COMMUNITY GARDENS FOR TIMOR-LESTE

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ABSTRACT

Timor-Leste, still considered a post conflict country, is one of the youngest but also poorest countries on our planet and its population consistently suffers from food insecurity. Timor-Leste's agricultural sector is effected by environmental degradation, erosion, irregular rainfall and the low input of organic or inorganic fertilisers resulting in generally low outputs on farm level. Research has shown that membership in farmers associations or similar groups usually accelerates the adoption of agricultural and environmental practices. Community gardens are known in developed and developing countries and can be established by a diverse range of community groups for example neighbourhood groups, schools, prisons, farmer associations or hospitals. They are a place of community activism and provide a space for social interactions, food production, cultural expression and environmental restoration. They have been proven to be beneficial not just for nutritional needs but also for mental wellbeing, social integration and income generation.

INTRODUCTION

Timor-Leste is chronically food insecure, 23 % of the total population are considered malnourished and the rate of acute malnutrition (wasting) is estimated with 12%. The effects are specifically severe among children where 52% under the age of 5 are chronically undernourished (stunted) and 43% are considered severely malnourished (OXFAM, 2008; Molyneux et al., 2012). It is estimated that around 80% of the population are subsistence farmers (Datt et al., 2008; OXFAM, 2008; Molyneux et al., 2012; Harmadi & Gomes, 2014). A large percentage of the poor is relaying on the agricultural sector to sustain their livelihoods (Datt et al., 2008; OXFAM, 2008; Molyneux et al., 2012; Harmadi & Gomes, 2014). Timor-Leste's agricultural sector which is a mixture between Javanese rice and Melanesian root-based agriculture (Molyneux et al., 2012; Costa et al., 2012) is effected by environmental degradation, low input and poor resource management practices (Molyneux et al., 2012; Costa et al., 2012; Worldbank, 2011). It is suggested that yields and soil quality could be significantly improved by applying some simple and affordable agriculture practices (Mellek et al., 2010; Heitkamp et al., 2011; Wani et al., 2003; Gosh et al., 2004; Del Carmen et al., 2008; Hati et al., 2006). Many studies (e.g. Odendo et al., 2010; Salasya et al., 1996; Oxfam, 2014; Zingiro et al, 2014) agree that membership in a farmer association or a similar group usually accelerates the adoption of agricultural and environmental practices. Palmer and Carvaho (2008) as well as Leon and Boris (as cited in Oldham et al., 2013) are arguing for the importance of local participation within the sustainable natural resource managing and decision making process for it to be truly successful. It is therefore suggested that community gardens offer a unique platform for multidisciplinary learning, environmental stewardship and advocacy to support sustainable development (Krasny & Tidball, 2009; Ison et al., 2007; Pretty, 1995; Toderi et al., 2007; Rist et al., 2007 and Pahl-Wostl et al., 2008).



METHODS

The main methodologies used for this research were a key informant approach and an in-depth literature review of the environmental, social, cultural and political circumstances which influence the success or failure of community gardens in relation to Timor-Leste. Several organisations and individuals were visited and interviewed during a visit in Timor-Leste in June 2014; these include Fernando Madeira (Na Terra), Rosaria Martins da Cruz & Roumaldo Amaral (HIAM Health), Ben Walta (CERES Global), Ego Lemos (PERMATIL & HASATIL), Danny Fyffe (Smallholder Agriculture International) and Barry Hinton (Barry's Eco-lodge).

RESULTS AND DISCUSSION

Timor-Leste's agricultural potential is massively underdeveloped due to a range of reasons, including poor infrastructure, missing access to resources like seeds, seedlings and adequate water supply. Extension services and governmental support seem insufficient; a legal and supportive policy framework for sustainable development within the agricultural sector should be developed (Molyneux et al., 2012; OXFAM 2008; WFP 2010; Harmadi et al., 2014). Ultimately an integrated approach to resource management should be applied to address these problems. The success rate of the adaption of agricultural practices can depend on several factors such as the availability of building material and work force, monetary resources, group or association membership, supportive government policies and extension services (Zingiro et al., 2014; He et al., 2007; Huhua et al; 2007; Motsi et al., 2004). Community gardens, if under appropriate guidance provide an excellent social and bio-physical environment for education (Krasny and Tidball, 2009) and can play a vital role within the food system by decreasing malnutrition and increasing the availability, affordability and consumption of a varied range of fresh nutritious food especially for the poor (Bushamuka et al., 2005; Trinh, 2003; Weinberger, 2013). A large number of rural youth migrating to Dili has been reported and they show opposed to the general opinion an interest in community engagement, however youth unemployment rates are high (Scambary, 2012; Dale et al., 2010; Kostner and Clark, 2007; personal communication Fernando Madeira & Ego Lemos, 2014). The establishment of a community driven development program for community gardens could generate youth employment, deliver further education, strengthen the connection of youth with their community and include youth purposeful into the empowering nation building process (Oldham et al., 2013). Findings by Jha and Dang (2013) indicate that food inadequacy in Timor-Leste is strongly related to the education of the head of the household more so than the observed food poverty. Consequently it might be suggested that equipping younger generations today with an adequate knowledge of nutrition, skills on how to grow their own food and the know-how to address agricultural challenges delivered through a strong connected socialecological framework could have major impact on the health and wealth of the families of tomorrow (Weinberger, 2013; Krasny & Tidball, 2009; Rist et al., 2007). Considering the massive infrastructure problems in Timor-Leste and up to 30% post-harvest loss reported due to inadequate storage options and long transport ways, the country's food supply system could benefit considerably from urban and peri urban community garden projects (Orsini et al, 2013; De Zeeuw et al, 2011; Weinberger, 2013).



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