the whole program because its impact on partner NGOs. These NGOs hope to get more micro credits for their SHG members in the future. As they get a third of the interest rate of such micro credits, they would get more income. Hence, the partner organisations have clear incentives to work with/for Antenna Micro Credit Support System. It is very questionable if these partner organisations would work with Antenna Nutritech on the same base if this organisation of Antenna would be in the lead.

Another important point is to think about having tailored script for different audiences.

¹²⁵ The feedback session of the NGOs on the 22nd of August have led to similar conclusions.

¹²⁶ The script was changed by the efforts of Rajendran, head of Exist Trust. He was appointed to execute the cultural campaign for the last part of it.

The drama was usually performed in schools in the afternoon and among villagers in the evenings. It would make sense to address children differently than adults e.g.. The benefits of Spirulina can be shown through examples on performances in school, but also in sports – such as cricket e.g. – and so forth. The message to villagers should be based on their real life situations.

Furthermore, such a cultural campaign is quite a resource intensive activity. Therefore it is very important that it is part of a holistic approach and coordinated with other activities and tools. It would make sense to have a banner that shows the name Spirulina (and probably also the Spiru Power brand), pictures of the alga and so forth. It would also be worth to think about having a SHG lady appointed who is ready to take up Spirulina as a business, when or even



Illustration 17. The vernacular village flyer helps SHGs to promote candies and 60 flasks.

before the cultural campaign is conducted. This sales lady could assist the program. As a result people would know her and how to get Spirulina. Additionally, such Spirulina ladies should be trained and equipped with sales material. A vernacular village flyer has been designed recently to support SHG in their promoting and sales activity. Finally, it is very important

that such campaigns are conducted on a frequent and regular basis. The education of people on a complex subject like nutrition and Spirulina in particular is a very difficult matter and it will take time. Therefore, the question of how to finance such campaigns is very important.

6.2.4 Place

Finding the best distribution channels is one of the main challenges in marketing. This is especially true in BOP markets of India, where basic infrastructure is missing and/or markets have to be developed.

Open Market

Antenna Nutritech distributes its products indirectly. Its distributor has a network of medical shops, pharmacies and alike in Madurai. The distributor is working very motivated and tries

to push Spiru Power through its relationships. Despite the personal motivation of the distributor, the relatively high margins offered to distributor and retailers – some 155 INR - make the product interesting for them. However, in April 2009 there were 35 out of about 400 retailers in Madurai selling Spiru Power products. The distributor has also contacts to other distributors in other cities in Tamil Nadu. Consequently, there is a great potential to grow in this segment.

Institutional Market

Antenna Nutritech sells directly to its institutional partners.

BOP Market

In the BOP market, which is predominantly located in rural areas, Antenna Nutritech works with SHGs through their partner NGOs. Antenna Nutritech relies thereby on the network of the Antenna Micro Credit support system.

The partner NGOs play the roles of facilitator. They organise meetings between Antenna Nutritech and their SHGs. They also buy products from Antenna Nutritech in quantities, which SHGs couldn't afford, e.g. cartons of 24 flasks of 60 tablets, and then resell them in smaller quantities to their SHGs respectively to the members of such SHGs. The SHGs then consume the Spirulina itself and/or are supposed to generate intra and inter group sales and also reach other people. The main idea is that women can reach women most efficiently because they know the needs and problems of other women in similar circumstances. Women could reach other women in a kind of Tupperware marketing approach from peer to peer. If this strategy works, it helps to combat two problems at one blow. On the one hand, it helps to reach the people who suffer most under malnutrition – women and young children. On the other hand, it helps to generate income for the women, who sell Spirulina. However, this distribution channel approach has not yet been established and has to be built. As pointed out before, such efforts should be made in very tight coordination with promotion tools and activities such as the cultural campaign.



Illustration 18. Manoharan inaugurates the juice stand at the campus.

At this point the paper would like to point out, that it is very difficult to find the appropriate staff. This became very clear during the Spirulina Juice Stand trials. The idea is, that SHG members run such juice stands and sell Spirulina enriched juices to health conscious people. There is a great potential of morning walkers and joggers in the public parks of Madurai. There has been a trial of two juice stands - one in the campus of Antenna India and one in Madurai nearby the office of Antenna Nutritech. There have been several

difficulties finding SHG members in nearby areas to run a stand. The members of Exist Trust, which is very close to the office and to the location where the second fruit juice stand was, were not convinced and the appointed SHG lady did not show up to run the stand, although it has been agreed to do so. In consequence, a senior female worker of AGT ran the stand for the three-day trial.

However, it is very cumbersome to bring SHGs or women from the farm or wider located areas to such a stand. They are very little mobile due the cost of travelling.

Furthermore, areas, which are located far away, are not considered as safe. Another problem is that SHG members are not available in the morning. They have other obligations and commitments – such as taking care of

children and family, household etcetera. It is impossible to meet this challenge with female students because women in general do not consider afar environments as safe and, in general, they are not yet married. Therefore being in a park or on the street in the morning is considered as dangerous and not appropriated – especially for unmarried women¹²⁷.



Illustration 19. The juice stand nearby the Madurai office of Antenna Nutritech.

6.3 Conclusion Marketing Mix

Antenna Nutritech has a rather elaborated and good marketing mix for the open market. There are good, value added products with a reasonable pricing. Furthermore, it cooperates with an established and highly motivated distributor. The doctor promotion is also conducted regularly. Although there is surely potential to grow, the marketing efforts in this market seem to be on track¹²⁸. The per unit sales of the 100 flasks increased to 106 flasks per month in the

¹²⁷ Please see the report on the lime juice stand trial in the annex for more details.

¹²⁸ There have not yet been large-scale capital injection from Antenna Switzerland. Therefore, bigger sales effort have not been conducted.

period of April to August 2009 compared with an average of 85 flasks per month in 2008/09. This is a growth of over 25%.

The institutional market is worked through direct sales. The sales efforts depend on personal visits to the NGOs. Due to the several issues – such as the development of the new land – there was very little time for such visits during the time of April to August 2009. Therefore, such efforts cannot be assessed properly in this report. However, sales of the 180 flask grew at 45% compared to the average figures of 2008/09.

Efforts to establish a distribution channels for the BOP segment to reach needy people and to create business opportunities for SHG women need a holistic approach. There have not yet been the right products for SHGs to take up Spirulina as sustainable business activities. The development of the Spirulina candies can be the missing link in the product portfolio. With the candies the product portfolio for SHGs consists of candies, powder of 5gr and 60 flasks. Especially, the candies can have a major impact because their price to end consumers of one INR is very affordable and therefore have the potential to reach the most needy. They can also figure as a “door opener” for more value added products – such as the 60 flasks. The latest sales figures in August show that Antenna Nutritech was able to sell some 1163 packages of candies. This is very promising. However, it is important to create big markets with communication efforts such as awareness campaigns, cultural programs or exhibitions in order to ensure the profitability of the candies due to large-scale production. These efforts have to be made continuously and on a regular basis. Simultaneously to such market creation activity, Antenna Nutritech needs to train SHG ladies who can take up the business. They have to be trained in Nutrition and sales skills. Despite training, such ladies need marketing support and sales tools. The recently developed vernacular village flyer is such a tool. In conclusion, Antenna Nutritech possesses a lot of different and necessary elements for a holistic approach – such as products, promotion and sales tools and so forth. Consequently, it needs to coordinate and harmonize the different activities, tools, promotions and alike, but also ensure the coordination with Antenna Micro Credit Support System.

7. Personal remarks and conclusion

I had a very interesting and intense experience during my four month in India, which I appreciate a lot. I think Antenna Nutritech does an excellent job with the resources they have. However, in order to make an impact on the severe situation of malnutrition in Tamil Nadu it is essential that the scope of the project grows. Therefore, it is crucial that Antenna Nutritech

manages to get registered as a section 25 company and to be able to receive the committed FDIs of Antenna Switzerland.

Once such resources are available, Antenna Nutritech would be able to hire an additional senior employee, which allows dividing some of the tasks. Thereby, Antenna Nutritech could work all the three markets intensively and focused. Additionally, Selvendran would get more time to develop the company itself and handle special projects – like the land development, the international congress in New Delhi on Malnutrition and so forth. I think that could make a major impact.

Once the company is registered and the FDIs are made, it is important to have a strategy how to bailout Selvendrans shares. Selvendran invested his own capital in order to build-up Antenna Nutritech. This shows a lot of his commitment to Antenna and his motivation to work for social purposes like combating malnutrition. Therefore, it is very important to agree on how such an acquisition can be made.

The process of registering the company is very cumbersome and resource intensive. It is very hard to assess when the process can be completed, since Antenna Nutritech has hardly any experience of this matter and the information of the lawyers regarding the time schedule of the process is usually far too optimistic or simply not accurate. This makes planning very difficult and challenging. However, this situation will change in the near future when the company is registered. Then the committed resources should be available and Antenna Nutritech should have more space for manoeuvre. It is then very important to have plans how to allocate the resources most efficiently and effectively. This is clearly a task for the management of Antenna Nutritech. However, targets and plans on a strategic level should be elaborated with the help of Antenna Switzerland in order to know strategic priorities, special projects and so forth.

Antenna Nutritech has quite an ample product portfolio. As pointed out before, it should focus on the existing products and not allocate too many resources into product development, which might fulfil a specific requirement for a small group of customers, but also has the potential to compete with the existing products of Antenna Nutritech.

Regarding the specific marketing efforts on the different markets, the BOP segment is the far most challenging one. People in the open market are relatively health concisions and relatively well educated and therefore relatively easy to convince. In the field of institutions sales efforts aim at a relatively small target group – NGO and institution leaders -, which is good educated and very concisions on the needs of its people. These markets are very important for Antenna Nutritech as both finance mechanisms and a way to fulfil its social

commitment – at least in the case of the institutional market. On the other hand, the BOP market is very hard to work. There are a very large number of people with relatively little money, little education and little consciousness on malnutrition and the subsequent problems it causes. Therefore the marketing efforts in this market are very challenging and a holistic approach is very much needed. Hence, different marketing efforts, such as educating the market through awareness meeting and cultural campaigns, should go hand in hand with the building up of distribution channels, such as the selection, training and equipping of SHG sales ladies. It makes no sense educating the market and not having the SHG ladies ready to sell or having well trained and equipped SHG ladies, but no costumers.

In order to make such efforts work in the BOP market Antenna Nutritech clearly needs the support of Antenna Micro Credit Support System and its partners. Although some of the efforts of Antenna Nutritech have been supported, there is a lot of potential, but also room to intensify such collaboration. This collaboration might be of more interest to Antenna Nutritech than to Antenna Micro Credit Support System. However, the relationship is potentially mutually beneficial. The benefits for Antenna Nutritech are quite clear and have been pointed out before. In short, it would profit from an already established and supportive network of NGOs and SHGs. On the other hand, Antenna Micro Credit Support System might benefit from a new and innovative business activity for their customers – the SHGs. There are few entrepreneurial activities of SHGs based on micro credits – most of are tailoring or goat rearing. However, Antenna Micro Credits Support System has had bad experience with micro credits and SHGs, which are involved in Spirulina business¹²⁹. This is true and it makes no sense to engage Antenna Micro Credit Support System against their will. However, it is crucial that this organisation is part or truly supports a marketing approach for the BOP market. It might need the support and the negotiating skills of the Antenna Switzerland senior management to persuade Antenna Micro Credit Support System that its support is crucial to Antenna Nutritech and its BOP marketing efforts.

¹²⁹ Please consult the interview with Manoharan in the annex.

8. Annex

8.1 Gross and Net Margin Calculation

Gross and Net Marging Calculation

Cost Calculation and Gross Margin

Direct related Costs	Tablets 100	Capsules	Boxes	Tablets 60	Tablets 180	Drum	Powder	Juice
Spirulina	36.00	24.75	27.00	21.60	64.80	10800.00	550.00	0.55
Process Costs	24.00	24.00	0.00	14.40	43.20	7200.00	0.00	1.10
Packaging/Flasks	5.57	5.57	37.40	3.50	5.20	0.00	0.00	0.50
Labeling	1.00	1.00	0.00	1.00	0.80	0.00	0.00	0.35
Freight & Cartage	0.90	0.62	1.24	0.54	1.62	270.29	11.27	0.10
Total Direct Costs	67.47	55.94	65.64	41.04	115.62	18270.29	561.27	2.60
Sales Price	120.00	90.00	120.00	69.00	200.00	33000.00	750.00	5.00
Gross Margin	52.53	34.06	54.36	27.96	84.38	14729.71	188.73	2.40
Gross Margin %	44%	38%	45%	41%	42%	45%	25%	48%
Indirect related Costs								
Bank Charges	0.46	0.20	0.46	1.15	0.63	124.44	2.54	
Printing and stationary	7.58	4.20	7.58	9.59	1.07	115.69	1.17	
Postage and communication	1.02	0.57	1.02	1.29	11.66	1261.71	12.73	
Promotional Expenses	2.73	2.73	2.45					
Free Sample Expenditure	4.05	3.36	3.94					
Wages	0.78	0.78	0.39	0.47	0.70	237.78	2.43	
Travelling Expenses	1.35	0.75	1.35	1.71	0.74	79.55	0.80	
Miscellaneous Exp	2.42	1.34	2.42	3.06	3.07	332.00	3.35	
Total Indirect Costs	20.37	13.91	20.37	17.26	17.87	2151.17	23.03	
Total Costs	87.85	69.86	86.01	58.30	133.49	20421.46	584.30	
Sales Price	120.00	90.00	120.00	69.00	200.00	33000.00	750.00	
Net Margin	32.15	20.14	33.99	10.70	66.51	12578.54	165.70	
Net Margin %	27%	22%	28%	16%	33%	38%	22%	

8.2 NGO Marketing Initiative

NGO	Field of activity	Category	Town	State	Phone	e-mail	homepage	Contact	prio
Novi Survat	To provide the street children	Child Nutrition		Goa		admin@novisr	http://www.novisurv		1
Annavaal Ind	To provide better health care.	Nutrition & Po	Pudukott	Tamil Nadu	91-4339-3030	ams.org@usa.net		Mr. M. M	1
Pochnalaman	o raise the Social, Educational, Nutrition & Po	Chennai		Tamil Nadu	9144-9444069	amarumugam	http://www.ARIUMUG		1
DON BOSCO	A DBA/ISSS is a Salesian Instituti	Child Nutrition	Chennai	Tamil Nadu	044-2522 542	anbulamchen	http://xlw.Arokiasar		1
Anwasha Trib	To revive, preserve, protect, pr	Rural Development %	H	Orissa	91-674-55705	anwasha2k@rediffmail.co		l@pini Bih	1
Aravind Child	To focus on preventive health c	Child Nutrition	Madura	Tamil Nadu	91-452-93265	aravind@compuserve.com;		lakshmi	1
ashaf	the promotion of child welfare thiv		Banglore	Karnatak	(+91- 80) 235	ashafbin@yahoo	http://www.ashaf.or		1
Ashribad	To provide better health care fr	Nutrition & Po	Cuttack	Orissa		ashribad@rediffmail.com			1
Association fo	To promote development and v	Rural Develop	Chennai	Tamil Nadu	91-44-827584	assefa.madras@gems.vsr		Mr S Lon	1
Association Se	To work for the overall welfare	Rural Develop	Salem	Tamil Nadu		association-sim			1
ATHENCOTTA	AMK is committed to the care ar	Child Nutrition	Kanyakun	Tamil Nadu	9367521395	athencot2000@yahoo.co		Mr. Arul	1
Asian Youth C	Children (especially street), but also shq	(wor	Chennai	Tamil Nadu	26451715	ayc_chennai@	http://www	Mr. Princ	1
Aid	3a) Children's Nutrition	Child Nutrition						Basic contact	1
Bai Sansar	field of community developmen	HIV	Jaipur	Rajasthan		bsansarindia@	http://www.baisanse		1
Buds Cura Fo	To bring back hope and dignty	HIV		Tamil Nadu	91-984114112	budscura@vsnl	http://www.Jeyapaul		1
CAN STOP	Cancer, Children, Women	Health	Chennai	Tamil Nadu	044-2628 425	canstop@vsnl	http://www.Vijaya Bh		1
CHRISTIAN MI	The Christian Mission Charitabl	Child Nutrition	Chennai	Tamil Nadu	044-2827 879	cmcredit.cmct@	http://www.Colleen R		1
Sangath	to promote health in all aspect	Child Nutrition & Health		Goa		contactus@sa	http://www.sangath		1
Damien Found	School, education	Health (Tubon	Chennai	Tamil Nadu	91-44-828049	damien@clsr	http://www	Dr. Krishr	1
Development	.DATA supports to sustain com	Rural Develop	Madurai	Tamil Nadu	91-452-26036	data@md3.vsnl.net.in		Reji Chan	1
Divine Childre	To establish children's home to help poor and	Trivandru	Kerala		91 471 32552	dch_tvnm@yah	http://www.divinech		1
FAD	FAD works for the cause of HIV	HIV	Mumbai	Maharashtra		drshantanoo@		Shantanu Dond	1
The Soastic Sk	To run an early detection and i	Disabled Child	Chennai	Tamil Nadu		enable@md2.vsnl.net.in		Poonam f	1
JANAKALYAN	http://jkporissa.org/activities.html		Parlakhen	Orissa	06815-223769	info@jkporiss	www.jkporissa.org		1
YASHUA SANC	receives girls under the age of	Child Nutrition		Goa	01255 860112	info@yashuasanc	www.yashua		1
AKSHAYA PAT	Akshaya Patra's focus is on hur	Child Nutrition	Banglore	Karnatak	080- 2357-83	infodesk@aksl	www.akshayapatra.o		1
Jeevandhara	To provide non-formal educatic	Child Nutrition	Jaipur	Rajasthan	91-294-46115	jeevandhaara@rediffmail.com			1
KIRUBA SEVA	Kiruba Javouhey Home for Street Girls		Pondicher	Pondicherr	94434 25884	kirubalaya@qr	http://kirubalaya.org		1
Kottekkad Kar	To provide food, cloths and she	Nutrition & Po	Palakkad	Kerala State		kkctpkd@pma	www.karunalayam.o		1
Lifeline Trust		HIV	Trichy	Tamil Nadu	9952846293	lifeline@bcl@yahoo.com		M.Moham	1
Nesakkaram	street children for over eighteen	Child Nutrition	Chennai	Tamil Nadu	28257830/	nesakkaramse	http://www	Fr. Jesu, I	1
SRIRAM CHAR	Health Care, Women Empowerment,,		Pondicher	Pondicherr	0413 4212180	nfo@sriramch	http://www.sriramch		1
Association Fo	To undertake activities for the	Rural Develop	Thoothku	Tamil Nadu	91-4639-6606	paakin@yahoo.co.in,		I Balakris	1

8.3 Interview with Manoharan

Interview with Deva Manoharan (Head of Antenna Micro Credit Support System) at the 12th of August 2009 on the Cultural Campaign of Antenna in Tamil Nadu between June 2009 and March 2010 on Spirulina Promotion, General health and Micro-Credit for Rural Poor.

This script will reproduce the essential content of the interview.

I) Cultural Campaign

- Personal experience:

Manoharan's father has always told stories with acting. Therefore acting as a mean of story telling was always a natural thing.

Manoharan always advocated the poor and the weak. He began to educate such people with the means of acting and story telling. 1974, he met Denis von der Weid, who gave him and his fellows some theoretical education. He introduced them to the theory of Augusto Boal on the culture of silence and how to break it.

Manoharan started to live with village people in order to learn their specific local languages or dialects, habits, superstitions, myths, beliefs etcetera. By doing so, he decoded the local culture and identified the signs of language, which are designed to keep secrets and use such information advantages to benefit from them. He identified different groups, such as men and women and different casts, which compete social positions and privileges. Manoharan identified keywords, which reflected life situations, underlying problems and needs. Such keywords are the base of education, which has to take place in cultural contexts.

Manoharan has a rich experience with dalits (or the caste of the untouchables). He spent years to educate them on their rights and how they can actually use or claim them. He performed dramas, which reflected concrete life situation of dalits and their experience with the police. The dalits, which were afraid of the police, were educated on their rights and how to claim the help of the police when such rights were violated. Manoharan also helped to improve economical situation of the dalits by organising strikes and establish organisations of and for dalits.

- What are the key factors for a successful campaign? Especially regarding the „sustainability“ of the messages spread?

- Cultural context. A successful campaign has to be set-up according to its cultural context and has to take languages, dialects, local beliefs, habits etcetera into account.

- Continuity. As education and changing social beliefs or habits takes time, a successful campaign needs to deliver regularly a consistent message.
- Emotions. In order to break the culture of silence performances need to be emotional.
- Commitment. As the case of Manoharan shows, cultural campaigns need a deep commitment. One has to understand the specific culture of villages or a certain population. Performances, dramas and other sessions are usually performed at evenings and nights and cultural campaigns. Cultural campaign activists are sometimes the targets of retaliation. E.g. Manoharan was beaten up and taken to jail because of the retaliation actions by landowners, which depended on dalits as low cost labour.

- How did the program come about? Who has taken up the initiative? Yves Burrus (Donor) or did Antenna ask for such a program?

Manoharan asked for funds for a cultural campaign. Yves Burrus, who already supports Antenna Trust with loan for the Micro Credit program, agreed to finance such a campaign. The campaign covered Spirulina promotion, general health and Micro-Credit for rural poor. Mr. Dharma Neethi of WED Trust, which is a partner NGO of Antenna Micro Credit Support System, was in charge of organising and training of the actors and writing the script of the drama because he has a unique experience in such cultural campaign performances. The messages of the drama were discussed in the kick-off/inauguration meeting and the NGO leaders, which were supporting the campaign, gave their inputs. Based on this meeting the drama has been designed.

- Feedback on ongoing campaign (in comparison with others)?

Manoharan regarded the campaign as a success. He stated the same in his report of the 27th of July to Mr. Yves Burrus. Although he admitted that the campaign was a trial and there was a lot of room for improvement, he was positive. Especially, because the campaign was the first of such an activity for quite a long time. He also highlighted the reach of the campaign regarding SHG. There the partner organisation did a very good job organising the meetings and the people that the dramas could be performed.

Manoharan suggested bringing a possible next cultural campaign on a broader base. Apart from the dramas and awareness programs conducted so far, he would also organise exhibition days as a full day program. He suggested having microscopes to show Spirulina to people, to offer Spirulina Juices and the other Spirulina products, to have photos about malnutrition and

to perform dramas etcetera. He also proposed to have dramas, which would be followed by discussions and question and answer sessions.

- Feedback of others in general? NGOs? Etc?

Feedback sessions are planned, but haven't been held yet.

- What about the sustainability of the messages (importance of savings, toilets, spirulina)?

Feedback sessions are planned, but haven't been held yet.

- Experience in linking Spi with a micro credit scheme? Did Antenna plan such a scheme in the future?

Antenna has already conducted three trials in the past but they have not performed very well and the SHGs had problems to pay back the credits. Manoharan explained that he thinks that the production of Spirulina would be too complicated for SHGs because the mastering of the Spirulina production would need education and some scientific understanding - something that SHG members simply don't have. Antenna experienced such a unsuccessful trial in 1995. He was also sceptical on supporting SHGs with micro credits for Spirulina sales activities. He expressed the concern that people or customers need to be educated to make sales possible. Therefore cultural campaigns would be of high importance. If Manoharan sees that such sales are possible and therefore that SHGs are able to pay back their micro credits, then he would support such Spirulina business activities by SHGs. However, at the moment, he fears that Antenna wouldn't get back the micro credits of the SHGs and therefore would make losses.

II) General questions:

- Impact of credits to standard of living of micro credit program?

Antenna doesn't have such data. However, according to Manoharan the impact of the micro credit system can be felt, when they visit the villages and get an impression of the housing conditions. He exemplified that first; one would sit on the floor in a house when visiting.

After sometimes, people would have plastic chairs to sit on. On the third visit, they then might have a television e.g..

- General facts? Income per household etc?

Not available.

8.4 Juice Stand Report

Lime Juice Stands

1. Status:

1.1 Farm

The stall at the farm has been temporally closed due to a labour shortage at the farm itself (2 women left AGT because they are getting married). Please find the data for the stand trial attached in the mail. It contains the data from the 18rd of April and the 31st of May.

Financial Assessment: the figures do not (yet) seem very promising. However, one should keep in mind that the period was in the school holiday and the farm was therefore not very well visited (compared how it is during the rest of the year).

1.2. Stand near the office

We have run a stand for 3 days (7th and 8th of May) with personal from the farm. We tried to run this stall with SHG groups from Exist Trust but we were not successful. The dedicated woman did not show up twice, let her daughter excuse her by phone and made absolutely no effort to live up to assist the agreed trial. It seemed that she didn't believe in the idea of the juice stand but did not tell us so. Please find the figures for these days also in the excel file attached. Please note, that the 7th and 8th of May were also days in which Madurai was crowded due to a religious festival.

2. General Situation

2.1 Product Portfolio:

We have the feeling that the stand should sell more then just lime juice. We are also selling Hybisco Spiru Juice (which has a better margin due to its sales price of 10 Rp). We are also selling powder and Candies. When we tried the Juice Stand near the office, we were able to sell two 60 flasks as well. We might also adding Chikis to the portfolio when we are able to run the stand again.

2.2 Staffing

there are several difficulties we face trying to make the juice stand concept make running. We haven't found shgs in nearby areas to run a stand. The members of exist trust are not (yet)

convinced by the concept. And it is hard to bring other shgs or women from the farm into the area because they are very little mobile (costs of travelling, far away areas are considered as being not safe). Another problem is to have shgs available in the morning. They have other obligations and commitments (children & husband, house etcetera). I thought about meeting this challenge with the female students but women do not consider afar environments as safe and, in general, they are not yet married. Therefore being in a park/or on the street in the morning is considered as dangerous and not appropriated (for a unmarried women). As far as we can assess, it would be challenging to run the stand by men. First, shgs are seen as more trustworthy. This seems especially important in the case of spirulina because it needs quite an effort to convince people. Second, other stand owners wouldn't easily accept the stand and the police might also want to have their shares (we have talked to a stand owner and he said he would have to bribe a police man).

3. School Lime Juice Stands

As we have been struggling to find personal to run the Lime Juice stands, we couldn't do any efforts towards the school lime Juice Stands.

8.5 Report on Cultural Campaign on Spirulina Promotion and Micro-Credit for Rural Poor by Manoharan

A Report on Cultural Campaign on Spirulina Promotion and Micro-Credit for Rural Poor

Name of the project

Cultural Campaign on Spirulina Promotion, General health and Micro-Credit for Rural Poor

Grant sanctioned:

Rs.INR.210000/-

Project Implementation Period

June 2009 – March 2010

Name and address of the implementing organization:

Antenna Micro Credit Support System
Madurai, Tamilnadu,

Major aim of the project

Spirulina a food / health supplement promotion and Micro Credit Promotion among rural poor.

Activities of the project

Cultural Performances and Public meetings.

Cultural Program

a) Cultural Training

4 volunteers including 3 trained artists were selected and formed into a Cultural Team. They were trained with the help of Street Theatre Trainer and Project Contact person Mr. Dharma Neethi for two days. Importance of Spirulina products in health promotion and Impact of Micro Credit on poor women are the major themes. The team prepared three scripts and made rehearsal for giving best performance.

The first two scripts explain the present poor health situation among women and children, what to do for this? And inform the public about the nutrient content which is available in Spirulina. How in the long run Spirulina will help to build up the immune system etc. of children, women and others.

How a small savings helps rural women in increasing the family income and making a happy and decent living is the teaching by another script. The team consumed the theme well and they are free to make slight changes according to the participants / audience i.e., school children or village public. The team also prepared four awareness songs on the subjects to make the performance more interesting.

b. Cultural Performance

It was planned to enact performances during the day time among children at the Middle Schools and higher secondary schools and in the evening village performances were planned and done accordingly. The network member NGO agreed to arrange the program with the prior permission from concerned school teachers and SHG women leaders at the village level. Mike set and loudspeakers were arranged at the village program and some of the schools where more number of participants were expected. The cultural team with music instruments will sing songs to collect the people in the village and when we reached to the desirable number of participants, the performance will start highlighting Spirulina promotion, and micro-credit. In every performance enough care has been taken so that every participant will enjoy, think, and act soon.

c. participation of Resource Persons in the public meetings.

Resource persons from Antenna Micro Credit Support System, Antenna Nutritech and network member NGOs had talked and shared concrete life examples and success stories with the public. Questions raised by common public and children were answered well with direct examples which satisfied the participants.

d, Beneficiaries

The table below explains the performances and the number of school children and people benefited out of this program.

Months and Dates	Name of the NGOs and the operational areas	No. of Performances conducted		Number of Participants Participated			
		And		In Schools		In Villages	
		Name of the Schools	Name of the Villages	Boys	Girls	Men	Women
June 27 & 28	WED Trust, Chellampatti	2performances one in Kovilan Kulam village and other in Valandur village	2 Performances one in Munduvelan patti and the other in Nattar patti village	242	231	245	365
June 29&30	ICHW Kuppanampatti	2 performances one in vasinagar of Thotappa naikanur and the second one in C.nadupaatti	2 performance one in kavanampatti the other in Periya semmetu patti	125	75	150	225
July 1&2	UTM Usalampatti	2 performances Vellaimalai patti villge school and Mela sempattyvillage school	2 Kanniyam patti village and Duraisamy puram village	130	155	290	286
July 3&6	RECARD Viruveedu	4 performances in the schools of Uthppanaickanur,Vell ai malai patti,Nadumuthalaikul am and Kodikulam	2performances in the villages of Kasma muthalaikulam and Thathampatti	505	435	438	550
July 8&9	SRED Andipatti	3 Jyamangalam union higher secondary school and kullapuram Governt kallar high er secondary schools	2 Jeya mangalam village and \Kull apuram	800	855	375	575
July 10&11	MMS Chinnamanur	2 performances in two Govt high schools	One in Ammapatti village the other in Ramasamy naickenpatti village	315	235	369	418
July 13&14	DALIT TRUST Sholavandan	4 performances one in Mullipallam village G.H.School Sholavandan village GHS,Alankottaram village private high school and Mannadimangalam Union middle school	2 performances one in Rishabam village and the other in M. Puthu patti village	680	735	175	215
July 16 & 17	CENTREREDA Kodairoad	4 performances in the following villages and schools Pallapatti, Koundan patti,Uchanampatti and Palampatti	2 performances one in Kandarpa kootai village and the other in Nariyuthu village	1010	865	365	470
July 24&25	EXIST TRUST Chellur and Thirumangalam	2performances one in Karruppayurani village Appar High School and the second one in Meenatchipuram	2 performances one in Karuppayurani village and in Kilaveneri villge	754	745	268	348

		village Middle school					
	TOTAL			4561	4331	2675	3452

Thus during the above period we have covered 8892 school children and 6127 women and men which include our MCBs also. Totally 15019 persons were participated in the campaign.

The expenses:

We had paid as contractual payment to the cultural team [consists of two women and three men] INR.2500/- per day thus totally for 18 days x 2500 =INR.45000/-

The cultural team had performed average three performances per day two in schools and one in a village public / common place.

AMCSS network partner NGOs performed well and they worked hard to bring in more and more participation of the children and common public .They had provided meals, tea and snacks for the cultural team. They looked after all the arrangements prior to and after every performance. To compensate all their expenses we had paid INR.1500/- per day per NGO. Totally it amounts to 9 NGOs x 2 days x 1500 =27000/-

NGO had also spent some funds from their own pockets for example for making photos, extra travel expenses for propogandas of the campaign etc. Roughly it may come up to INR. 500/ per performance thus NGOs contribution was around [18 performance x INR.500] =9000/-

Apart from this the people also especially MCBs and SHGs had spent from their savings averagely INR.300 per performance on electricity, tea, meals etc. 18 days x 3 performances x INR.300 =16200/-

Budget:

Total grant, INR.2, 10,000/-

Total expenses for the above 18 days programs = INR.45000/- + INR.27000/- =72000/-

Earmarked remuneration for Mr. Dharmaneethi, coordinator, Awareness campaigns is INR.5000/- per month. 12 months x 5000 =60000

Remaining grant for future programs = 210000 – 72000 + 60000 =INR 78000/-

Impacts

- ✓ School students and common public thoroughly enjoyed the programs.
- ✓ School students & rural Public get to know more about Spirulina
- ✓ Spirulina filled sample toffees were distributed to large number of students and common public and SHG members.
- ✓ SHG women are planning to sell Spirulina products.
- ✓ Rural women and children liked the taste of spirulina and start believing the availability of nutrient content
- ✓ Rural children, teachers, SHG women and general public were highly motivated
- ✓ AMCSS and Member NGOs widely reached and get recognition from public.
- ✓ Strengthened relationship between Network NGOs
- ✓ The volunteers from cultural team benefited with job opportunity and information
- ✓ Women come forward to join as group and to start with small savings.

Follow up

- Feedback sessions are planned among network NGOs and steps will be taken for further follow up.
- Sample of Spirulina products are being distributed to public and are about to getting orders for commercial packs from public and SHGs.
- Formation of new women groups and strengthening the existing groups
- Extension of Micro- Credit Program to more villages are on.
- We have still INR. 78000/- left with us so organizing exhibitions and seminars on spirulina and other subjects becomes a must and on the anvil.

Conclusion

On the whole the above campaign had helped the Common public, school children, SHGs, MCBs and NGO leaders to learn more about Spirulina and other subjects. And it is our duty to plan our future course of actions in a better way so that our people and SHGs benefit more from the programs. All in Antenna Micro Credit Support System extend their heartfelt thanks to Mr. Yves Burrus, Dr.Denis and friends for having supported us with funds and other resources. No need to say that without that support we cannot reach out to many SHGs and common public.

Annex B - Report on Spirulina Awareness and Green Tongue Candies Launch meeting

06-11-2009
Madurai

Report on Spirulina Awareness And Green Tongue Candies Launch meet Held at WED trust on 04-11-2009:

As reported from the previous meeting held Antenna Nutritech's Office at two occasions before for Spi- candies promotion at rural villages through SHGs dated 07-10-2009 and 12-10-2009 ,we could develop Green Tongue –Candies and launch it at the proposed meeting planned at the venue WED Trust , Chellampatti on 04-11-2009 as scheduled.

The important points of the meetings are being reported below

There were around sixty SHG members and women from other possible segments to take up Spirulina promotion were invited for this special meeting by WED trust but due to heavy rain around forty SHG members could make it to the event.

The meeting was started with the welcome note by Mr.Dharmaneethi (D.N) a founder and Director of WED Trust (WT) and it was the day WT has been established seventeen years ago hence on this occasion the members of team Antenna wished at two occasions WT to continue their good work.

(I also personally wish them (WT) to continue their Great work and appreciate the new initiatives on the much needed health and Nutrition areas with special campaigns, as I could not make it to this meeting I did wish them by phone.)

Ms.Arthi(D.A) has given a simple and complete explanation on nutrition ,prevailing food habits , what would be the benefits if we and our children consume Spirulina. She also explained SHG members about the process steps of spirulina and the products like candies with the suitable photos from the banners.



Arthi explaining SPI to the SHG members



SHGs at SPI-awareness session

There were perceptions of spirulina as medicine and chemical substance but it has been clarified by D.A to the participants (natural, more beneficial and even can be grown at villages by SHGs locally) and many became interested on Spi.

Mr.Balaji (P.B) has explained the Spi-benefits and, spi-promotion as income generating business among village children and women .P.B also given the tips to make use of the profit margins to buy GT-candies and SP-tablets for the welfare of their family members.



Balaji explaining the Spi-Business



Jayaraj Sharing his Spi-salesexperience

Mr.Jayaraj (J.R) has shared his selling experience of SP-tablets at Usilampatti area and the benefits (testimony) he has been recording since these two years. J.R's experience has made the participants to experience the Spi-benefit with immediate effect as a result there were about 40 SP-tablet flasks and about 12 packets (50 candies each) GT-candies has been sold during the meeting.

Ms.Logamani (L.M) another founder and director of WT has also consolidated the benefits to the participants.



Ms.Logamani briefing the Spi-Benefits to SHGs



SHG members listening the SPI-Session

Mr.D.N has concluded the meeting with highlighting the following points...

- Rural need for Nutrition
- Reason -Antenna speaking the Spi-benefits to our village and community
- The high Spi-product prices of at market place and affordable Antenna SPI-products.

- Possible business avenues:(School vendors, Anganwadi workers, Village nurses and Auto drivers)

SPI-Stall:

There was a SPI-Stall which has been set and the GT-candies and SP-Tablets with SPI-powder was displayed which made a good impact in the minds of participant SHG members and finally the stall has been permanently placed at WT's office.



SHGs at SPI-Stall



SPI –products display at Stall

Highlights:

- Some of the SHG leaders were very enthusiastic to promote SPI.
- SHGs have invited Antenna members to their villages to speak- SPI benefits.
- WED Trust has plans to appoint two women exclusively for SPI-Promotion.
- Antenna team learnt the pocket money of rupees 2-5 a day to the children at villages hence the SHGs feels the children could easily buy the GT candies at one Rupee.
- There were only four men in the big group of around forty participants.

Next Steps:

To train more SHG members at Eco-Park and Spi-Farm with practical sessions to improve the spi-knowledge.

To give them Sales Training at City Office to enable them to develop their entrepreneurial skills.

To support this set of women (2-4) monetarily in the first 3-5months as proposed by D.N of WT to enable them to become sustainable in this proposed period.

Supportive Materials Provided to Health & Nutrition team WED Trust:

- 1) Village notice (Vernacular Language)
- 2) SHG -Show card (Front -Green Tounge Candies / Back-Spiru Tablets)
- 3) Banners on Green Tongue production Steps, Benefits
-Highlights for both candies and tablets.
- 4) SPI-Stall for permanent Display and to give awareness at different villages.

Pricing :

Both GT candies and SP-tablets are priced as in the table

	Price to NGOs	Price to SHGs	Price to Customer
Price per Candy (Indian Cents)	70 paise	80 paise	100 paise
Price per Packet -50's (INR)	35	40	50
Spiru Power Tablets 750mg x 60 tablets in each flask(INR)	69 / Flask	75-80 /Falsk (Based on qty)	99

Purchase by WED Trust:

On this special occasion 360 packets of GT-candies (50 candies each) and 80 Spiru Power SHG's tablet packs have been delivered by Antenna and would regularly keep supplying both the products to WED trust on request.

Period allotted for SPI Campaign:

WT has allotted the period of one year for this novel Spirulina Promotion Campaign from 04-11-2009 to 04-11-2010 in their areas to address the people with SPI. This is the good period and we thank the interest of the WT team.



Conclusion:

This Spi-awareness and GT-Candies launch meeting is just a beginning and we intend to reach as many as villages as possible by providing regular training and support to the SHG members and interested women entrepreneurs in the coming months.

We learn from the SHGs that these products are suitable and affordable (GT-candies –to the children and SP-Tablets to the adults) to the rural people hence with the proper awareness programs and training to the SHGs we shall reach our social targets.

We thank WED Trust team for the consistent cooperation and support to address the distressing problem of Malnutrition by promoting spirulina to the social markets.

D.Selvendran and Team
Spirulina Program
Antenna India

Note:

As D.S could not travel the team ANT has made the note of the meeting and shared with D.S, based on it this report is prepared there could be minor deviations kindly bring it to our notice if you find (Participants of this meeting)any such differences we shall correct it.

Annex C - Spirulina – Rural Promotion Strategy Meeting

Date: 12-10-2009

Venue: Antenna Nutritech Office.

Topic: Spirulina –Rural promotion strategy meeting.
(To focus the Village and social markets through Micro Credit Program)

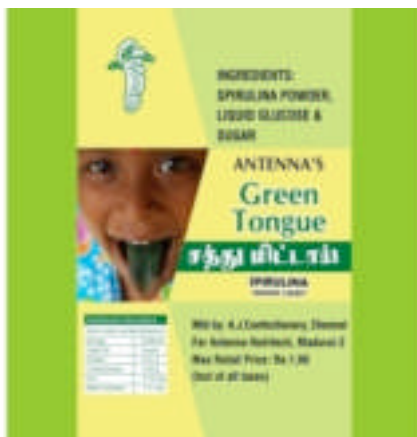
Participants:

Mr.Dharma Neethi, (DN) –WED Trust
Mr.Devamanoharan, (DM) –MCP Antenna
Mrs.D.Arthi (D.A) –AGT
Mr.Jayaraj (J.R) –MCP Antenna
D.Selvendran(D.S) –ANT

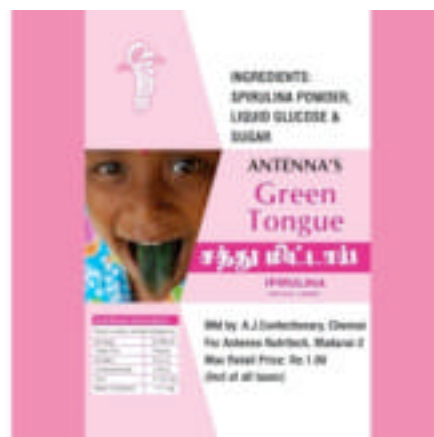
As we were working longtime to find a suitable name for the candies we began our discussions to arrive at the name.

Yes! Today we could arrive at Combination of both English and Tamil names at the same place on the wrapper. **Green Tongue and Sathu Mittai** (Nutritious Candy) find the Design below. (We informed the designer to do the sample immediately after our meeting and he could finish and sent it by evening).

Spi-Mango



Spi- Vanilla



We could start our discussion on **4P's** (Product, Price, Place& Promotion)

Product:

We have concluded the name **Green Tongue -Sathu Mittai** (Nutritious Candy) for our product.

We were discussing about various packaging possibilities to have better reach, DN and DA suggested like small sachets or rolls with 5-7 candies and external wrapper in eco friendly paper to offer environment friendly affordable packaging.

DN also suggested an important point to make the Candies size bigger as it looks smaller for one rupee (Now it is 3grams and to make it to 4grams).

DM suggested different Spi-Product and packaging at possible frequent intervals to keep the buyers (children and mothers) to feel something new and would keep buying it.

The suggestions were very important and ANT could implement it gradually and DS would work to find such innovative system in the months to come keeping all the suggestions.

DS explained the present Profile of the product and the proposed new product ANT is trying to develop in few months for the social markets especially for the children consumption (With less sugar-CH and eco friendly packaging) as mentioned below

SPI-Candy product profile

Existing

Composition:

Weight:3grams

Spi 0.5 G

CH: 2.5G

Packing

Polythene wrapper

Shelf Life:

2 years

Proposed

Composition:

Weight:3grams

Spi:0.5 G

CH:1.5G + Protein:1.0 gram

Packing

Eco-friendly wrapper

Shelf Life:

???(May be 6months)

DS also explained the constraints in developing and strategizing a new product. Requested the Group to think the possibilities of promoting the available candies which are still new and soon going to be available in the proposed brand name(in a fresh new wrapper) and the group started discussing the next P- Price.

Price:

On price we had many suggestions DM suggested to have lesser possible price or to keep the same price of 70 paisa per candy to 4gram candies.

DN also suggested finding the possibilities of selling bigger candies to the customer at one rupee.

DM suggested ensuring this distribution among very low income group families and children and to plan the sales accordingly.

DS explained that the Product is to be sold in the market for one rupee (MRP) maximum at any cost which is a pocket money of a child of any income group hence it would be important for us to give proper awareness to the targeted group to ensure regular buying habits then concentrating on distribution system. The group agreed with this point to focus on regular awareness sessions.

There was proposal by DN that to have two different packing to support one for the regular sales and another for the subsidy distribution to MCP beneficiaries but DM said there should be only one pack for the social distribution.

DN suggested subsidizing by providing additional candy packs to the poor SHG lady who is promoting Spi-Candies with involvement.

DS explained the economics of the product (as on Sep2009)in the last meeting , subsequently highlighted the minimum possible price for ANT and it has been agreed by the group to proceed with the same price structure followed now for next few months as follows...

	Price to NGOs	Price to SHGs	Price to Customer
Price per Candy (Indian Cents)	70 paisa	80 paisa	100 paisa
Price per Packet -50's (INR)	35	40	50

Economics of Spirulina Candies:

As of now with our experience we conclude the break up as follows...

S.No	Cost components	Cost break up
	<u>Under Variable cost Head (VC)</u>	
1	Candy making cost	0.36
2	Wrapper cost	0.06
3	Drum Cost	0.02
4	Spirulina Cost (half a gram)	0.30
5	Analysis expenses	0.01
6	Transport cost at various level	0.03
7	Promotion exp	0.04
8	External cover and outer label	0.02
		0.84
	<u>Under Fixed cost Head (FC)</u>	
1	Office rent /Salaries and others	0.10
	<u>Total Cost (TC=VC+FC)</u>	0.94

Another Price burden to be faced by ANT:

DS also explained the group about the next big problem to affect the Candies price as ANT is going to cross the exempted level of 5lacs sales per year now every product of ANT has to be sold with tax.

Though the Candy prizes now seem higher still ANT has the problem of promoting it at the same price in the coming months as VAT (12.5%) to affect its price by appx 10 paise (8.9) more per candy.

But the group has directed ANT to promote Spi-Candies with out additional taxes ANT should also work to do so.

DS proposed the long term solution–MCP may have to find a way to set up a Small Scale Industry (SSI) to prepare and promote Spirulina Candies and other products meant for social markets so that it can be promoted with out tax burdens and at affordable price to the rural community forever. DM also of the same opinion and soon MCP would start working on this option.

Place:

Spi-Candies will be promoted only for the social markets especially the children of

Low income families,
Rural villages and
Undernourished children
as long as we make significant changes towards disaster Child Malnutrition.
The promotion activity would be completely done by the NGOs, SHGs with the help of Micro Credit Program (MCP) Antenna.

Promotion:

From six different interested groups as proposed by DN in the last meeting

1. College students
2. NGO Staffs
3. TINIP Staffs (Tamilnadu Integrated Nutrition Program)
4. SHG leaders
5. PHC nurses (Public Health Centre Nurses)
6. Women entrepreneurs

Approximately about ten members each would be selected by WED Trust and will be given SPI- awareness twice in next two months time (one each at Nov & Dec 2009).

DS asked DN about the minimum possible sales plan by WED Trust for next two months and the following things are expected as in the table...

1	No of promoters to be selected		60
2	No of full time promoters of proposed by WED Trust		2
3	No of candy packets sales expected from each member		25
4	No of total candies required		60x25 =1500 packets (or) 75000 candies/month
5	Amt of spirulina Required		75000/0.5=37500 grams or 37.5 kgs
6	Total no of children to benefit in next two months		75000/30 days=2500 children (apx per month)
7	Total women to benefit from the income (Directly / Indirectly)		60 Spi-promoters+ 2(Full timer) +8-10Spi producing women of AGT and elsewhere to total of around 70 women to benefit in this promotion.
8	Total sales price of ANT (75000x 0.7 x2months)		INR 105 thousands
9	Margins	To SHG @ 0.2 / candy	INR 30000 for two months (or) INR500 per head
		To WED Trust 0.1 /candy	INR 15000 in two months

Point no -9 from the above table margins proposed for NGO (INR 15000) can not be a assured income in the beginning ,once they really able to achieve it DN said ANT may not require to support WED Trust from 3rd month as it can pay the salaries of the full timer from January 2010.

ANT can do the same model with another suitable NGO from third month.

Expected Expenditures and activities:

	Activities	Exp proposed
1	Appointment of two full time staffs by WED Trust (to pay Rs 2500/person/ month)	2x2500x 2months=10000

2	Promotion materials co-branded(Print Design) -Banners 4nos ,Pamphlets etc	4000-6000
3	Promotion Stall	To use the available ones
4	60-70 people awareness meetings-two(Nov-Dec) (60 lunch x Rs 40 x 2)	4800

ANT to obtain a clear proposal for next two months from WED Trust and MCP Antenna. It has also been proposed that to have the first meeting on 4th of November'09.

This proposal to be given to ANT by WED trust as soon as possible to enable this program to be launched with the first Awareness meeting on 4th of November.

We think it is Good beginning now it is important for ANT to ensure the printing of wrappers and production of candies in order to make them available for launch.

DM proposed the entire social promotion through WED Trust (DN) and DS explained the difficulties in doing so with immediate effect and later after few months ANT may try to operate the whole promotion as proposed by DM.

MCP –Antenna to coordinate with WED Trust and to share the important implication with ANT for regular actions.

Prepared By
D.Selvendran & Team ANT