



Integrated approaches to food and nutrition security

Discussion paper

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Summary

- A diverse array of integrated approaches exist, designed to address complex issues such as food and nutrition security. Such approaches aim to go beyond the impact of one-dimensional sectoral projects and, for that purpose, combine the work of different stakeholders across various sectors, disciplines and scales.
- There are many tools that can be applied to different aspects of integrated interventions; some are particularly relevant such as: integrated food security phase classification, adaptive management, social learning, action research, problem-driven iterative adaptation, and theory of change.
- Achieving optimal conditions for the implementation of integrated projects on food and nutrition security requires: 1) appropriate project management, including proper project planning and implementation based on context analysis and theory of change, as well as management that is adaptive and able to respond to a changing context, 2) an environment that is enabling through appropriate supportive policies, financing instruments, institutions, and governance, and 3) appropriate capacity for managing multi-stakeholder processes, brokering agreements between partners, building relationships and resolving conflicts, as well as multidisciplinary technical capacity.
- Bottlenecks that specifically apply to integrated projects include: lack of integrated funding instruments (and lack of funding in general), competing project and organizational objectives among stakeholders, inadequate coordination of collaborative efforts, and lack of multidisciplinary or multi-sectoral expertise.

This discussion paper is based on the background study 'A look at integrated approaches to food and nutrition security: Working towards better design and implementation', which was prepared by The Broker for the Food & Business Knowledge Platform (Chen et al., 2016). The author would like to thank Pieter Windmeijer and Maja Slingerland of Wageningen University & Research Centre for their valuable comments on this paper.

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Why are integrated approaches needed to tackle food and nutrition insecurity?

According to the 2015 Millennium Development Goals report, about 795 million people are undernourished worldwide (UN, 2015a). Hence, a great challenge lies ahead. This challenge is amplified by a rising world population and the global, but unequally distributed, impacts of climate change. In the coming decades, more food needs to be produced using less resources (land, water and energy), in a global economic context of volatile commodity prices, high food and energy prices, as well as rising unemployment and economic stagnation in the developed world. Under these conditions, achieving food and nutrition security in all its facets requires approaches that are specifically designed to tackle complex interlinked problems and that go beyond local agriculture and food sectors. This was also one of the main conclusions of the consultation on Dutch food security policy organized by the Food & Business Knowledge Platform (F&BKP) in the summer of 2014.

The report concludes that: “To achieve maximum impact on food and nutrition security an integrated approach is required at all levels (local, regional and international) to avoid a situation in which each stakeholder focuses within their own niche without understanding the complexity of the overall system and therefore being less effective in transforming it” (F&BKP, 2014: 7). The necessity of such an integrated approach is further acknowledged in the resolution on the Sustainable Development Goals (SDGs), which states that the 17 SDGs are “integrated and indivisible and balance the three dimensions of sustainable development: the economic, social and environmental” (UN, 2015b).

This need for integration is also reflected in the concept of food security itself. According to the Food and Agriculture Organization of the United Nations (FAO, 2008), food and nutrition security “exists when all people, at all times, have physical and economic access to sufficient safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life”. This definition encompasses production-related aspects of availability, but also the economic, political and environmental aspects of access, utilization and stability.

Despite this recognition, more systematic knowledge of how various approaches to integration are actually being implemented, and whether or not such projects are (more) effective in achieving food and nutrition stability, is needed. For this purpose, The Broker, commissioned by F&BKP, conducted a study on integrated food security interventions consisting of a systematic mapping of integrated projects, a literature review, a selective survey questionnaire, and several interviews with experts. In this study, emphasis was placed on identifying the practical implications of adopting integrated approaches to food and nutrition security.

The study revealed a clear consensus on the added value of integration when it comes to tackling food and nutrition insecurity. The findings can be best summarized as follows: issues such as food and nutrition security are best tackled by integrated approaches because the synergies brought about by such integration enable greater impact and sustainability. Two aspects of such integration were central to this reasoning: the benefits produced by the alignment of multiple food and nutrition

security objectives, and the added value of bringing together knowledge, expertise and resources from different disciplines and sectors.

Welcome to the jungle

Speaking of ‘the’ integrated approach would not do justice to the great number of approaches to integration, which span disciplinary and sectoral boundaries on varying scales. In practice, significant overlaps exist between the various approaches, resulting in an array of terms that can confuse or discourage those who might benefit from their application. The background study showed that labels such as ‘comprehensive approach’, ‘integrated approach’ and ‘holistic approach’ are ambiguously used by food and nutrition security practitioners. Other loosely used terms such as multi-, inter-, cross- and trans-sectoral (or -disciplinary) complicate matters even more.

So what are integrated approaches actually about? The idea of integration itself has been around for some time. The first attempts at integrated programming were integrated rural development projects in the 1960s and 1970s. However, these were unsuccessful due to their large scale and top-down management, which led to inefficiencies and high costs (ODI, 1979). These interventions focused on the integration of development activities within large rural areas to increase production and alleviate poverty. Various other integrated strategies have been developed and implemented since that time with the knowledge that not everything that *can be* integrated *should be* integrated. Different aspects talked about when discussing integration today were identified in the 2014 F&BKP consultation. This consultation suggested that, for projects to achieve systemic change, four substantive and organizational aspects are key: governance levels, stakeholders, sectors and policy domains (F&BKP, 2014).

In the background study, four contemporary approaches to integration were identified that represent its most important principles: The ecosystem approach, landscape approach, value chain approach and territorial approach (see Box 1). From these approaches we can see that integration can occur both vertically (across scales) and horizontally (across sectors and disciplines), linking the objectives of various stakeholders across these divides. Moreover, such integrated projects can be applied on different scales. Both integrated pest management applied by smallholders, for example, and integrated watershed management projects that incorporate multiple villages (or even larger scales) can be considered integrated.

Box 1: Four approaches to integration

Approach	Features
Ecosystem approach (CBD, 2004)	<ul style="list-style-type: none"> • Promotes both conservation and the sustainable and equitable use of resources and views humans as integral to ecosystems • Area-based, the starting point is the environment, integrates management of land, water and living resources • Scale is determined by the ecosystem, decentralizes its

	<p>(adaptive) management to the lowest possible level and includes all stakeholders in this process</p> <ul style="list-style-type: none"> • Key activities: ecosystem analysis, analysis of ecosystem services, participatory planning, establishing joint resource management institutions, capacity building
<p>Landscape approach (Minang et al., 2015; Sayer et al., 2013)</p>	<ul style="list-style-type: none"> • Aims to reconcile conservation and development objectives, and recognizes the central role of humans in 'social-ecological systems' • Area-based, starting point is the environment, aims to sustainably combine agriculture, forestry and other competing uses of land • Scale is determined by the social-ecological system, management is adaptive, includes stakeholders who are affected by and interested in the initiative • Key activities: participatory GIS, resilience assessment, multiple resource assessment and management, participatory monitoring, identification of common concerns, capacity building
<p>Value chain approach (Kolavalli et al., 2015; Hawkes & Ruel, 2011; Microlinks, nd)</p>	<ul style="list-style-type: none"> • Engages with food and nutrition security through supply chains connecting food producers to food consumers, including processors and distributors within their environmental, social and economic systems • Product- or service-based, starting point is the economy, aims to improve food and nutrition security through increased income and food production for smallholders or SMEs • Scale is determined by the market, always aims at scaling up or out, management of value chains is multilateral with the private sector as driver of collaboration and coordination • Key activities: end-market analysis, comparative chain analysis, participatory value chain design
<p>Territorial approach (Cleary, 2003; Janvry & Sadoulet, 2007; Cistulli et al., 2014)</p>	<ul style="list-style-type: none"> • Emphasizes poverty, inequality, food security and nutrition from the assumption that not only urban, but all regions, have development potential • Area-based, starting point is the economy, aims to capitalize on the strengths inherent in a territory so that locally-based products and services drive development • Scale is determined by the social and economic makeup of a given territory, management is inclusive and starts at the grass-root level to evolve into multi-level governance network • Key activities: territorial analysis, livelihood analysis, negotiation, consensus building, conflict resolution, consultation

Although the different integrated approaches cannot be entirely differentiated from each other, some general characteristics allow us to separate them from one-dimensional approaches to food and nutrition security projects. These were captured in the core and open definition used in the background study. Namely: integration implies the coordination of efforts across different areas of work (e.g. agriculture, water management, nutrition education, etc.) and interests (e.g. increasing production, reducing poverty, managing natural resources, etc.), with the aim to increase the effectiveness and, thereby, the sustainability of the impact of projects aiming to achieve food and nutrition security.

Applying integrated approaches

So what does it mean when a project applies an integrated approach? To understand integrated approaches it is important to recognize that applying them does not mean applying cookie-cutter solutions. An approach suggests ways to engage with a context based on its principles, rather than dictate a project plan. Moreover, the choice of an approach always follows the identification of a problem, in this case food and nutrition security, linked to a certain area, community or population group. This delimits the possible and necessary actions to some degree. Projects are then developed using methodological tools – which should be seen as proven strategies that help guide analysis, planning, management or other aspects of a project. There are many variations and, in this sense, integrated projects are not that different from one-dimensional projects.

To illustrate, the Integrated Food Security Programme (IFSP) in Malawi (see Box 2) started with a feasibility study, followed by a baseline study, after which the project initially took place in six villages. The project applied community participation tools and the threefold concept of food security to guide its (area-based) planning and implementation. One of its important guiding principles consistency with established food security policies (Webb, 2011). Integration consisted of combining projects in several sectors, as defined by the concept of food security at the time. It did not need to apply an approach with a name (i.e. territorial or landscape) to be considered integrated. The Sahel Integrated Lowland Ecosystem Management Project (SILEM) in Burkina Faso, on the other hand, adopted an ecosystem approach and chose participatory land use planning as a tool to combine its environmental objectives with local livelihood concerns (World Bank, 2011).

Box 2: Two integrated projects

Project	Description and outcomes
GTZ Integrated Food Security Programme, Malawi 1997–2004 (Webb, 2011)	<ul style="list-style-type: none"> • The IFSP was a multi-sector intervention spread over 185 villages, covering about 40,000 households. • The project was designed based on three aspects of food security, namely, availability, accessibility and utilization, and included a focus on community participation and institutional capacity building. • Interventions were planned over multiple sectors, which included health services, clean water delivery,

	<p>family planning, income generation, and enhanced food preparation.</p> <ul style="list-style-type: none"> • Successes reported were: positive changes in food security (measured by outcomes across multiple sectors), changed thinking and behaviours at the community level (which persisted a decade later), and new approaches to tackling food insecurity adopted by the public sector locally and nationally.
<p>Sahel Integrated Lowland Ecosystem Management Project, Burkina Faso 2004–2010 (Apel, 2011; World Bank, 2011; GEF, 2014).</p>	<ul style="list-style-type: none"> • SILEM adopted an ecosystem approach to mainstream environmental concerns into the poverty agenda, it covered 302 communes across the country. • Its approach was based mainly on participatory land use planning to address livelihood needs and priorities at the village level. • SILEM targeted watersheds and combated land degradation to manage land, water and forest resources with local communities of farmers and herders through the creation of Village Watershed Management Committees. Additionally, 3,000 micro projects aimed at: land protection and the restoration or conservation of water and soil, reforestation and forest resource management, the improvement of livestock production, the promotion of plant production, support for fishing, and research activities. • The Ministry of Agriculture reported that the project contributed to the productivity of natural resources, increasing agriculture revenues and restoring degraded land and biodiversity.

In a practical sense, the tools used structure what integrated approaches do. Accordingly, various documents describing approaches suggest tools for their planning, implementation and management, outlining multiple options compatible with their principles. The value chain approach, for instance, borrows many analytical tools from the private sector (FAO, 2014; Webber & Labaste, 2010; Microlinks, nd). While guidebooks for territorial analysis (linked to the territorial approach) mainly focus on combining analysis with participatory negotiation processes (Cleary, 2003; Sarmiento et al., 2008; Sisto & Groppo, 2012; Hatcher, 2009; Lundy et al., 2005). The majority of suggested tools are not specific to an approach, however, nor are they specifically meant to be used in integrated projects. Tools listed for the ecosystem approach count in the hundreds, and most are commonly used in all types of interventions (CBD, 2004).

Tools specifically useful for integrated projects

Yet some tools are particularly relevant to the needs of integrated interventions. The Integrated Food Security Phase Classification, for instance, provides standardized ways to map the food system (IPC, 2012). Apart from tools for integrated or (food) systems

analysis, this includes those tools that can help manage an intervention in the face of unpredictable interactions between different elements within a changing context, including the effects of interactions between multiple objectives and working methods of partners, or interactions between scales – commonly called bottlenecks in the background study.

Among the tools identified in the study was adaptive management, described by Walters and Holling (1990) as “learning by doing and adapting based on what is learnt”. Adaptive management takes into account what is uncertain and what is known about the processes that influence an intervention over time, as well as how an intervention influences its environment. Figure 1 illustrates this process. The objective of such a management strategy is to reduce uncertainty and, therefore, improve management by understanding the effects of management itself (Williams & Brown, 2012).

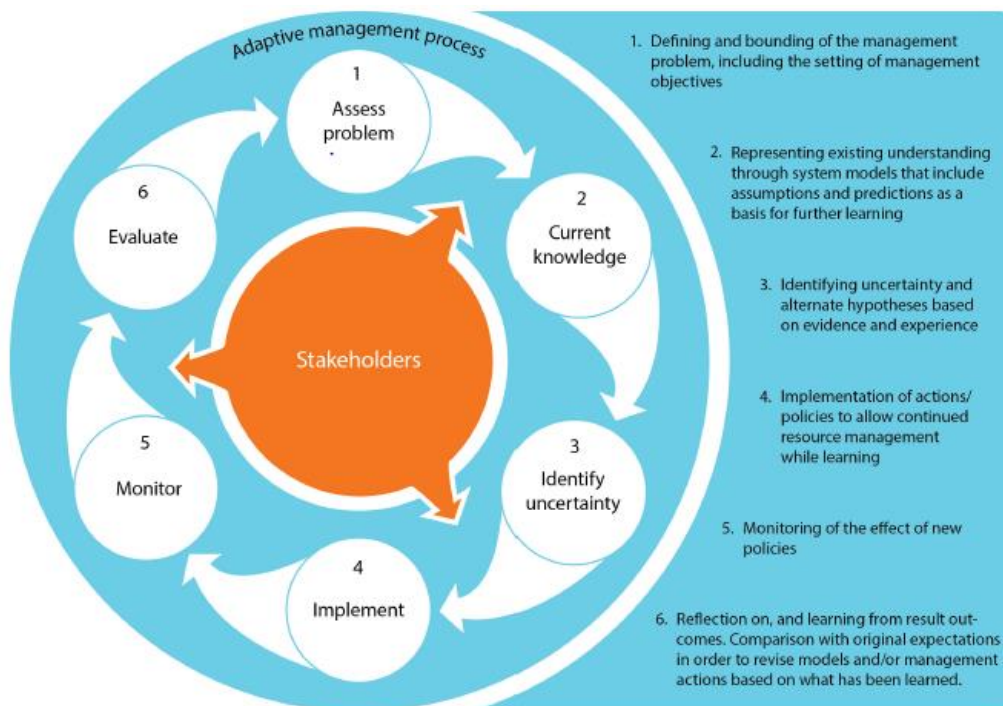


Figure 1. The adaptive management process

Source: Rist et al., 2013

Social learning and action research are two other frequently named methods based on a similar logic. Social learning encourages various groups involved in an intervention to learn from each other, so that policy can reflect a range of different viewpoints (Stringer et al., 2006), while action research combines research and development to better understand problems and thereby find better solutions. This involves dealing with different interests, looking for synergies and trade-offs, and reflecting on progress with partners (Frost et al., 2006). Another, less-known tool based on this logic is problem-driven iterative adaptation (PDIA), which provides a systematic way of working towards uncertain outcomes through feedback mechanisms designed to facilitate effective reform processes (Andrews et al., 2012).

Lastly, theory of change is particularly useful for unifying the abovementioned principles of critical reflection and adaptive management into a systematic approach to project planning and implementation (cf. Brouwers, 2013). Applying it stimulates organizations to make explicit how they expect to achieve change and how they view sustainability in this context. Valters (2015) outlines four key principles as guidance, saying that it should: focus on process, prioritize learning and interim adjustment, be locally led, and be viewed as a compass rather than a roadmap. Tools such as these allow practitioners to deal with some of the uncertainties that come from the integration of objectives between sectors and of methods between disciplines. Moreover, they provide possibilities for integration among stakeholders on different scales ranging from small-scale farmers to NGOs, businesses and governance actors.

What factors contribute to the success (or failure) of integrated projects?

In its investigation of bottlenecks and the advantages and disadvantages of applying integrated approaches, the background study showed that integrated projects face many of the same problems – and have many of the same requirements – as one-dimensional projects, while other problems are more specific to integrated projects. Because integrated approaches are meant to be applied to complex challenges, this means their implementation is also complex. In this regard, scale matters, as increased intervention scale implies increased complexity as well as uncertainty. In general, the study found that the specific value of integrated approaches in bringing together expertise, skills and resources from different organizations and disciplines implies that, compared to one-dimensional projects, integrated projects often require more time and have a higher cost, while their increased complexity also results in an increased risk of failure (see Box 3).

Box 3: Collaboration for a sustainable palm oil standard

Johan Verburg, senior advisor at Oxfam Novib, was interviewed on the Roundtable on Sustainable Palm Oil, a multi-stakeholder initiative involving smallholders, communities, multinationals, governments and investors. According to Verburg, solving complex problems related to social-ecological systems requires an integrated approach involving multiple stakeholders to reach sustainability. However, in his experience, collaboration between NGOs focusing on integrating different dimensions of sustainability is a challenge. To manage such complexity, he says, it is important, firstly, that a theory of change is well defined, so that the impacts that the project intends to achieve are clearly understood, as well as the organization's role in shaping this impact. Secondly, in order to achieve systemic change, a project should engage and be complementary with other interventions to help the government build institutions. Thirdly, flexibility and a learning by doing attitude among the stakeholders involved in a project can ensure effective collaboration between organizations.

Analysis of the bottlenecks experienced when implementing integrated projects revealed three groups of factors that are crucial for their successful implementation: proper project planning and implementation, an enabling environment, and the right set of skills.

Proper project planning and implementation

First of all, proper project planning is the cornerstone of any successful project – and is especially important for integrated projects that rely on a greater number of interlinked elements. Good planning includes context analysis to guide implementation, preferably done jointly with the involved stakeholders while accounting for their relative power. This should include the formulation of a theory of change that outlines the assumptions and reasoning behind the chosen strategy (including how sustainability is viewed in light of the integrated objectives). Furthermore, ensuring flexibility by implementing adaptive project management is very important for integrated interventions when it is not sure how different elements and objectives will interact. One respondent wrote, for instance, that: “It was difficult to equally address productivity and nutrition diversity in our project. Farmers sometimes opt for cash crops instead of crops that provide nutrition diversity.” In practice this means making sure that a project responds to additional stakeholder input and a changing context during implementation. This should then feed back into a repeated cycle of refined theory of change formulations.

An enabling environment

Secondly, the effectiveness of integrated projects depends on an environment that is conducive to their specific needs. Research shows that this means an environment in which institutions are strong and where plenty of knowledge and the ability to enforce agreements exists (Sayer et al., 2008). More specifically, it refers to an environment in which there are appropriate supportive policies, institutions, and governance, appropriate and available financing, and the capacity to evaluate if project objectives have been reached (Minang et al., 2015). Bottlenecks in the background study showed that projects faced a lack of high-level support, a lack of understanding and will among decision makers, and conflicting policies and overlapping organizational mandates. Establishing integrated policy and funding instruments is especially important in this regard, as the study showed that sector-specific resource flows created difficulties for cross-sectoral projects. In addition, integrated projects often need to address parallel institutional challenges to be sustainable, meaning that projects should determine in advance whether or not influencing the institutional environment should be pursued next to (or as part of) the project.

The right set of skills

Finally, a specific skill set is required for organizations engaging in integrated work. Stakeholder collaboration and management is an important part of integration, which involves negotiating roles and budgets, adopting similar working methods, managing expectations and reaching consensus among partners – especially in relation to setting priorities among organizational objectives that might compete with each other. The ability to broker agreements, build relationships and resolve conflicts are core competencies for this type of strategic management capacity. Moreover, due to the complexity and interrelation of objectives, multidisciplinary and multi-sectoral expertise is needed to translate sensible forms of integration into a concrete plan of action. The study showed that for many respondents a lack of this capacity, as well as such top-notch coordination, affected the effectiveness of their projects.

Recommendations

Based on the abovementioned factors, some clear recommendations can be drawn to make the application of integrated approaches a success. In general terms, what goes for regular, one-dimensional projects also goes for integrated interventions. However, their complexity makes them more vulnerable to common issues. The following recommendations address how to advance the successful implementation of integrated interventions:

- More research should be conducted on how different sectoral objectives can be integrated and what tools and methodologies are specifically useful for integrated projects. Interaction between academics and practitioners should be stimulated towards this end.
- Integrated projects should develop a clear theory of change that includes stakeholders, outlines how integrated objectives are related, why integration is preferable to a one-dimensional approach, and what is meant by sustainability.
- Integrated projects should practice adaptive management in order to adjust objectives according to progress and stakeholder input, while being careful to monitor their effects.
- Organizations engaging in integrated projects should invest in appropriate strategic and technical capacity, including skills to broker agreements, build relationships, and resolve conflicts and engage relevant multidisciplinary expertise.
- Funders and policymakers should develop multi-sectoral, integrated policy and funding mechanisms. Appropriate evaluation mechanisms that capture the effects of synergies and scattered projects should be developed as well. Moreover, funders and policymakers should leave room for adaptive project management.

Points for discussion

There is much that can still be studied about integrated approaches and their implementation. The background study should be seen as only an initial investigation into the topic. Some pertinent questions still to be addressed, including:

- What tools are specifically useful for integrating objectives and integrated projects in general, for instance, to deal with apparent conflicting interests, or to generate innovative technical, organizational and institutional solutions?
- How do integrated projects deal with different scales, e.g. include political and international voices? How do these projects include local voices and local perspectives? How do integrated projects remain feasible and accessible for policymakers, practitioners, and businesses?
- How effective are these projects in achieving systemic change? What synergies are achieved by integrated projects?

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