



Inclusive business for sustainable food systems

Putting the last first

Contributors: Nicky Pouw, Daniëlle de Winter, Katie Minderhoud, Ellen Lammers

1. Introduction

Inclusive business has gained much prominence in international policy debates and research on sustainable and inclusive development in recent years (Pouw, Bush & Mangnus 2019a; Likoko and Kini 2017). Public stakeholders acknowledge a growing need for innovative market-based solutions that drive inclusion and provide opportunities for marginalised and vulnerable groups (UN 2018; World Bank Group 2018). Increasingly, inclusive business approaches are seen as a way to integrate social objectives into business operations.

Inclusive business is defined as a viable business that benefits low income populations (World Sustainable Business Council 2019). Inclusive business approaches aim at addressing societal problems, including poverty and food and nutrition insecurity, and at promoting sustainable livelihoods. Specific approaches differ widely in terms of target groups (e.g. large companies, small-scale producers and grassroots organisations), instruments (e.g. policy, advocacy) and business processes. For example, 'inclusion' can relate to employment creation and better market connections for small-scale producers, or to creating access to services and products at an affordable price. Business 'viability' refers to the ability to successfully generate an income from the business.

However, inclusive business is also a contested concept (Ros-Tonen et al. 2019; Gupta & Pouw 2017). Central to the discussion is a lack of shared understanding of, or misconceptions about, who exactly are the marginalised and vulnerable groups that ought to be included, and under what conditions can inclusive business deliver on its promises? Making relevant use of the concept thus requires a stronger empirical foundation and scrutinisation that builds on context-specific knowledge and expertise.

To contribute to the debate with such context-specific knowledge and insights, NWO-WOTRO Science for Global Development commissioned a synthesis study. This study explored how a selection of research projects funded by the Food & Business (F&B) Research programme have directly or indirectly addressed key opportunities and constraints of sustainable inclusive business initiatives. The synthesis included 13 interdisciplinary research projects, which shared the long-term objective of contributing to improved food and nutrition security of marginalised and vulnerable groups. Based on this study, this paper presents new insights into the different business processes and innovations of, particularly, small-scale producers and entrepreneurs in the agri-business sectors of countries across sub-Saharan Africa and southeast Asia.

Box 1: About Food & Business Research

The Food & Business Research programme aims at generating new knowledge, insights and innovations to address food and nutrition insecurity in low and middle income countries (LMIC). It focuses on the urgent and growing need for adequate knowledge and solutions for regional and local problems related to food security. Food & Business Research consists of two funding instruments: the Food & Business Global Challenges Programme (GCP) and the Food & Business Applied Research Fund (ARF). Both are part of the Food & Business Knowledge Agenda of the Netherlands Ministry of Foreign Affairs. The objective of GCP is to promote research-based advanced understanding of emerging key issues in global and regional food security and their impact on local food security and the role of private sector development. The objective of ARF is to promote research-supported innovations that contribute to food security and private sector development in the partner countries of Dutch development cooperation. Food & Business Research is funded jointly by the Ministry of Foreign Affairs of The Netherlands and the Dutch Research Council (NWO) and managed by NWO-WOTRO Science for Global Development.

Box 2: The projects under study

The synthesis covers a review of 13 projects that received funding as part of the Food & Business Research programme in the period 2014 to 2019. They are listed in the Annex. Of these projects, 9 were funded through the Global Challenges Programme (GCP) and 4 projects through the Applied Research Fund (ARF). Their activities were conducted in 12 different countries, mostly in sub-Saharan and Southern Africa. Two calls for proposals (GCP 2 and ARF 3) explicitly addressed the topic of inclusive business and inclusive growth. Projects funded under other calls, though not their key focus, touched upon different elements of inclusive business. Some studies, for example, addressed how 'markets can work for the poor' by introducing cost-effective, local innovations for smallholders. Others explored opportunities to strengthen the negotiation power of the marginalised by encouraging 'collaboration at scale' and introducing affordable financial services and products. Across the board, projects focused on inclusive business as a process, in which co-creation and learning with, by and for the poor and marginalised took central stage.

This paper is organised as follows. The conceptual and theoretical debate on inclusive business and poverty is briefly reviewed in Section 2, focussing on different approaches to inclusive business, the role of innovation therein, main contestations in the debate and knowledge gaps. It also introduces the analytical framework guiding the empirical inquiry of this paper. Section 3 discusses the empirical findings of the F&B Research projects with regard to innovations and their Applicability-Affordability-Accessibility features. 'Triple A' innovations enable poor and marginalised groups to overcome barriers and constraints to achieving inclusive business, and support them in contributing to and/or benefiting from food and nutrition security. Section 3.1 elaborates on the applicability aspects of innovation in terms of the ability to solve day-to-day problems within multiple life domains of the poor and marginalised. This often implies, it is shown, taking a couple of steps backward before being able to move forward again. Section 3.2 proceeds to discuss the affordability aspect of innovation, since many (science-based) innovations are too costly to be sustainably adopted by the marginalised. Section 3.3 addresses the accessibility aspect of innovation, since not all societies and living conditions may easily accommodate any type of innovation. The concluding section draws out the key lessons learned on the opportunities offered and constraints faced when applying inclusive business models, and the ways in which the Triple A principles contribute to delivering on the promises of inclusive business in a sustainable manner. This final section also poses some concluding critical questions for reflection by academia, policy and practice.

2. Inclusive Business for marginalised groups: current theoretical debate

The concept of inclusive business has many definitions, each with their own emphasis (Pouw, Bush & Mangnus 2019a; Likoko & Kini 2017). The common denominator in all definitions is that inclusive business refers to a business approach that addresses societal concerns - poverty, inequality, unsustainable practices or exclusion – and aims at giving impetus to sustainable development pathways out of poverty (Fressoli et al. 2014; Goyal et al. 2014; Kamani 2016). Those involved in inclusive business debates advocate a need to move beyond 'business as usual' (Hajer et al. 2015; Scheyvens et al. 2016) by designing new business models that take a non-Western or bottom-up perspective. Key to such perspective is meeting local needs and values, being aware of local conditions, and of opportunities and constraints. While in broad-based terms inclusive business initiatives can be categorised as bottom-up *versus* top-down approaches, at the level of application we see further differences between social and technical, formal and informal, and individual and group-oriented business models.

Inclusive business is conceptually linked to social entrepreneurship, which is gaining a lot of theoretical ground in both higher and lower income countries. However, the difference is that inclusive business emphasises the poverty/inequality reduction effect, while social enterprises first and foremost focus on delivering services to the poor. Inclusive business models move beyond seeing the poor and marginalised as consumers or users of services, and also acknowledge them as producers and business contributors. Some scholars see inclusive business as a vehicle for creating shared values (Michelini & Fiorentino 2012), for transforming into more inclusive and sustainable societies (Kamani 2016) or even as an emergent part and parcel of a new regenerative economy (Raworth 2017).

Inclusive business is not only interpreted and applied in different ways, the concept itself is also contested. Critics note a tension between promise and reality: there is a risk that inclusive business models exclude certain actors, fail to address root causes (e.g. education gap, impact of malnutrition on cognitive capacity, culture of poverty and discrimination), or under-deliver in practice (Ros-Tonen et al. 2019; Gupta & Pouw 2017). Others have criticised the ‘marketization’ of poverty by seeing the poor only in terms of their relationship to markets, thus obscuring the social, political and moral determinants of poverty (Schwittay, Bardiane & Berdisch 2011; Karnani 2016). These criticisms may be due to misconceptions about the position of marginalised and excluded groups in inclusive business, the conditions in which they operate, and their (lack of) connections to the governance environment. Moreover, false assumptions are often made about the entrepreneurial motivations and opportunities of the marginalised. All these issues reveal knowledge gaps in the literature to date (Pouw, Bush & Mangnus 2019a; Likoko & Kini 2017).

Misconceptions also exist in narratives about the global food system, which are dominated by the assumption of unproductive agricultural practices in smallholder agriculture. This causes policy makers and business actors to make decisions based on generalised or even false assumptions regarding the capacities of, and the constraints faced by, small-scale producers and entrepreneurs in specific contexts. Policies and business practices, therefore, run the risk of sidelining certain target groups from the very start. The Dutch Food Security Policy (2012-2016) applied the categorisation of the poor as those who are “hanging in”, “stepping up” or “stepping out” (Dorward et al, 2009) to distinguish subsistence farming from commercial farming. This categorisation continues to inform the current Dutch policy debate, with limited attention for the enabling conditions that allow or obstruct socio-economic mobility of farmers (such as infrastructure, land administration and access to markets) (IOB Food for Thought, 2016).

Box 3: The Global Food System

A food system gathers all the elements (environment, people, inputs, processes, infrastructures, institutions, etc.) and activities that relate to the production, processing, distribution, preparation and consumption of food, and the outputs of these activities, including socio-economic and environmental outcomes. This comprises the food value chain (all activities that move food from production to consumption); the food environment (“the physical, economic, political and socio-cultural context in which consumers engage with the food system to acquire, prepare and consume food”); and consumer behaviour (“the choices made by consumers, at household or individual levels, on what food to acquire, store, prepare and eat, and on the allocation of food within the household (including gender repartition, feeding of children”). (HLPE, 2017)

Furthermore, knowledge gaps prevail with regard to complex linkages between inclusive business and ‘food and nutrition security’, and inclusive business and ‘innovation’ – two focus areas of the NWO-WOTRO Food & Business Research programme. Firstly, the link between inclusive business and food and nutrition security requires better understanding of how and when economic empowerment (i.e. improved income) translates to improved nutrition, given the complex dynamics of competing priorities (i.e. school fees, health costs), available dietary knowledge and culture, and decision-making power about spending at household level. Even if a higher income is realised as a result of inclusive business, marginalised farmers and food entrepreneurs may not spend the additional income on more or better quality food. The underlying mechanisms for such decision-making merit further research, which was outside of the scope of this synthesis study, or the individual projects for that matter. Secondly, knowledge gaps associated with innovation and inclusive business include questions on agency (who initiates?), on who has the mandate or ability to engage in and organise an inclusive process for co-creation and innovation, as well as on who steers the selection and introduction of fitting solutions and technologies.

The F&B Research programme aims at delivering impact for the most poor and vulnerable groups. Amongst other objectives, the programme seeks to gain new insights into how innovation can act as an effective mechanism for enhancing business processes to sustainably impact food and nutrition security, especially by and for the marginalised. A relevant research field, as innovation that is currently offered to these stakeholder groups (by NGOs, government extension services, etc.) often fails to address or understand their real priorities and needs, and therefore rarely has a sustainable impact. This lack of understanding, or even false perceptions, hamper the introduction of solutions that can truly benefit marginalised groups.

Various scholars have argued that in order for innovations to be relevant and effective for the poor and marginalised, these need to be applicable to a specific problem and context, affordable at low costs, and accessible to all (*triple AAA*) (Basu et al. 2013; Agarwal et al. 2016). We build on this argument as an analytical tool for the synthesis of the range of innovations that have been introduced by the thirteen reviewed projects. These innovations were introduced and/or promoted with the ambition to **enhance the added value of the food commodities** (in terms of nutrition and/or market value) produced and consumed by poor and marginalised people, as well as the **viability of their businesses**. Both are, in theory, potential mechanisms through which the food and nutrition security of marginalised populations can be improved.

An analytical framework (Figure 1) was developed for guiding the empirical analysis of this synthesis study (Pouw, Bush & Mangnus 2019b). The framework takes a bottom-up perspective by focussing on inclusive business models by and for marginalised consumers, producers and entrepreneurs who engage in agri-business. By taking them as point of departure, the role that bigger companies could play in contributing to inclusive and sustainable food systems falls outside the scope of this paper. By focusing on ‘inclusive business’, we zoom in on the role and contributions that ‘food entrepreneurs’ play in local food systems. The literature distinguishes between **survival entrepreneurs** and **growth-oriented entrepreneurs** (see also Vossenbergh 2016; Likoko et al. 2019). Since we consider this an *entrepreneurial spectrum* rather than a clear-cut distinction, the focus in this paper is on those food entrepreneurs who are motivated to enhance the added value of their produce and/or the viability of their business (i.e. being closer to a growth-orientation). Through the lens of ‘**Triple A**’, project findings on innovations in the operational (primary and secondary) business processes, and strategic (tertiary) business processes are reviewed.

The (i) **primary business processes** include food consumption and production inputs (e.g. labour, assets, farm inputs, technology), activities (production, time-use, mobility) and outcomes (type of food commodities, quality, quantity, regularity); (ii) **secondary business processes** include financing, food handling and packaging, transport, marketing, management and different forms of collaborations with other consumers, producers or entrepreneurs; and, (iii) **tertiary business processes** include capacity building activities, knowledge exchange, connections, policy and institutional programming activities. These latter processes concern strategic business activities, for which the poor and marginalised often lack the time and resources. Nevertheless, there are innovative self-initiatives by and for marginalised groups that have proven their *raison d'être*, but which are not on the radar of policy and business actors, and therefore are not professionalised, upscaled or invested in, in any other way. The F&B Research consortia were therefore encouraged to collaborate with marginalised and vulnerable groups during the research, which has led to new knowledge on how innovations in capacity building, knowledge exchange, strategic connections, and engagement with policy and programming can contribute to inclusive business. It also opened up new perspectives and opportunities on the part of food entrepreneurs, most of whom are usually so pre-occupied with managing their primary and secondary business processes, that they have little time and resources to spare for such tertiary business processes.

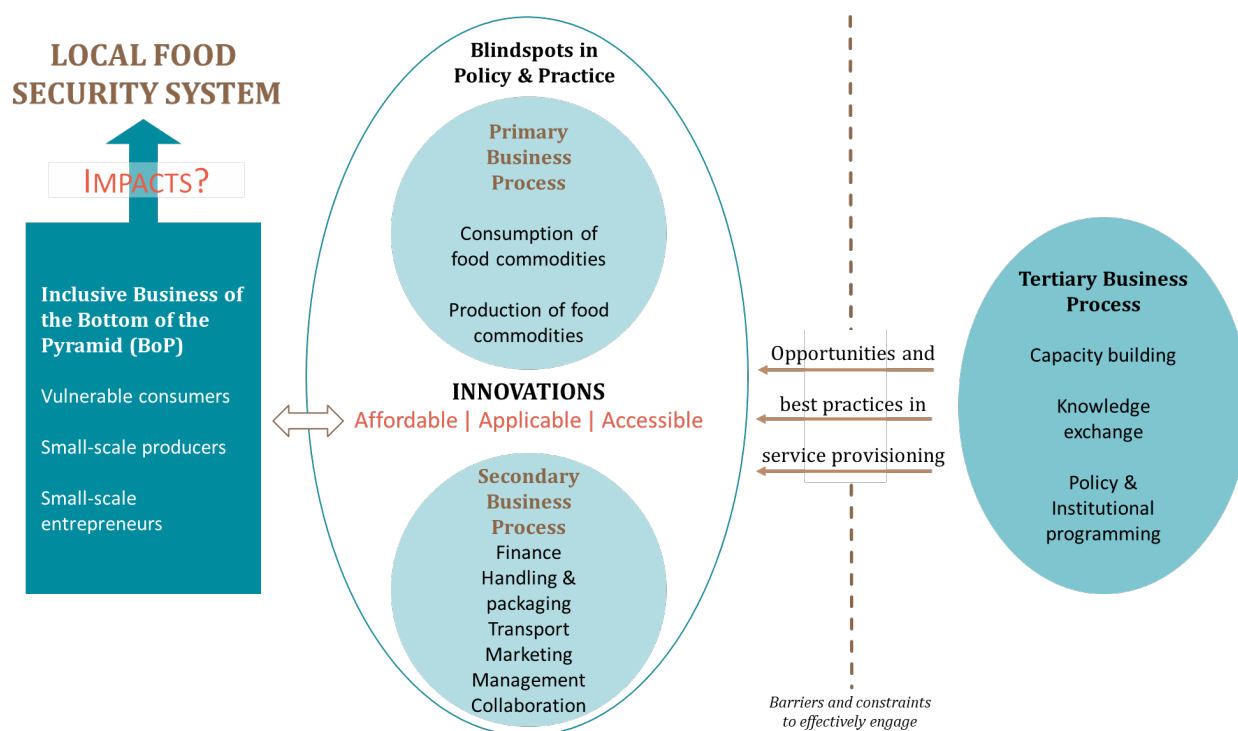


Figure 1: Analytical Framework for Assessing Food and Nutrition Impacts of Inclusive Business from the perspective of marginalised and vulnerable groups. Source: Pouw, Bush & Mangnus (2019b, Figure 1, p. 95)

3. Project findings

This section presents insights gained from the reviewed projects, starting from the premise that innovations are only relevant and effective to the poor and marginalised (and therefore can contribute to ‘inclusive business’) when they are applicable to a specific problem and context, affordable at low costs, and accessible to all. The central question guiding the synthesis was: Which new insights relevant for policy and practice did the projects gain concerning the Applicability, Affordability and Accessibility of innovations that aim to benefit food and nutrition security by and for poor and marginalised groups by creating inclusive business opportunities?

3.1 Applicability

The ARF and GCP research projects provide insights into how *applicable* innovations can function as an instrument of inclusive business for food and nutrition security. Food entrepreneurs need innovations in food production, processing and/or marketing that are applicable to their daily business challenges. This requires a recognition of the diversity among small-scale food entrepreneurs and the specific challenges they face. These challenges are multifold, context-specific and may be gender-biased. Several *applicable innovations* that enable marginalised food entrepreneurs to overcome their day-to-day operations are described in this section. Three distinct inclusive business mechanisms were identified across the different projects: (i) lowering input and transaction costs, in combination with using more sustainable inputs (ii) closing the gaps between (informal) food entrepreneurs and formal actors and institutions (iii) validating and activating the use of local and indigenous knowledge in all business operations. The mechanisms will be explained in the next sections with the help of a number of case examples following from the projects.

The **first mechanism, lowering input costs and introducing more sustainable inputs to benefit marginalised groups**, was explored amongst others by the Women Food Entrepreneurs project¹, which focussed on women food entrepreneurs in urban slums in Kenya. The project found that women food entrepreneurial groups in Kenya and Burkina Faso applied unsustainable soil management practices, due to the ill-informed over-usage of chemical fertiliser and social constraints (i.e. theft and damaging of irrigation equipment). Seeking to provide an answer to the challenges at hand, the project supported innovations in terms of the type of fertilisers being used and in the food production techniques applied. As an alternative to chemical fertiliser, the women were encouraged to use self-produced organic fertiliser from market food waste. This proved successful as it lowered input costs and enhanced the income of women food entrepreneurs, while also lowering their ecological footprint. With support from the local University and the Kenya Industrial Research and Development Institute (KIRDI), the organic fertiliser was tested and certified before it could be packaged, labelled and sold to a broader market. New food production techniques introduced included innovations at the operational business level, in particular more practical irrigation solutions. Elevated (wooden) tables were set up in the communal gardens to control water levels within the water-scarce urban environment, and clay water jars were buried in the soil for sub-surface irrigation of plants. Two relatively modest innovations that proved to be low-cost, could be constructed by the women, and were not susceptible to damage or theft when gardens were left unmanaged.

As another example, the Insect-based Feed project² shows the benefits of inclusive business approaches by introducing alternatives to expensive inputs that are a business constraint for many small-scale farmers. The research project explored the use of insects as low-cost, high-protein inputs in animal feed production in Kenya. This innovation reduces the dependency of small-scale agri-business entrepreneurs on internationally traded and more expensive animal feed (e.g. fishmeal and soymeal), while also reducing animal feeding costs. In addition, it contributes to a higher yield and to the regenerative capacity of local food systems. Results of this project were instrumental in creating an enabling environment for the development of standards and government legislation for the use of dried insect-based protein ingredients. This in turn may open new markets

¹ 'Women Food Entrepreneurs in Kenya and Burkina Faso: Building inclusive business models for food security in the city slums of Kisumu and Ouagadougou' (see Annex)

² 'Improving livelihood by increasing livestock production in Africa: An agribusiness model to commercially produce high quality insect-based protein ingredients for chicken, fish and pig industries (ILIPA)' (see Annex)

and opportunities for large-scale production and commercialisation of insect-protein animal feed, which responds to a local demand for low-cost and sustainable animal feed.

The Indigenous Vegetables Marketing project³ in Kenya provides insights into the second inclusive business mechanism of closing the gaps between (informal) food entrepreneurs and formal actors and institutions. The project explored the quality standards for food production from the perspective of the poor and marginalised consumers. This perspective usually remains underexplored in research, which touches upon a wider debate on power dynamics in the food system.⁴ By documenting the nutritional value of indigenous vegetables, which are consumed in large quantities by marginalised populations, and by piloting the potential of marketing dried indigenous vegetables in local supermarkets, a new business opportunity was identified. However, substantial efforts went into closing the gap between the small-scale food producers and the supermarkets that sell only standardised and certified foods. Considering different stages of the supply chain, the project identified both gaps and opportunities in the uptake of indigenous vegetables in Kenya. This led to a range of interventions, including: addressing the (lack of) availability of inputs (i.e. seed development, quality control and seed marketing channels); development of organic-based soil fertility standards in close collaboration with producer associations; and innovative market systems through vertically coordinated value chains and enhanced information flows on production and marketing. This combination of coordinated interventions helped to connect small-scale producers directly to the market and created assurance through quality control from seed to end product. As a result, producers involved dedicated 50% more land to the production of indigenous vegetables and achieved significant higher total farm incomes (46.7%).

Insights from the Fermented Foods project⁵ are relevant to the third inclusive business mechanism of validating and activating the use of local and indigenous knowledge in all business operations. The project researched and documented the nutritional value and production and processing methods of traditional fermented food commodities that are widely consumed in Zambia (using milk in Mabisi and cereal in Munkoyo as prime inputs). This approach proved effective for validating the present knowledge of women as traditional producers of these food commodities. Much of their knowledge goes undocumented and is therefore rarely recognised or used in the design of food and nutrition security policies and interventions. Consumer research conducted by the project in urban centres revealed that the traditional product was favoured over the commercial alternatives, but unavailable in supermarkets. With the identification of the various recipes and production processes used in rural areas it was now possible to start defining formal standards for production and food quality/safety parameters in collaboration with the Zambia Bureau of Standards. The certification and following promotion of these traditional food commodities will thus deliver benefits to both marginalised food producers as well as (urban) consumers.

Another example of activating local knowledge comes from the Inclusive Value Chain Collaboration project⁶, which found that peer learning platforms, by enabling direct sharing of experiences, deliver applicable knowledge. Farmers are inspired to try new practices that are discovered, developed and shared by fellow

³ 'Systemic approach to overcoming constraints of production and marketing of indigenous vegetables in Western Kenya' (see Annex)

⁴ For further reading on the discussion on valuing different perspectives in the food system, please refer to Anderson et al (2019) 'Introduction: Valuing Different Perspectives on Power in the Food System', IDS Bulletin, 50: 2.

⁵ 'Enhanced nutrition security through traditional fermented foods in Zambia' (see Annex)

⁶ 'Inclusive partnerships and innovation platforms for sustainable landscapes and greater food sovereignty among tree crop farmers in Ghana and South Africa' (see Annex)

farmers that face similar day-to-day challenges. Examples of such shared new practices include the planting of plantain in the direction of the wind to significantly reduce storm damage, and the use of extracts from pawpaw and neem leaves as an alternative insecticide to reduce the use of agrochemicals in vegetable production.

In sum, the synthesis shows the different avenues that research projects adopted to introduce innovations to the food system which benefit poor and marginalised communities: from lowering input and transaction costs, to closing the gap between the informal and formal market players, and activating local and indigenous knowledge. The inclusive business innovations presented here emphasise that even (or especially) modest interventions can make a great difference to the income and possible food security of marginalised food producers and consumers (e.g. Women Food Entrepreneurs), but initial thresholds may be high. Additional challenges experienced at project level relate to, firstly, stakeholder engagement and participation and the importance of building trust and joint commitment, and secondly, dealing with unpredictable circumstances which cause setbacks in planning and desired progress. On the positive side, changes which benefit the marginalised communities also turn out to serve other actors along the value chain as new products are developed or new market opportunities evolve (e.g. Insect-based Feed). When quality standards and the needs of marginalised food producers and consumers are monitored (e.g. Indigenous Vegetables Marketing) and the knowledge of marginalised communities is valued and mapped (e.g. Fermented Foods; Inclusive Value Chain Collaboration), opportunities arise for new inclusive business models. However, solid evidence that confirms the applicability and long-lasting impact of such innovations is hard to obtain due to the persistent lack of available data and monitoring procedures regarding the food and nutrition security needs of marginalised communities.

3.2 Affordability

The poor and marginalised are often hampered in the adoption of innovations in their business processes not only by market-related costs, but also by costs related to inefficiencies and inequities in other domains of life. These costs are incurred due to, for instance, a lacking (access to) knowledge and market information, precarious or insecure access to land and other resources, lack of mobility and relevant connections, unequal gender roles, lack of access to markets and outlets or clean water, etc. In addition, many food entrepreneurs operate in the informal economy, where their economic activities are not monitored. This leads to misconceptions about the affordability of innovations for marginalised food entrepreneurs. The many hidden costs they face are systematically overlooked by formal actors and institutions. 'Hidden costs' that affect marginalised food entrepreneurs, do not affect the better-off entrepreneurs in the food chain, or not to the same extent. These costs can be economic, e.g. having to hire-in a transporter to bring produce to markets/customers due to lack of own transportation means, having to accept an under-market price due to lack of information, lack of means for preserving produce or inferior quality/packaging, or having to buy a personal identification document first before being able to enter into a contract. These costs can be social, e.g. having no time or opportunity to travel due to childcare obligations or gender norms. These costs can also be political, e.g. having no entitlement or right to access certain institutions or decisionmaking realms, unless brokers are paid for mediation. Hidden costs are thus multi-dimensional and create high thresholds for marginalised food entrepreneurs to professionalise and upscale their business activities.

For example, the System Pond Farming project⁷ in Vietnam found that expensive fish oil and fish meal feed could be replaced by more affordable natural foods produced inside the ponds (algae). Experiments with this new approach showed that more fish could be produced using less feed, thus reducing input costs for the small-

⁷ 'Nutritious system pond farming in Vietnam' (see Annex)

scale fishpond farmers (shrimps). Experimental research demonstrated that conventional pond systems are not efficient in contributing to shrimp diet. Farm trials in the Mekong Delta showed higher individual shrimp growth per day in trial ponds where the conventional feed load was reduced by 20% while adding cheap carbohydrates. As fish feed accounts for a large proportion of farmers' input costs, these results (20% feed cost reduction with higher pond productivity levels) provide promising outlooks for the affordability of small-scale fishpond farming. However, through behavioural analysis the System Pond Farming project found that **it is a misconception to think that affordable innovations will be easily or automatically adopted**. The fish farmers involved in the project perceived the threshold for changing their current practices as too high. This was due to misperceptions about market risks and a lack of up-to-date knowledge on sustainable aquaculture practices. In this case, this threshold functions as a 'hidden cost' for the fish pond farmers. Raising awareness of the actual risks and improving knowledge and skill levels in sustainable aquaculture practices is therefore needed to ensure adopting of the innovation at fish pond farm-level.

The Solar Mango Drying project⁸ serves as an example where collaboration at scale, between smallholder producers and a local agribusiness, supported an innovation that addressed critical barriers and constraints related to financial costs at producer level. The aggregation of smallholder mango harvest in Ghana allowed for a capital investment in a drying facility, to prevent food waste (estimated at 40% of the harvest) and enabled processing, packaging and marketing of dried fruit for local as well as export markets. The project centered around the design of a tailor-made, affordable, technological innovation and resulted in the development of a low cost automated drying oven, which can be built and maintained by (trained) local artisans. The hybrid solar-gas dryer uses water heaters and LPG gas, which significantly reduces cost for fuel and reduces vulnerability by relying on two sources on energy. Farmers were engaged from the start of the project to ensure their buy-in and understanding of this opportunity to add value and enter new markets. The introduction of this technology – for which a key design principle was affordability - offers multiple wins as it allows for value addition as a result of processing, an improved bargaining position for smallholders (due to increased shelf-life and multiple market outlets for their product), an increased income by minimising post-harvest losses, and improved nutrition security in the region by increased access to fruit at an affordable price outside of harvest season.

Overall, **marginalised food entrepreneurs were found to have weak negotiation positions** due to their dependency on middlemen and traders, who have access to transportation means and (bigger) markets (e.g. Sustainable Cocoa Productivity project⁹; Solar Mango Drying; Women Food Entrepreneurs). Farmers' lack of coordinated organisation as well as the fact that they often operate their businesses from remote locations, increases this dependency on middlemen and traders (i.e. Sustainable Cocoa Productivity). A lack of knowledge on market prices, of regular (high-quality) production, and of storage facilities to preserve food commodities furthermore lower the price they can demand for their produce. By organising themselves in food producer/processor groups, the dependency on intermediaries can be partly overcome (e.g. Inclusive Innovation Intermediaries project¹⁰; Women Food Entrepreneurs). All mentioned inefficiencies impact women even more, since they often function as principal food providers to the family and have to combine this role with other household and caretaking roles. This hidden cost of multi-tasking further impacts their often limited mobility outside the immediate proximity of the homestead. In places where women are organised in (informal or formal)

⁸ 'Development of automated solar powered fruit drying technology for smallholder farmers in Ghana' (see Annex)

⁹ 'Helping Poor Farmers Grow Money: Sustainable Cocoa Productivity and Socio-Economic Impacts of International Investments in Sierra Leone' (see Annex)

¹⁰ 'Bringing food security to scale in East and West Africa: understanding and supporting the role of inclusive innovation intermediaries in inclusive business networks' (see Annex)

groups, these kind of inefficiencies can be partly overcome through collective arrangements (e.g. sharing childcare, gardening, transport). In Box 4 an example is provided of women food entrepreneurs living in urban slums who have created a solution to tackling such hidden costs.

Box 4: Overcoming the hidden costs of childcare

Drawn from Women Food Entrepreneurs project

One food entrepreneurial group consisting of about 50 women (la Saisonnière) in the peri-urban outskirts of Ouagadougou (Burkina Faso), successfully started-up an open-air school. Some 300 children, many from very large families, are taught the principles of sustainable agriculture, while their mothers are working in the gardens that are far from home. The children are not only looked after for free whilst they are in 'school', but also learn about the origins of their food, agroecology and the importance of food sovereignty for their country. The group is formally registered. Over the years, this has helped them attract external funding for building a solar panel for drip-irrigation and to obtain funding from international organisations to support their Educational Garden.

A final example concerns the need for affordable financial products and services for marginalised food entrepreneurs who want to, individually or collectively, step-up to a growth-oriented pathway. The Access To Credit project¹¹ in Ghana identified the need for a wider range of financial products and services to serve informal food entrepreneurs. The financial services would need to be 'climate-smart' and applicable to the fluctuating livelihood conditions and constrained asset base of the marginalised food entrepreneurs. In combination with applicable farm-level information on weather conditions, soil and crop management and irrigation, better insurance products can be designed. One improvement would be a more accurate correlation between actual damage and insurance pay-outs for example. Also, new financial products and services such as mobile money and mobile banking can lower the transaction costs of doing business for food entrepreneurs (see also support for this proposition by Oostendorp et al. 2019). In combination with smaller formal loans and smaller collateral requirements, innovative financial products and services could lower the reliance on higher-risk, informal finance.

In sum, hidden costs render many innovative agri-business solutions unaffordable to the poor and marginalised. These hidden costs may be economic, social, or political in nature and influence risk perceptions, time and resource allocation and business investment decisions. By making other actors and institutions aware of these multi-dimensional hidden costs, as well as of the knowledge and information asymmetries, new insights and opportunities for resolving these inequities might arise .

3.3 Accessibility of innovative business solutions

A key point in the critical debate on inclusive business is whether it actually delivers to the poor. This relates to the accessibility of innovative business solutions. Across the board, the research projects observed that poor and marginalised food producers and entrepreneurs lack access to innovation in both their operational and strategic business processes, leading to interlocking effects and standstills. For example, (informal) small-scale food entrepreneurs have difficulties accessing agri-business and technology fairs, food market fairs, networking and

¹¹ 'Information Transparency system as a low-cost scaleable solution to farmers? access to credit and services in Ghana' (see Annex)

start-up events due to a lack of resources, time and contacts. As a result, they are not exposed to innovative agri-business solutions that could also work for them or that could give them new knowledge, insights and ideas. They therefore stick to long-taught practices and techniques that may be less efficient or effective. This causes a growing divergence with large-scale food entrepreneurs and locks them in a competitively disadvantageous position, and eventual standstill. Instead of progressing their business by paying attention to tertiary, strategic business processes, their prime attention goes to resolving challenges in the primary and secondary business processes, where production, processing, marketing and management take place. Marginalised food producers and entrepreneurs feel especially 'powerless' in accessing the domains and platforms where strategic knowledge exchange, capacity building, institutional policy and programming takes place, and where business connections can be made. This section will highlight the insights that research projects gained in relation to such tertiary business processes, especially in relation to gaining access to and voice in spaces, platforms and domains where knowledge is (co-)created and shared for marginalised groups.

Firstly, we address the importance of acknowledging that inclusive business is a process and that the process encompasses certain conditions under which 'inclusion' can take place. Secondly, up-to-date knowledge and awareness of relevant actors and institutions influence strategic access to those knowledge holders, actors and institutions, out of which new forms of knowledge exchange, collaboration, co-creation and policy/programmatic agenda-setting can emerge. The research projects show that farmer organisation and strategic alignment appear to be crucial conditions for inclusive business models.

For example, the Land Governance project¹² in Mozambique found that marginalised food producers and entrepreneurs typically lack access to land governance decision-making arenas. This is a problem because it is in these arenas that decisions are made about large-scale land investments. The research project supported approaches to mitigate this infringement on their right of access. Inter-community exchange was organised between communities with more negotiation power and experience and those without. This exchange encouraged communities to set up associations and community councils, and to elect community committees that can engage with investors to claim their rights to land and land development. The project shows that **conditions driving 'inclusion' can be improved by investing in access to information, effective communication, forms of engagement and organisation, training on capacities for negotiation, and establishing new connections with the private business sector and public actors and institutions.** Effective capacity development can include community, association, and cooperative exchanges. Communities can benefit from this as they acquire new knowledge and in the process develop a coherent voice in negotiations.

Likewise, the Sustainable Cocoa Productivity project in Sierra Leone demonstrated that investing in capacity-building to enhance the voice and bargaining power of marginalised cocoa producers and entrepreneurs responded to a dire need in the country's post-conflict context. Following, the strategic alignment of marginalised cocoa producers and entrepreneurs was perceived as a priority, by first facilitating the organisation of producers in cooperatives. Strategic alignment enables the marginalised to negotiate and resolve the barriers and constraints in their primary and secondary business processes better, for example, through collectively organising access to land, market space, transportation, or consumer markets. In the case of the Sustainable Cocoa Productivity project, the partners set out to establish Block Farms, which in effect are hybrid models where land owners, farm workers and the cocoa buying company form a joint venture around a tract of land. The research showed this set-up has potential to enhance productivity of small-scale cocoa farms because of joint actions to eradicate common pests and diseases. Furthermore, the strategic alignment of farmers with

¹² 'Bridging the gaps between policy and practice on land governance, inclusive business and food security in Mozambique' (see Annex)

other partners contributed to reducing the number of conflicts at community level (i.e. land conflict) that had previously stifled operations and investments. Other research projects confirm that where such alignments were formalised, marginalised collectives met greater receptibility on the side of private and public sector actors and institutions (e.g. Inclusive Innovation Intermediaries, Inclusive Value Chain Collaboration, Women Food Entrepreneurs).

Several projects show how formal strategic alignment can facilitate improved access to business opportunities. The Women Food Entrepreneurs project in Kenya found that women food entrepreneurial groups gained access to 10% of government contracting reserved for female food supplier groups to service local institutions (e.g. schools, prison) as soon as they were formally registered. In the Inclusive Value Chain Collaboration project, women oil palm processors and soap makers established women's associations to help each other access markets more efficiently and effectively (by reducing transaction costs) and to reduce their dependency on buyers. Organisation in groups or cooperatives is of course not without challenges (e.g. Inclusive Innovation Intermediaries, Women Food Entrepreneurs). Group governance issues remain a challenge, which causes many groups to dissolve after some time. Box 5 describes the challenges that the Urban Aquaponics project¹³ in Ethiopia experienced with the introduction of cooperative models and the insights that were gained about possible solutions.

Box 5: Power in numbers, when managed well

In the Urban Aquaponics project in Ethiopia, youth in Metahara city were found to lack access to decent employment. Despite being educated, the formal labour market hardly provided any opportunities to them. The government initiated a large-scale aquaponics farm, organised as a cooperative, with the purpose of creating an inclusive business opportunity for these unemployed youth. Aquaponics is a system of aquaculture in which the waste produced by farmed fish or other aquatic creatures supplies the nutrients for plants grown hydroponically, which in turn purify the water.

While technically the farm functioned well, the collective management proved to be a problem. As the facilities were given for free, the project partners found that nobody felt responsible for the business and distrust and individual side-selling prevented the group from making the farm profitable. To overcome such challenges, the project introduced a new business model, in which each of the participating youth had to buy in (via government credit) to assure their responsibility.

The project confirmed that a sense of ownership is critical for people to be motivated to run a commercially viable business, especially if it relies on a collective effort. By investing in centres of expertise and building a new supply chain of fish and vegetables, efficiency and profits increased with scale. However, multiple-headed management constructions of these larger scale cooperatives required clear rules, responsibilities and accountability (e.g. through buy-in) to assure long-lasting motivation and dedication.

Secondly, the synthesis study highlights how access to knowledge influences the extent to which poor and marginalised food producers and entrepreneurs can benefit from innovations. The research projects found that where access to co-creation domains and events can be organised for mixed stakeholder groups and representatives, new food production and processing innovations emerge. For example. the Indigenous

¹³ 'Aquaponics in Ethiopia: Developing a business model for sustainable implementation of small scale aquaponics systems improving food and nutrition security of urban and peri-urban households in Ethiopia' (see Annex)

Vegetables Marketing project in Northern Kenya developed indigenous vegetable demonstration fields in four sites (Cheptebo, Moi's Bridge, Turkana and Bungoma), using the farmer field schools (FFS) approach. Farmers were trained and supported to produce at least ¼ acre of indigenous vegetables in their farms through provision of seed and extension services. Lead farmers from farmer associations attended the FFS once a month during the cropping season, brokering knowledge through existing producer networks. Farmer associations also demonstrated to be a useful access point for communication on and quick uptake of new technology packages, whereby the opportunity of mutual validation arose. Throughout the project, African indigenous vegetables (AIV) products have been offered in Kenyan supermarkets in a vertically integrated marketing chain directly involving farmer associations. A survey carried out among AIV farmers revealed that nearly half of the farmers now consider market quality requirements (i.e. size, colour, variety) as a result of training received through the project on production and grading of quality AIVs. This new mind-set changed farmers' priority crops. During the project period 1137 (out of 1467) farmers adopted AIVs as priority crop, allocating 52% more land to production of AIVs, and achieved a significantly higher total farm income (46,7%). Especially farmers who were registered in the 'connected farmer' platform increased their yield by 30% and reduced post-harvest losses by 50%. The fact that they actively started seeking and accessing information both on production and marketing through the platform supported these efficiency gains. In the end, the project enabled farmer associations to become economically self-sustainable through playing the role of 'connector'¹⁴ in production and marketing of AIVs. Farmer associations are not only important channels for passing on information, but can also use their role for better service provision. This requires proactive partnerships with both market players and research actors to ensure continuous capacity building on new technologies and investment opportunities that benefit their networks.

A final example concerns the **organisation of access to innovation platforms for marginalised food producers and entrepreneurs who normally lack such access**. The Local Parboiled Rice project¹⁵ in Benin introduced innovation platforms to develop a commercially viable business model for low-income women's groups through co-creation. Project partners worked together with the women in experimenting with production processes, which led to the improvement of rice cultivation and parboiling¹⁶ techniques, benefiting the women groups. The women rice processors succeeded in increasing the added value and market price of the processed rice (they went from selling at a price of 250 to 350/400 CFA (XOF) per kilo). The innovation platforms used a 'capitalization on experience' approach, meaning relevant experiences were identified, validated and documented, leading to lessons learned, identification of potential good practices and their subsequent adoption. Systematising knowledge in co-creation with rice producers and processors spurred an interesting empowerment dynamic among extension officers. Through their role in both farmer field schools and the innovation platform, the rice extension officers regained a strong status of experts at village/local level and are now called "Rice Doctors". The effective extension services resulted in a high adoption of the best practices both in rice production and in rice parboiling. The consequent increased consumer demand for parboiled rice over traditional processed rice benefited the women involved in rice parboiling. The improved quality of parboiled

¹⁴ Since the word 'broker' does not have a favorable connotation in many African contexts, the term 'connector' is used instead.

¹⁵ 'Ensuring Sustainable and Sustained Food Security by Enhancing local parboiled rice value-Chain Competitiveness in Gogounou and Banikoara areas in Benin (PARCR)' (see Annex)

¹⁶ Parboiled rice is rice that has been partially boiled in the husk. The three basic steps of parboiling are soaking, steaming and drying. These steps make the rice easier to process by hand, while also boosting its nutritional profile, changing its texture, and making it more resistant to weevils.

rice has not only increased consumer demand, but also resulted in established links between women processors and shops and traders in town. The innovation platforms have facilitated direct supply arrangements between rice farmers and processors, securing supply of rice for processing as well as market connections for sales.

Similarly, the learning platforms in the Inclusive Value Chain Collaboration project created a safe space for farmers to share their practical and affordable 'innovations-from-below' to deal with day-to-day challenges. Furthermore, the learning platforms created an opportunity to interact directly with several public and private support organisations that they do otherwise seldom encounter simultaneously.

A concluding remark is that the lack of access to innovation that many marginalised food producers and entrepreneurs experience is often embedded in unequal power relations and other processes of exclusion and marginalisation. Within an enabling governance and business environment, access barriers and constraints can be effectively addressed through a process of mutual learning and engagement. A genuinely enabling governance environment does not promote a growth model where 'the winners take all', but ensures that there are broader-based redistribution mechanisms in place within the national economy that address poverty and inequality as *a priori* concerns, rather than giving poverty 'handouts' that help people to cope but not to build a viable business and participate sustainably in the economy.

4. Reflections and implications for policy and practice

This synthesis tried to answer the question which new insights relevant for policy and practice did the projects gain concerning the Applicability, Affordability and Accessibility of innovations that aim to benefit food and nutrition security by and for poor and marginalised groups by creating inclusive business opportunities? This section summarises the findings across the Triple A's and shares some overarching insights relevant to the field of inclusive business.

Ensuring that poor and marginalised groups benefit from inclusive business approaches benefiting their food and nutrition security requires innovations that address the Triple A conditions of applicability, affordability and accessibility. To ensure that innovations are **applicable** by marginalised groups that lack, or have limited access to, certain resources (e.g. capital, time, (scientific) knowledge), the research projects introduced various approaches. While the term 'innovation' might trigger notions of fancy ICT applications or genetic modification of crops, the synthesis instead shows that innovations most suitable and relevant to local needs are often those that entail relatively simple interventions. Projects that combined social innovations (e.g. mapping of needs, building on local and indigenous knowledge) with technical (food) innovations (e.g. mobile dryers or feed improvements), seemed to have the best potential for developing applicable solutions for their beneficiaries. Modest changes to currently used production techniques offered applicable solutions to day-to-day struggles of small-scale farmers and entrepreneurs (e.g. Women Food Entrepreneurs; Inclusive Value Chain Collaboration). Some of these interventions not only benefit the marginalised, but also other value chain actors in the food system (e.g. Indigenous Vegetables Marketing and Fermented Foods).

However, the **affordability** of innovations for poor and marginalised communities, the synthesis confirms, strongly depends on the hidden costs faced by small-scale food producers and entrepreneurs. In general, hidden costs render many innovative agri-business solutions unaffordable in the long run. These costs may be economic, social, or political in nature and influence farmers' risk perceptions, time and resource allocation and business investment decisions. To overcome such hurdles, projects identified the need for awareness raising of actual market risks when introducing innovations, while simultaneously building the knowledge and skill base of the target groups (e.g. Insect-based Feed, Indigenous Vegetables Marketing, Women Food Entrepreneurs). At the same time, solutions for reducing hidden costs of food entrepreneurs should be provided with careful guidance

to avoid that the inequalities and causes for exclusion, particularly in relation to their food and nutrition security, persist or even are exacerbated by the innovations (i.e. Access to Credit).

Thirdly, the research projects show that marginalised groups can benefit more fully when innovations are made **accessible** through collaboration (to reach scale and to combine diverse knowledge and skill sets) and by establishing connections (to build on each other's knowledge in order to create effective supply chains and to connect to markets). Creating access to spaces, platforms and domains where knowledge is (co-)created and shared, is essential for inclusive business processes. Moreover, the voices of the poor and marginalised should be heard in these arenas. The research projects show that strategic alignment of cooperatives or producer groups is a key condition to amplify the voices of the marginalised in market negotiations. When cooperatives and farmers' or women's associations are registered and formalised, this can moreover create novel business opportunities with formal stakeholders (e.g. Land Governance, Sustainable Cocoa Productivity, Women Food Entrepreneurs, Inclusive Value Chain Collaboration).

Overall, the synthesis brought forward a number of key insights for research projects that aim to contribute to inclusive business. Firstly, **the projects demonstrate that only limited information is available on the food quantities, qualities and flows that are produced and marketed by and for marginalised groups.** Systematic mapping and monitoring of foods produced, consumed, exchanged and marketed is needed to get a better grasp of the actual food flows of marginalised communities. In this way, both their contribution (who is producing what, where and how?) and their needs (who gets what, when, how and why?) will become more visible and can thus be better addressed by policy and practice.

Secondly, the research projects show that processes to facilitate inclusive business by and for marginalised groups to enhance their food and nutrition security, move forward in small steps. To make an inclusive approach viable, the context in which economic activities of food production, processing and marketing take place should be taken into account. Taking the context as an entry point can help to identify the thresholds for professionalising and upscaling that the marginalised face. The research projects show that multiple factors, such as a lack of resources, knowledge, network and connections, labour and time, determine whether an economic activity that primarily serves the household's subsistence can expand into something (more) profitable. Certain projects experienced that food entrepreneurs needed to move a few steps backward, before constraints could be overcome and they could move forward again.

Finally, **the projects show that innovation comes from all directions.** Both bottom-up and scientific innovations, with a focus on Triple A insights, are needed to benefit from local and indigenous knowledge and experience. It is a fallacy to think that marginalised and excluded groups lack innovation. The projects show that, on the contrary, they innovate on a daily basis to resolve small-scale, practical problems of running their agribusinesses with little means, power, and within a constrained context. In doing so, they combine sensory local and indigenous knowledge and practical experience with scientific knowledge from the 'outside' (e.g. through agricultural extension trainings and/or innovation and learning platforms) to work out low-cost solutions. Furthermore, it is important to ask whose knowledge dominates the knowledge exchange and co-creation processes and which insights are prioritised over others. Acknowledging such power dynamics in co-creation processes is essential to make them successful.

When introducing new business models, attention must always be paid to possible trade-offs. Policy makers and practitioners should be aware of the institutional and resource conditions that can help mitigate trade-offs between business growth, social values and environmental values. This is important to ensure that business development does not result in natural resource depletion or pollution, or comes at great social costs. Inclusive business can only flourish in an enabling governance environment, which a priori recognises the needs, priorities and agency of poor and marginalised populations rather than addressing these merely as an after-thought.

In conclusion, when the contributions and needs of the poor and marginalised are more visible, more appropriate innovations can be introduced that will benefit these groups. The synthesis of project insights shows that inclusive business models have the best chances to be viable and make a contribution to food and nutrition security when innovations are adopted that are affordable in the long-run, applicable to the problem at hand, and accessible to all. Such innovations are typically devised based on criteria and conditions set in co-creation with the poor and marginalised food entrepreneurs that are meant to benefit from the innovations for enhanced food and nutrition security.

References

- Agarwal, N., Grottke, M., Mishra, S., & Brem, A. (2016). A systematic literature review of constraint-based innovations: State of the art and future perspectives. *IEEE Transactions on Engineering Management*, 64(1), 3-15.
- Anderson, M. et al (2019) 'Introduction: Valuing Different Perspectives on Power in the Food System', *IDS Bulletin*, 50: 2
- Basu, R. R., Banerjee, P. M., & Sweeny, E. G. (2013). Frugal Innovation. *Journal of Management for Global sustainability*, 1(2).
- Dorward, A., Anderson, S., Nava, Y., Pattison, J., Paz, R., Rushton, J., & Sanchez Vera E. (2009). Hanging In, Stepping up and Stepping Out : Livelihood Aspirations and Strategies of the Poor. *Journal of Management*, 45(1).
- Fressoli, M., Arond, E., Abrol, D., Smith, A., Ely, A., & Dias, R. (2014). When grassroots innovation movements encounter mainstream institutions: implications for models of inclusive innovation. *Innovation and Development*, 4(2), 277-292.
- Goyal, S., Esposito, M., Kapoor, A., Jaiswal, M. P., & Sergi, B. S. (2014). Linking up: inclusive business models for access to energy solutions at base of the pyramid in India. *International Journal of Business and Globalisation*, 12(4), 413-438.
- Gupta, J., & Pouw, N. (2017). Towards a trans-disciplinary conceptualization of inclusive development. *Current Opinion in Environmental Sustainability*, 24, 96-103.
- Hajer, M., Nilsson, M., Raworth, K., Bakker, P., Berkhout, F., De Boer, Y., ... & Kok, M. (2015). Beyond cockpit-ism: Four insights to enhance the transformative potential of the sustainable development goals. *Sustainability*, 7(2), 1651-1660.
- Hajer, M., Nilsson, M., Raworth, K., Bakker, P., Berkhout, F., De Boer, Y., ... & Kok, M. (2015). Beyond cockpit-ism: Four insights to enhance the transformative potential of the sustainable development goals. *Sustainability*, 7(2), 1651-1660.
- Halme, M., Lindeman, S., & Linna, P. (2012). Innovation for inclusive business: Intrapreneurial bricolage in multinational corporations. *Journal of Management Studies*, 49(4), 743-784.
- HLPE (2017) *Nutrition and food systems*. A report by The High Level Panel of Experts on Food Security and Nutrition. September 2017. HLPE Report 12.
- IOB Evaluation Food for Thought (2016) no. 419, p. 21 – 22. Karnani, A. (2016). Fighting poverty together: rethinking strategies for business, governments, and civil society to reduce poverty. Springer.
- Likoko, E., & Kini, J. (2017). Inclusive business—a business approach to development. *Current opinion in environmental sustainability*, 24, 84-88.
- Likoko, E., Pouw, N.R.M., Okeyo-Owuor, J. & Odame, H. (2019). Rethinking Women in Survival Entrepreneurship and Wellbeing in Kenya. Chapter 24 in Lepely, M.T., Kuschel, K., Beutell, N., Pouw, N.R.M. & Eijdenberg, E. (eds) *The Wellbeing of Women in Entrepreneurship*, New York: Routledge, pp.374-390.
- Michellini, L., & Fiorentino, D. (2012). New business models for creating shared value. *Social Responsibility Journal*, 8(4), 561-577.

- Oostendorp, R., van Asseldonk, M., Gathiaka, J., Mulwa, R., Radeny, M., Recha, J., ... & van Wesenbeeck, L. (2019). Inclusive agribusiness under climate change: a brief review of the role of finance. *Current Opinion in Environmental Sustainability*, 41, 18-22.
- Pouw, N.R.M., Bush, S. & Mangnus E. (2019a). Inclusive Business for Sustainability, *COSUST*, 41: A1-A4.
- Pouw, N.R.M., Bush, S. & Mangnus E. (2019b). Editorial overview: Towards an inclusive food systems approach for sustainable food and nutrition security, *COSUST*, 41: 93-96.
- Ros-Tonen, M.A.F., Bitzer, V., Laven, A., de Leth, D. O., Van Leynseele, Y., & Vos, A. (2019). Conceptualizing inclusiveness of smallholder value chain integration. *Current Opinion in Environmental Sustainability*, 41, 10-17.
- Scheyvens, R., Banks, G., & Hughes, E. (2016). The private sector and the SDGs: The need to move beyond 'business as usual'. *Sustainable Development*, 24(6): 371-382.
- Schwittay, A., Badiane, K., & Berdish, D. (2011). The marketization of poverty. *Current Anthropology*, 52(S3), S71-S82.
- de Sousa Teodósio, A. D. S., & Comini, G. (2012). Inclusive business and poverty: prospects in the Brazilian context. *Revista de Administração*, 47(3): 410-421.
- UN (2018). 'Inclusive Businesses doing their Part to Promote Development Reap Bottom-Line Benefits', Deputy Secretary General Speech, 4 April 2018: <https://www.un.org/press/en/2018/dsgsm1151.doc.htm>
- Vossenbergh, S. (2016). Gender-aware women's entrepreneurship development for inclusive development in sub-Saharan Africa. INCLUDE knowledge platform on inclusive development policies.
- Wach, E. (2012). Measuring the 'inclusivity' of inclusive business. *IDS Practice Papers*, 2012(9), 01-30.
- World Bank Group (2018). 'IFC's experience with Inclusive Business', *An Independent Evaluation Group (IEG) Evaluation*: <http://documents.worldbank.org/curated/en/503711525903711942/pdf/IFC-s-experience-with-inclusive-business-an-assessment-of-IFC-s-role-outcomes-and-potential-scenarios.pdf>
- World Business Council for Sustainable Development (2019). 'What is Inclusive Business', Last accessed 03/07/19: <http://businessfordevelopment.org/insight/what-is-inclusive-business/>

Annex

ARF projects included:

Indigenous Vegetables Marketing

‘Systemic approach to overcoming constraints of production and marketing of indigenous vegetables in Western Kenya’

Margaret Komen (MACE Foods, Kenya)

<https://www.nwo.nl/en/research-and-results/research-projects/i/14/12214.html>

Parboiled Rice

‘Ensuring sustainable and sustained food security by enhancing local parboiled rice value-chain competitiveness in Gogounou and Banikoara areas in Benin (PARCR)’

Jean Kpetere (DEDRAS, Benin)

<https://www.nwo.nl/en/research-and-results/research-projects/i/80/13180.html>

Solar Mango Drying

‘Development of automated solar powered fruit drying technology for smallholder farmers in Ghana’

Kwasi Etu-Bonde (Sustenance Agro Ventures, Ghana)

Land Governance

‘Bridging the gaps between policy and practice on land governance, inclusive business and food security in Mozambique’

Amade Suca (Action Aid Mozambique)

GCP project included:

Fermented Foods

Enhanced nutrition security through traditional fermented foods in Zambia

Dr. Sijmen Schoustra (WUR, the Netherlands)

<https://www.nwo.nl/en/research-and-results/research-projects/i/07/11507.html>

Insect-based feed

Improving livelihood by increasing livestock production in Africa: An agribusiness model to commercially produce high quality insect-based protein ingredients for chicken, fish and pig industries (ILIPA)’

Dr. Marcel Dicke (WUR, the Netherlands)

System-pond farming

‘Nutritious system pond farming in Vietnam’
Dr. Marc Verdegem (WUR, the Netherlands)

Women Food Entrepreneurs

‘Women Food Entrepreneurs in Kenya and Burkina Faso: Building inclusive business models for food security in the city slums of Kisumu and Ouagadougou’
Dr. Nicky Pouw (UvA, the Netherlands)

Sustainable Cocoa Productivity

‘Helping Poor Farmers Grow Money: Sustainable Cocoa Productivity and Socio-Economic Impacts of International Investments in Sierra Leone’
Dr. ir. Maarten Voors (WUR, the Netherlands)

Urban Aquaponics

‘Aquaponics in Ethiopia: Developing a business model for sustainable implementation of small scale aquaponics systems improving food and nutrition security of urban and peri-urban households in Ethiopia’
Dr. ir. Maja Slingerland (WUR, the Netherlands)

Inclusive Value Chain Collaboration

‘Inclusive partnerships and innovation platforms for sustainable landscapes and greater food sovereignty among tree crop farmers in Ghana and South Africa’
dr. Mirjam Ros-Tonen (UvA, the Netherlands)

Inclusive Innovation Intermediaries

‘Bringing food security to scale in East and West Africa: understanding and supporting the role of inclusive innovation intermediaries in inclusive business networks’
Prof. ir. Laurens Klerkx

Access To Credit

‘Information Transparency system as a low-cost scaleable solution to farmers? access to credit and services in Ghana’
Prof. Robert Lensink (RUG, the Netherlands)