

# **Social Entrepreneurship - One Way toward Sustainable Smart Farming**

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According to the IFAD (International Fund for Agricultural Development) 2015 report in State of Food Insecurity of the World, there is no “one-size-fits-all” solution for tackling hunger and food insecurity. Interventions must be tailored to conditions, including food availability and accessibility, as well as longer-term development prospects. Inclusive growth provides opportunities for those with meager assets and skills, and improves the livelihoods and incomes of the poor, especially in agriculture. It is therefore among the most effective tools for fighting hunger and food insecurity, and for attaining sustainable progress. Enhancing the productivity through smart technology and producing innovation held by smallholder family farmers through community economic integration and well-functioning markets are essential elements of inclusive growth.

Technology innovation and community integration should therefore directly lead to social protection, economic equality and ecological resilience which then contribute to hunger reduction and environmental sustainability. Proactively detecting the sustainability problems through social and environmental thinking and institutional design, i.e. social entrepreneurship, for creating “win-win” situations is critical. For example, institutional purchasing through cash-for-work programs so that local farmers could supply the local school meals, allowing the communities to consume locally produced food and support the disadvantaged families at vulnerable regions. Fight against food insecurity, natural damage and social injustice through resources reallocation requires coordination and complementary responses from all stakeholders including the social designer of smart devices.

Social entrepreneurship is therefore “irreplaceable”, functioning as intermediary body for problem-solving of sustainability which technology alone can’t afford. The question is whether a social enterprise can find a sustainable business model to meet the needs of the local households by promoting smart farming utilizing green energy solution. Indeed, the intermediary functions have advantages of value creating. The biggest challenge for social enterprise is then to develop unique business model through self-empowerment.

Social problems are not isolated issues. They are closely related with climate change and global sustainability which are the main reasons for promoting smart farming. Without social thinking the smart farming would be “just smart”. Nevertheless, social problems “share” the same conditions of smart farming as they are closely associated in a unique local area where a social enterprise needs to develop a globalized strategy together with their local stakeholders.

Table 1 summarizes a complex situation a smart farm may confront. Although “greater competition from abroad may trigger improvements in productivity through greater investment, R&D, technology spillover.”<sup>1</sup> “Indeed, the constraints faced by rural women, in terms of lack of access to productive factors, such as land, credit, inputs, storage and technology, may undermine their capacity to adopt new technologies and/or take advantage of economies of scale to improve their competitiveness. In several developing countries, female small farmers who are unable to compete with cheaper agricultural imports have been forced to abandon or sell their farms, which in turn can contribute to their food insecurity.”<sup>2</sup>

Table 1. All-dimensional holistic development of smart farm sustainability

		Goals dimension: Sustainability			
		Business	Social	Environment	Governance
Initiative dimension: Innovation	Technology	O2O, P2P	Learning	Carbon	Expertise
	Procedure	Cross-border	Recruitment	Cycled	Communication
	Concept	Fair-trade	Flip-over	Renewable	Network

In fact, in this table the third dimension will be “level” which demonstrates a dynamic social process through which we will monitor the change, i.e. the I-O-O-I (input-output-outcome-impact) process of smart farming. It should empower a social innovation action which involve all levels, i.e., on micro-individual action, meso-network collaboration and macro-political regulation. Through mutual learning and innovative diffusion a social enterprise will build its own business model and find its way to sustainability.

The biggest challenge for social enterprise is then to develop a sustainable business model through self-empowerment. A smart farm may cost a lot to set up, is hard to get profit, and it needs expertise and long-term business strategy, not to mention the potential challenges under current policies in many places. Money, timing, passion and innovative solution are four dominant factors to developing a flourishing social entrepreneurship of smart farming.

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<sup>1</sup> IFAD, Food and Agriculture Organization 2015: The State of Food Insecurity in the World, United Nations.

<sup>2</sup> WomenWatch. 2011. Gender equality and trade policy. Resource paper (available at [http://www.un.org/womenwatch/feature/trade/gender\\_equality\\_and\\_trade\\_policy.pdf](http://www.un.org/womenwatch/feature/trade/gender_equality_and_trade_policy.pdf)).