Food Value Chain Consultations

Consultative workshop on sustainable food value chain focusing on agricultural inputs, primary production & traders
15th April 2021

WORKSHOP REPORT

Attendees:
Full list of attendees is available in the end of the report

Workshop objectives:

- Introduce the value-chain approach as adopted by the One Planet-International Resources Panel Task Group.
- Provide key findings of the analysis of the food value chain with the focus on agricultural inputs, primary production & traders.
- Understand the role of the agricultural inputs, primary production and traders in the food value chain and its dependencies on other stages.
- Understand what initiatives/solutions currently exist at this stage of the food value chain to:
  - define the opportunities for their scale-up and replication;
  - identify gaps and challenges to be addressed;
  - identify actions needed by stakeholders at other stages of the food value chain to improve resource efficiency at primary production.

Full presentation of the meeting is available here

MAIN MESSAGES

- The application of the ‘Value-Chain Approach’ to analyse the food sector showed that the middle stages of the food value chain -- controlled by food companies across processing and packaging, retail and food services -- are structurally powerful and have a disproportionate influence across both primary production and final consumption. Actors at these stages have a huge impact on the activities at either end in determining both what food farmers sell and what food consumers buy.
- More specifically, in relation to agricultural inputs, primary production & traders stages:
  - There is a high degree of consolidation in the agricultural input industry, with a small number of companies controlling inputs on which farmers depend.
  - Farmers and fishers are fragmented and find themselves in a weak position where they are compelled to accept the prices, standards and contract terms offered to them by food companies, with limited capacity to negotiate. Many farmers in traditional food systems suffer from a lack of physical and institutional infrastructure to improve productivity and profitability.
  - Traders, an important player in the food value chain, are the closest link to farmers. Depending on the commodity agricultural traders can be either highly consolidated (e.g.
grain) or fragmented (e.g. palm oil). Big import/export companies are increasingly involved in other stages of the food value chain including production, processing & distribution.

- The importance of traders in the food value chain was highlighted by the additional research on the middle stages of the food value chain undertaken by 3Keel in collaboration with WWF. Transport was acknowledged as an important transversal sector. The diagram of the food value chain is amended as follows:

1. Effective mechanisms for participatory and inclusive processes for policy development need to be rethought and established. They should be based on the real needs and realities of the stakeholders, especially farmers, to manage tradeoffs. These can be elaborated at local and regional levels to define the vision supported by concrete outcomes.
2. Access to markets and finance remains a big challenge for smallholder farmers. There is a need to build the connection between the farming and the investment community to ensure their alignment when it comes to the requirements and the reality of making the production systems sustainable.
3. Public procurement, as a strong enabler of sustainable farming practices, should be leveraged. Potential is identified within school feeding programmes that procure food from agroecological farm, improving nutrition, educating and raising awareness, and contributing to the reduction of resource use and environmental impact of the primary production.
4. Certifications, connecting production and consumption stages, present an opportunity for systems change. Certifications should be streamlined and measures to reduce their costs adopted.

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**SETTING THE SCENE**

1 This diagram provides a simplified overview of all the stages of a food value chain. However it should be noted that food value chains exist within each country and region of the world and are diverse in their composition and functioning based on whether the local food system is traditional or modern, or ‘intermediate’—which is a mix of the two and makes up the majority of food systems. For the purpose of the analysis, a level of generalisation has been necessary.
o Strengthening the science-policy interface by adopting the value-chain approach is one of the key elements in strengthening multilateral cooperation on Sustainable Consumption and Production (SCP).
o As part of this process, the One Planet network has planned a series of multi-stakeholder consultations to take place in 2021, focused on high-impact sectors of food, construction and plastics.
o These consultations build on the findings of the One Planet-International Resources Panel Task Group on catalysing science-policy action on SCP, presented in this report “Catalysing Science-Based Policy Action on Sustainable Consumption and Production: The Value-Chain Approach and its Application to Food, Construction and Textiles”.
o This is the first consultations series that is focusing on the food sector and dedicated to “Innovative business and policy solutions” along the food value chain. It consists of 5 workshops focusing on the prioritized stages of the food value chain.
o The outcome document of these workshops developed jointly with the participants will be the basis for the collaborative development of the common agenda for action in the food sector.
o The work on the value chain approach in high-impact sectors will inform further discussions on a post-2022 strategy on sustainable consumption and production lead by the Member States.

**Value-chain approach and its application to the food sector**

o The One Planet-International Resources Panel Task Group on catalysing science-policy action on SCP has been established at the request the Member States at the 4th United Nations Environment Assembly.
o The Task Group aimed to catalyse science-based policy action on SCP, thereby providing actionable insights on the management of natural resources in relation to the 2030 Agenda for Sustainable Development. To achieve this, the task group took a sectoral focus and applied the ‘Value-Chain Approach’.
o The ‘Value-Chain Approach’, as developed by the Task Group, is a methodology for catalysing science-based policy action on sustainable consumption and production which identifies key points of intervention within economic systems to reduce natural-resource use and environmental impacts through a common agenda for action.
o By applying a systems lens, the socio-economic drivers and barriers that influence value chain operations of different sectors are identified, taking into account the complex feedback loops influencing the operations and behaviours of actors along the value chain. This approach shows that the key points of intervention are often not the same as where natural resource use and environmental impacts take place, making systems analysis essential.
o The ‘Value-Chain Approach’ identifies where the greatest opportunities for a shift to sustainable consumption and production exist, shapes corresponding actions by building on current knowledge and available data and engages the relevant actors.
o The Approach consists of three main steps:
The Task Group has applied various steps of the ‘Value-Chain Approach’ to three high-impact sectors: food, construction and textiles.

When it comes to the sector of food, application of Step 1 has demonstrated that: “while the majority of natural resource use is taking place at the primary production stage, a systems lens that considers drivers of food systems shows us that primary producers have a limited ability to shape food systems and change their production practices. Analysis shows that the middle of the value chain, controlled by food companies across processing and packaging, retail and food services, is structurally powerful and has a disproportionate influence across both primary production and final consumption. While these stages of the value chain don’t use the most resources themselves, they have a huge impact on the activities at either end in determining both what food farmers sell and what food consumers buy”.

More specifically, in relation to the Agricultural Inputs, Primary Production and Traders stages of the food value chain, the analysis has demonstrated the following:

**Agricultural inputs: privatisation and intensification**

- Inputs sold to farmers include fertilisers, pesticides, seeds and animal feed + energy to power irrigation, machinery and vehicles.
- Consolidation and control (USA & Europe): high degree of consolidation in agricultural input industry, small number of very profitable companies (mostly from Europe & USA) controlling agricultural inputs on which farmers depend. e.g. Bayer, Syngenta, Monsanto, Cargill, DuPoint, BASF.
- Privatisation of generic resources: in modern food systems, most seeds are obtained from private companies, meaning farmers must spend part of income on purchasing new seeds every year. In traditional food systems ‘informal’ seed sector is still important, based on traditional knowledge and maintaining, exchanging and selecting seed varieties.
- Prevalence of GM inputs varies: in USA, more than half total cropland planted using GM crops, and share of GM crops such as soy, maize and cotton is more than 90%. In EU, GM crops are hardly grown, due to differences in legislation and public acceptance.

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2 Full analysis available [here](#)
Farmers and fishers: fragmentation and weak position

- **One billion farmers:** globally, there are one billion farmers with around 450 million farms, the majority (85%) small-holder farmers with farms less than two hectares. The number of farmers is much smaller in developed countries, with just 20-24 million farmers across all OECD countries.

- **Low prices and shrinking profit:** farmer share of profit in the food dollar is consistently falling over recent decades. Low profit margins put farmers in precarious position, make them dependent on food companies they sell to, and leave little margin to invest in more sustainable practices.

- **Structurally weak position:** uneven power balance where farmers have few potential customers that they can sell to (due to consolidation), and therefore are in a weaker bargaining position. Farmers are compelled to accept the prices, standards and contract terms offered to them by food companies, with limited capacity to negotiate.

- **Lack of infrastructure and low productivity:** many farmers in traditional food systems suffer from a lack of infrastructure both physical and institutional to improve both productivity and profitability.

Traders: key connection and missing link

- **Consolidation or fragmentation:** agricultural traders amongst largest publicly listed companies in the world e.g. Cargill, ADM. Highly consolidated e.g., 90% of global grain market controlled by four companies. Traders in other food types much more fragmented e.g. palm oil.

- **Closest but indirect link to farmers:** closest link to producers, although often through local ‘middlemen.’ Often very large companies responsible for import and export of food commodities. Increasingly involved in other stages of the chain including production, processing and distribution.

- **Informal and short-term contracts:** lack of long-term relationships between traders and farmers as suppliers. Traders often source from tens of thousands of farmers and with a shifting supply of farmers each year. Traders buy from producers that can provide the volumes they need for the lowest cost and within the necessary timescales.

- **Challenge for tracing and accountability:** this makes it difficult to trace supply chains and for downstream actors to enforce sustainability measures upstream, while also reducing incentives for farmers to make their production process sustainable. Farmers can shift to another buyer with less stringent standards, suppliers can claim too hard to track.

The analysis of the food value chain identified three core challenges:

1) **How we produce food:** The majority of natural-resource use and environmental impacts takes place during production. Changing production practices is critical to using resources more efficiently and sustainably, while causing less damage to the environment.

2) **How much food we produce and consume:** One-third of all food produced is either lost at the production, transportation or processing stages, or wasted downstream in the food at the retail, food service and consumption stages.

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3 These conclusions come from the additional analysis of the middle stages of the food value chain undertaken by Keel and WWF.
3) What types of food we produce and consume: Different types of food can embody large differences in the natural resources used and environmental impacts caused along the stages of the value chain including production processing, transportation, and disposal.

- Initial application of Step 2 of the Approach was based on the reporting data of the One Planet network. The One Planet network activities related to food were mapped in relation to the stage of the value chain that they target. Most activities of the Network take place at primary production (23%) or individual consumption (19%) stages. The middle stages of the food value chain, including food processing and packaging, transport and logistics, retail and food service, represent only 25% of the total. A significant amount of these activities within this ‘middle part’ of the food value chain can be seen at the food service stage. This is driven by a large number of activities under the Sustainable Tourism programme to address food sustainability. Only 32% of activities consider the whole food value chain with a holistic focus, largely driven by the work of the Sustainable Food Systems programme.

**Policies targeting Inputs, Primary Production & Traders (based on 12.1.1 reporting data)**

- Concentration of policy measures at the two ends of value chain
- Nearly 60% of the measures proposed at either input/production phase or consumption phase.
- Input/production stages represent together 69 of the 191 measures identified across policies, which is more than a third (36%) of total.
- On production side, the majority of the regulatory measures focus on efficiency increases (e.g. reducing water use, decreasing emissions from livestock), or reducing use of harmful pesticides and increasing organic production.
- In the policies reported there is often explicit focus on smallholder farmers. Less clear if measures in policies are aimed at larger scale industrial agriculture.
- Nearly half at this stage (46%) are regulatory in nature, and typically center around the production, use and distribution of pesticides
- This consultation series on “Innovative Business and Policy Solutions” organized by the One Planet network continues the application of the ‘Value-Chain Approach’ developed by the Task Group. Understanding of the existing action along the food value chain will be broaden through the consultations and mapping of initiatives along the food value chain will be enriched to better reflect the existing global action and identify opportunities, gaps, challenges, interlinkages and trade-offs.
- This analysis will serve as the basis for the collaborative development of the common agenda for action for the food sector (Step 3 of the ‘Value-Chain Approach').
EXISTING ACTION AT AGRICULTURAL INPUTS, PRIMARY PRODUCTION & TRADERS STAGES OF THE FOOD VALUE CHAIN

The discussions of the workshop focused on existing initiatives/solutions at agricultural inputs, primary production & traders stages of the food value chain. Through the discussion a number of enablers, challenges & gaps that exist at these stages were identified.

Opportunities & enablers

- Addressing food loss and waste presents an opportunity in reducing resource use and environmental impact at primary production.
- Farmer organizations/cooperatives play an important role in strengthening the voice of farmers and their negotiating power.
- Place-based agroecology initiatives present an interesting opportunity as it gives the farmers access to the market and directly connects them with local restaurants and retail.
- Public procurement is a strong enabler of sustainable farming practices. More specifically through school feeding programmes that procure food from agroecological farms that has multiple benefits: improves nutrition, educates and raises awareness and contributes to reducing resource use and environmental impact of the primary production.
- School gardens is also a way to educate consumers from early age and create the understanding and demand for sustainably produced food. Engaging young generations in farming is conducive to better adoption of new technologies and practices.
- Access to finance is a key enabler. Microfinance programmes can facilitate financial inclusion of farmers and help them to transform and incorporate best practices. This also links to the need to educate the financial sector and bring the understanding of the farmers needs to be addressed through adequate financial offer.
- Peer-to-peer learning among farmers and farm to farm collaboration has shown to be effective when accessing finance and adopting sustainable practices.
- Adopting innovative farming techniques (such as micro-biome applications) may not be very profitable, but beneficial in terms of planetary health. Diverse tools and incentives need to be developed by the governments to support the farmers in adopting these innovative practices.

Challenges & Gaps

- Transportation within the food value chain presents a significant bottleneck as it comprises a broad variety of means to be considered, is quite consolidated in some countries, and is crucial in determining the distances the food can travel. More focus should be put on the sector.
- It is important to consider the balance of power between exporting and importing countries, where government usually tends to play a major role as an exporter of food commodities and private companies are the importer. Policy interventions should therefore vary depending on the context.
- Policy approaches need to be harmonized and discrepancies of policies adopted at different levels (national vs local) addressed.
- A lot of developing countries are a net exporter of food, especially unprocessed food, which comes from large monocultures managed by companies. These are different realities and challenges, and so is production for the domestic markets and external markets. In all cases, there are several intermediaries.
between producers and consumers, who do not always have interest in developing sustainable agriculture. Furthermore, they are the ones who keep most of the economic income in the value chain.

- Technology can bring producers closer to consumers and facilitate transparency and make sustainable practices more visible. A lot is asked at the production stage of the value chain, however in developing countries producers are the most vulnerable. It is essential that the rest of the value chain takes co-responsibility.

- Public and private standards are powerful tools but they require both public and private experts that can implement them. Qualified and knowledgeable extension services are crucial, especially to reach where governments and companies cannot. This means that public-private partnerships (including academia) are necessary.

- Provision of adequate extension services and access to sustainable agricultural input guaranteed through government policies is crucial.

- Sustainability certification costs fall as a burden on both the farmers and the end consumer. Mechanisms aimed to reduce certification costs should be adopted.

- Lack of training and access to sustainable technologies (including digitalization) makes it difficult for the primary producers to shift to sustainable practices. It is important not only to produce knowledge in a participatory way but also make it accessible to the farmers including access to financial support for its adaptation.

- Policy environment tends to put focus on agricultural inputs, mainly pesticides. There is however a lack of focus on financing and marketing especially when it comes to smallholder farmers. Policies and regulations should take into account the whole food system and interdependencies of its stages to avoid the potential trade-offs.

- Sustainability could be defined differently based on local conditions. This aspect needs to be taken into account by policy-makers and allow for sustainability criteria and goals to be adapted locally. Social aspects are crucial in this regard and should not be excluded.

- Consumer education and awareness remains a big gap that contributes to the challenge of resource use and environmental impact of the food value chain.

- The farmers are in a disadvantaged position being restricted by the contractual arrangements that do limit the diversity of agricultural input, and place restrictions of farm structures. There is a big challenge in diversifying crops from inputs to production all the way to consumption at different geographical scales. Therefore there is a strong need to break these binding structures and reach out to markets that are more lucrative for small producers.

- Opening the market and creating demand for native products that support biodiversity irrespectively of their visual esthetics is an important aspect and should be considered.

- Proper food storage especially in the case of small-holder farmers in developing countries is an issue and is a factor in addressing food loss and waste.

**LIST OF INITIATIVES SHARED AT THE WORKSHOP**

- [Regenerative Agriculture a Pathway to a Sustainable South Africa](#), WWF South Africa
- [Coffee & Climate Initiative](#)
- Report “Environmental and health impacts of pesticides and fertilizers and ways of minimizing them”, United Nations Environment Programme
- **Global Sustainable Seafood Initiative**
- Coffee Futures: Insights from the sustainable coffee knowledge base, Evidensia
- **Amazon Integrated Project**, Embrapa Brazil
- **Amazon Research Portfolio**, Embrapa Brazil
- **Sweden Food Arena** – food industry multistakeholder collaboration platform
- **Food Systems Multi-Stakeholder Mechanisms** by members of the One Planet Sustainable Food Systems Programme
- **Making Better Policies for Food Systems**, OECD
- **Innovative Citizen Participation and New Democratic Institutions**, OECD

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<td>Development Aid from People to People</td>
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<td>Division of International Trade and Integration Commerce, ECLAC</td>
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