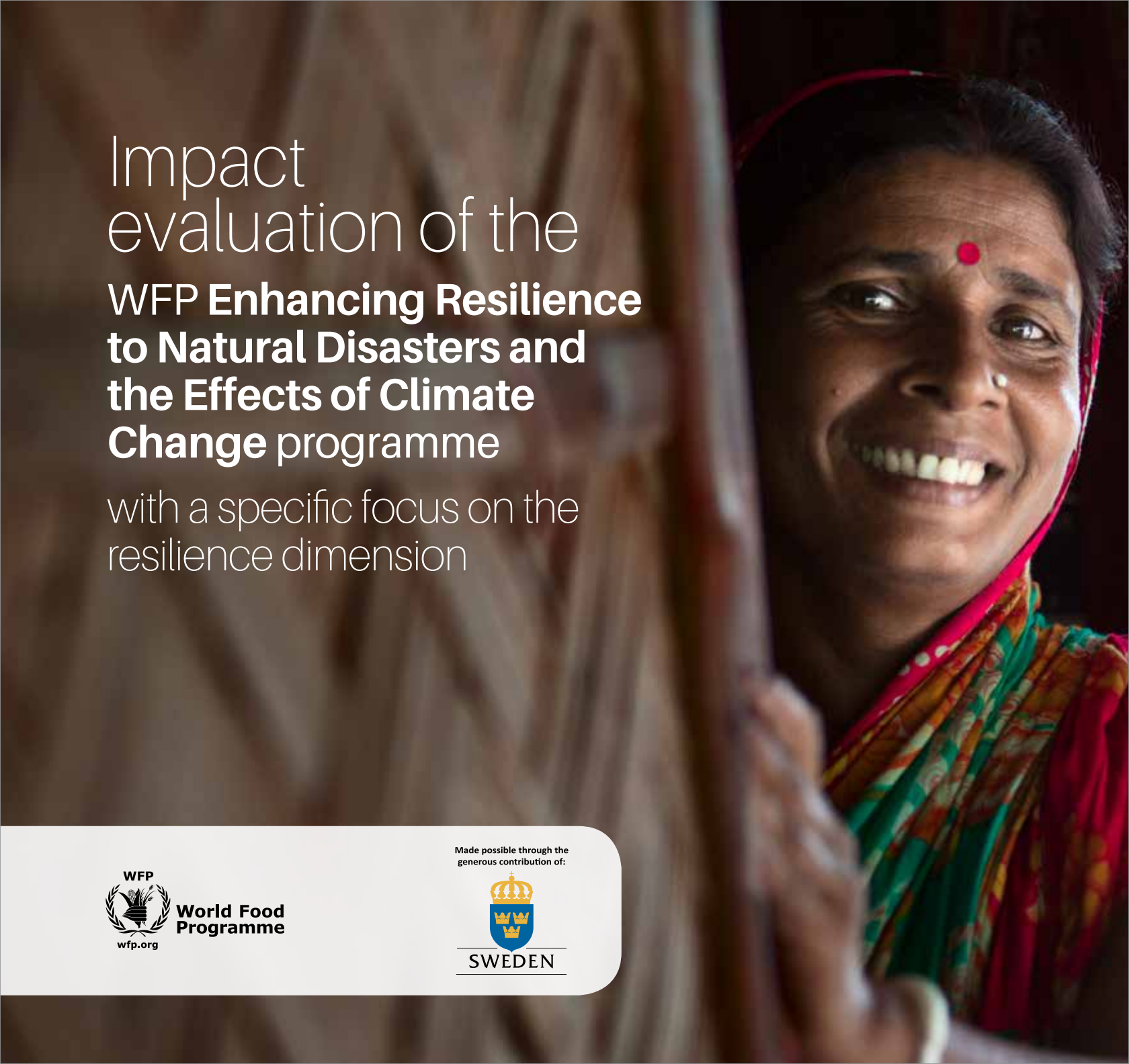

Impact evaluation of the

WFP **Enhancing Resilience to Natural Disasters and the Effects of Climate Change** programme

with a specific focus on the resilience dimension

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EXECUTIVE **SUMMARY**

The WFP office in Bangladesh commissioned an evaluation of the ER programme in 2015, with the particular objective of assessing the programme's effectiveness in terms of improving beneficiaries' resilience. This report presents the key findings of this evaluation.

The **Enhancing Resilience to Natural Disasters and the Effects of Climate Change** (ER) programme is a joint initiative by the Government of Bangladesh and the World Food Programme (WFP) that aims at addressing the vulnerability of the rural population (especially the ultra-poor) exposed to natural disasters and to the effects of climate change. It was started in 2011 in two distinct parts of the country: the river erosion prone areas of the northwest and the cyclone and salinity affected coastal belt in the south. Through a 3-year cycle of support and training activities one of its main expected outcomes is to strengthen the resilience of the targeted communities.

Although several components of the ER programme have already been internally and externally assessed, the specific objective of building the resilience of the targeted population has not. In this context, the WFP office in Bangladesh commissioned an evaluation of the ER programme in 2015, with the particular objective of assessing the programme's effectiveness in terms of improving beneficiaries' resilience. This report presents the key findings of this evaluation.

The assessment draws partially on recent conceptual advances made in the understanding of resilience in the context of food security, where resilience is understood as "the ability of individuals, households, communities, institutions or higher-level systems to adequately deal with shocks and stressors" (the terms 'adequately' referring to the ability to avoid short and longer term negative impacts).

> Resilience is understood as **the ability of individuals, households, communities, institutions or higher-level systems to adequately deal with shocks and stressors.**

In the absence of any resilience baseline data, an ex-post treatment versus control approach was adopted where the responses (outcome) and ability to recover from shock/stressors (impact) of the treatment group (households who benefited from the programme by being participants in the activities) were compared to the responses and ability to recover of control households (non-recipients with similar demographics and socioeconomic background living out of the areas where the programme has been operating).

The impact evaluation was constructed around two hypotheses: **(i) Hypothesis 1** at the outcome level, ER-beneficiaries were expected to show lower propensity to adopt detrimental (coping) responses and higher propensity to adopt positive (adaptive/transformative) responses; **(ii) Hypothesis 2** at the impact level, ER-beneficiaries were expected to show faster recovery rates than households in the control group (everything else being equal).

The evaluation exercise was implemented in four unions in the southwest region, two of which were unions where the programme had completed a full 3-year cycle (treatment unions), and the two others were unions where the ER programme had no activities (control). In these unions a total of 502 beneficiaries (treatment) and 505 non-beneficiaries (control) were selected.

A series of preliminary descriptive analyses were performed to compare the treatment and control groups. Some general household characteristics were found to be similar between the two groups, but others differed. In particular (despite our effort to ensure that control and treatment groups were comparable) households in the treatment group were observed to be exposed to a higher number of shocks/stressors than those in the control group. The nature of these shocks/stressors also differed slightly, with control households more frequently affected by some idiosyncratic shocks such as serious illness or accident, while treatment households seem to be more exposed to covariant shocks and stressors such as flooding from excessive rainfall. On the other hand both groups reported similar levels of exposure to other co-variant (in particular cyclones) and idiosyncratic shocks (such as e.g. loss of small livestock) and showed similar self-assessed levels of shock/stressor severity.

Further analysis shows that, although treatment households reported to be more exposed to shocks/stressors, they appear to display a statistically lower propensity to engage in detrimental responses (including reducing food consumption; changing the type of food consumed; reducing family expenses; taking loan; and seeking assistance from community members) than the control group.

This first key result, which addresses directly our first hypothesis, was obtained without controlling for household characteristics. When controlling for those characteristics, analysis still shows that the ER programme reduces the probability of

households to engage in detrimental coping strategies for half of the 20 major shock-response combinations that were tested. This reduction is statistically significant in 7 out of these 10 combinations. For these positive results, more in-depth computations show that the ER programme reduces those probabilities by **5** to **16%** -depending on the shock-response combination.

On the other hand the data did not permit to draw any rigorous conclusions about the more positive (adaptive/transformative) responses, essentially because the **number of ER-beneficiaries and non-beneficiaries who did engage in these uplifting strategies was too small to allow the use of robust econometric analyses**.

> Although **treatment households** reported to be more exposed to shocks/stressors, they **appear to display a statistically lower propensity to engage in detrimental responses** (including reducing food consumption; changing the type of food consumed; reducing family expenses; taking loan; and seeking assistance from community members) **than the control group.**

The second hypothesis (at the impact level) was tested for the five more important shock/stressors, using a self-reported indicator of household capacity to recover. A Propensity Score Matching technique was used to control for potential confounding factors and to identify and compare these recovery indicators between treatment households and a pool of comparable control households. The results indicate that the score for these recovery indicators is systematically higher for the treatment (in line with our Hypothesis 2) for the five shock/stressors considered, but that only one of these differences is statistically significant at 5% level (cyclone).

Finally ER-beneficiaries were also shown to be characterized by a statistically **higher income level**

> The beneficiaries show faster recovery rate from different shocks than the non-beneficiaries and the result is statistically significant in **case of cyclone.**

than the non-beneficiaries (other things being equal), **as well as higher levels of saving and lower levels of loan**. A plausible scenario is that these ER-beneficiaries (who were initially poorer and more vulnerable than the rest of the communities), have been successful at improving their income and savings thanks to the activities/ support of the ER programme, to the extent that they are now significantly better-off than non-beneficiaries.

In conclusion, the analysis demonstrates with reasonable certitude that the ER programme, not only did not do harm to the beneficiaries, but also contributed positively to strengthen their capacity to better handle shocks and stressors (their resilience) by altering positively their ability to avoid engaging into detrimental coping strategies when faced with shocks and stressors. There is also reasonable evidence to assume that these beneficiaries rely on this stronger capacity to better recover from shocks and stressors to improve their welfare (income and assets) above the level observed for the non-beneficiaries.

From a resilience-building programme's M&E perspective, the main lesson that emerges from this analysis is that even if it appears now possible to provide robust and rigorous conclusions regarding the effectiveness of a particular resilience programme without a gold-standard framework relying on high-frequency sampling, one still needs to put in place some minimum conditions if one wants to be able to not simply monitor or even evaluate the programme but learn from it. In particular it seems indispensable to have a comprehensive baseline/ endline assessment framework that allows to document and quantify medium-term changes in households' strategies in response to specific shocks and stressors, and that allows to identify which specific activities and interventions of the programme contribute to these outcome changes.

C-ADAPT Climate Resilience for Food Security: ANALYSES, INNOVATIONS & STANDARDS

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