

Realigning Agriculture to Improve Nutrition: RAIN Project

Rationale, Model & Implementation in Mumbwa District

The RAIN project integrates agriculture and nutrition/health interventions at all project levels to improve nutritional status within the critical 1,000 days from conception until a child reaches its second birthday. The project emphasizes integration at its core. It aims to develop a sustainable and replicable model that can be scaled, supported by a strong and comprehensive monitoring & evaluation component.

Context and Rationale for Integrated Agriculture and Nutrition Programming

Nearly every second child or 45%¹ of children below five years of age are suffering from chronic malnutrition in Zambia. Chronic malnutrition, also called stunting, is shortness in stature compared with a child's age. It has long-lasting, irreversible effects on the child's development, including its mental development, health, school performance and, later on, work productivity. Diets have a low dietary diversity, which increases the risk of inadequate nutrient intake. A baseline survey in the project area confirms these general trends.² Poverty, a low focus on production diversity beyond staple production, population growth, and the high prevalence of HIV and AIDS, among others, also contribute to food insecurity and undernutrition in Zambia.

The Government of Zambia recognises the importance of prioritizing nutrition. In line with a global shift from a nutritional treatment to a preventive approach³, i.e. addressing the problem of malnutrition before a child actually becomes malnourished, the forthcoming National Food and Nutrition Strategic Plan prioritizes the prevention of stunting in its strategic direction one. Zambia is an early riser country within the global Scaling Up Nutrition (SUN) movement and is focusing on nutrition within the first 1,000 critical days from pregnancy until a child reaches its second birthday. This is the period of greatest benefits from nutrition interventions and a set of high impact nutrition interventions exists that may be promoted.^{4,5}

The links between nutrition, health, agriculture, food security and livelihoods are well recognised. Potential pathways between agriculture and nutrition have been suggested⁶: improved production for consumption, production for sale on markets, food price reduction through increased supply, empowerment of women as change agents, and, indirectly, macro-economic effects through improved productivity of the agricultural sector. In spite of a number of successful agriculture programmes⁷ contributing to improved nutrition outcomes, evidence on *how* agriculture impacts on nutritional status (stunting) along an impact pathway is still scarce and is often limited by evaluation methods⁸.

Traditional impact pathways, e.g. from greater crop yields and access to livestock, via increased income, to better nutrition status of women and young children frequently assume that certain steps along the pathway happen

‘automatically’ and lead directly to the next step. However, undernutrition has multi-sectoral causes, including socio-cultural, behavioural, underlying health status, HIV & AIDS, competing income priorities, and gender inequalities. Agreement increases on the importance of multi-sectoral programming to sustainably address undernutrition.

Project Description

The RAIN project aims at preventing child stunting through interventions mainly focusing on agriculture with strong linkages to nutrition and health interventions in Mumbwa District, Central Province. Concern Worldwide Zambia and the International Food Policy Research Institute (IFPRI) collaborated to design and now implement this project: Concern leads the overall implementation together with partners in Zambia, while IFPRI leads the learning and evaluation component and technically supports the integration component.

Target Area, Intervention Groups and Target Population. In addition to the four intervention wards within Mumbwa District (see Box), two adjacent wards have been selected as a comparison site, Chisalu and Lutondo (previously Kapyanga). The overall intervention area is randomised into smaller areas that will receive either agriculture *and* nutrition/health interventions or agriculture interventions only. Approximately 3,480 households with pregnant women and/or children below the age of two years are eligible with a special focus on targeting extreme poor households. Approximately 1,740 households each are assigned to each of the two intervention groups (agriculture & nutrition/health and agriculture only) and the project uses a phased in approach over the first two years.

Project Basics

PROJECT TITLE: Realigning Agriculture to Improve Nutrition (RAIN)

PROJECT OBJECTIVE: To develop a sustainable model that integrated and realigns agricultural and nutrition/health interventions to effectively prevent child and maternal undernutrition among rural poor communities, which can be replicated and brought to scale.

SPECIFIC OBJECTIVES:

- 1) To reduce the prevalence of chronic malnutrition among young children and improve the nutritional status of pregnant and lactating women in Mumbwa District through targeted interventions during the first 1,000 days.
- 2) To realign and integrate activities and mechanisms within the Ministries of Agriculture and Health, especially at District level, to more effectively and efficiently achieve sustainable nutritional outcomes.
- 3) To use and share evidence generated at the District to influence the local, national and international policy agenda to prevent child stunting.

TARGET GROUP: Households with children under two years of age, lactating and pregnant women; some activities will include men and the wider community. The RAIN project will ensure the inclusion of extremely poor and vulnerable households.

NUMBER OF DIRECT BENEFICIARIES: 3,480 households or approximately 20,500 people

PROJECT DURATION: 2011 – 2015

PROJECT AREA: Nalubanda, Shichanzu, Chona and Milandu Wards in Mumbwa District, Central Province, Zambia

IMPLEMENTING PARTNERS: Ministry of Agriculture and Livestock, Ministry of Health, Mumbwa Child Development Agency, Women for Change, International Food Policy Research Institute (IFPRI), and Concern Worldwide Zambia

PROJECT FUNDING: The overall budget is approximately €3 million, which partially is funded by Irish Aid, Kerry Group/ Ireland.

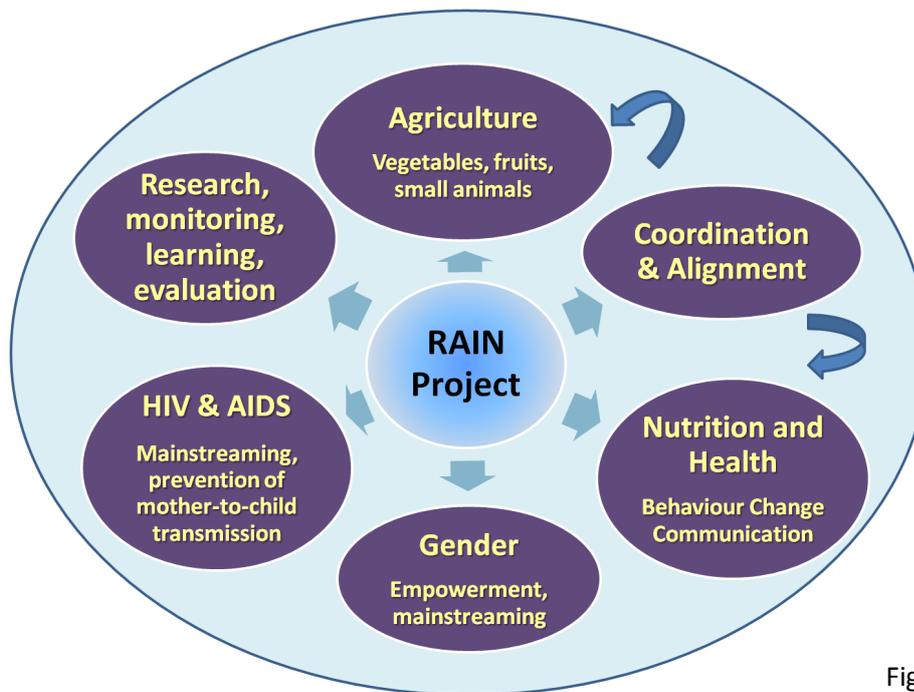


Figure 1. RAIN Project Components

Project Implementation. The project has several components, summarised in **Figure 1**. A unique component of sectoral coordination/integration is at the core of the project: at District but also extension and community level, the project facilitates and promotes collaboration and integration between the agriculture and the health sectors, to align them for achieving the common goal of improving nutrition. Agricultural activities focus on homestead gardening and small-scale animal husbandry; nutrition and health activities focus on behaviour change communication for improved child and maternal nutrition, especially infant and young child feeding, and linkages to the existing health system, including the prevention of mother to child transmission services. Gender equality and women’s empowerment activities will be implemented throughout the intervention area, based on a gender needs assessment carried out recently by Women for Change. The project is being delivered through the existing agriculture and health sector services at district, field/ extension and community level. Cascading trainings build up capacity for specific agriculture and nutrition skills but also contribute to improved cross-sectoral understanding and coordination. Women’s groups of 15-20 women are the target for delivering recurring agriculture and nutrition trainings; they are trained by small-holder model farmers (SMFs) and community health workers. The SMFs are similar to the contact/ lead farmer system, the focus, however, is on vegetable/fruit and small animal production and they are usually women. These farms serve as demonstration and training sites for the women’s groups. Agricultural inputs are provided at the beginning of the project; farmers are supported to generate their own inputs later on and the SMF will be supported to specifically assume a role of a local input generation hub. Linkages to markets and potentially to micro-finance services will be facilitated as agricultural production increases; the main and first focus is on household consumption of foods produced.

Project Partners. The project was designed and is being implemented in partnership with the key line ministries, and local NGOs (see Box on the left). This is to ensure ownership and sustainability right from the beginning and involve relevant stakeholders in the development of a feasible project model that can be scaled-up and replicated in other areas of Zambia or within the region.

Monitoring, Learning and Evaluation. With its rigorous monitoring, learning and evaluation component, the project provides evidence about the approach itself to contribute to the global evidence base, a process being led by IFPRI. The project is designed not only to understand *what* impact such a complex, integrated, multisectoral project can have on maternal and child undernutrition, but also contributes to the understanding of *how* such a project can be delivered. A short pathway has been drafted, which will be refined as evidence is building up (**Figure 2**, p.4).

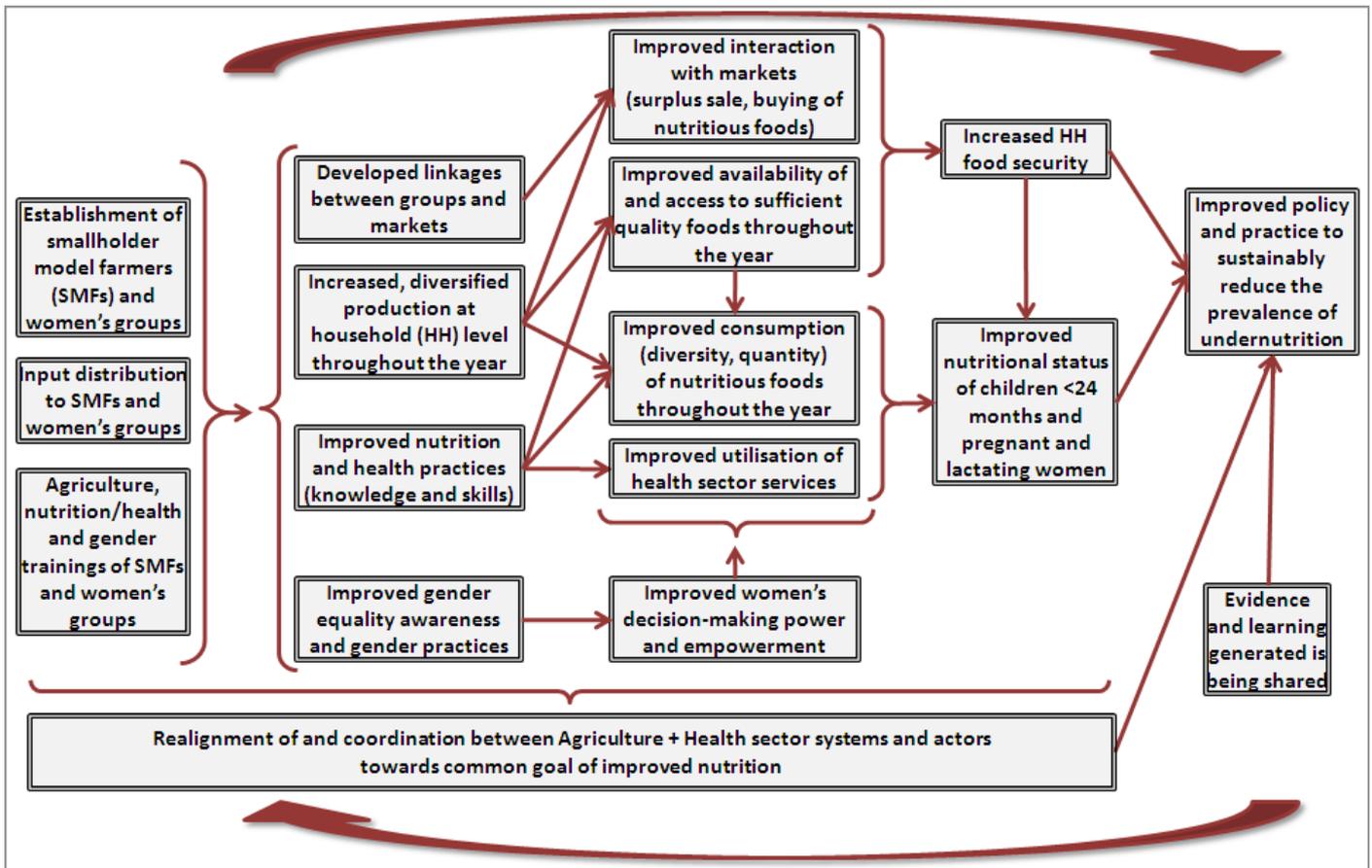


Figure 2. RAIN Project Impact Pathway.

Notes

¹ Zambia Demographic and Health Survey 2007

² See Concern Worldwide & IFPRI (2011) RAIN Project Brief No. 2

³ IFPRI, Cornell University & World Vision Haiti (2007) Prevention is better than cure. Final report of the Evaluation.

⁴ The Lancet (2008) Series on Maternal & Child Undernutrition

⁵ Unicef (2009) Tracking progress on child and maternal nutrition. A survival and development priority.

⁶ World Bank (2007) From Agriculture to Nutrition. Pathways, Synergies, and Outcomes.

⁷ IFPRI (2009) Millions fed. Proven successes in agricultural development.

⁸ Masset E, *et al.* (2011) A systematic review of agricultural interventions that aim to improve nutritional status of children.

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