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COMMITTEE ON FISHERIES

SUB-COMMITTEE ON AQUACULTURE

Ninth Session

Rome, 24–27 October 2017

AQUACULTURE AND BLUE GROWTH DEVELOPMENT OPPORTUNITIES IN SMALL ISLAND DEVELOPING STATES (SIDS) 23 OCTOBER 2017

Executive Summary

This seminar will be held the day before the 2017 COFI Sub-Committee on Aquaculture (Rome, Italy, 24–27 October 2017), which agenda includes an item on *Aquaculture in the Small Island Developing States (SIDS): Blue Growth Opportunities for SIDS in a changing climate*. The Blue Economy has been recognized as a means to enable SIDS to benefit fully from the sustainable development of their aquatic resources as well as to meet the objectives laid down by SDG 14.7¹. The aim of this seminar is thus to discuss how aquaculture can contribute to appropriately addressing challenges faced by SIDS by seizing the opportunities of Blue Growth. It is part of the platform conveyed by The High Level Panel on the Work of FAO with Small Island Developing States (SIDS), held on 6 June 2015 during the 39th Session of the FAO Conference, in which views on possible approaches, options and actions to promote food security and nutrition whilst also addressing climate change and environmental threats in SIDS were presented and exchanged.

¹ World Bank and United Nations Department of Economic and Social Affairs. 2017. The Potential of the Blue Economy: Increasing Long-term Benefits of the Sustainable Use of Marine Resources for Small Island Developing States and Coastal Least Developed Countries. World Bank, Washington DC.

https://sustainabledevelopment.un.org/content/documents/15434Blue_EconomyJun1.pdf

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Background

The Small Island Developing States (SIDS) are a distinct group of developing countries located in the Caribbean, the Pacific, and the AIMS (Atlantic, Indian, Mediterranean and South China Sea), that share unique and particular vulnerabilities or development needs. Food security and nutrition are priority concerns, whereas the importance of natural resources management, climate change adaptation and disaster risk reduction have been highlighted as being additional critical challenges for them to achieve their sustainable development goals.

Many activities have been implemented by FAO in the SIDS. In particular, a Global Action Programme on Food Security and Nutrition in Small Island Developing States (GAP) has been set-up to recommend actions at local, national, regional, and global levels to achieve three interconnected and mutually-reinforcing objectives: 1) Enabling environments for food security and nutrition; 2) Sustainable, resilient, and nutrition-sensitive food systems; and 3) Empowered people and communities for improved food security and nutrition. The GAP's structure is intended to facilitate and guide a comprehensive, multi-sectoral approach to achieving food security and improved nutrition in SIDS².

The large marine environment and Exclusive Economic Zone (EEZ) of SIDS provide a strong potential for development and economic growth, in particular for aquaculture and food systems, and for empowerment of local communities and stakeholders through the creation of new market opportunities. In 2015, the total aquaculture production of SIDS was 71 893 tonnes with total estimated farm gate value of USD125.1 million, including 50 126 tonnes of aquatic animals (USD123.8 million) and 21 857 tonnes of seaweeds (USD1.3 million). However, the national aquaculture production capacity varies greatly among SIDS countries, ranging from less than 1 tonne (such as Nauru and Marshall Islands) to around 30,000 tonnes (Cuba). In 2015, only six SIDS produced more than 1 000 tonnes of farmed aquatic animals, five of them between 100–1000 tonnes and the rest below 100 tonnes. Farmed freshwater fishes also play a major role in some States with abundant inland water resources, like Cuba and Jamaica, where respectively a range of carp species and tilapia are produced successfully at commercial scale.

The average seafood consumption in SIDS is 12.4 kg/capita/year, with figures ranging up to 185 kg/capita/year in Maldives. As a result, many aquaculture initiatives have been launched, and both success stories and failures have been reported in SIDS. Reasons for failures include lack of scaling-up of the research/pilote-scale initiatives, market and commercial considerations, availability and cost of inputs, transportation costs, limited resources, risks and uncertainties and the competition with imported products. Both public and private investments are required for the sector to develop in a viable manner. Governments need to create the enabling aquaculture policy and legal frameworks that would encourage the private sector to invest with fewer uncertainties. Applied research, pilot demonstration sites, capacity building and extension services, technology transfer, sharing of best-practices information and success stories are needed as well. Stakeholders should also have access to reliable data on local profitability of aquaculture, including on opportunity costs and on the reliable availability of production factors/inputs to both small-to-medium scale farmers as well as to larger private investors/operators, so that a reliable investment risk assessment can be conducted.

Collective action and pooled resources among the SIDS is one option to overcome the challenges to aquaculture development, specifically the limited technical expertise, infrastructure, and capital investment. Many forms of collaboration are available as options, including intergovernmental networks, the establishment of regional facilities, co-management of aquatic genetic resources, capacity building of stakeholders in the wider SIDS community, and joint research activities, among others.

² www.fao.org/documents/card/en/c/43502426-7359-4894-b299-96bb09f76976/

South-South Cooperation is another way of facilitating technology transfer to benefit aquaculture in SIDS, as highlighted by the 4th ACP Fisheries and Aquaculture Ministerial meeting held in July 2015.

The FAO Blue Growth Initiative (BGI) is a flagship initiative that aims at supporting more productive, responsible and sustainable fisheries and aquaculture sectors by improving the governance and management of the aquatic ecosystems, conserving biodiversity and habitats, and empowering communities. It is an opportunity to enable SIDS to benefit fully from the sustainable development of their aquatic resources as well as to meet the objectives laid down by SDG 14.7. It is implemented during three broad phases: 1/the enablement of changes towards a Blue Growth, 2/the learning from the transformations occurring, and 3/the mainstreaming into policies and action plans. It considers three interlinked platforms of organizational change: the Blue Communities, the Blue Production (of which aquaculture is part) and the Blue Trade. It is already implemented in some SIDS like Cabo Verde whereas a specific strategy is currently being prepared at the interregional SIDS level.

Objectives

The purpose of this seminar is 1) to review the various challenges SIDS face in developing a sustainable aquaculture sector in the face of climate change at the different stages of the Blue Growth process (enablement, learning, mainstreaming); 2) to share the positive and negative experiences in addressing these challenges and classify; 3) to identify priorities; and 4) to discuss the way forward, especially to formulate recommendations with regards to the enabling conditions, processes to undertake and actions needed to address the challenges through a Blue Growth approach, especially with regard to efficient resource use, energy efficiencies, decent work and innovations. The Seminar takes a holistic perspective, in line with the FAO's Initiatives for SIDS and Strategic Programmes, particularly those regarding food insecurity and malnutrition (SP1), a more productive and sustainable agriculture (SP2), rural poverty alleviation (SP3), food systems (SP4) and increased resilience (SP5).

Participants

The participants will be SIDS participants with technical background and resources persons from FAO or other institutions involved in the SIDS. Participants are expected from AIMS³, Caribbean and Pacific. Other institutions with an interest such as financial institutions, higher education, aquaculture professional associations or research etc. will also be invited to participate in the seminar. SIDS participants will be sent this concept note beforehand and requested to start gathering information and data on their national situation.

Workshop structure

The workshop will take place on the 23rd of October 2017, from 9:00 to 17:00, in FAO Headquarters in Rome, Italy. The meeting room (Malaysia room) is capable of hosting 50 persons and allows for group work. The meeting will be conducted in English and French and simultaneous interpretation into French and English will be provided. Following an introductory presentation of the seminar, two sessions will be organized in the morning and in the afternoon.

³ Atlantic, Indian Ocean, Mediterranean and South China Sea (AIMS).

Session 1: Developing a shared vision of the challenges SIDS face in developing a sustainable aquaculture in order to identify aquaculture objectives

The first session will be divided into three steps. The first one will focus on updating participants with data and knowledge on the various challenges faced by SIDS at the regional levels so that they can fully participate in the subsequent steps. These will include regional reviews on specific challenges faced by the Caribbean, Pacific and AIMS regions.

Assuming that technical solutions and policies based on simple theoretical models and resulting in one-size-fits-all interventions are not what is currently needed to ensure a sustainable development of aquaculture and blue growth in SIDS, several homogeneous groups (depending on the number of SIDS participant, 3 to 4 persons per group) will be formed during the second step to try to cope with the diversity of the small island developing states. The group composition will be discussed with participants beforehand and will be handled with flexibility.

Each group will be requested to share their experiences and vision in order to develop a shared strategy aimed at coping and making use of the various challenges and opportunities SIDS face in developing a sustainable aquaculture sector. Collaborative tools will be used in support to brainstorming of the group. More specifically, they will be asked to answer the following questions, upon the situation in their own country, by using paper boards, papers, pencils, post-it or equivalent:

- Relevant past and current aquaculture experiences
 - Species, environment, scale of production, technologies, investors, market, etc.
 - Stage of experience: enablement, learning, or mainstreaming
 - Results: Success/Failure
 - Lessons learned and achievements to build upon
 - National Aquaculture Development Plans and Strategies
- Current challenges
 - Activities currently foreseen in relation to aquaculture development
 - External drivers
 - Does climate change create new constraint (or opportunities?) for aquaculture?
 - Which are the other likely sectors that Blue Growth might consider as priorities⁴ and how do they create new opportunities and constraints for aquaculture?
 - Are there other external drivers that determine how aquaculture can develop?
 - Which characteristics support aquaculture development strategies?
 - Production factors: Cost and availability of feeds, seeds, energy, equipment, technologies, transport, land/water availability, etc.
 - Natural environment: conflicts of use, water, diseases, carbon footprint, ecosystem services, efficiency in resource use, biodiversity, biosecurity
 - Human/Economic environment: Private sector, investors, business, education, employment, communities etc.
 - Markets and value chains: Which are the safe and risky markets for aquaculture products (domestic, export, niche etc.)? Who are the competitors? Who are the clients? What is the trend of the market (volume, price volatility etc.)?
 - Institutions: extension, bank and finance, education, research, official control etc.
 - South-South Cooperation/Inter-island and Inter-Regional cooperation
 - Which characteristics impair or drive aquaculture development strategies?
 - Same as previous bullet points

⁴ e.g. other types of aquaculture competing for space or resources, fishery, coastal protection, tourism, carbon sequestration, transport and trade, waste, energy, early warning systems, safety at sea.

- Which are the positive and negative foreseeable impacts of aquaculture development?

Finally, the groups will be expected to produce a comprehensive vision, by sketching a comprehensive diagram synthesizing the results and discussion (Fig. 1). This diagram will be developed throughout the previous exercises, and revised at the end.

The last step of the session will be a plenary aimed at sharing and discussing the different groups' outcomes. Special attention will be put at the diversity of SIDS, to highlight areas that need to be tackled globally or regionally through Inter-Regional or South-South cooperation, and those that can only be dealt at a National level. Based on the general discussion, a synthetic shared vision will be developed by the organizers and shared with the participants at the beginning of the second session.

Session 2: Strategic Discussion on the Way Forward within the framework of FAO Blue Growth Initiative

The second session will be organized in two steps: group work, and final discussion. The objective is to define the way forward for aquaculture to develop within the framework of Blue Growth. The session outcomes will start with a review of FAO's Blue Growth Initiative and the opportunities it creates for SIDS. The Ecosystem Approach to Aquaculture and spatial planning will also be presented, as well as several value chain relevant to SIDS and aquaponics.

During the second step, the groups will be asked to answer the following questions:

- Which are the enabling conditions for aquaculture to develop in the context described by the morning session?
 - Technology & Finance
 - Knowledge capacity and development
 - Public-Private Partnerships
 - Policy & legal frameworks
 - Others
- Which are the steps to be implemented?

The methodology will be brainstorming and each proposed priority will be considered against the shared vision developed during session 1.

During the final step, the outcome from each group will be presented in plenary and discussed. A final list of recommendations will be formulated.

Tentative agenda

9:00–9:15	Welcoming remarks and General introduction to the seminar
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Session 1: Developing a shared vision of the challenges SIDS face in developing a sustainable aquaculture and experiences in addressing these challenges

9:15–10:00	<ul style="list-style-type: none"> • <i>Challenges faced by AIMS SIDS and aquaculture experiences (15 minutes)</i> • <i>Challenges faced by Caribbean SIDS and aquaculture experiences (15 minutes)</i> • <i>Challenges faced by Pacific SIDS and aquaculture experiences (15 minutes)</i>
10:00–11:00	<ul style="list-style-type: none"> • <i>Presentations by resource persons</i> • <i>Blue Growth and funding opportunities</i> • <i>Ecosystem Approach to Aquaculture and Spatial planning</i> • <i>Fish value chain</i> • <i>Seaweed value chain</i> • <i>Aquaponics in the Caribbean</i>
11:00–12:30	<p>Group work</p> <ul style="list-style-type: none"> • <i>Which are the lessons learned from past experiences? (15 minutes)</i> • <i>Which are the opportunities for aquaculture development? (30 minutes)</i> • <i>Which are/have been the constraints to its development? (30 minutes)</i> • <i>Which are the foreseen priorities ranked by importance? (15 minutes)</i> • <i>(Which are the foreseen impacts of the identified priorities that may require a precautionary approach?) -optional</i>

Session 2: Strategic Discussion on the Way Forward within the framework of the FAO Blue Growth Initiative

14:00–14:45	Outcomes presentation, discussion, conclusion of session 1
14:45–16:15	<p>Group work: for each of the top 3 priorities identified during the morning session, and by making use of opportunities available at National, Regional and Global levels:</p> <ul style="list-style-type: none"> • <i>Which scenario would allow aquaculture to develop? (Open discussion, 10 minutes)?</i> • <i>Which are the enabling conditions and needs? (10 minutes)</i> • <i>Which are the steps to be implemented? (10 minutes)</i>
16:15–17:00	Outcomes presentation, discussion, conclusion of session 2

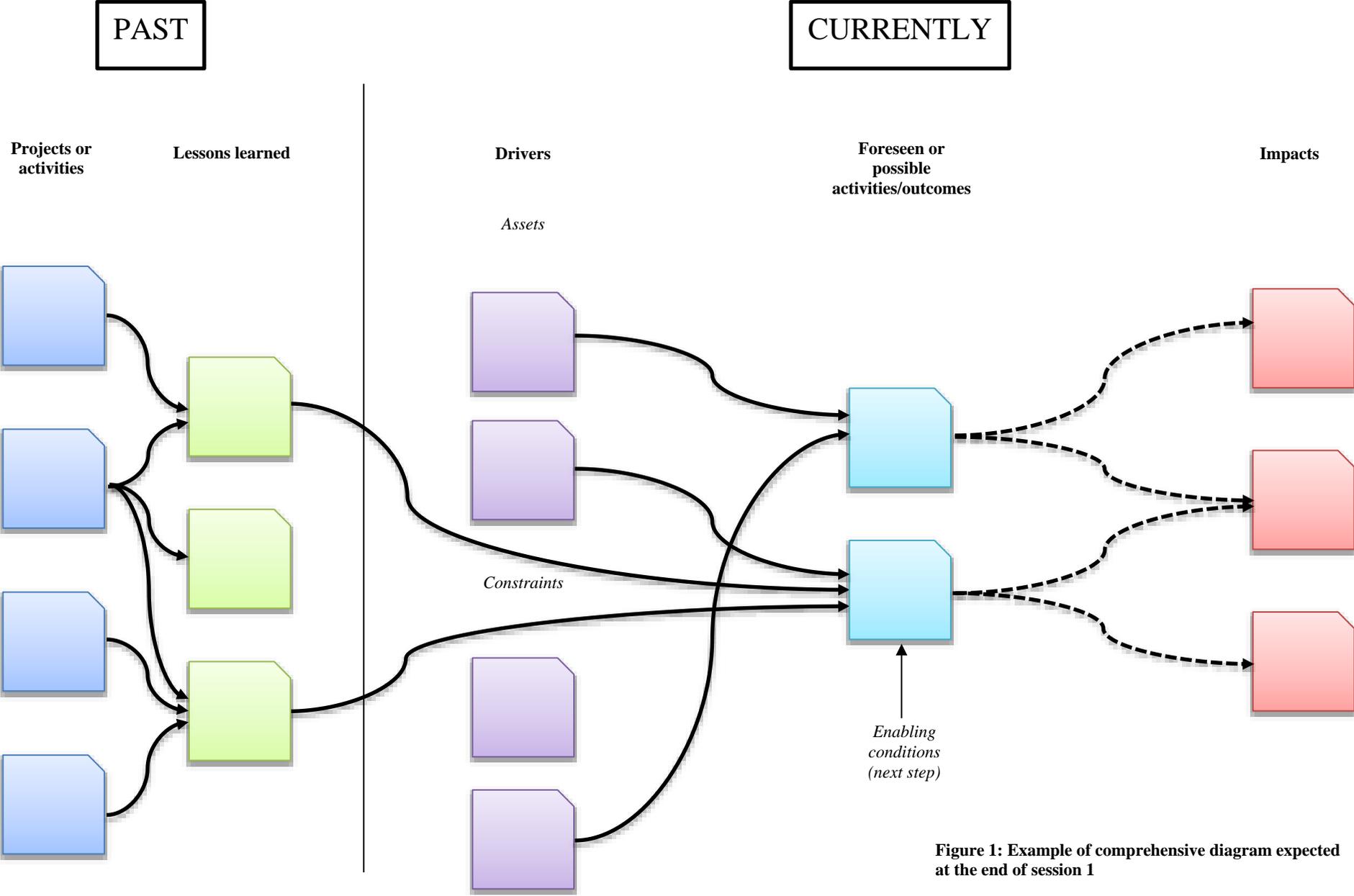


Figure 1: Example of comprehensive diagram expected at the end of session 1

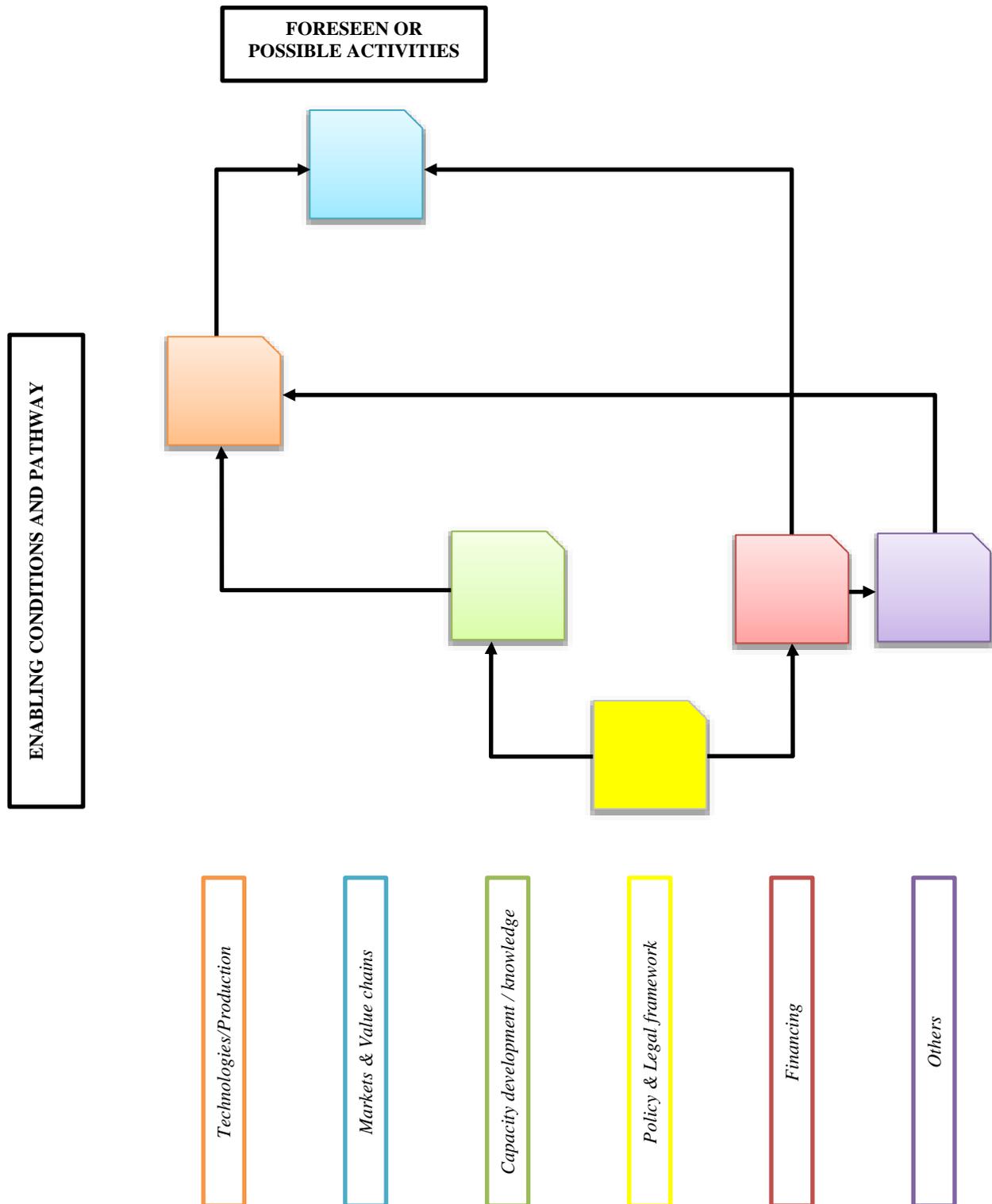


Figure 2: Example of diagram expected at the end of session 2