



TAFS

Transitions to Agroecological Food Systems: a case for policy support

Concept Note

October 15, 2020

The TAFS proposal results from a collective effort by about thirty researchers involved in five platforms in partnership for research and training. These platforms or dP are Cirad's main modality of collaboration with its partners in several projects and actions of research, training and development in three continents (Africa, Southeast Asia, Latin America).

In Africa, the Centre for the Study of Governance Innovation (GOVINN) is a joint centre in South Africa between the University of Pretoria and Cirad (<http://governanceinnovation.org>). The centre hosts the partnership platform in collaboration with the University of the Western Cape and the Centre of Excellence in Food Security. GOVINN focuses on governance and public policy processes through a diversity of multidisciplinary research streams at various scales (households, territories/landscapes, nations, regions). GOVINN's core research areas include alternative development approaches and new metrics of economic performance and well-being, as well as governance of the commons, natural resources, agriculture and food systems (Adelle, 2019; Jourdain et al. 2020; Giordano et al 2019).

ISA (Information for food security - www.dp-isa.org/) is a multi-disciplinary research platform in the Sahel region which works on the long-term determinants of food security in order to better inform local stakeholders and policy makers in the development and implementation of food security policies (Bacyé et al. 2019; Alpha and Fouilleux 2018; Le Cotty et al. 2018). It joins eight Cirad's partners from research, training and governments in three countries (Burkina Faso, Mali, Niger) and at the regional level (Cilss, IER, Inran, Inera, Isestel, Ministry of agriculture in Burkina, University Pr. J. Ki-Zerbo Ouaga I, USSGB).

The SPAD Platform (Highland Sustainable Production System in Madagascar - www.dp-spad.org/) works on production systems and agroecological transition in order to improve agricultural production and the preservation of natural resources on family farms in the Malagasy Highlands (Sourisseau et al. 2018, Ranaivoson et al. 2019).

In Southeast Asia, MALICA (Markets and Agricultural Linking Chains in Asia – www.malica.org) is an international consortium of research partners including research institutes of Vietnam (Vaas, Favri, Casrad, Rudec) and Laos (Nafri, NUOL-Faculty of agriculture) and an international research center (Ciat). MALICA aims to strengthen the research and decision capacity on food market analysis and urban/rural linkages of researchers, students, public officials, and private groups, in order to foster the

sustainability of food systems in the region (Cesaro et al. 2019; Cerdan et al. 2019; Lienhard et al., 2019).

PP-AL (Public policy and rural development in Latin America - www.pp-al.org/) is an international network that joins twenty institutional partners in ten Latin America and Caribbean countries working on rural development policies issues. PP-AL has informed the development of agroecology public policies in the region (Guéneau et al. 2019; Sabourin et al. 2017, Sabourin et al., 2018) and in Argentina (with INTA), Brazil (with UFRRJ, UFRGS, UFPA and UnB), Colombia (with CIAT), Costa Rica (With UNACINPE) and Mexico (with Unam and Chapingo University).

The TAFS concept note was developed following a workshop held on February 25-27, 2020, in Montpellier, France¹, to discuss ways for developing a research project on policy frameworks supporting agroecological transitions towards sustainable food systems².

Context

Low and medium income countries face a number of inter-linked sustainability challenges. In particular, food systems have to provide food and nutrition security, decent jobs and incomes and to adapt to climate change, in a context of where government budgets are constrained. Agroecological approaches are increasingly recognised as relevant solutions for ensuring sustainable food production and food security (HLPE 2019).

Yet, sustainability challenges associated to food systems are common but their relative importance as well as the dynamics of agroecological transition (AET) are context specific. Countries face very different issues like the need to reduce the use of agrochemicals (e.g. Vietnam), to strengthen ecological intensification of traditional production systems (e.g. Sub-Saharan Africa), or to scale up scattered agroecological experiences (e.g. Brazil).

Several knowledge gaps exist about the possible contribution of agroecological food systems for sustainable development and particularly their capacity to provide:

- a- food security: sufficient, affordable, healthy and nutritious food for rural and urban population;
- b- decent jobs and incomes;
- c- food production that respects the environment while adapting to climate change.

Ongoing projects and research initiatives - e.g. CGIAR-France Transformative Partnership Platform (TPP 2020a), FAO, European Commission DEVCO-DESIRA projects - are mostly focused on socioeconomic and environmental assessment of AE practices at the farm level (TPP 2020b). In addition of addressing this core level of analysis, the TAFS proposal also deals with public policies and food systems.

AET could lead to the emergence of more sustainable food systems only if agroecological practices on the ground are adopted. It is why public policies can provide important leverage in supporting transition to agroecological food systems.

¹ A workshop report is available upon demand.

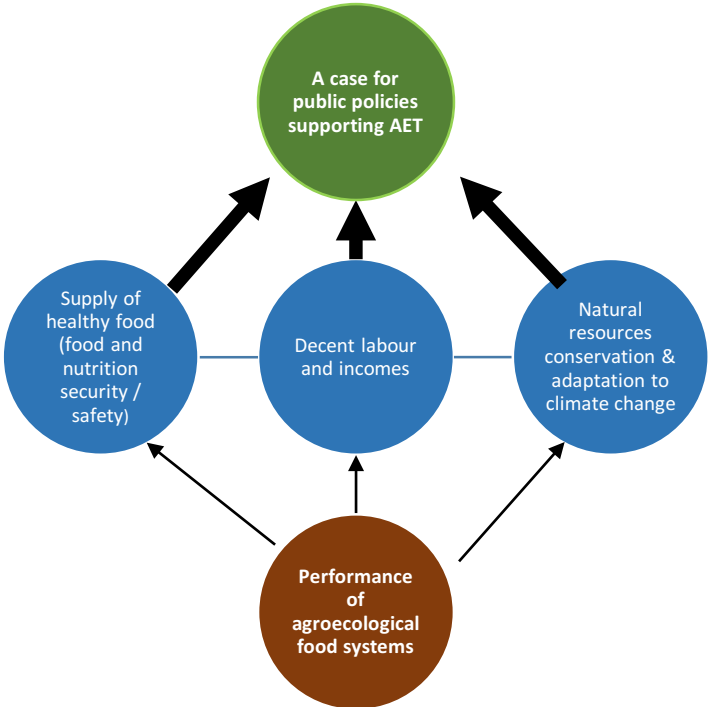
² A food system is defined as “the chains of market and non-market activities and actors connecting food production, aggregation, transportation and storage, processing and catering, distribution, preparation and consumption, waste and resources management, as well as agro-input suppliers (seeds, fertilizers, packaging etc.) and the associated regulatory institutions and activities” (Dury et al, 2019, p.16).

Objectives

The main objective of the project is to provide policy makers and stakeholders with convincing arguments about the importance and adapted ways of promoting agroecological transitions in order to address current and coming sustainability challenges.

The project consists in producing and sharing knowledge based on new evidence and on-going experiences about the contribution of agroecological food systems to the three dimensions listed above: a) the supply of sufficient, affordable, nutritious and healthy food; b) the generation of decent labour and incomes for households and; c) the sound management of natural resources at the territorial level in the context of climate change. (cf. figure 1).

Figure 1 - Filling knowledge gaps to make a case for agroecological transitions to sustainable food systems



Methodology

The project will be implemented in collaboration with the five above mentioned platforms in partnership in nine countries in Asia (Laos, Vietnam), in Africa (Burkina Faso, Mali, Madagascar, South-Africa), and in Latin-America (Argentina, Brazil, Colombia). It will provide a diversity of situations with regard to agroecological practices and trajectories. Drawing on these partnerships, a diversity of case studies will be identified in each country.

The added value of working in three continents and different countries is to establish a comprehensive understanding and knowledge about the diversity of AET processes and how related adapted policy frames may support sustainable food systems.

Hence, given the diversity of situations and sustainability challenges in the three continents, the methodological purpose is not to compare performances of agroecological food systems between countries. Rather, the methodological challenge is to use common tools to reveal

evidence on the sustainability of agroecological food systems, in order to nourish policy processes based on desirable futures defined by stakeholders.

Research sites selection

The case studies and related food and production systems will be selected at the territorial level³ by considering:

- The diversity of production systems with regard to a range of AE and conventional practices;
- The presence of innovative food systems and AET dynamics (especially their consideration by public policies);
- The existing data on AET.

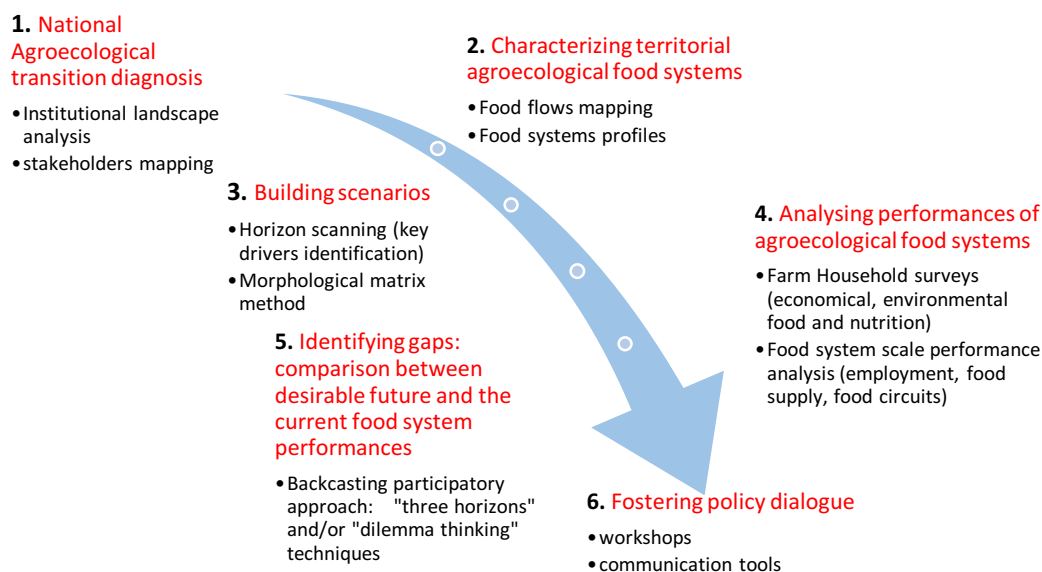
The project will not study all types of production systems. It will focus on some of them, with the following criteria:

- Focus on family farming (Bélières et. 2015), considering it includes the most economically vulnerable farmers and represents the vast majority of farmers in the targeted countries;
- Focus on farmers engaged in AE technical and organizational innovations and their relation to upstream and downstream activities;
- A diversity of situations allowing the development of a typology of different models of AET;
- The possibility to set core elements of comparison between AET (including the consideration of qualitative indicators) with regard to conventional systems of production.

Research design

The research design includes six interconnected stages with a diversity of research instruments (see figure 2). The engagement with both policy makers and local stakeholders will start from step 1, at the beginning of the project, develop through policy dialogue platforms.

Figure 2 - Step by step analytical process



³ A territory is defined "as a space of governance for human activities where future projects are conceived and implemented. A territory is governed and influenced by a community of actors dealing with common challenges by defining appropriated actions and policies" (TP4D 2018).

- **Step 1. Analysis of AET at the national level**

The first step will document what agroecology means in each country and its degree of institutionalisation. It will help to select territories that are representative of current dynamics and to set the baseline needed for subsequent steps (mapping, scenarios and policy dialogue). For this purpose, specific initiatives and current policies related to AET at the national level will be identified with different stakeholders (e.g. government and civil society representatives, and farmers and their organisations).

Several questions will be addressed such as: what are the visions and narratives of AET and the related food systems? How sustainability challenges and AET are framed? What are the social forces promoting and opposing AET? What kind of public action supporting AET has already been implemented?

Institutional landscape analysis and stakeholders mapping are some of the possible tools to be used to answer these questions. The outcomes of this first step will be, in each country: i) the baseline characterizing the different visions of AET, the nature of sustainability challenges, the existing initiatives and policies as well as the types of agroecological practices and associated food systems and; ii) the selection of one or more territories as research sites.

- **Step 2. Food systems and actors mapping at the territorial level**

Paying attention to sustainability challenges, this step will characterize the existing food systems based on AE practices and the supporting policies on the ground. The different actors engaged in local initiatives and public interventions in favour of agroecology within the different segments of local food systems will be identified as well as existing forms of policy dialogue (e.g. stakeholder platforms).

Based on participatory approaches, food flows mapping methods will be implemented in order to collect data on access to safe and nutritious food, agrifood labour markets, the use of natural resources, and food systems profiles will be identified. In addition, it is crucial to understand how national and multi-scale policies are implemented at the local food system level. The outcome of this step will be a typology of territorial agroecological food systems, including the characterisation of production, upstream and downstream activities, stakeholders, and governance structures. These results will be shared and discussed through local dialogue platforms with policy makers, farmers' and consumers' organisations, NGOs, etc.

- **Step 3. Participatory Scenario building at territorial level**

Based on the knowledge produced in step 2 and further work in order to identify driving forces of local agrifood systems (through literature review, interviews, possibly workshops on specific topics), step 3 will consist in building scenarios about plausible futures for the different local food systems. What they mean with regard to the three dimensions of sustainable development which are central to the project will be discussed. Some driving forces will be related to local agrifood systems, but others will be related to national and global contexts. Most driving forces will be the same in the different territories, but assumptions for the future will probably vary from one territory to another. For building a range of possible futures (3 to 5 scenarios), horizon scanning and morphological matrix methods will be used in participative workshops, gathering a diversity of stakeholders including local government representatives in charge of implementing national policies.

- **Step 4. Assessment of current performances of agroecological food systems**

The indicators of performance and specific tools for their evaluation will be established through a participatory process with local actors, taking into account the outcomes of the food systems diagnoses and the main issues identified at previous stages. As this process will be context-specific, the whole range of socio economic and environmental performances will not be examined in all the selected territories. A selection of indicators and methodologies adapted to each territory will be made in order to analyse the performances at two levels:

- At the production systems level, with reference to existing typology of main production systems if any, socio-economic and environmental performances will be assessed through farm household surveys. These surveys will be representative at the territorial level and will particularly look at household production, food consumption, labour, incomes, and natural resources management. Regarding employment performance, work quantity and quality indicators related to the main AE practices will be designed. Further, the Olympe software will allow integrating a range of socio-economical performances indicators and facilitate research-policy linkages (Penot 2004); they might also include contamination and biodiversity levels indicators.
- At the food system level, surveys with households and enterprises will be elaborated regarding a) employment dimensions of upstream and downstream activities (characteristics and labour content); b) natural resources management outcomes of these activities; c) food security and safety performance (food prices, food quality and food circuits and change in distribution systems).

The outcome of these activities will be an assessment of the current economic and environmental performances and food security/safety performances of the territorial agroecological food systems.

- **Step 5. Identification of obstacles and opportunities to move from current practices toward desirable future**

In this step, the current performances of local food systems will be put into perspective with a desirable future that stakeholders would like to achieve among the scenarios identified in step 3. Further work with the designed scenarios will be implemented in workshops using different techniques, such as "three horizons" or "dilemma thinking". Backcasting participatory exercises will be used to identify the obstacles, opportunities and pathways from the current situation to the desired sustainable food systems, as well as key recommendations for national level policies (step 6).

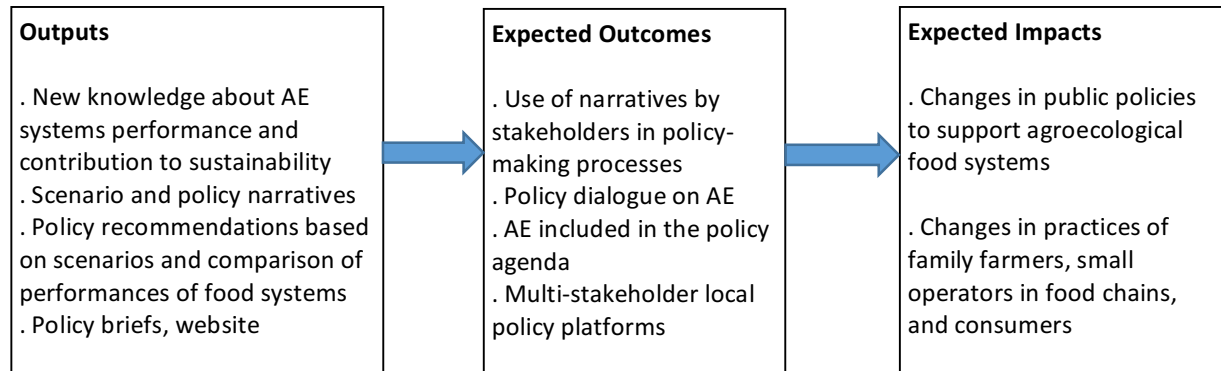
The outcome of this activity will be the identification of concrete situations and actions to overcome the obstacles identified or to seize opportunities, i.e. an action plan for food systems based on AET in the selected territories.

- **Step 6. Policy dialogue with stakeholders and policy makers at the territory and national level**

Policy dialogue at this stage will help to summarize and further identify obstacles and opportunities with regard to: a) the supply of affordable, nutritious and healthy food; b) the generation of decent labour and incomes for households and; c) the sound management of natural resources. This process will contribute to the formulation of public policies, inform specific policy design and the drafting of principles fostering the AE transition. It will help to revisit the existing national visions (step 1). Policy dialogue platforms, forum, workshops,

policy briefs and possible innovative participatory methods will be used. The outcome of this last task will be the elaboration of arguments, narratives and possible advocacy actions to influence the policy-making processes.

Expected results



References

- Adelle, C., 2019. The role of knowledge in food democracy. *Politics and Governance* 7 (4), 214-223.
- Alpha, A. & Fouilleux, E., 2018. How to diagnose institutional conditions conducive to intersectoral food security policies? The case of Burkina Faso. *NJAS-Wageningen Journal of Life Science*, 84, pp. 114-122.
- Bacyé, B., H.S. Kambiré, A.S. Somé. 2019. Effets des pratiques paysannes de fertilisation sur les caractéristiques chimiques d'un sol ferrugineux tropical lessivé en zone cotonnière à l'ouest du Burkina Faso, *International Journal of Biological and Chemical Sciences* 13(6), October 2019, pp. 2930 - 2941.
- Bélières, J-F., Bonnal, P., Bosc, P-M., Losch, B., Marzin, J., Sourisseau, J-M. 2015). Family Farming Around the World. Definitions, contributions and public policies. Paris : AFD.
- Cesaro, D. et al., 2019. Les élevages-recycleurs de déchets alimentaires à Hanoï : un service informel en transition. 2019. *Flux* (116-117). pp. 74-94.
- Cerdan, C., Biénabe, E., David-Benz, H., Lemeilleur, S., Marie-Vivien, D., Vagneron, I., Moustier, P. 2019. What market dynamics for promoting an agroecological transition? In: Côte F.X., Perret, S. Poirier-Magona E., Roudier, P. (Eds). The agroecological transition of agricultural systems in the Global South. Versailles, France: Quae. pp. 271-291.
- Dury, S., Bendjebbar, P., Hainzelin, E., Giordano, T. and Bricas, N. (eds.). 2019. Food Systems at risk: new trends and challenges. Rome, Montpellier, Brussels: FAO, CIRAD and European Commission. 75 p.
- Giordano, T., Losch, B., Sourisseau, J.-M., Girard, P., 2019. Risks of mass unemployment and worsening of working conditions, in: Dury, S., Bendjebbar, P., Hainzelin, É., Giordano, T., Bricas, N. (Eds.), Food systems at risk: new trends and challenges. Rome, Montpellier, Brussels: FAO, CIRAD and European Commission. 75 p.
- Guéneau, S., Sabourin, E., Niederle, P. A., Colonna, J., Strauch, G.D. F. E., Piraux, M., Lamine, C., Assis, W.D. S. A., Avila, M. L., Canavesi, F.C., Tavares, E. D., Barbosa, Y.R.S., Schmitt, C.J. 2019. A construção das políticas estaduais de agroecologia e produção orgânica no Brasil. *Revista Brasileira de Agroecologia*, Vol. 14, n° 2, pp. 7-21.

- HLPE (High Level Panel of Experts), 2019. Agroecological approaches and other innovations for sustainable agriculture and food systems that enhance food security and nutrition, Rome: HLPE report 2019
- Jourdain, D., Lairez, J., Striffler, B., Affholder, F. 2020. Farmers' preference for cropping systems and the development of sustainable intensification: a choice experiment approach. *Rev Agric Food Environ Stud.* <https://doi.org/10.1007/s41130-020-00100-4>
- Le Cotty, T., E. Maître d'Hôtel, R. Soubeyran and J. Subervie, 2018. Linking risk and time preferences and the use of fertilizers in Burkina Faso. *Journal of Development Studies*, 54(11), pp. 1991-2006.
- Lienhard, P. 2019. Accompanying the actors of the agroecological transition in Laos. In: Côte F.X., Perret, S. Poirier-Magona E., Roudier, P. (Eds). The agroecological transition of agricultural systems in the Global South. Versailles, France: Quae. pp. 271-291.
- Penot, E., Le Bars, M., Deheuvels, O., Le Grusse, P., Attonaty, J. M., 2004. Farming systems modelling in tropical agriculture using the software "Olympe". Montpellier, CIRAD TERA, France.
- Ranaivoson, L., Naudin, K., Ripoche, A., Rabeharisoa, L., Corbeels, M. 2019. Effectiveness of conservation agriculture in increasing crop productivity in low input rainfed rice cropping systems under humid subtropical climate. *Field Crops Research*. 239. pp. 104-113
- Sabourin, E., Le Coq, J.-F., Fréguin-Gresh, S., Marzin, J., Bonin, M., Patrouilleau, M. M., Vázquez, L., Niederle, P., 2018. Public policies to support agroecology in Latin America and the Caribbean, *Perspective* n°45. <https://doi.org/10.19182/agritrop/00020>.
- Sabourin, E., Patrouilleau, M.M., Le Coq, J.F., Vasquez L.L., Niederle P. (Orgs). 2017. Políticas públicas a favor de la agroecología en América Latina y El Caribe, Porto Alegre: Criação Humana/Red PP-AL/FAO. 412 p.
- Sharpe, B., A. Hodgson, G. Leicester, A. Lyon, and I. Fazey. 2016. Three horizons: a pathways practice for transformation. *Ecology and Society* 21(2). p. 47. <http://dx.doi.org/10.5751/ES-08388-210247>
- Sourisseau J.-M., Bélières J.-F., Marzin J., Salgado P., Maraux F. 2019. The drivers of agroecology in sub-Saharan Africa: an illustration from the Malagasy Highlands. In: Côte F.X., Perret, S. Poirier-Magona E., Roudier, P. (Eds). The agroecological transition of agricultural systems in the Global South. Versailles, France: Quae. pp. 179-198.
- TP4D, 2018. *Fostering territorial perspective for development. Towards a wider alliance*. White paper. AFD, BMZ, Cirad, European Commission, FAO, GIZ, Nepad, OECD, UNCDF.
- TPP (Transformative Partnership Platform), 2020a. Agroecological approaches to building resilience of livelihoods and landscapes. France – CGIAR initiative.
- TPP (Transformative Partnership Platform), 2020b. Documenting and evaluating the socio-economic viability of agroecological practices across Africa. TPP Concept note 1. France – CGIAR initiative.

Contacts : Eric Sabourin sabourin@cirad.fr; Arlène Alpha arlene.alpha@cirad.fr; Sara Mercandalli sara.mercandalli@cirad.fr; Stéphane Guéneau stephane.gueneau@cirad.fr