



Syrian Food Futures

Briefing Paper

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Visioning for the future of food security in Northwest Syria

One Health FIELD Network 2021

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Executive Summary

- Relevant, context-specific and interdisciplinary sources of intelligence may be neglected or excluded from intergovernmental, third-sector and local initiatives, Non-governmental Organisation (NGO)- or government-led social and development programmes.
- The aim of this work is to highlight the potential role and contributions of Syrian academics, and to facilitate a platform for dialogue between academics and practitioners in order to integrate local knowledge, cultural and scientific expertise, and to improve strategy development and prioritisation for long-term future planning.
- The emphasis of that dialogue is not to “predict the future” but to create opportunities to discuss potential constraints and benefits, and to evaluate whether proposed policy and investment decisions are likely to be robust in the context of evolving uncertainties.
- In this workshop, participants employed this framework to explore uncertainties associated with long-term drivers of change according to three axes: displacement, natural-resource management and agricultural policy, in order to articulate vision for the future of food security over the next five years.
- Participants stressed the importance of harmonising and centralising data curation, management and information-sharing to ensure a coordinated approach in the region.
- Affordable, accessible and acceptable locally led interventions to improve agriculture and food security from production to consumption were proposed.
 - Community-based actions should be incentivised and integrated into sustainable institutional arrangements capable of countering displacement and low connectivity. This includes a graduation from relief initiatives to those focused on sustainability, self-reliance, cost-recovery and empowerment of women.
 - Technological change improves natural-resource management when supported by an institutional framework structured around transnational and local efforts (e.g., networks of agricultural knowledge and collaboration the international institutions).
 - The links between food security, agricultural production and local and international markets should be explored at the intersection of: a conflict-driven institutional landscape; the economic determination of long-term contingency planning; and the impacts of chronic global emergencies (e.g., the COVID-19 pandemic and climate change).
- The connectivity and resilience of Syrian food systems is addressed in terms of the constitution of sites of local knowledge-sharing about the culture and history of agriculture, food access, production, preparation and food behaviours. These networks of agricultural knowledge form the basis for the reconstruction of the agricultural sector, by counteracting conflict- and economic-driven de-territorialisation.

Background

In Syria, 12.4 million people are in need of food assistance¹, due to the sustained crisis since 2011. Nevertheless, agriculture is still considered an important part of Syria’s economy and important for self-sufficiency for more than 75% of households who grow their own food for consumption. Capturing stakeholders’ visions for the future of agriculture in Syria is now critical, as attitudes and beliefs towards producing and consuming food will have changed considerably over the long duration of the conflict.

Uncertainties about governance, weakened institutions and research funding and capacity constrain traditional opportunities for long-term contingency planning and inhibit access to local expertise, which is essential for timely, evidence-based decision-making. Interventions have understandably focused on survival and short-term food-security needs (i.e., food supplies and agricultural inputs such as seeds, fertilisers, pesticides, animal vaccines), perhaps at the expense of longer-term strategic approaches which incorporate broader socio-economic or environmental considerations. This may result in unforeseen tensions between short- and long-term food-security demands, which could undermine resilience in the long-term.

This is exacerbated by diminished regional and international collaborative research ties between researchers, universities, public institutions, national, international and United Nations

(UN) agencies, producer organisations and the private sector. Although there is still excellent expert capacity remaining within Syria (with Syrian academics embedded within local and international NGOs, and governmental entities) it is also the case that there has been extensive loss of in-country human and intellectual capacity, as academics have been displaced from high-risk areas as a matter of safety. This has made it more challenging to connect local cultural knowledge with decision-makers who are responding to the crisis and trying to influence future societal rebuilding efforts positively, based on social trust, cultural values and pluralism.

In this report, we provide a brief overview of the use of scenario planning as a framework for facilitating dialogue between academics, local stakeholders, practitioners and lay people so that local knowledge, and cultural and scientific expertise can be better integrated into strategy development and prioritisation for long-term future food-security planning.

We describe the participatory approach (Section 1) and historical drivers and trends (Section 2) which were used to develop a vision for the future of food security in Northwest Syria over the next five years (Section 3). A Strengths, Weaknesses, Opportunities and Threats (SWOT) analysis is described (Section 4), which was used by participants to inform and future-proof strategy development (Section 5). We conclude with a series of next steps (Section 6).

1. Approach

Scenario-planning methodologies were employed to explore uncertainties associated with long-term drivers of change and to create a vision for the future of food security. Scenario planning is a transdisciplinary approach which brings together diverse groups of participants with different interests/beliefs to engage in qualitative, structured, long-term strategic thinking about the future. We drew on previous work which systematically explored the history and prioritisation of important drivers of long-term trends and developments in food security in the region as a starting point for this exercise².

Participatory workshops were held to facilitate stakeholder discussion and agreement on the definition and characteristics of a future vision for a sustainable agriculture industry, through consideration of the following question:

“What is a desirable future for food security in Northwest Syria in five years’ time?”

Although a “Whole-of-Syria” approach was acknowledged to be pragmatic; the geographical scope of the focal question

was narrowed to consider only Northwest Syria to reflect the expertise and sphere of influence of the participants in the discussion as well as the variability and specificity of the region with respect to agricultural production.

A SWOT analysis was linked to strategy-development exercises, which generated a number of policy options around: livestock production, land use, promotion of knowledge, technology innovation and exchange, and development of education and training programmes to increase technical competence at a local level to address short-term stakeholder-felt needs.

1 Food Security Cluster (2017) Food security situation in Syria: Expanded version of the Food Security Sector Humanitarian Needs Overview 2018. Whole of Syria Food Security Sector
2 Boden, L.A. et al. (2019) Global Health and Food Security in Fragile and Conflict Affected States (FCAS) Syrian Academics and their Role in the Future of Food Security for Syria. Available at https://www.ed.ac.uk/files/atoms/files/ghafs_fullreport_eng_jan20.pdf

2. Historical Drivers and Trends

A detailed discussion of social, technological, economic, environmental and political drivers was conducted in 2019 at a roundtable discussion on the future of food security in fragile and conflict-affected states³. A summary of critical uncertainties for the future of food security in Syria

is presented in Table 1. with the following three themes “displacement”, “natural resource management” and “agricultural policy” considered by participants as the critical axes underpinning any future scenario.

TABLE 1. CRITICAL UNCERTAINTIES (reproduced from Boden, et al. 2019⁴; Boden et al. 2021⁵)

A. HIGH IMPACT AND UNCERTAINTY (MODIFYING OR UNDERPINNING DRIVERS)

DISPLACEMENT	NATURAL RESOURCES	AGRICULTURAL POLICY
<ul style="list-style-type: none"> Lack of access to academic expertise, which is no longer in country and cannot return. Lack of access to veterinary services. Increased role of women in the workforce. 	<ul style="list-style-type: none"> Increased water poverty: reduced groundwater levels and replenishment sources for safe drinking, sanitation, irrigation. Dependency on water sources outside Syria (in Turkey) and elsewhere for replenishable water supply. Preservation of natural-resource heritage (i.e., genetic resources and seeds from loss Syrian forests). 	<ul style="list-style-type: none"> Market forces (prices, value chains, agriculture as a private rather than public good). De-regulation and absence of strong institutions responsible for standards and certification of agricultural products (inputs such as pesticides, fertilisers etc.). Emergence of privately run and owned businesses. Increase in black markets, counterfeit drugs and agricultural inputs. Changing donor-funding priorities

B. LOWER IMPACT AND UNCERTAINTY (MODIFYING OR UNDERPINNING DRIVERS)

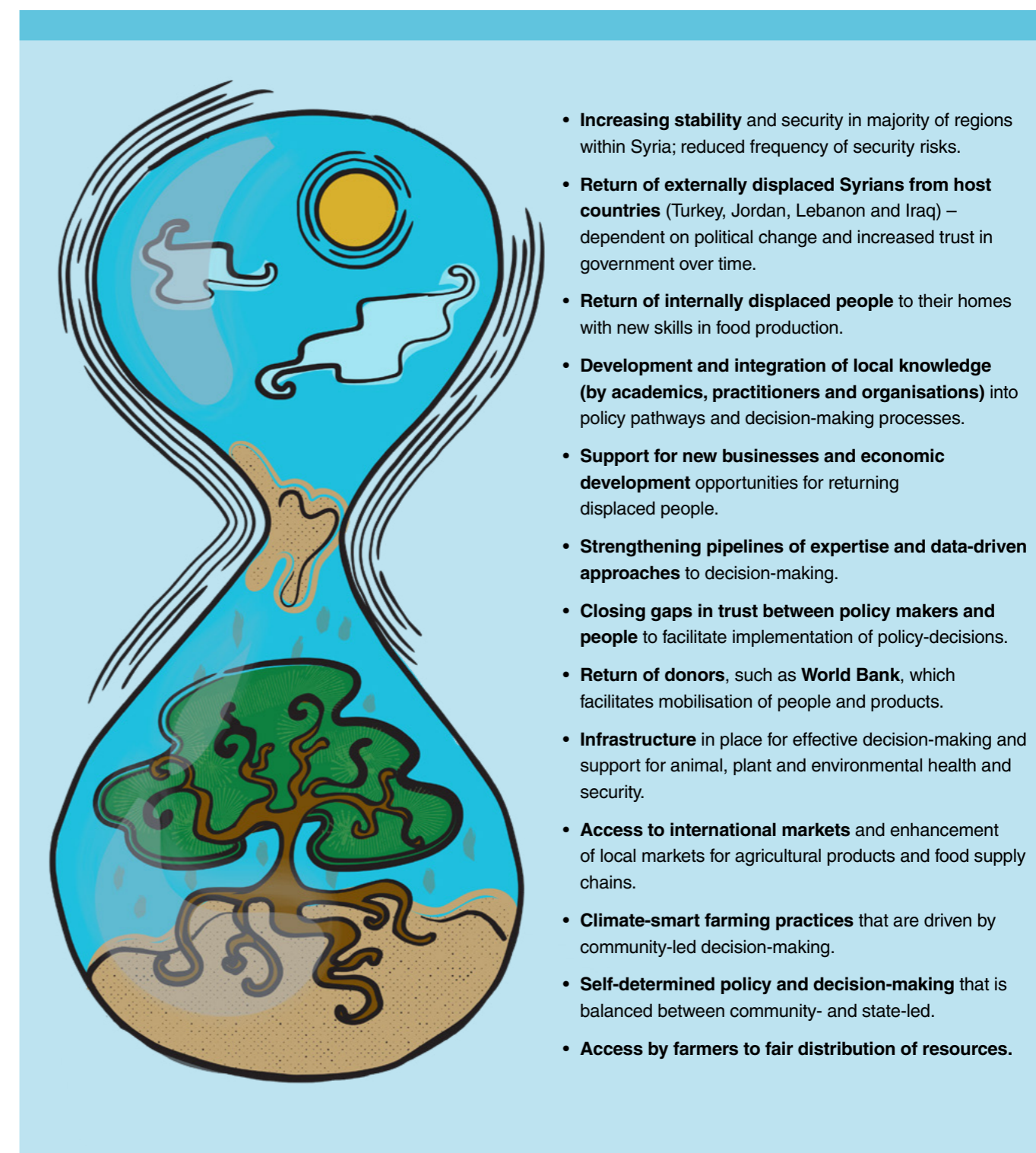
DISPLACEMENT	NATURAL RESOURCES	AGRICULTURAL POLICY
<ul style="list-style-type: none"> Competition from expatriate experts: China, Russia, Iran, to develop markets for their own populations, exacerbating “brain drain”. Kinship networks: sources of income, communication and expertise. 	<ul style="list-style-type: none"> Trade-offs between natural environment, agricultural machinery and transport infrastructure (i.e. availability and cost of fuel, inaccessible or damaged road networks (due to security threats), old machinery etc). Fire hazards (resulting from conflict activities). Climate change: increase in greenhouse gas emissions; extreme weather events such as drought, flooding; changes in distribution of pathogens, pests, vectors and hosts/ reservoirs of infectious disease. 	<ul style="list-style-type: none"> Land ownership and tenure in response to Legislation #10⁶, i.e. availability, access, use for agriculture, ownership (state or private). Movement of people across porous borders.

3 Boden, L. A. et al. (2019) Global Health and Food Security in Fragile and Conflict Affected States (FCAS) Syrian Academics and their Role in the Future of Food Security for Syria. Available from https://www.ed.ac.uk/files/atoms/files/ghafs_fullreport_eng_jan20.pdf Drivers of change: food and agricultural production in Syria since 1960 at pages 7–10

4 Boden, L.A. et al. (2019) Global Health and Food Security in Fragile and Conflict Affected States (FCAS) Syrian Academics and their Role in the Future of Food Security for Syria. Available at https://www.ed.ac.uk/files/atoms/files/ghafs_fullreport_eng_jan20.pdf

3. A Vision for the Future of Food Security

FIGURE 1. A VISION FOR THE FUTURE OF FOOD SECURITY IN NORTHWEST SYRIA IN THE NEXT FIVE YEARS (reproduced from Boden et al. 2021)



5 Boden et al. (2021). Syrian Food Futures: Visioning for the future of food security in Northwest Syria One Health FIELD Network 2021. Available at https://static1.squarespace.com/static/5fa3d6390e27d76c3131e8cb/t/6228454f0083ce69900aa8a2/1646806353109/SFF_SPRReport_fullreport_2022.pdf

6 <https://timep.org/reports-briefings/timep-brief-law-no-10-of-2018-housing-land-and-property/>

4. SWOT Analysis: Strengths, Weaknesses, Opportunities and Threats for Agricultural Practice in Northwest Syria

STRENGTHS	WEAKNESSES	OPPORTUNITIES	THREATS
What is already done well? What unique resources are available?	What needs improvement? What resources do you lack?	How can you leverage your strengths? What trends could benefit people in the future?	What global or local shocks might disrupt the future?
<ul style="list-style-type: none"> Improved agricultural practices (e.g., increasing crop diversity). Resources and skills drawn from Syrian humanitarian workers and academics who have extensive experience from participation in humanitarian relief and sustainable programmes e.g., proposal writing, management, international humanitarian principals, risk assessments. 	<ul style="list-style-type: none"> Absence of sufficient participation of women in agriculture. Inefficient production/ planting (subsistence farming on small land parcels). Generational gaps in expertise and experience in traditional practices in agriculture due to displacement. Old agricultural equipment leading to inefficient practices. This equipment is expensive to run, potentially unaffordable if fuel prices are high. 	<ul style="list-style-type: none"> Learning new skills and contributing to expertise and decision-making opportunities. Trust-building between policy-makers, practitioners-producers and academics. Focusing on the consumer end of the food-value chain (manufacturing and retail of food products/local markets with high nutritional value). Opportunity to increase climate activism and climate-smart practices. Enhancing agricultural exports (e.g., olive, pistachio, potato), to create jobs and new income sources. 	<ul style="list-style-type: none"> UN Cross border agreement and challenges with related technology. Absence or reduction of practical agricultural knowledge. Knowledge gap/ potential reduction of linkages between academia and humanitarian sectors to produce new knowledge. Giving people the appropriate inputs or resources for success in agriculture.

5. Strategy Development

Participants devised a set of affordable, accessible and acceptable locally led interventions to improve agriculture and food security from production to consumption. In summary these included (see also Table 2 and Table 3):

- **Community-based actions** – which should be incentivised and integrated into sustainable institutional arrangements capable of countering displacement and low connectivity.
- **Technological change** – which improves natural-resource management when supported by an institutional framework structured around transnational and local efforts (e.g., networks of agricultural knowledge).

- **Improved links between food security, agricultural production, and international markets** – which should be explored at the intersection of a conflict-driven institutional landscape, the economic determination of long-term contingency planning, and the impacts of chronic global emergencies (e.g., the COVID-19 pandemic and climate change).

6 Boden, L.A. et al. (2019) Global Health and Food Security in Fragile and Conflict Affected States (FCAS) Syrian Academics and their Role in the Future of Food Security for Syria. Available at https://www.ed.ac.uk/files/atoms/files/ghafs_fullreport_eng_jan20.pdf

TABLE 2. PARTICIPANT-IDENTIFIED NEEDS DERIVED FROM THE FOLLOWING CRITICAL UNCERTAINTIES (reproduced from Boden, L. A. et al. 2019)⁶

DISPLACEMENT	NATURAL RESOURCE MANAGEMENT	AGRICULTURAL POLICY REFORM
<ul style="list-style-type: none"> Centralised data curation, sharing and management. Improved information sharing networks. Building trust. Education, training and agriculture extension initiatives. 	<ul style="list-style-type: none"> Agricultural innovation to enable self-sufficiency. Climate-smart agriculture. 	<ul style="list-style-type: none"> Holistic agricultural policy reform - A combination of top-down and bottom-up approaches.

TABLE 3. PROPOSALS FOR LOCALLY APPROPRIATE INTERVENTIONS

CROP PRODUCTION	LIVESTOCK PRODUCTION	OTHER FORMS OF PRODUCTION	LAND MANAGEMENT	WATER MANAGEMENT
<ul style="list-style-type: none"> Climate-smart practices. Increase land yield where appropriate. Crop diversification (e.g., Azola cultivation for fodder/grass). Support for winter foraging crops. Improve crop yield, methods and irrigation (e.g., crop rotation) to increase land fertility. Plant crops suited to climate and geographical conditions (e.g., barley as fodder, alfalfa where enough water). Support strategic industrial crops, such as cotton and beet, to support farmers. Use of new seed varieties. Improve nutritional value of crops. 	<ul style="list-style-type: none"> Support for extension services which are now lacking (to rebuild trust between farmers and experts). Focus on fodder-crop production for livestock. Strengthen local markets, and marketing practices to give farmers access to greater market capability. Reduce pressure on grazing land through fodder improvement. Implement vaccination campaigns to reduce risks of animal disease outbreaks. Improve access to artificial insemination to improve productivity. 	<ul style="list-style-type: none"> Beehive/bee breeding, breeding of silkworms. Cottage industries: yoghurt and cheese production. Strengthen local markets, and marketing practices to give farmers access to greater market capability. 	<ul style="list-style-type: none"> Agroforestry approaches for sustainable development, conservation and rehabilitation in post-conflict times. Support communities to use secondary plant products). Encourage tree-planting (to support soil health) and other forms of sustainable re-purposing of land after camps are removed. Support efforts to improve biodiversity and conservation. Reduce pressure on grazing land through fodder improvement. 	<ul style="list-style-type: none"> Collect and conserve rainfall. Early-warning systems to anticipate and prepare for drought. Restore water/ irrigation canals – develop new technology systems for irrigation. Use of alternative energy sources (solar, biogas) and new technologies to support grey-water recycling.

6. Conclusions and Next Steps

This workshop was one aspect of the Global Challenges Research Fund-UKRI (GCRF) project *Cultures of expertise: Academics in exile and their role in the future food security agenda for Syria (SyrianFoodFutures)*.

Our aim

To develop relationships, strengthen partnerships and create a platform for dialogue between academics, decision-makers, practitioners and lay people in order to facilitate integration of local knowledge and expertise to improve decision-making and strategy development for long-term and highly uncertain futures.

Next steps

1. To understand and trace the tensions between emerging paradigms of global public policy (state dynamics) prompted by the COVID-19 and climate change emergencies, and collective actions occurring at the community level – linking knowledge networks into a pathway of food security (One Health) innovations.
2. To re-imagine an agriculture network pathway:
 - Recognise the gendered nature of knowledge production/creation/transfer and of the appeal to agricultural innovations.
 - Horizontally connect local, transnational (displaced Syrians) and external (non-Syrian) expertise.
 - Vertically connect academic knowledge and local lore.
 - Re-found Syrian higher education around principles of knowledge co-creation and the critical assessment of international guidelines (exigencies) on food security innovations – co-construct a specific One Health framework for Syria, as a means of scaffolding Syrian higher education.
3. Determine the reach and impact of the resulting networks of (gender-critical) agricultural knowledge into various instances of institutional decision-making.

