

# **BUILDING BACK BETTER IN GAZA**

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## **ABSTRACT**

Building Back Better signifies the opportunity that post-disaster reconstruction presents to induce resilience into communities and overcome recurring vulnerabilities. The framework for BBB created by Mannakkara and Wilkinson recognizes that BBB requires disaster risk reduction, psycho-social recovery of affected communities, regeneration of local economy, and effective and efficient implementation of reconstruction and recovery processes.

Mannakkara and Wilkinson's BBB Framework was used to assess the recovery of agricultural businesses affected by the 2014 conflict in Gaza, Palestine. The military assault on Gaza caused extensive damages to the agricultural sector. A rehabilitation project conducted by the Agricultural Development Association (PARC) and Diakonie Katastrophenhilfe (DKH) to strengthen the resilience of 310 households and their agribusinesses and fisheries provided a unique opportunity to test the applicability of the BBB Framework in a conflict situation, and understand how it can apply to a specific sector such as agriculture.

Fieldwork was administered in Gaza by conducting focus groups with green house farmers, poultry farmers, livestock and dairy farmers, and fishery farmers. The data collected focused on: physical asset resilience; land-use; preparedness and risk reduction; community recovery; business recovery; and effective implementation.

The results from this study provided valuable insight into what is practical and effective in a complex environment like Gaza. Specific BBB indicators for agricultural business recovery in Gaza were developed from the findings to assist local farmers build back better, improve resilience and successfully recover their livelihoods.

**Key words:** *Build Back Better, Gaza, Agriculture, Post-Disaster, Reconstruction*

## **INTRODUCTION**

Building Back Better (BBB) has become a prominent concept in both pre- and post-disaster management. BBB advocates for using post-disaster recovery as an opportunity to holistically improve a community's resilience (Clinton, 2006; Mannakkara & Wilkinson, 2014; Monday, 2002). BBB has been identified as one of four priority areas of actions in the United Nations Sendai Framework for Disaster Risk Reduction in the next 15 years (UNISDR, 2015).

Following the July 2014 military assault in Gaza, Palestine organisations involved in recovery operations made a decision to instil resilience in affected communities. The agricultural sector being a key economic driver in Gaza, the Agricultural Development Association (PARC) in partnership with the German NGO Diakonie Katastrophenhilfe (DKH) decided to adopt a BBB approach to the agriculture rehabilitation process.

This paper presents the outcomes of a project administered in Gaza to introduce BBB and strengthen the resilience of key agricultural businesses using Mannakkara and Wilkinson's modified BBB Framework. This paper introduces the framework, describes the project implemented in Gaza and presents the findings of focus groups conducted in Gaza to test the framework and develop BBB indicators for the project.

## **BUILDING BACK BETTER**

"Building Back Better" (BBB) became popular as a catch-phrase particularly following the 2004 Indian Ocean Tsunami (Clinton, 2006). It was recognized that the time period following a disaster is an optimal time to make changes in a community. BBB is defined as a way to use the reconstruction process following a disaster to improve a community's physical, social, environmental and economic conditions to create a more resilient community in an effective and efficient way (Kennedy, Ashmore, Babister, & Kelman, 2008; Khasalamwa, 2009; Mannakkara & Wilkinson, 2014).

Mannakkara and Wilkinson (2014) conducted international case studies on BBB and developed a BBB Framework which was adapted for this project (figure 1).



Figure 1: The Modified Build Back Better Framework (Mannakkara and Wilkinson, 2014)

The BBB Framework illustrates that building back better requires consideration for:

- Disaster Risk Reduction (DRR) – Improving disaster resilience in a community by minimising/eliminating disaster risks through (1) improving the resilience of the built environment and physical assets (James Lee Witt Associates, 2005; Sandeeka Mannakkara & S. Wilkinson, 2013); (2) better land-use planning in response to risks (Batteate, 2006; Mannakkara & Wilkinson, 2012b); and (3) providing DRR education and awareness to educate communities on how to incorporate disaster capacity through early warning, disaster preparedness, evacuation and management plans.
- Community Recovery – Supporting the overall recovery of the community through (1) implementing programmes for psychological and social recovery to assist the community with re-establishing their lives through advisory services, counselling and methods of empowerment (Gordon, 2009; Mannakkara & Wilkinson, 2015); and (2) regenerating and rejuvenating the community’s economy by helping businesses recover, facilitating the return to traditional livelihoods, and introducing new economic opportunities (Mannakkara & Wilkinson, 2012a; McComb, Moh, & Schiller, 2011).

- Effective Implementation – Enabling reconstruction and recovery to progress in an effective and efficient manner through (1) establishing an institutional mechanism that is fitting for the local community and coordinate the recovery process (Brinkerhoff, 2005; Samaratunge, Coghill, & Herath, 2012); (2) using appropriate legislation and regulation to enforce BBB-based practices and to improve efficiency by fast-tracking processes (Sandeeka Mannakkara & Suzanne Wilkinson, 2013; Rotimi, Myburgh, Wilkinson, & Zuo, 2009); and (3) putting in place monitoring and evaluation mechanisms to improve the recovery process and extract lessons for the future (Bevington et al., 2011).

## **INTRODUCING BUILDING BACK BETTER IN GAZA**

### **Gaza Context**

The Gaza Strip, or Gaza is a self-governing Palestinian territory. It is situated on the east coast of the Mediterranean Sea and borders Egypt and Israel. Gaza is often subject to environmental problems such as drought, desertification and water scarcity due to salination of fresh water and depletion and contamination of ground water resources. The industries in Gaza are commonly small family businesses.

Gaza was subject to ongoing military assault for seven weeks in July 2014 by land, sea and air. At least 2,145 people were killed and over 60,000 homes were damaged or destroyed (State of Palestine, 2014). The conflict created a scarcity of water, energy, food and shelter, whilst the agriculture industry in particular suffered heavily. Rapid damage and loss assessments conducted in 29 locations showed extensive damages to crop production, poultry farmers, livestock farms and fisheries amounting to nearly 23 million USD in damages and losses (PARC & DKH, 2015).

### **Project Information**

The project “Improve food security and enhance resilience in Gaza through optimised rehabilitation of agricultural infrastructure” was implemented by PARC and DKH in 2015 with the following objectives:

- Strengthen the resilience of 310 households and their businesses (100 Greenhouses, 100 Poultry farms, 60 Livestock and Dairy Farms and 50 Fisheries) against future shocks via the use of a **Building Back Better** approach in the rehabilitation process

- Restore the means for minimum subsistence and improve food security for the 310 households
- Rehabilitate the 310 agribusinesses and fisheries to be able to contribute to food security in the region by increasing production and supply of food products to the markets in Gaza
- Introduce the **Building Back Better** approach to the agricultural sector in Gaza, with best practices shared with relevant actors and allow for possibilities of replication and improvement

The implementation of the project involved:

- Conducting a Participatory Risk Assessment in Gaza by DKH (DKH & PARC, 2015)
- Selection of beneficiaries by PARC
- Desktop study by international BBB consultants
- Field visit to conduct focus groups with selected beneficiary groups by international BBB consultants accompanied by PARC and DKH
- Development of a BBB roadmap for the project including specific BBB indicators for the beneficiary groups

### *The Field Visit and Focus Groups*

The field visit took place from Monday 28<sup>th</sup> December 2015 to Sunday 3<sup>rd</sup> January 2016 and included four 2.5 hour focus groups held with each respective beneficiary business type. The beneficiary meetings were based on having 10% of the total number of beneficiaries attending the focus groups. The central objectives and questions for the focus group discussions are shown in table 1.

Table 1: Objectives and questions for the beneficiary focus groups in Gaza  
(Source: Author)

<b>Objective</b>	<b>Question(s)</b>
Identification of the methods and technologies used for physical asset resilience	What methods, materials and techniques are you using to move on with your life and business?
Identification of land use examples and their evidence basis	How did/do you select that land you use now?

Identification of the effective education programmes and training that had been used for preparedness and risk reduction	What informal or formal training have you been given that assisted you to face risks and hazards?
Identification of community recovery within communities	How did the conflict impact on you and how did you recover?
Identification of the evidence for business recovery	How do you know that your business has recovered?
Identification of examples of effective implementation from an institutional, regulatory perspective together with monitoring and evaluation	What effective examples of implementation (at any level) are you aware of?

### **Findings: BBB Indicators for Gaza Agricultural Business Recovery**

The findings from the desktop study, field visit and focus groups showed that the modified BBB Framework formed a good basis to assess Gaza business recovery. The results showed that the BBB indicators proposed by Mannakkara and Wilkinson for DRR, community recovery and effective implementation can be tailored to cater to the local context and nature of businesses.

#### *Disaster Risk Reduction*

Table 2 shows the DRR initiatives proposed for BBB of agricultural businesses in Gaza based on the data collected. Improving the resilience of physical assets primarily meant repairing physical damages incurred along with introducing technological improvements to the businesses. Although revising land-use based on multi-hazard assessments is a universal indicator for BBB, the beneficiaries stated that relocation was deemed an impossible and impractical option for them. The study participants however stated that minor alterations of land-use was possible such as changing the orientation of greenhouses and barns for better ventilation and adding crops to diversify the businesses. Providing DRR education and awareness was seen as most effective through involving the community in DRR activities. The community was closely involved in the participatory multi-hazard mapping exercise conducted by DKH (DKH & PARC, 2015), which was a successful example of engaging the community to utilise their knowledge, as well as raise awareness on DRR. Participatory exercises and outreach activities urge farmers and their families to think differently to protect their businesses and families.

Table 2: Disaster Risk Reduction Initiatives for Building Back Better Agricultural Businesses in Gaza (Author)

<b>Business Type</b>	<b>Improving Physical Resilience</b>	<b>Land-Use</b>	<b>DRR Education and Awareness</b>
Greenhouse Farmers	<p>Repair physical damages incurred</p> <p>Strengthen drainage systems inside the greenhouse</p> <p>Use reflective sheeting over plastic</p> <p>Install ventilation windows</p> <p>Adopt insect and salt-resilient crops</p> <p>Use thermal disinfectants for the ground to prepare soil for next growing season</p> <p>Rain-water harvesting</p> <p>Install on-site water storage tanks</p>	<p>Change orientation of greenhouse</p>	<p>Training for new technologies, techniques and use of new equipment</p> <p>Facilitate knowledge-sharing in local neighbourhood and friend networks</p>
Poultry Farmers	<p>Repair physical damages incurred</p> <p>Install an efficient heating system</p> <p>Install effective humidity control</p> <p>Enable easy access to chemicals and medicine for disease prevention</p> <p>Access to quality food for bird stock</p> <p>Desalinisation of water</p>	<p>Change orientation of barn</p> <p>Plant crops in a section of land</p>	<p>Training for new technologies, techniques and use of new equipment</p> <p>Facilitate knowledge-sharing in local neighbourhood and friend networks</p>
Livestock and Dairy Farmers	<p>Repair physical damages incurred</p> <p>Provide access to secure and cost-effective barns for animals including modern technology such as steel feeders, mechanical drinking and isolation units for lambs</p> <p>Install better drainage and ventilation systems in barns</p> <p>Provide equipment and tools for safer birthing</p> <p>Water harvesting</p>	<p>Change orientation of barn</p> <p>Plant crops in a section of land using in-house manure</p>	<p>Training for new technologies, techniques and use of new equipment</p> <p>Facilitate knowledge-sharing in local neighbourhood and friend networks</p>

Fishermen	<p>Repair physical damages incurred</p> <p>Provide good quality spare parts for repairs</p> <p>Provide good quality fishing equipment including boats, nets, tools, motors etc.</p>	N/A	<p>Training for new technologies, techniques and use of new equipment</p> <p>Facilitate knowledge-sharing in local neighbourhood and friend networks</p>
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### *Community Recovery*

The psychological and social recovery of the beneficiaries were assessed by administering the Depression Anxiety Stress Survey (DASS42) (Lovibond & Lovibond, 1996). In Gaza, PARC and DKH officers carried out the survey on 96 individual beneficiaries. The results showed that overall the depression level amongst the participants was rated mild; anxiety was rated moderate; and stress was rated normal. There were however six individuals with unusually high anxiety and one with unusually high depression. This data serves useful in determining what psychological and social interventions are required at the individual and community levels. The focus groups illustrated that the psycho-social interventions that were required and applicable in Gaza reflected international findings (table 3).

The focus groups illustrated that supporting business recovery needed to be centred on identifying businesses' recovery needs, creating immediate jobs, and supporting rapid recovery and upgrading of businesses. Modified BBB indicators tailored for business recovery are shown in table 3.

**Table 3: Community Recovery Initiatives for Building Back Better Agricultural Businesses in Gaza (Author)**

<b>Business Type</b>	<b>Psychological and Social Recovery</b>	<b>Business Recovery</b>
All	<p>Consult and include community for DRR processes (e.g. hazard mapping, technical assessments, recovery planning etc.)</p> <p>Create and strengthen community/business groups and networks</p> <p>Keep community/businesses regularly informed of recovery plans, decisions and implementation</p>	<p>Arrange (short-term) alternative employment options such as labour work</p> <p>Provide access to social support from Government</p> <p>Provide DRR and business recovery training</p> <p>Assist with the replacement of damaged physical assets</p>

	Coordinate with partner NGOs for psychological, spiritual and/or religious support  Assist families to move back to their homes	Facilitate collaboration and cooperation between businesses  Diversification of businesses
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### *Effective Implementation*

It was necessary for the farmers to understand the main actors in each business sector and their roles in the recovery process, and most importantly understand what key partnerships can assist with recovery and BBB. Therefore introducing farmers to each other to assist collaboration and cooperation, encouraging farmers to share knowledge and resources and strengthening existing community and business networks were identified as crucial BBB initiatives at the grassroots level.

Using legislation and regulation for recovery as identified by the modified BBB Framework did not come across as relevant or applicable for the beneficiaries, however it was recognized that steps should be taken at the sector level to improve recovery activities in the agricultural sector and support BBB.

Monitoring and evaluation for BBB is to be conducted by PARC and DKH by performing pre- and post-intervention surveys, undertaking regular reporting exercises to identify on-going issues and track rebuilding and recovery progress, extracting lessons learnt to modify future processes as well as design training programmes and education campaigns.

## **CONCLUSIONS**

Building Back Better is a prominent concept in post-disaster recovery to induce resilience into communities following a disaster. Following the devastation caused in Gaza by the 2014 conflicts, there was a strong desire to introduce BBB concepts and rebuild affected agricultural businesses in a resilient manner.

Mannakkara and Wilkinson's (2014) modified BBB Framework was used in an agribusiness rehabilitation project in Gaza to evaluate the practicability of BBB. The findings showed that the framework served as a robust and useful tool to introduce and implement BBB concepts for the recovery of agricultural businesses in Gaza. BBB indicators were tailored to suit the

local context and constraints and overall provide a good starting point for successful and resilient recovery.

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