

## Case Report

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## Management of Innovation of the Food Industry - Innovative Fortified Yoghurt named “Shokti Doi +” in the Grameen Danone Foods Ltd., Bangladesh

Mohammad Habibur Rahman

Atomic Energy Research Establishment, Savar, Dhaka, Bangladesh

**\*Corresponding Author:** Mohammad Habibur Rahman, E-mail: tuki.st07@gmail.com

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### Abstract

Gameen Danone Foods Ltd. is one of the innovative food industries in Bangladesh which is joint venture Company of Grameen Group & Danone Asia Pte. Ltd. They announced an innovative product named Shokti Doi plus, fortified yoghurt for the poor children's. It's an innovative and fortified milk based product and very effective for children health. It has high nutritious value and removes malnutrition.

**Key words:** Food innovation, Social business, Nutritious value, Fortified yoghurt, Malnutrition

### Introduction

Innovation means introducing or creating something new. It is a new idea, device or process which can impact on market, society as well as consumers decision [13]. It is a combined system of theoretical conception, technical invention and commercial exploitation [18]. Usually, an organization or institute make a plan and strategy to support the development of technology or services by investment in research and development [3] and an established organization involves the introduction of innovation or novelty by the management innovations, and it can be a symbol of a particular kind of organizational change [1]. Malnutrition is one kind of situation in which long-lasting lack of one or more nutrients retards physical development or causes specific clinical disorders e.g. low birth weight, wasting, stunting, underweight, vitamin A deficiency, iodine deficiency disorder, iron deficiency anaemia, etc. [2]. These are the very common deficiency disease in children's of rural and slum area in Bangladesh. Millions of children suffer from one or more forms of malnutrition in Bangladesh [11]. Grameen Danone Foods Ltd. aims to improve malnutrition among children by selling fortified yoghurt at a reasonable price [15]. It is also using school feeding programme (SFP) to improve child nutritional status in rural and slums area, Bangladesh.

### Historical Background of the company and their products

In the year 1919 Group Danone was founded in Barcelona, Spain. Now a day's Group Danone is the largest fresh dairy products producer industry in the World. Almost 80,000 employees have been working in Group Danone. Group Danone's main product is Danone yogurt as well as it is produced bottled water, baby, and medical nutrition brands. In 2009, Group Danone's total worldwide sales were around US\$22 billion and had a 15 percent profit margin [9]. Franck Riboud, CEO of the Group Danone promoted a new idea to expand the business with large Asian market and to provide its nutritional fresh dairy products. For that Group Danone tried to make an agreement with Grameen Food Enterprise (GFE) in Bangladesh. After then Franck Riboud discussed his ideas with Dr. Muhammad Yunus, the Grameen Bank chairman in October, 2005. After agreement signed, Grameen Food Enterprise (GFE) became Group Danone's first investment in Bangladesh. Grameen Danone Foods is the Grameen Food Enterprise's first partnership with a multi-national corporation with first investment in dairy processing and changed name Grameen Food Enterprise to Grameen Danone Foods Ltd. [7]. Grameen Danone Foods Ltd. located Betgari, a village of Bogra district in Bangladesh. It's a rural area about 140 miles northwest of Dhaka District, the capital of Bangladesh [16].

It's a joint venture between Groupe Danone, a multi-national corporation, and the Grameen Bank, a Bangladeshi non-governmental organization (NGO) and produced fresh fortified yoghurt in Bangladesh that was founded in 2007. Grameen Danone Foods collects milk from many small dairy farmers to produces yogurt products and distribution through both rural and city channels. Grameen Danone's Foods plant small with compared to Group Danone standards, only 7,500 square ft in size and per day production capacity is 5 tons. GDF operating their business plan by the using of the SWOT (Strengths, Weaknesses, Opportunities, and Threats) framework. It's an ideal structure for analyzing the content of the case, such as future plan, marketing and operations [15]. The company focused on social aspiration, like improve malnutrition situation and reduce poverty with practical business details. The brand name of the company's products is "Shokti+", it means "energy plus." Here's plus (+) means the yoghurt's nutritional value and "Shokti Doi" means "energy yoghurt" which is consists of fresh full cream cow milk, live fermenting cultures, data molasses and sugar [6]

### Types of innovation the company applied

There are two types of innovation technique mainly Grameen Danone Foods used. The GDF produced fortified yoghurt which is a product innovation as well as its business model and promotion of business is a social innovation. New designs of products, services and models so that all together meet social needs and create new social relationships or cooperation's by using social innovation methods [4]. GDF applied social innovation methods to their business model and promotion of business. This point examines in-depth that the Grameen Bank chairman, Prof. Dr. Muhammad Yunus' first deliberately designed social business joint venture in Bangladesh with Grameen Danone Foods Ltd. Social business focuses on using business methods and practices to achieve positive social change. It promotes social adjectives as primary, while also making a profit [10]. By using the social innovation method, the company's mission is to "reduce poverty by a unique proximity business model which brings daily healthy nutrition to the poor" [8].

More in particular, Grameen Danone aims to remove malnutrition among poor children in rural and slums by selling fortified yoghurt at an affordable price.

Product innovation is another characteristic of Grameen Danone Foods Ltd. Yoghurt is the main products of the company. This yoghurt is a fortified product. Development nutritional new techniques and high nutrients are applied on it. GDF focused on improve malnutrition situation of the country poor children [15]. They experts of the company developed the protein, calcium value and micronutrients of the yoghurt and fortified it named "energy yoghurt plus" means "Shokti Doi +".

### Why "Shokti Doi +" and the business model are innovative

As mentioned before, GDF business model is a social innovation method so that the company reduce poverty and brings daily healthy nutrition to the poor [8]. Its aims to improve malnutrition situation among poor children in rural and slums by selling fortified yoghurt at an affordable price and share the benefits with its community of stakeholders. The company's business has to be self-sustaining and the owners must remain dedicated to never take any share beyond the return of the innovative amount they invested. Eventually, the success of the company's yoghurt business should be judged not only by the amount of profit generated, but also by the amount of children who remove malnutrition each year. It's a Dr. Muhammad Yunus social business concept [6]. Shokti Doi or energy yoghurt fortified with a high dose of micronutrients with vitamin A, zinc, iron, and iodine. It is also contains a natural source of calcium and protein. The yoghurt developed by the nutrition expert professionals of GAIN NGO and Group Danone. This fortified yoghurt develops the nutritional status of poor children (aged 3 to 15 years), who eat the yoghurt on a regular basis or at least one cup twice a week. A 60 gram cup covers 30% of children's daily needs of nutrients [12]



Figure 1: Shokti Doi or the fortified yoghurt nutrient value  
<http://www.slideshare.net/danonecommunities/grameen-danone-food-ltd-overview-210609>

## The innovation potential of the company, the product & the factors affecting it

Grameen Danone Foods is a model for comprehensive business. It has adjusted the company's entire value chain to its social mission and rural business environment. Such as involving local communities in all parts of the company's value chain are changing poor women and men from aid beneficiaries into suppliers, producers, distributors, and customers. For that they can change the economic dimension of poverty and involves positive livelihood. Grameen Danone already reveals how conventional business goals e.g., driving frequency in, consumption can be social objectives at the same time. The core of the business of the company covers the manufacturing, packaging, marketing, sales, and distribution of fermented fresh dairy fortified yoghurt products under the brand name Shokti+. Other core activities of the company are linked to social marketing i.e., educating consumers about their nutritional demands, health issues and setting up a rural sales and distribution structure price <sup>[15]</sup>.

Almost 280 farmers perform as suppliers of raw milk, 30 residents are employed within the factory in quality control, maintenance, and production, and 175 local women are engaged as sales lady in daily rural distribution. It's a good sign of women to encouraging at work. According to the Grameen Group & Danone Asia Pte Ltd, the company's primary social objectives are allow low-income, nutritionally underprivileged, poor populations, especially children to have access (in terms of affordability and availability) to daily healthy nutrition in order to improve their nutritional status as well as reduce poverty and improve the economic conditions of the local poor class's population <sup>[17]</sup> by involving local suppliers e.g. farmers and helping them to improve their practices relating the local population via a low-cost, labour-intensive developed model <sup>[14]</sup>.

## The factors for success

The GDF success depends on some key aspects such as, involvement and commitment of top management, single minded goal to succeed at all costs and constant innovation to achieve social objectives and self-sustainability. The GDF business model and the innovation methods are one of the success business models in the World. Here the company applied two types of innovation techniques which was very effective and positive approach. According to the CEO of Group Danone, Franck Riboud the GDF business aim to reduce poverty and brings daily healthy nutrition to the poor and reduce malnutrition among poor children in rural and slums by selling fortified yoghurt at an affordable price and share the benefits with its community of stakeholders.

So far it's a success approach. Lots of women are engaged as sales lady in daily rural distribution. It's a good symbol of women to encouraging at work. Various major factors are related to the product category and target customers' socioeconomic attributes success like, reduce poverty, avoid malnutrition of the children, make a grameen danone community based business structure, women at work, nutritional awareness, health education, social development, promote business and make profit. The fortified yoghurt price is lower than other normal yoghurt prices. It is one of the parameter for success. Also high-quality nutrition, professional

product design, and brand image <sup>[8]</sup> as well as the novelty of the product category i.e., packaged child nutrition are effecting on the business success price <sup>[15]</sup>

## The innovation process of the company

One of the core activities of the company are linked to social marketing like, educating consumers about their nutritional demands, health issues and setting up a rural sales and distribution structure <sup>[15]</sup>. GDF business model is a social innovation process so that the company reduce poverty and brings daily healthy nutrition to the poor as well as improve malnutrition situation among poor children in rural and slums by selling fortified yoghurt at an affordable price and share the benefits with its community of stakeholders. The owners must remain dedicated to never take any share beyond the return of the innovative amount they invested and in the long run, the success of the company's yoghurt business should be judged not only by the amount of profit generated, but also by the amount of children who remove malnutrition each year. According to Maurel, a number of environmental factors drove GDF to adopt a proximity-based business model in Bangladesh.

A proximity-based model works to bring supply, production, retail, and consumption of a product as close to one another as possible as well as living conditions of the poorest members of the community by involving them in all stages of the business model including supply, production, sales, job creation, improving local competencies, preserve non-renewable resources as much as possible and become profitable to ensure economic sustainability <sup>[12]</sup>. It's a social innovation process as well as the company's qualitative elements e.g. high quality nutrition, professional product design, and brand, and the novelty of the product category e.g. packaged child nutrition are product innovation.

## Grameen Danone Foods Ltd. barriers faced to innovation

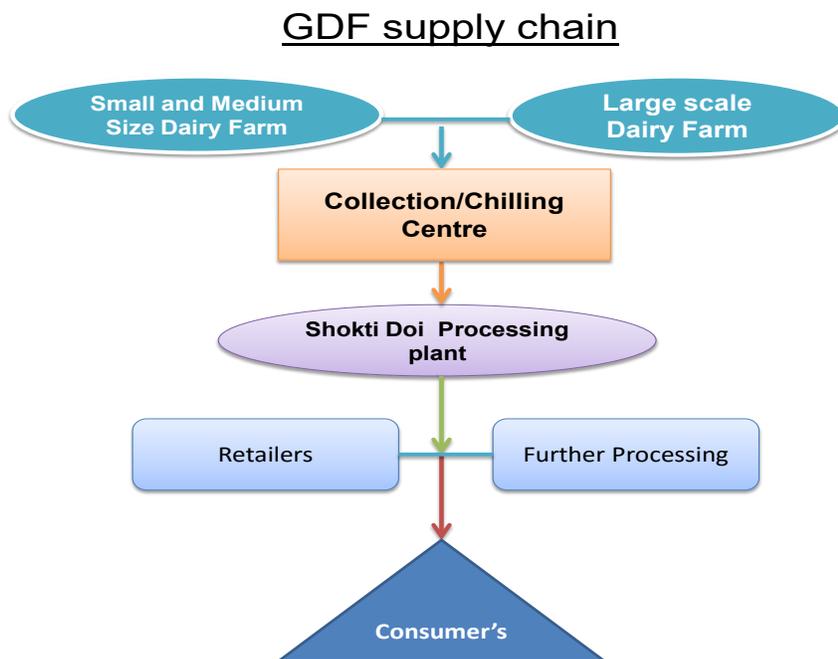
Grameen Danone Foods Ltd. struggled with limited demand for packaged nutrition and channel issues in rural marketing and sales. The demand for Shokti Doi has been limited for different reasons linked to the product category and target customers' socioeconomic status. Lack of health education and nutritional awareness as well as Illiterate villagers have difficulty in understanding the concept of nutrition and why it is important. The villagers always get scared when they first know about Shokti Doi's ingredients. They thought that zinc one of the key ingredients of Shokti Doi with a chemical used in fertilizers or a local divinity called Zin and they also afraid of their children might catch a cold if they have a chilled product (Shokti Doi) in winter <sup>[15]</sup>. According to the Advisor of the GDF Board tells that a price of 6 Taka is still not marketable to the rural poor because of their inadequate purchasing capability.

The rural sales and distribution manager reveals that if the villagers have 10 Taka, they always think about rice, vegetables, and some fish if they can and according to the company's sales ladies, customers regularly bargain over or simply retain one Taka coin and somebody comes with 5 Taka, somebody comes with 4 Taka, somebody wants the yoghurt on credit, but nobody exceeds 6 Taka. Low literacy rates, mass communication in the rural area, lack of retail infrastructure (namely refrigeration facilities and reliable energy supply) are problem in rural areas <sup>[21]</sup>. The fortified yoghurt business has been struggling with high operating costs as

well as sales and promotion expenses. In 2008 and 2009, rising raw material prices, resource wastage, and high logistics costs per unit in rural sales were major factors. Purchasing raw milk is the main cost factor per unit because of fluctuation raw milk rate.

Also limited shelf-life of Shokti Doi in the absence of a perfect cold chain (mainly due to power cuts in urban areas and a lack of fridges in villages) caused further barrier in urban areas which led to high return rates of expired products from the retailer shops [19]

**GDF supply chain, market and competitors**



**Figure 2:** Grameen Danone Foods supply chain

The company’s raw milk supply chain does not change greatly than the other competition. Firstly, the raw milk is collected from large/ medium/ small dairy farmers at collection booths that are located near the dairy farmers. Then the raw milk is brought for collection to a chilling centre/facility in the morning and evening by bicycle/ rickshaw and is stored at the centre/facility until a truck picks it up and brings it to the factory. When the time of processing, the company mixing up sweeteners and nutritional supplements in order to make its yoghurt. Date palm molasses, which is prevalent in the Rajshahi Division, is the company’s primary sweetener. Iron, calcium, vitamin A, and iodine nutrients that are typically imported from Europe also include in the yoghurt. The finished yoghurt is then packaged in plastic cups [15]. According to Dr. Yunus, the Bogra yoghurt plant production volume was likely to grow from 22 percent of capacity in 2009 to 54 percent in 2010. Now a days, Dhaka, Sylhet and Chittagong cities account for 50 percent of sales volume, rural sales through village saleswomen represent about 20 percent of sales, and towns and cities in the

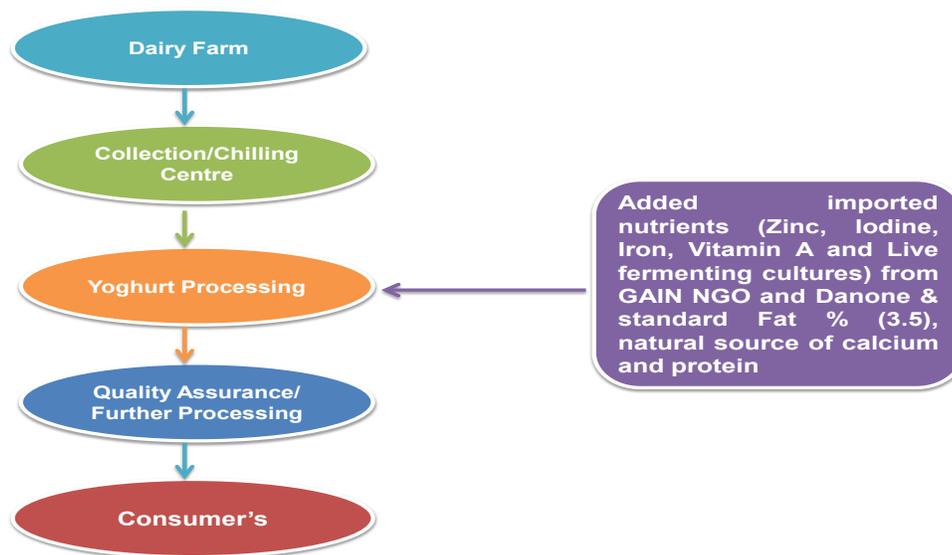
Bogra area account for about 30 percent [22]. Competition so far of the company has been low due to its different product attributes such as taste, texture, colour, packaging, and price as well as the rural consumers perceives Shokti+ Doi. Snack-producing companies such as Pran, Unilever and Nestlé and so on are the indirect competitor’s of GDF in terms of people’s share-of-wallet for children’s sweets and snacks. According to the sales women of the GDF the consumers, who have a concept of nutrition, tend to compare this fortified yoghurt with pure milk. No other yoghurt companies in Bangladesh offer fortified yoghurt but GDF [5]

**The specific product development**

Shokti Doi or energy yoghurt developed with a high dose of micronutrients with vitamin A, zinc, iron, and iodine. It is also contains a natural source of calcium and protein and developed by the nutrition expert professionals of Group Danone. A 60 gram cup covers 30% of children’s daily needs of nutrients.

The fortified yoghurt: product development	
Sources	Description
Zinc	Zinc reduces the risk of growth retardation and maintains a healthy immune system of the children.
Iodine	Iodine promotes brain development and physical growth of the children
Vitamin A	Vitamin A helps to maintain proper eyesight.
Iron	Iron reduces the risk of anaemia.
Calcium	Calcium is beneficial for growth and bone strength of the body.
Live Fermenting Cultures	Live fermenting cultures are supposed to maintain intestinal balance and help to minimize the incidence and seriousness of diarrhoea.
Artificial Colour and Preservatives	No artificial colour and preservatives added.
Packaging	Very attractive packaging with lion symbol, children likes it and hygienic.

**Table 1:** The fortified yoghurt: product development Source: [12]



**Figure 3:** The fortified yoghurt: product development [15]

## Market Potential and Customer Interface

“Shokti Doi” has become a trusted brand name for Bangladeshi consumers. Children of five to twelve years old are the main consumer’s of the business and they are the primary beneficiaries of the product. According to the Johns Hopkins University and the NGO GAIN, reveals that this project has a very positive impact on the physical and cognitive development of children [20]. The company has constantly extended its sales area. The yoghurt business has been serving dual market systems like, in cities, it sells its yoghurt through a retail network over 1,600 shops. On the other hand, in rural areas the company’s own and the NGO CARE’s sales force sell the yoghurt door to door. The company also plan to make customer segmentation and different customer segmentations receive little different offers and are served through various distribution and marketing channels [5] When the company sales yoghurt, it faces with low levels of education of the consumers, limited purchasing power and a lack of basic infrastructure required to maintain a cold chain like, networks for reliable electricity and retailing. Finally, the consumer’s accepting the products and the sales is increasing day-by-day.

## Conclusions

Grameen Danone Foods Ltd. is a social business enterprise and a new way of looking of business. It’s a constant innovation to achieve social objectives. It is increasing collaboration between social entrepreneur and private business and initial start to the founding of the Danone communities. The company addresses the social needs and uses global potential to further impact. In 2008, 2 million units of Shokti Doi sold within 40 km reaching 40% of village’s impact on health of children proofed and measured by GAIN reduction in intensity and length of diarrhoea. It is also practicing sustainable agriculture for making dairy production safe. The fortified yogurt “Shokti Doi” produced with ‘solar’ and ‘bio gas’ energy and is served in environmentally friendly packaging. Shakti Doi are opening new window in Bangladesh scenario as far as concerned taste, safety and nutrition. It fulfils the requirements and expectations of children especially poor children such as, vitamin A, zinc, iodine, iron, calcium as well as good appearance, colour, flavour and taste. It is highly nutritious. It is totally safe as concern to microbiological aspects. It does not consist of preservatives or chemical residue. According to the Grammen Danone Foods Ltd, they announced that in total 50 fortified yoghurt plants they will set up in between the year, 2020 in Bangladesh.

## References

1. Birkinshaw, J. Hamel G and Michael J. Mol (2008) Management Innovation. *Academy of Management Review* 33:4, 825–845.
2. Blössner, Monika. de Onis, Mercedes (2005) Malnutrition: Quantifying the health impact at national and local levels. Geneva, World Health Organization, 2005, WHO Environmental Burden of Disease Series No. 12
3. Business Dictionary.com (2015) Innovation strategy, Web Finance Inc: Online <http://www.businessdictionary.com/definition/>

innovation-strategy.html accessed 24-01-2015

4. European Commission (2014) Enterprise and Industry, Social Innovation <http://ec.europa.eu/enterprise/policies/innovation/policy/social-innovation/#h2-1> accessed 24-01-2015
5. Fox J. (2009) Grameen Danone Foods Ltd. outlets, Excel file. Bogra: Grameen Danone Foods Ltd.
6. Ghalib, Asad Hossain, Farhad and Arun, Thankom (2009) Social Responsibility, Business Strategy and Development: The Case of Grameen-Danone Foods Limited, *Australasian Accounting, Business and Finance Journal*, 3:4
7. Grameen Bank (2011) Annual report [http://www.grameen.com/index.php?option=com\\_content&task=view&id=1173&Itemid=999](http://www.grameen.com/index.php?option=com_content&task=view&id=1173&Itemid=999) accessed 25-01-2015
8. Grameen Group & Danone Asia Pte Ltd. (2006a) Grameen Danone Foods (A social business enterprise): Joint venture agreement - Key principles, internal document. Dhaka and Singapore: Grameen Group and Danone Asia Pte Ltd.
9. Group Danone, (2010) Annual Financial Report, Registration Documents 2010, [http://media.corporateir.net/media\\_files/irol/95/95168/DocRef/Registration\\_Document\\_2010.pdf](http://media.corporateir.net/media_files/irol/95/95168/DocRef/Registration_Document_2010.pdf) accessed 23-01-2015
10. Grove A and Berg G. A (2014) Social Business: A Publication of the California Institute for Social Business at California State University Channel Islands. Springer-Verlag Berlin Heidelberg 2014, P.3
11. Haque, M. M., Bhuiyan, M. R., Naser, M. A., Arafat Y, Suman K. R. et al. (2014) Nutritional Status of Women Dwelling in Urban Slum Area. *J. Nutr Health Food Eng* 1(3): 00014. <http://dx.doi.org/10.15406/jnhfe.2014.01.00014>
12. Maurel, O. (2009) Grameen Danone Foods Ltd: Overview. <http://www.slideshare.net/danonecommunities/grameen-danone-food-ltd-overview-210609> accessed 27-01-2015
13. Merriam- Webster (2015) Britannica Company, Innovation: online <http://www.merriam-webster.com/dictionary/innovation> accessed 27-01-2015
14. Penicaud, M. (2008) Grameen Danone Food Ltd.: Social innovation to bring nutrition to the poor in Bangladesh & to valorise and professionalize local populations. Paris
15. Rodrigues J. and Baker G. A. (2012) Grameen Danone Foods Limited (GDF) International Food and Agribusiness Management Review 15:1
16. Saker P. K. (2009) Plant & milk source indication within Bogra & Adjacent districts, Map. Bogra: Grameen Danone Foods Ltd. (GDFL)
17. Sultan I. (2007) Grameen Danone Foods Limited: A unique model of social business enterprise. Dhaka
18. Trott. P. (2012): Innovation Management and New Product Development. 5th edition, Pearson, Harlow P.15ff

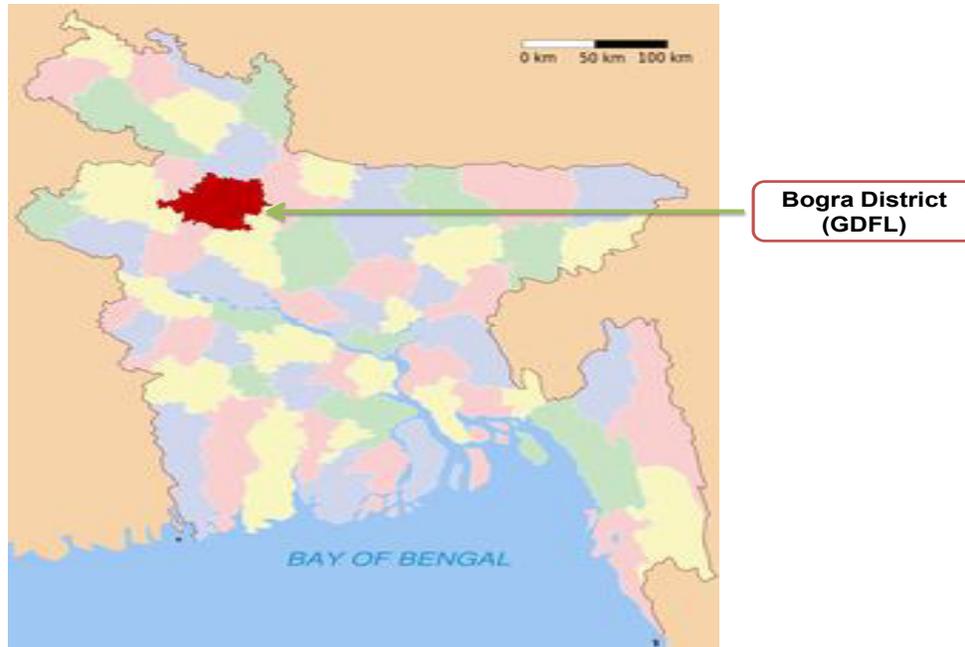
19. Williams R. Jr. and Omar M. (2013) Case Study Utilizing the VFBOB model for entry into emerging markets: Grameen Danone Foods, *Transnational Marketing Journal*. 1:1 59 - 71

20. Yunus M. (2007a) *Creating a world without poverty: Social business and the future of capitalism*. New York, NY: Public Affairs.

21. Yunus M (2010a) *Building social business - The new kind of capitalism that serves humanity's most pressing needs*. New York: Public Affairs.

22. Yunus, M. (2010b) GDF update presentation May 2010 <http://muhammadyunus.org/Social-Business/grameen-danone/> accessed 27-01-2015

**Annexure**



**Annexure 1:** Bangladesh map and Bogra district [15]



**Annexure 2:** Grammen Danone Factory in Bogra District [15]



**Shukti Doi with three flavours**

**Annexure 3:** The fortified yoghurt with three flavours



**Grameen Danone Foods Plant**

**Annexure 4:** Grameen Danone Foods Plant



Annexure 5: Danone and Grameen Bank Business Collaboration



Annexure 6: happily face of children with yoghurt, Group Danone CEO and Dr. Yunus, some villagers with yoghurt and two sales women

Source: <https://www.google.co.uk/search?q=grameen+danone+foods+images>