

LEAD COORDINATING AUTHORS:

Mamadou Goïta and Emile Frison

PROJECT MANAGEMENT & RESEARCH DESIGN:

Céline Perodeaud, Chantal Clément

EDITORIAL LEADS:

Nick Jacobs, Chantal Clément, Céline Perodeaud

Approved by IPES-Food Panel, July 2020

Citation: IPES-Food, 2020. The added value(s) of agroecology:
Unlocking the potential for transition in West Africa.

www.ipes-food.org



ACKNOWLEDGEMENTS

This report is the culmination of a 3-year process of research and collaboration between IPES-Food and a wide range of local, regional and international partners to support the development of sustainable food systems in West Africa. The authors would first like to thank the IPES-Food panel for providing feedback and guidance at various stages of the process. They are also grateful to the IPES-Food Secretariat, without whose sustained efforts this report would not have been possible. The authors would particularly like to thank Céline Perodeaud for her tireless work, energy, and time in leading this process from start to finish; Chantal Clément for conceptualizing and providing essential strategic inputs throughout the process; Nick Jacobs for his analytical and editorial contributions to the report; and each for their role in drafting and providing research for the final report. Throughout the process, they were supported by the indispensable work of Salomé Le Bourligu and Marina Yamaoka, as well as drawing on research by Hemal Thakker. IPES-Food is also grateful to the many participants of the interview process and focus group meetings for their willingness to share their invaluable insights and experiences. IPES-Food would also like to thank the Open Society Initiative for West Africa, the Open Society Foundations, and the Daniel and Nina Carasso Foundation, without whose generous support, this process would not have been possible. Finally, IPES-Food would like to express its deepest and most sincere gratitude to all member organizations and partners of the Alliance for Agroecology in West Africa (3AO), whose collaborative spirit was and will continue to be essential in fostering an agroecological transition in West Africa.

Layout & graphic design: www.heartsnminds.eu, Brussels

EXECUTIVE SUMMARY



West Africa faces a number of urgent and interconnected challenges. With temperatures rising 1.5 times faster than global averages, intense climate variability, reliance on rain-fed agriculture, and limited adaptive capacity, the region is fast becoming a climate hotspot. This, in combination with other stresses, is projected to lead to highly unpredictable agricultural productivity, loss of biodiversity, greater food insecurity, as well as socio-economic and political instability. These risks come in a context where 70-80% of the population lives on less than \$2 a day, and where the COVID-19 pandemic is threatening to plunge millions more into poverty and food insecurity. With one of the youngest populations in the world, questions are also arising about the capacity of West African economies to absorb millions of young people into the labour force.

Food systems are at the heart of these challenges – and are changing fast. Agriculture, livestock, and fisheries account for 35% of regional Gross Domestic Product and employ more than 60% of the population. On one hand, West African agriculture is still characterized by diverse agro-sylvo-pastoral production systems: 90% of agricultural production is accounted for by family farms, producing a range of foods for their households and communities on small plots of land. But export commodity zones, large-scale land acquisitions, and huge influxes of foreign investment ('FDI') are also a feature of this complex and varied landscape – signaling the accelerating efforts to commercialize and industrialize all aspects of West African food systems.

Agroecology is emerging as a compelling response to the challenges West Africa faces, and a viable alternative to the industrial agri-development pathway. Agroecological systems build resilience through crop/species diversity and natural synergies across the whole agro-ecosystem, thereby offering a response to the urgent challenges of climate change and resource scarcity. Furthermore, agroecology is labour intensive, does not require major land restructuring or upscaling, and relies on farmer-to-farmer and intergenerational modes of knowledge exchange – making it well-adapted to the structure and economic realities of West African agriculture.

Despite the multiple efforts and initiatives to develop agroecology in the region, political support remains limited, and blockages are emerging at multiple levels. Through a three-year participatory research process, we identified eight key obstacles to agroecology in West Africa:

OBSTACLE 1:

ACCESS TO FINANCE

While agroecological systems draw on natural synergies and use locally-available resources, transitioning to this model entails some costs at the outset, and requires support. Public and private investment is flooding into West African agriculture, but is mostly accruing to export commodity production, high value-added sectors, and agropoles. These trends have been reinforced by the need to service debts via exports of cash crops, the use of public finances to unlock private investment opportunities (e.g. PPPs, blended finance models), and the influence of a handful of international donors on whom West African countries are highly reliant. Meanwhile, smallholders, and particularly women, struggle to access the credit they would need to move beyond subsistence farming.

OBSTACLE 2:

ACCESS TO LAND AND WATER

Rapid population growth, urban sprawl, and land grabbing have created unprecedented pressures on land and water resources in West Africa. Land laws, often rooted in the colonial era, have generally failed to protect customary tenure and land use. Between 2000 and 2012, some 3 million hectares of land were subject to large-scale land acquisitions across nine West African countries. These land deals have been linked to the eviction of peasant farmers, the loss of access to grazing land, and the depletion of resources for local food production. Large-scale irrigation projects have further reduced access to water for pastoralists and smallholders. In the Sudano-Sahelian area, land and water grabbing has led to the breakdown of traditional pastoral areas, creating conflict between farmers and pastoralists. Climate change is exacerbating these pressures. As a result, potential adopters of agroecology are left with marginal land, resource constraints and competition, and – in the absence of secure land tenure – no guarantee that they will be able to reap the benefits of transition.

OBSTACLE 3:

ACCESS TO SEEDS AND ORGANIC INPUTS

Farmer seed systems, through which farmers select, multiply, conserve, and exchange a wide range of reproducible varieties, account for as many as 75% of varieties grown in Mali, and up to 90% of the seeds used in some countries in Africa. These systems are an essential component of agroecology, which relies on diversity at all levels (including crop genetic diversity). However, they are lacking in legal recognition and policy support, and are relegated to 'informal' status, while privatized seed systems are gaining ground on the back of donor- and industry-led initiatives. While farmer seed systems for cereal crops are highly developed, access to vegetable seeds remains low. Farmers also face major challenges in accessing organic matter, as a result of desertification, deforestation and encroachment on land and natural woodlands, while access to manure is limited by the large distances and poor linkages between animal rearing and cropping zones.

OBSTACLE 4:

ACCESS TO MARKETS

Agroecological produce is valued by a growing number of West African consumers on the basis of its perceived advantages in terms of taste, quality, resistance to transport, and increased shelf life, while concerns about synthetic inputs and diet-related diseases are driving general interest in the nutritional and health properties of foods. Nonetheless, reliable and remunerative sales outlets for agroecological produce are still lacking. Firstly, in a context of high post-harvest losses, producers of the same crop are forced to sell at the same time, resulting in oversupply and lower prices. Prices are further driven down by imported goods – which gain regional market shares and disincentivize the development of local value chains. In general, there is a lack of price differentiation or visual distinction between conventional and agroecological produce, apart from a limited range of certified organic and agroecological-labelled products which tend to price out local consumers.

OBSTACLE 5:

POLITICAL BUY-IN

Agroecology has made its way into regional policy frameworks (e.g. ECOWAS) and national policies (e.g. Burkina Faso, Senegal). However, the policies that mention agroecology also mandate growth corridors for export commodities and the upscaling of family farms, while directing the bulk of resources towards the conventional/ industrial pathway. In some cases, this is a result of 'double speak' where divergent and competing objectives overlap in the statements and policy prescriptions of elected officials. But in other cases, it reflects weak government steering capacity, fragmented funding structures, and the ability of dominant financial partners to lobby for their own interests at the implementation stage. Incoherent policy imperatives at the national level in fact mirror the incoherence within and between the many agriculture, nutrition, and food security frameworks adopted at regional and pan-African levels.

OBSTACLE 6:

UPTAKE OF AGROECOLOGICAL PRACTICES

While industrial agriculture tends to reduce total labour requirements, agroecological practices require significant time and manual labour – particularly if the relevant tools are lacking. The challenge of convincing people to adopt agroecology is compounded by the increasing characterization of farming as a backward livelihood in the region. Furthermore, agroecological practices are context-specific and require a breadth of skills and knowledge. This in turn necessitates considerable training and support in the transition phases. The decline and defunding of public agricultural extension services therefore represents a major obstacle to agroecology in West Africa.

OBSTACLE 7:

BRINGING EVIDENCE TO BEAR

Across West Africa, scientific research is widely funded and shaped by external donors. Total funding for agricultural research, education and extension is stagnating, and represented only 14% of agricultural aid to Africa in 2017. Donors are generally not prioritizing agroecological research, making it difficult for researchers to pursue this pathway. Furthermore, there has been a failure to communicate the existing research and evidence on the performance of agroecology. This reflects the fact that agroecological research does not typically produce evidence of the type valued by the mainstream; the undervaluing of agroecology's benefits under conventional performance criteria; insufficient efforts to communicate and break down the findings of scientific research to policymakers and farmers; and prohibitive dissemination costs (e.g. printing, translation, radio or television fees).

OBSTACLE 8:

FRAGMENTATION OF THE MOVEMENT

While many initiatives and platforms are developing in the region to support agroecological transition, they often remain isolated, poorly documented, and insufficiently coordinated with each other. Further networking of the agroecology movement is essential to build trust, encourage common ownership of the issues, and ensure that the plans, strategic actions, and needs of grassroots actors are transmitted into policy debates. To overcome resistance at the political level and show that agroecology is not purely a form of militant activism, balanced representation among different groups and operational reform proposals are essential.

The obstacles to agroecology are therefore numerous, and mutually-reinforcing. For example, without a secure resource base for agroecological production (Obstacles 2 and 3) and without remunerative sales outlets (Obstacle 4), agroecology remains on the fringes and struggles to be economically viable. This limits its attractiveness to farmers (Obstacle 6) and to policymakers (Obstacle 5). In turn, low political buy-in accentuates funding shortfalls for agroecology (Obstacle 1): external donors, in particular, are unlikely to push for agroecological development pathways without a clear signal from national governments. Furthermore, the obstacles to agroecology in West Africa are reinforced by a series of global dynamics (e.g. short-term and highly compartmentalized policy frameworks, 'feed the world' narratives, and export orientation) that 'lock in' industrial agriculture.

Nonetheless, the foundations of different food systems and different economic systems have remained intact in West Africa, and are being revived by vibrant movements to defend farmer seed systems, smallholder land tenure, and peasant agriculture. We identify four leverage points where sustained action could build on progress already made, overcome key obstacles, and accelerate the agroecological transition in West Africa:

LEVERAGE POINT 1:

ALLIANCE-BUILDING AND COLLECTIVE ACTION

A vocal, visible, broad-based, and unified agroecological movement is essential for advancing change on multiple fronts and unlocking transition in West Africa. Agroecology is already well embedded in the region as science, practice, and social movement, providing strong foundations for broad-based alliances. Furthermore, there are signs that the fragmentation of the movement is being increasingly overcome. Over recent years, the agroecology and food sovereignty movements are finding common cause, with diverse groups coming together around struggles to resist land grabs, counter GMOs and pesticides, and protect peasant seeds. Since 2018, some 69 organizations have joined the Alliance for Agroecology in West Africa (3AO) and committed to working with a breadth of partners (farmers organizations, social movements, advocacy NGOs, research networks and international organizations) to develop a multi-country, multi-scale action plan for advancing agroecology. As well as facilitating collective action, alliances transform the modalities and mindsets of their members, helping actors to see themselves as part of an inter-connected landscape, while increasing creative learning, experimentation, and innovation due to the many perspectives and insights involved.

LEVERAGE POINT 2:

INTEGRATED FOOD POLICIES

Reforming the governance of food systems is a powerful vehicle for advancing agroecology in West Africa and beyond. Integrated food policy frameworks can align various sectoral policies with overarching food system objectives, assign accountability over multi-year timeframes, and allow diverse constituencies to co-define priorities on equal footing. This approach is particularly relevant in West Africa, given the need to reconcile the competing initiatives espoused by governments, and to re-establish agroecological transition as a top priority. Integrated food policies can build on the basic foundations provided by CAADP, and by the national and regional frameworks put in place to implement it – notably ECOWAP. Furthermore, comprehensive food policies can provide a focal point for bringing together an ever-broader coalition of actors with a shared interest in transforming food systems, including consumers, supply chain actors, public health organizations, youth movements, municipal policymakers, and many others.

LEVERAGE POINT 3:

FOOD SOVEREIGNTY, TERRITORIAL DEVELOPMENT, AND A NEW ECONOMIC PARADIGM

As economic orthodoxies are questioned and new priorities and paradigms gradually take root, favourable conditions for agroecology could start to emerge. Agroecology can thrive when the additional value it creates – for ecosystems and for society – is rewarded, and when hybrid systems (e.g. new knowledge exchanges, new modes of accessing and sharing resources, solidarity-based marketing structures and sales outlets) are able to emerge alongside the mainstream economy. Favourable conditions for agroecology can be accelerated by building on existing political footholds and openings in economic thinking. For example, as civil society and scientific actors have increasingly argued, agroecology may in fact be the most cost-efficient way, and perhaps the only way, for countries to meet the majority of the SDGs. This could be achieved through modest reorientation of economic strategies, realignment with the original CAADP and NEPAD goals, and redirection of some FDI flows towards agroecological markets as a commercialization opportunity. Furthermore, trade-based growth mantras are giving way to new paradigms. The EU and OECD have recognized the need for *territorial* rural development strategies. Meanwhile, the principle of *food sovereignty* has been invoked by a number of West African governments in their economic and food security strategies.

AGROECOLOGY AS CRISIS RESPONSE

As disease and climate threats multiply, agroecology can be positioned as a systemic solution to prevent and build resilience to future shocks. Agroecology can and must be placed at the heart of the radical climate mitigation strategies the region urgently needs. Through its focus on diversity at all levels, agroecology builds in resilience to shocks. Meanwhile, its adaptability and economic viability for family farms makes agroecology appropriate for the various parts of West Africa and the various forms of extreme weather they will face. The COVID-19 pandemic is also highlighting the need for food systems transformation. COVID-19 is already hitting West Africa hard, with food insecurity projected to rise as a result of supply chain interruptions, access problems, and lost income. However, it is also creating opportunities for new investments and new thinking. At least six West African countries have prepared response plans worth 1.85 trillion CFA (€2.8 billion), but implementation and mobilization of resources is proving challenging. Action is also being stepped up at the pan-African and regional levels. In April 2020, all 55 AU member states committed to strengthen their social safety nets, bolster intra-regional food and agricultural trade, and support access to food and nutrition for their most vulnerable populations. In other words, new ways of intervening in and governing food systems are rapidly being adopted. While agroecology has not been prioritized among initial responses, there is major scope to place it at the centre of crisis responses. As the COVID-19 and climate crises unfold, and the SDGs loom large in the background, the need for cost-effective solutions to support the livelihoods of family farms *and* deliver access to healthy and nutritious food will become more acute. In other words, agroecology can and must become a byword for *systemic response* and for *resilience*.

The challenge remains vast, with the region delicately poised at the threshold of different pathways. Nonetheless, a promising picture emerges: West Africa has all the ingredients to become the epicentre of the global agroecology movement, and one of the frontrunners in transition to sustainable and equitable food systems. All of this relies, most of all, on the continued willingness of those working towards agroecology to keep cooperating, sharing and working together – in line with the foundational principles of agroecology.

FOREWORD

JOSÉ GRAZIANO DA SILVA

Former Director-General of the Food and Agriculture
Organization of the United Nations (FAO),
2012-2019'




"Agroecology is opening a window in the 'Cathedral of the Green Revolution". With these introductory words, as the 8th Director-General of the Food and Agriculture Organization of the United Nations (FAO), I delivered the closing remarks of the first FAO symposium on "Agroecology for Food Security and Nutrition" on September 18-19, 2014.

This moment signaled the importance of agroecology as an organizing principle for future food security and nutrition programs. It sought to redefine food systems as cultural systems, with people at the center of the system, in contrast to the current industrial model with its focus on yield maximization at all costs, the use of non-renewable resources, and the deployment of all available production technologies. Ecological and social diversity and complexity, rather than simplicity and homogeneity, were called for as alternatives to the extractive and damaging monoculture approach that dominates the world's food systems today. From this perspective, it has become increasingly clear that food security depends not only on food availability at the right place at the right time, but also on access, utilization, and stability.

While agroecological methods have played a marginal role in the past, those approaches are now growing fast, and many countries are starting to allocate resources to researching and promoting agroecology on the ground. It is now possible to say that we have a viable alternative pathway for agricultural development.

But the challenge remains vast. Today, most agricultural development funding in Sub-Saharan Africa still supports Green Revolution approaches, as shown by the recent report by IPES-Food, Biovision, and the Institute of Development Studies ('Money Flows: what is holding back investment in agroecological research for Africa?').



If we are able to channel an increasing share of these resources to agroecological approaches, we will surely find ways to improve productivity without damaging the environment. Doing so will also allow us to address the world's great food paradox. According to 2018 assessments by the FAO, 820 million people globally suffer from hunger, and 2 billion are food insecure, while another 2 billion are overweight. There is a growing awareness that hunger and malnutrition are not only a matter of food production, but depend rather on people's entitlements – access to food, to natural resources, inputs, marketing and services – which are currently distributed very unequally.

The problem, therefore, is how to produce more without damaging the environment and without compromising natural resources - such as soil, water, and forests - that cannot be replaced in time to face the challenges of Agenda 2030.

These challenges are more urgent than ever in West Africa, and the potential for transition is great. This report brings to light the voices, visions and initiatives of the region's vibrant agroecological movement. And while obstacles remain, it shows that many more doors and windows in agricultural development are starting to open.

FOREWORD

PAPA ABDOULAYE SECK


Ambassador of Senegal to Italy, Permanent
Representative of Senegal to the FAO, Former Minister
of Agriculture and Rural Equipment of Senegal



The agro-sylvo-pastoral and fishery sectors of West Africa face considerable challenges, ranging from food security to the scarcity of natural resources, from rural exodus to climate change, not to mention the use of intensive practices that pollute waters and soils and cause the disappearance of traditional knowledge adapted to local conditions. At the same time, West Africa's population is growing exponentially, while the region continues to experience one of the highest rates of chronic malnutrition in the world. Lastly, the destruction of natural habitats and the loss of biodiversity have drastically reduced the natural barriers that guard against the risks of virus transmission between species.

Providing insights into how to better understand and address these challenges, IPES-Food's latest report, *"The added value(s) of agroecology: Unlocking the potential for transition in West Africa"*, will be a valuable resource, in many respects, to the government of Senegal and to the ECOWAS community. Faced with these economic, health, and social challenges, it appears necessary and urgent for the West African region to develop sustainable, resilient, and just food and agricultural systems capable of redressing current trends for the benefit of its populations. Agroecology appears to be a major opportunity that countries across the ECOWAS region must seize.

We have seen agroecological practices improve the fertility of soils degraded by drought and chemical input use. We have seen producers' incomes increase thanks to the diversification of their crop production and the establishment of new distribution channels. We have seen local knowledge enriched by modern science to develop techniques inspired by lived experience, with the capacity to reduce the impacts of climate change. And we have seen these results increase tenfold when they are supported by favorable policy frameworks, which place the protection of natural resources, customary land rights, and family farms at the heart of their action.



The agroecological transition implies a synergy of actions being carried out by farmers, researchers, development and political authorities. Yet as many efforts remain dispersed, it remains challenging for citizens to take full advantage of their benefits. The scaling up of agroecology in the region therefore involves pooling skills, renewing intersectoral dialogue, and engaging with farmers to co-develop actions that best meet their needs and priorities.

This report, prepared using a participatory approach, shows the way to overcome the multiple obstacles presented by our current system, and move towards an agroecological, integrated, and sustainable transition. The government of Senegal, through its PSE Vert, and ECOWAS, through its Agroecological Transition Support Project, take into account the concerns that are raised here, and commit to supporting the efforts made to promote agroecology as a pillar of sustainable development, an economic engine and job creator, and a healthy and equitable agricultural model for future generations.

TABLE OF CONTENTS

EXECUTIVE SUMMARY	4
FOREWORD	13
INTRODUCTION	19
Figure 1: Map of West Africa	21
Figure 2: A three-year process of consultation and co-creation	24
SECTION 1	
AGRICULTURAL DEVELOPMENT PATHWAYS IN WEST AFRICA	25
1.1 WEST AFRICAN FOOD SYSTEMS: A RAPIDLY EVOLVING LANDSCAPE	26
Figure 3: A net food importer: Africa's food import & export trends	28
Figure 4: West African demographic outlook (2019-2100)	30
1.2 NEW ACTORS AND OLD IMPERATIVES: EVOLVING AGRICULTURAL DEVELOPMENT TRAJECTORIES IN WEST AFRICA	33
Figure 5: Understanding CAADP: an overarching framework of action for agri-development in Africa	36
Figure 6: The proliferation of private sector initiatives in Africa	39
Figure 7: The policy frameworks shaping West African food and agricultural systems	49
SECTION 2	
UNDERSTANDING AGROECOLOGY AND ITS POTENTIAL IN THE WEST AFRICAN CONTEXT	50
Figure 8: Understanding agroecology: a holistic and comprehensive approach	54
Figure 9: Different starting points towards agroecological transition	59

SECTION 3	
OBSTACLES TO AGROECOLOGICAL TRANSITION IN WEST AFRICA	60
Figure 10: The regional obstacles and systemic lock-ins that Agroecology must overcome in West Africa	61
3.1 OBSTACLE 1. ACCESS TO FINANCE	62
3.2 OBSTACLE 2. ACCESS TO LAND AND WATER	68
3.3 OBSTACLE 3. ACCESS TO SEEDS AND ORGANIC INPUTS	71
3.4 OBSTACLE 4. ACCESS TO MARKETS	75
3.5 OBSTACLE 5. POLITICAL BUY-IN	80
3.6 OBSTACLE 6. UPTAKE OF AGROECOLOGICAL PRACTICES	84
3.7 OBSTACLE 7. BRINGING EVIDENCE TO BEAR	88
3.8 OBSTACLE 8. FRAGMENTATION OF THE MOVEMENT	95
SECTION 4	
THE WAY FORWARD	98
4.1 LEVERAGE POINT 1: ALLIANCE-BUILDING AND COLLECTIVE ACTION	101
4.2 LEVERAGE POINT 2: INTEGRATED FOOD POLICIES	105
4.3 LEVERAGE POINT 3: FOOD SOVEREIGNTY, TERRITORIAL DEVELOPMENT, AND A NEW ECONOMIC PARADIGM	108
4.4 LEVERAGE POINT 4: AGROECOLOGY AS CRISIS RESPONSE	112
CONCLUSION	114
ANNEX 1	
ALLIANCE BUILDING TOOLKIT	117
ANNEX 2	
METHODS OF DATA COLLECTION AND ANALYSIS	135
REFERENCES	139

INTRODUCTION



West Africa faces a number of urgent and interconnected challenges. With temperatures rising 1.5 times faster than global averages, intense climate variability, reliance on rain-fed agriculture, and limited adaptive capacity, the region is fast becoming a climate hotspot (Sultan & Gaetani, 2016; UNDP, 2020). West African soils are rapidly degrading under the combined effect of climate change, agrochemical pollution, water erosion, loss of biodiversity, and deforestation. These stresses are likely to lead to highly unpredictable agricultural productivity, rural exodus, greater food insecurity, rising poverty, and potentially to socio-economic and political instability. These risks come in a context where 70-80% of the population already lives on less than \$2 a day (Jalloh et al., 2013), and where the COVID-19 pandemic is threatening to plunge millions more into poverty and food insecurity. With one of the youngest populations in the world, questions are also arising about the capacity of West African economies to absorb millions of young people into the labour force.

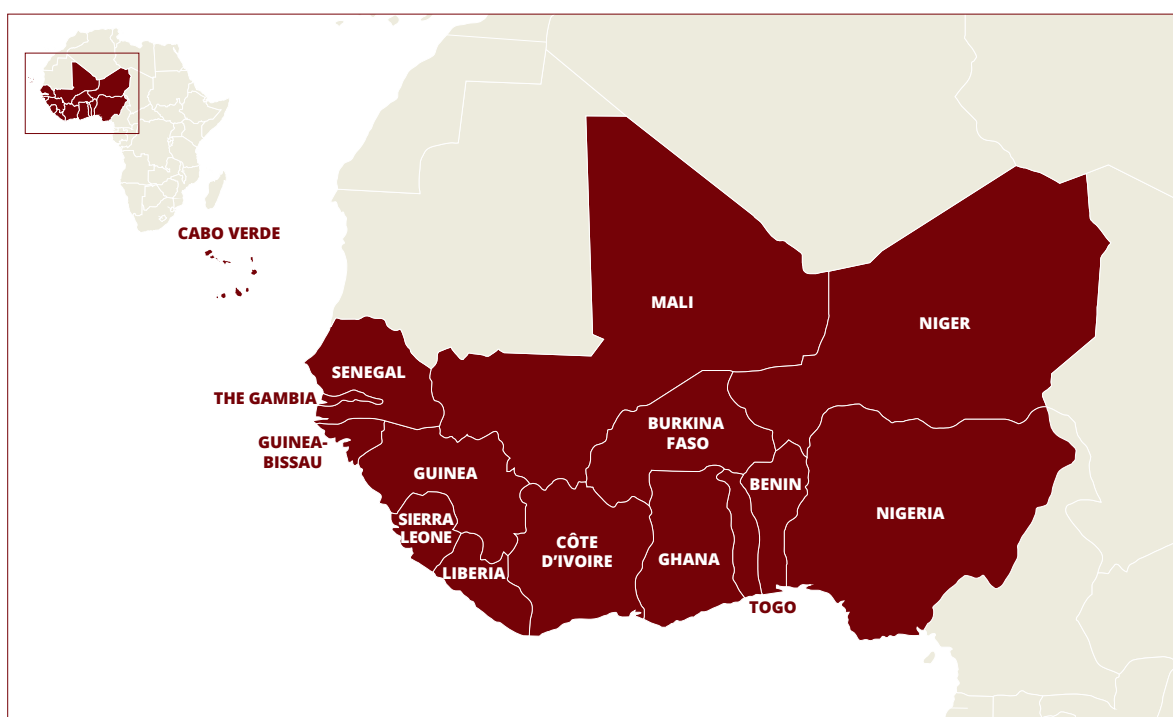
Food systems are at the heart of these challenges – and are changing fast. Agriculture, livestock, and fisheries account for 35% of regional Gross Domestic Product and employ more than 60% of the population (Jalloh et al, 2013). On one hand, West African agriculture is still characterized by diverse agro-sylvo-pastoral production systems: 90% of agricultural production is accounted for by small family farms, producing a range of foods for their households and communities on small plots of land (ECOWAS, 2015). But export commodity zones, large-scale land acquisitions, and huge influxes of foreign investment ('FDI') are also a feature of this complex and varied landscape – signaling the accelerating efforts to commercialize and industrialize all aspects of West African food systems.

Agroecology is emerging as a compelling response to the challenges West Africa faces, and a viable alternative to the industrial agri-development pathway. A growing evidence base from around the world is showing that agroecological systems can keep carbon in the ground, support biodiversity, rebuild soil fertility, strengthen yields by rehabilitating ecosystems (and not at their expense), build nutrition based on access to diverse foods, and provide a basis for secure farm livelihoods.

In West Africa, a vibrant agroecology movement has taken root: a myriad of actors and organizations at the local, national, and regional level are adopting, promoting, and experimenting with agroecology as a way to combine productivity with resource conservation, ecosystem regeneration, food sovereignty, and social justice. But despite these efforts, political support remains limited, and blockages are emerging at multiple levels.

FIGURE 1

MAP OF WEST AFRICA



This report seeks to understand what is blocking the transition to agroecology in West Africa, and how those obstacles might be overcome, focusing in particular on the Economic Community of West African States¹ (ECOWAS), while acknowledging the significant socio-cultural, linguistic, economic, and environmental diversity contained within it (see figure 1). The analysis builds on IPES-Food's 2016 report, *From Uniformity to Diversity*, which identified the factors locking industrial food systems in place at the global level – from trade policies to agricultural subsidies, from market structures to research and educational priorities, from how we talk about food systems to how we measure them.

This report first examines current trends in agricultural development across the ECOWAS region (Section 1), and explores the potential of agroecology as understood in West Africa (Section 2). It then tests the relevance of the global 'lock-ins' in the region while identifying concrete impediments to the development of agroecology faced by farmers and food system actors on the ground, and bringing to light an array of agroecological initiatives that are already challenging the status quo (Section 3). Lastly, the report identifies a series of leverage points for advancing agroecological transition in the region (Section 4).

The report is based on a 3-year process of engagement and cooperation with a wide range of people and organizations working to support the development of sustainable food systems in West Africa (see Box 1). This collaborative spirit led to the co-creation of the Alliance for Agroecology in West-Africa (3AO) in April 2018, whose experiences and lessons learned are captured here (see also Toolkit in Annex 1). It also seeks to bring agroecological alternatives to the attention of new and broader audiences – including policy-makers and donors – whose engagement will be essential in order to overcome the obstacles and unlock the full potential of agroecology in West Africa.

¹ Established in 1975, ECOWAS is a political and economic union of fifteen West African countries, with a mandate to promote economic integration and shared development between its members. The ECOWAS region includes Benin, Burkina Faso, Cabo Verde, Côte d'Ivoire, The Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Mali, Niger, Nigeria, Senegal, Sierra Leone, and Togo. As described in Section 1, ECOWAS guides policy-making on food and agriculture systems at the regional level through a series of plans and programmes. It further serves to implement pan-African frameworks at the regional level, and supports ECOWAS member states in the planning and adoption of national level policies to ensure coordination between different levels of governance (i.e. pan-African, regional, national).

BOX 1

A THREE-YEAR PROCESS OF CONSULTATION AND CO-CREATION

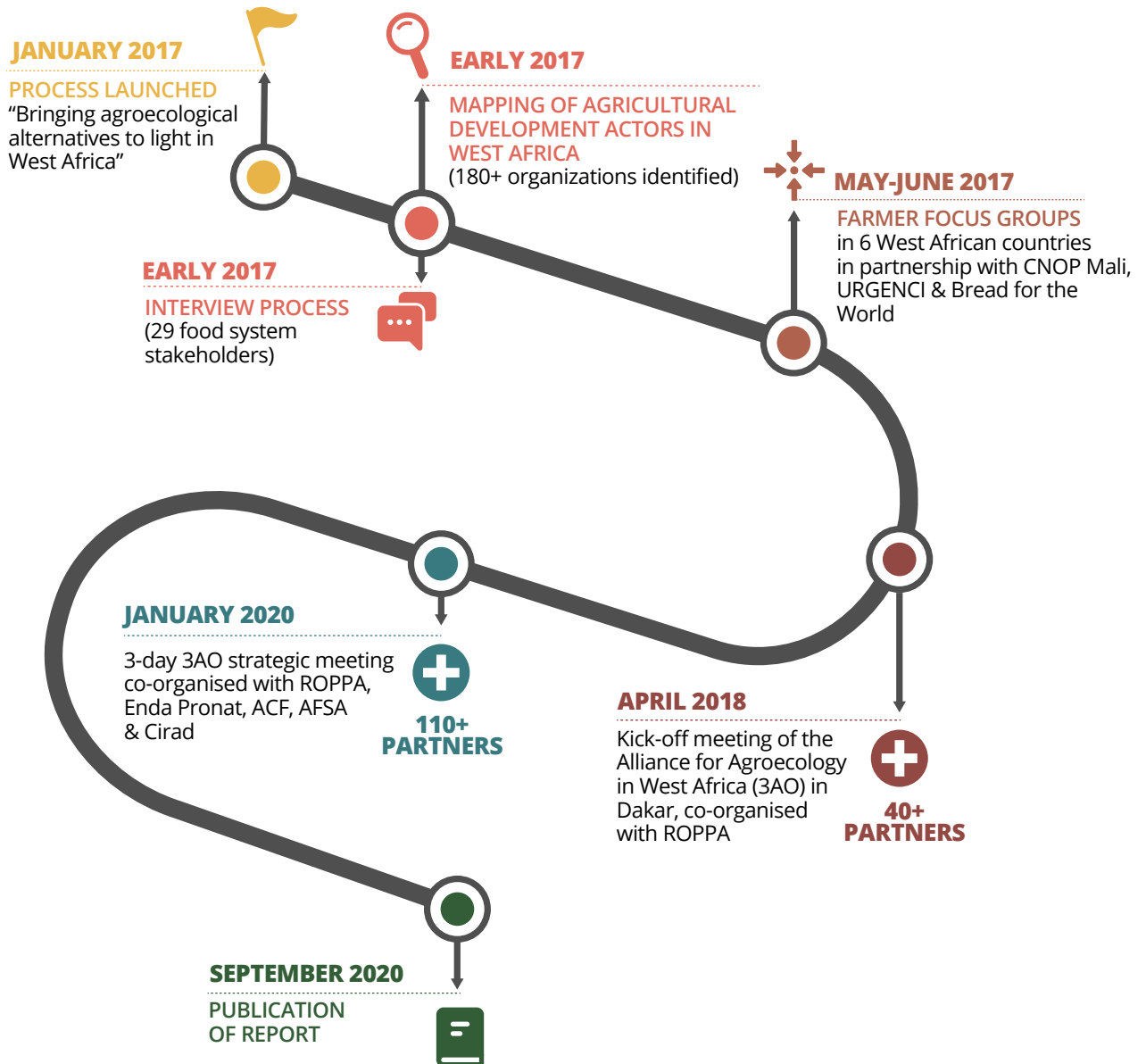


This report is the culmination of a 3-year process developed by IPES-Food to support the development of sustainable food systems in West Africa. The process was launched in January 2017 and included: 29 **interviews** with representatives from farmers' groups, NGOs, research institutions, and international organisations working across the ECOWAS region (early 2017); **full-day focus group meetings** with farmers and consumers in 6 West African countries co-conducted by CNOP Mali, URGENCI and Bread for the World (May-June 2017); a **2-day meeting** in Dakar, co-organised with ROPPA, bringing together 43 food system stakeholders from across the region and leading to the creation of the Alliance for Agroecology in West Africa (3AO) (April 2018); and a **3-day strategic meeting** co-organised with ROPPA, Enda Pronat, ACF, AFSA and Cirad, gathering 114 alliance members and partners to collectively define a way forward for agroecological development in the region (January 2020).

A wide range of food system actors have been involved in all stages of the process, including: civil society groups and social movements; farmers' organizations; scientific researchers and think tanks; officials from national, regional, and international authorities; international NGOs; and foundations. The report not only draws on extensive literature review and data analysis, but also seeks to capture the objectives and priorities expressed by a wide range of actors throughout the process. Direct quotes are used as clarification and evidence throughout the report (See Annex 2 for full description of methods).

FIGURE 2

A THREE-YEAR PROCESS OF CONSULTATION AND CO-CREATION



SECTION 1

AGRICULTURAL DEVELOPMENT PATHWAYS IN WEST AFRICA



This section provides a brief overview of West African agriculture, and the political, socio-economic, and environmental factors that have shaped its development. It then considers agricultural development trajectories adopted in the ECOWAS region since the start of the 20th century, and briefly recaps the major pan-African and regional policies and programmes that have underpinned them. In doing so, this section allows us to understand where opportunities may exist to shift towards more sustainable and resilient agricultural development pathways.

1.1 WEST AFRICAN FOOD SYSTEMS: A RAPIDLY EVOLVING LANDSCAPE

On December 20, 2017, the United Nations General Assembly launched the UN Decade of Family Farming. The initiative aims to encourage public policies in favour of family farmers and to highlight their crucial role in food systems (UN, 2017). This is particularly relevant in West Africa, where small-scale family farming accounts for 90% of agricultural production² and represents the primary source of employment in rural areas (ECOWAS, 2015). With the exception of cash crops for export, family farmers generally cultivate small areas of land (less than 2 ha) for self-consumption and for local and regional markets (NEPAD, 2013). Family farms are at the heart of the economic and social organization of crop, livestock, and fish production systems in the region (ECOWAS, 2015).

Agricultural landscapes vary greatly across West Africa depending on climate (arid, semi-arid, sub-humid, or humid), geography (coastal or landlocked areas), and topography. The main foodstuffs grown and consumed in the region include cereals (maize, sorghum, rice, millet), legumes (peanuts and cowpeas), and roots and tubers (cassava, yams, sweet potatoes). These crops are primarily produced by a large number of small-scale farmers and processors. With more than 65 million cattle and 200 million sheep and goats raised in the region, animal husbandry is a major source of livelihood in many West African countries (GRET, 2017). This region is also home to 5.6 million fishers, fish processors, and traders – of which 60% are women – whose activities sustain many coastal communities and port cities (FAO, 2016c).

² While family farms may vary in size, they are defined as agricultural holdings that are managed and operated by a household, and primarily rely on family rather than hired labour (FAO, 2020d). In West Africa, most agricultural households continue to operate at the smallholder level (<2-5 hectares) (Gollin, 2014).

BOX 2

WOMEN IN WEST AFRICAN FOOD SYSTEMS



Women play a key role in West African food systems, producing between 40-80% of food in the region (Doss et al., 2018; Palacios-Lopez et al., 2018), and playing a leading role in local food distribution and street vending (Otoo et al., 2009). However, data measuring the share of food produced, processed, and sold by women remains inherently complex and varies significantly across countries. In particular, “quantifying the share of food produced by women involves making many arbitrary assumptions about gender roles in the production process” (Doss, 2014).

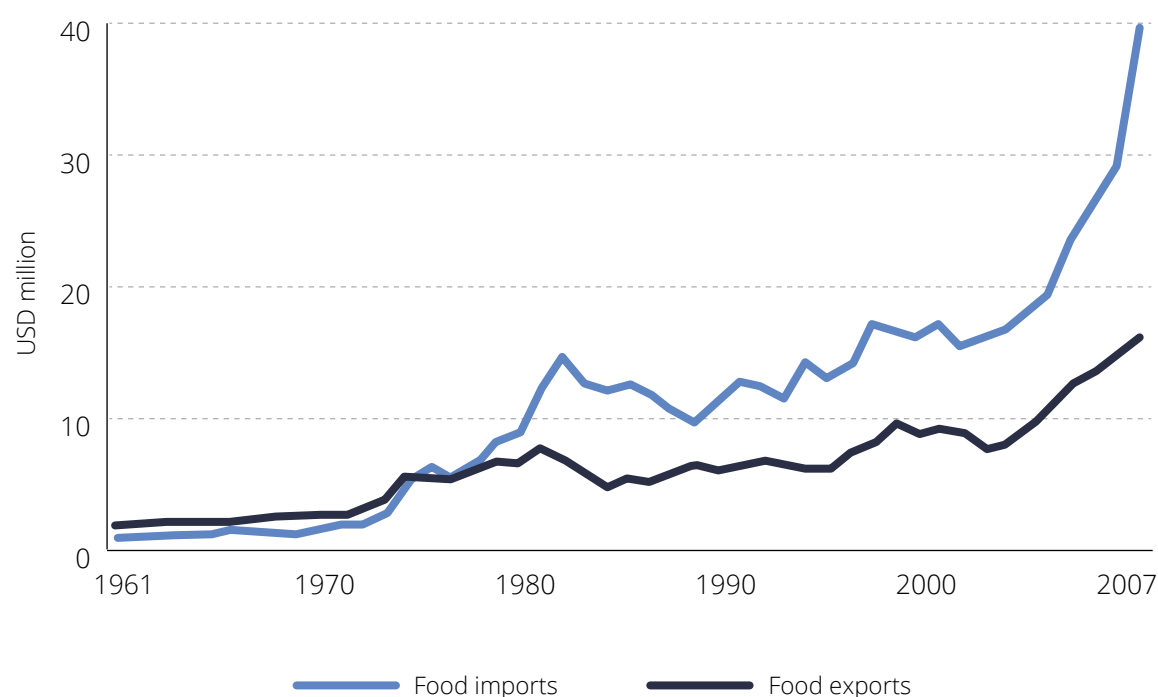
Men and women generally do not produce food separately from one another, but with complementarities between their work and skills (Doss et al., 2018, OECD, 2016). They may engage in distinct cropping or livestock rearing patterns (e.g. cultivating specific crops or tending to different types of livestock), but may also cultivate the same crops for different levels of consumption (e.g. household, local, export) (OECD, 2016). Assessing gendered work in West African food systems also remains difficult as women may qualify their roles and responsibilities differently than men, e.g. in responding to survey data, women may cite ‘caring for their household’ as their primary responsibility, despite their significant contributions to food and farm work (Deere, 2005). For example, while women's kitchen gardens and home plots rarely count as agriculture, they play a crucial role in providing dietary diversity for their families and ensuring food security at the household level (Doss et al., 2018). Women may also contribute at various stages of production, processing, and retail without their work being attributed as such, for example, if they are contributing as part of the family or as non-wage workers (Doss et al., 2018).

Women play a vital role in the food system in spite of persistent inequalities and obstacles to accessing production assets and services – inequalities which leave women and their families more vulnerable to food insecurity (Ben-Ari, 2014; Perez et al., 2015; Walther et al., 2019). West Africa remains a region where Gender Inequality Indices are among the highest in the world (FAO, 2014). Family farming systems tend to reinforce gender inequalities as they are rooted in traditional patriarchal structures (Doss et al., 2018, Sachs, 2018). Meanwhile, the shift towards large-scale commercial farms has reinforced male-dominated activities and positions (Sachs, 2018).

However, a series of rapid changes over recent decades has dramatically altered the role of family farmers, pastoralists, and fishers within their societies and economies. During the 1980s, the African continent shifted from being a net exporter to a net importer of agricultural products (FAO, 2011a) (see figure 3). This trend has been particularly pronounced in West Africa. While self-sufficient in cereals over most of the 20th century, cereal imports increased from 29.4 kg to 49 kg per capita per year between 1983 and 2013 (Bricas et al, 2016a), and by 2017, the region's agricultural trade deficit had reached \$3,88 billion³. Food security in the region has thus also become contingent on – and vulnerable to – price volatility, changes in global distribution infrastructure, and speculation on global commodity markets. However, West African agricultural production has been rapidly increasing since the start of the 21st Century. Between 2000 and 2012, cereal production rose by 59% (+95% for rice and +130% for maize), while poultry production grew by 85% (Inter-Réseaux, 2016a). These trends reflect an increase in cultivated areas and agricultural labour force, rather than improvements in yields, which have remained low in global terms (NEPAD, 2013).

FIGURE 3

A NET FOOD IMPORTER: AFRICA'S FOOD IMPORT & EXPORT TRENDS



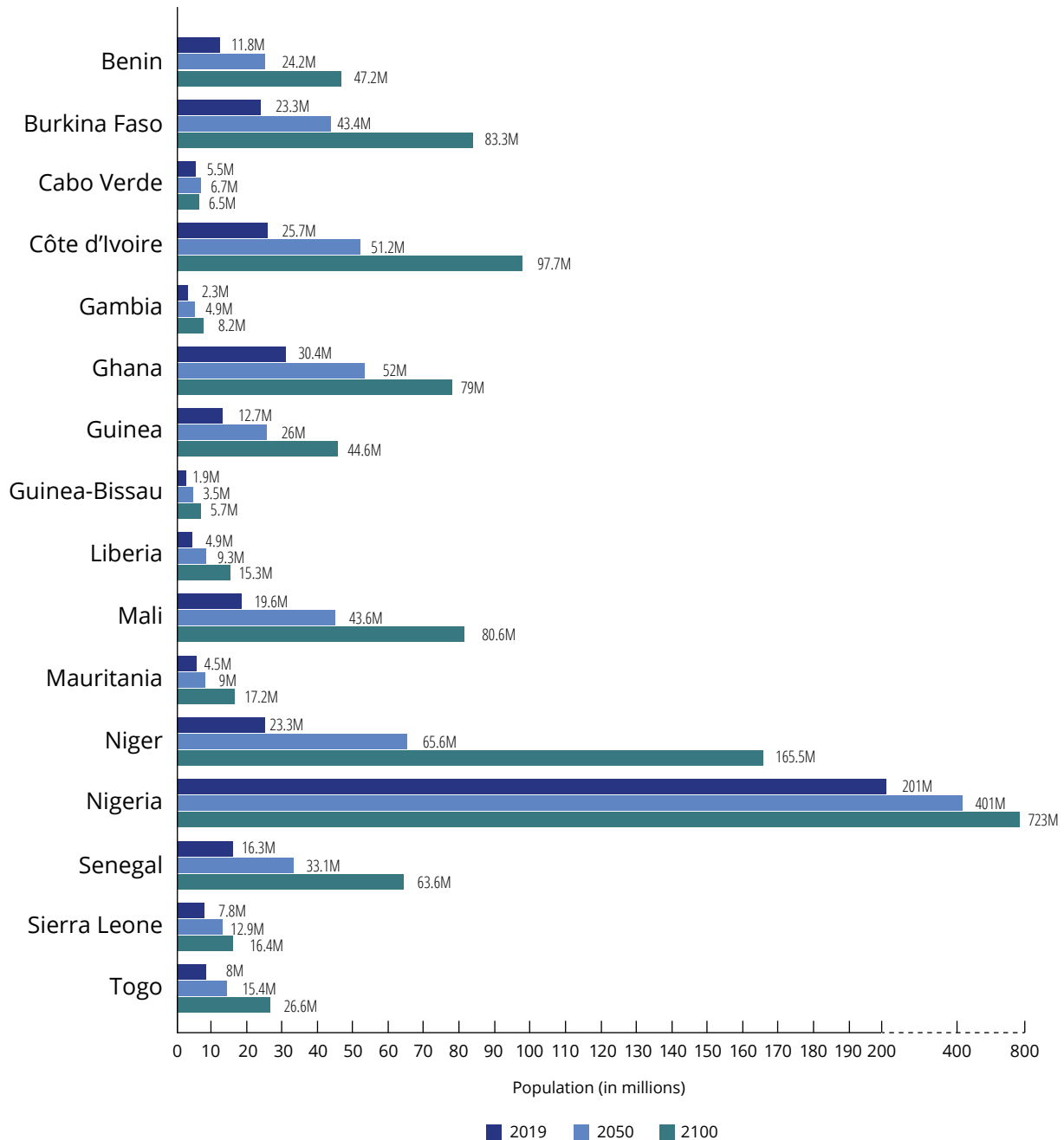
³ Calculation based on data available in the Atlas of Economic Complexity (The Growth Lab at Harvard University, n.d.)

The region has also increasingly invested in post-harvest activities (processing, packaging, distribution, and retail). Off-farm activities now make up 40% of the food sector's value in West Africa, changing the nature of jobs and skills in the sector, and redistributing food sector activities between rural and urban areas (OECD, 2018). While women account for 51% of total food system employment, they play an even more prominent role in off-farm activities, which account for one out of three jobs for women in West Africa's urban areas (compared to one out of seven for men) (Allen et al., 2018).

West Africa is also in the midst of rapid demographic change, with population growth and urbanization driving major socio-economic shifts and exerting new pressures on food systems. Firstly, the region has one of the world's youngest populations. In 2018, 64% of the West and Central African population was under the age of 24 (UNFPA, 2018). Questions are therefore arising about the capacity of West African economies to absorb the millions of young people looking to enter the formal and informal labour force each year (AFD, 2019). While youth labour force participation rates are higher in rural areas than in cities, the agricultural sector remains highly unattractive to most youth, who prefer to live in cities and avoid the strenuous labour and low pay of most farm work (Hollinger & Staatz, 2015).



FIGURE 4

WEST AFRICAN DEMOGRAPHIC OUTLOOK (2019-2100)

Secondly, almost half of the West African population now lives in urban areas, compared to only one third in the 1990s (Hollinger & Staatz, 2015). This rapid urbanization has come with its own set of challenges, including pressures on food demand. The expansion of urban markets has also been characterized by changes in dietary preferences, from ‘traditional diets’ based primarily on cereals, tubers, and some lean meats to a ‘transitional diet’ including higher amounts of white bread,

vegetables, animal protein, dairy products, and “energy-dense processed foods and fast foods” (Bosu, 2015). On the one hand, this dietary shift has been characterized by increased demand for fruits and vegetables, greater dietary diversity, and higher-quality and safer foods particularly amongst a growing urban middle class (Elbehri et al., 2013; Zhuo & Staatz, 2016). On the other, there has been higher consumption of processed and prepared foods by adults and children, leading to rising levels of overweight/obesity, hypertension, and diabetes, affecting both the middle classes and the urban poor in major cities including Accra, Cotonou, and Ouagadougou (Bosu, 2015; Codjoe et al., 2016; Sodjinou et al., 2009). In 2018, processed foods represented 41% of food budgets in urban areas of West Africa, and 36% in rural areas (OECD, 2018).

Due to rural exodus, cross-border migration, and a rising population, urban areas have experienced rapid surges in poverty and unemployment, with serious implications for food security (Bricas, 2019; Matuschke, 2009; Szabo, 2016). Between 1999 and 2006, for example, Accra’s standard poverty rate more than doubled⁴ (UN, 2018). And while poverty rates have decreased across the region since 2003, the absolute number of poor and vulnerable households has grown, and social inequalities have widened – particularly in urban areas (World Bank, 2018).

Indeed, the majority of low income households in rural and urban areas continue to struggle to access a healthy, balanced, and diverse diet. Some 70-80% of the West African population continues to live on less than \$2 a day (Jalloh et al., 2013).⁵ Despite notable progress in reducing malnutrition across the region in recent decades, hunger and malnutrition have been on the rise since 2014 (FAO, 2020c). Chronic malnutrition has been recorded each year during the lean season, affecting 36 million people across the region (OECD, 2015) – with rates of hunger and malnutrition expected to rise significantly during and following the COVID-19 pandemic (FAO, 2020b; Oxfam, 2020). Paradoxically, small-scale farmers, breeders, and fishers are among those most exposed and vulnerable to these challenges (UN, 2020). In addition, the region is now also facing the ‘double burden of malnutrition’⁶, i.e. the coexistence of undernutrition with overweight and obesity, particularly among urban women (Hollinger & Staatz, 2015; WAHO, 2017).

⁴ Standard poverty incidence in Accra jumped from 4.4% to 10.6% between 1999 and 2006 (UN, 2018). Poverty incidence refers to the proportion of families with per capita income less than the per capita poverty threshold compared to the total number of families.

⁵ Côte d'Ivoire proves the one exception in the region, where the percentage of those living on less than \$2 a day is around 50% (Jalloh et al., 2013).

⁶ The fact that 30% of the West African population suffers from either or both under- or over-nourishment shows the severity that this double burden of malnutrition imposes on West Africa’s health systems, which are generally already overstretched (van Wesenbeeck, 2018).

Lastly, while West Africa emits only 2% of global greenhouse gas emissions, temperatures in the region are increasing at a rate 1.5 times higher than global averages (Kairé et al., 2015; USAID, 2019). West Africa has frequently been cited as a climate change ‘hotspot’, due to intense climate variability, reliance on rain-fed agriculture, and limited socio-economic and institutional capacity to respond to major changes (Sultan & Gaetani, 2016; UNDP, 2020). The region already suffers from rising instances of heat stresses and water scarcity as a result of extreme weather events such as droughts, excessive rains, and floods (USAID, 2018). At the same time, intensive pressures on natural resources from human activity (e.g. urbanization, agriculture, overfishing, logging, mining, oil and gas extraction) are driving deforestation, loss of biodiversity, and the degradation of water and soils across the region, further contributing to climate change and simultaneously undermining the functioning and quality of natural resources that underpin agricultural production. Together, natural and man-made stresses are likely to continue over the coming decades, contributing to highly unpredictable agricultural productivity, loss of biodiversity, greater food insecurity, as well as socio-economic and political instability.

West African food systems, therefore, are being reshaped by these demographic, health, and climate pressures. In addition, following the Ebola crisis of 2014-2016, the region now faces another major public health crisis in the shape of COVID-19.



1.2 NEW ACTORS AND OLD IMPERATIVES: EVOLVING AGRICULTURAL DEVELOPMENT TRAJECTORIES IN WEST AFRICA

For centuries, food production in West Africa has relied on small family farmers using little to no external inputs, pastoralists drawing on extensive grazing systems, as well as small-scale fishers and community-based fisheries. However, the dominant agricultural development trajectories shaping West Africa today are deeply rooted in a colonial legacy of export commodity production to meet demand overseas. As early as the 19th century, colonial powers developed large-scale agricultural development projects in the region, specialized in a few tropical crops, to support the expansion of colonial outposts and the early stages of their industrial revolutions (Brooks, 1975; Curry-Machado, 2013; Gann et al., 1975).

Community-based and indigenous tenure systems were undermined by a new series of laws to allocate control of natural resources (land, forests, waterways, pastures) to the colonial state (Cotula, 2007; FAO, 1997). The economies, societies and natural environments of West African countries were profoundly reshaped over the course of a century by the colonial imperative to dedicate land, labor, and resources to the production of 'exotic foodstuffs' (Austin, 2010 ; Bonneuil & Kleiche, 1993).

Even as West African countries gained independence in the early 1960s, the logic of export commodity specialization endured. The rise of neoliberal economic theory, and particularly the idea of 'comparative advantage', helped to legitimize further specialization, industrialization, and mechanization of West African agriculture. Enduring economic ties between former colonial powers and newly independent states served to entrench this logic, with support from West African elites. Facilitated by the integration of West African states into the global economy, the region also began to undergo the early stages of a 'Green Revolution'. This productivist approach to agricultural development, rolled out in the 1950s and 1960s, was based on technological transfer initiatives (e.g. mechanization, synthetic fertilizer use, irrigation, improved seeds). It promised to ensure food security for developing countries and increase their competitiveness on international markets (UNECA, 2004). Uptake of Green Revolution approaches, however, was less extensive on the African continent than in Southeast Asia and Latin America. Nevertheless, it left its mark by embedding the intensive industrial agriculture paradigm as the pathway towards economic growth. It was also during this period that West African governments worked to further consolidate the cash crop commodity chains (cotton, coffee, cocoa) first developed during the colonial era (OECD/SWAC, 2007).

BOX 3

UNDERSTANDING INDUSTRIAL AGRICULTURE AND ITS CHALLENGES



Industrial agriculture refers to a wide spectrum of farming models based around specialized commodity-crop production (e.g. monocultures), intensive livestock farming, the use of genetically uniform varieties and breeds, highly-mechanized production systems, intensive use of synthetic inputs, and the production of large volumes of homogenous products for distance/international markets. Industrial systems focus on maximization of yields/economic returns (over environmental or social returns), and are characterized by long value chains. In this report, industrial agriculture encompasses smaller-scale 'conventional agriculture' as well as larger-scale industrialized systems.

While early industrialization of agriculture succeeded in increasing agricultural productivity worldwide, it has also engendered a series of negative social, economic, and environmental consequences. Agricultural yields are now plateauing in almost half of the world's rice and wheat areas, including in the wealthiest and most industrialized regions (Ray et al., 2012). Pests, viruses, fungi, bacteria and weeds are becoming increasingly resistant to chemical inputs; for example, 210 weed species have already been identified as herbicide resistant (Pimentel & Peshin, 2014). Pesticides are also driving the widespread loss of insects and pollinators, whose services are crucial to agricultural production and ecosystem health (Culliney, 2013; Sánchez-Bayo & Wyckhuys, 2019; Shiva, 2016; van Lexmond et al., 2015). The use of chemical inputs has also driven the collapse of soil health and related ecosystem processes (e.g. nutrient recycling, maintenance of soil structure, natural pest control) – with land degradation affecting more than 75% of African arable land (IPES-Food 2016; Prashar & Shah, 2016). High input costs, low margins, and reliance on a limited number of large buyers, means that industrial agriculture fails to deliver secure livelihoods for farmers and undermines their autonomy (IPES-Food, 2016; Bassermann & Urhahn, 2020; van der Meer, 2006; Lee et al., 2012). Countries relying on export commodities often face price volatility, declining terms of trade, and depletion of resources for domestic food production (IPES-Food, 2016).

Over the 1980s and 1990s, public investment in agriculture declined, with states using export agriculture as the means to finance growth in the manufacturing sector (Fouilleux & Balié, 2009). The conditionalities attached to the World Bank and IMF's structural adjustment programs led West African governments to phase out agricultural subsidies and trade protections, and to undertake other forms of market liberalization (AFSA, 2017). The resulting decline in government spending on agriculture was accompanied by a drop in financial support from development aid and donor agencies in the global North. For example, the amount of agricultural aid flowing to Africa from the OECD's Development Assistance Committee dropped from around \$12.5 billion (or 17% of total aid) in the 1980s to only \$6.2 billion (or 6%) in 2006 (Gabas, 2011).

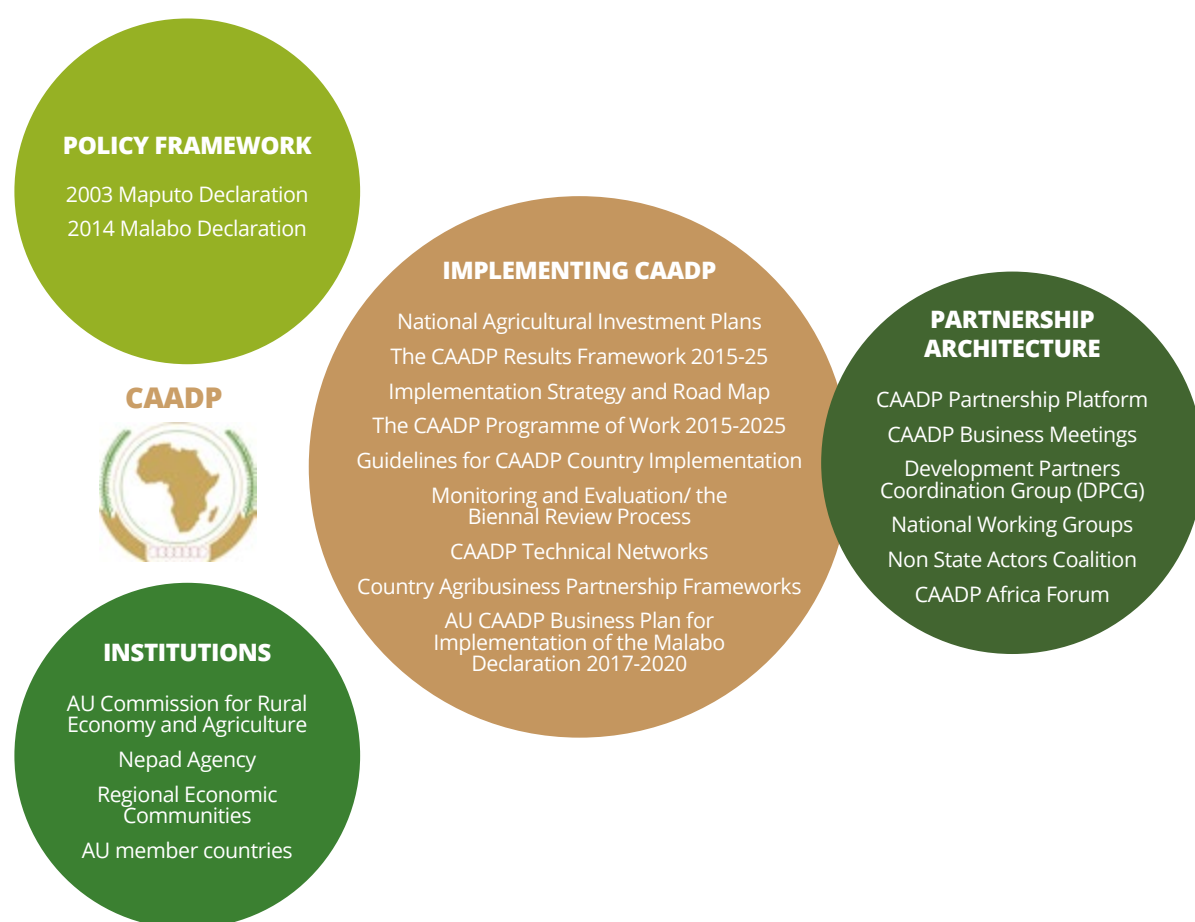
It was also during the early 1990s that an international movement began to form around sustainability and climate change. The Rio Declaration on Environment and Development (1992) and the Rome Declaration on World Food Security (1996) ushered in the first comprehensive action plans to combat food insecurity using sustainable development strategies. And while primarily framed around productivist narratives (i.e. the need to grow more food for a growing population), the Convention on Biological Diversity, adopted in 1993, made the first strides to protect biological diversity at the international level, including the fair and equitable sharing of benefits arising from the use of biological and genetic resources. The following years also saw an increasing focus on poverty eradication. Initiatives like Jubilee 2000 and the 'Make Poverty History' campaign underlined the need for debt relief and more ambitious development aid commitments, alongside a proliferation of community-based natural resource management approaches prioritizing local control and livelihoods. Meanwhile the World Bank and IMF placed renewed emphasis on poverty reduction targets, and strengthened the Heavily Indebted Poor Country (HIPC) initiative, while debt relief was placed higher on the G7 agenda.

The turn of the century also saw the inception of the UN Millennium Development Goals (MDGs): the first set of internationally agreed objectives on poverty eradication, environmental protection, human rights, and improving health and education. The new MDG-focused agenda signaled growing understanding that poverty and inequality were tied to questions of access to education, health, nutrition, and other areas of human development.

Following the launch of the MDGs, the African agricultural sector received unprecedented attention, particularly from the newly created African Union (AU). After decades of persistent underinvestment in the sector, the AU developed the Comprehensive Africa Agriculture Development Programme (CAADP) in 2003 to guide agri-development under the New Partnership for Africa's Development⁷ (NEPAD). CAADP became the first pan-African policy framework to recognize agriculture's potential to contribute to food security and nutrition, economic growth, farmer livelihoods, and climate resilience. Under the CAADP, the 2003 Maputo Declaration on Agriculture and Food Security in Africa committed all signatory governments of the AU to allocate at least 10% of their public expenditure to agricultural and rural development, and to aim for an annual agricultural productivity growth rate of 6% (AU, 2003; AU & NEPAD, 2006).

FIGURE 5:

UNDERSTANDING CAADP: AN OVERARCHING FRAMEWORK OF ACTION FOR AGRI-DEVELOPMENT IN AFRICA



⁷ The New Partnership for Africa's Development (NEPAD) is an economic development programme of the African Union. Adopted in 2001, NEPAD provides a policy framework for accelerating economic cooperation and integration between African countries. NEPAD's four main objectives are to eradicate poverty, promote sustainable development and growth, integrate Africa in the world economy, and accelerate the empowerment of women. (NEPAD, n.d.)

BOX 4

ECOWAP: LEADING THE WAY IN IMPLEMENTATION OF CAADP



ECOWAP has successfully translated CAADP into a regional policy framework, in part due to the participatory process adopted in the design and implementation of the programme. ECOWAP was established through inclusive participation during regional and national level consultations to develop locally-relevant policies. The involvement of farmer and peasant organizations in these processes has been lauded by civil society groups and peasant organizations alike for generating uptake of these programmes on the ground (ROPPA, n.d.). However, inclusive participation has not been systematically ensured across the region, leading to major discrepancies in how regional plans are reviewed and implemented at the national level (ROPPA, n.d.).

A number of countries in the region have also proven particularly successful in implementing the programme, reflecting strong buy-in from their governments. For example, Burkina Faso, 80% of whose population is engaged in agriculture, has consistently dedicated more than 10% of its annual budget to agriculture and rural development between 2006-2010, and reached 9% growth in its agricultural sector in 2010 (Angelucci et al., 2013). Through the commitments of President John Kufuor, Ghana also succeeded in halving domestic hunger between 2001 and 2009, through heavy investments in supporting its agricultural sector (AFSA, 2017).

However, a general lack of buy-in for ECOWAP from a number of governments – who are ultimately responsible for monitoring and implementing policies – has led to persistent lack of funds, or technical and governance capacities (AFSA, 2017; Oxfam, 2015). Ten years into the implementation of CAADP, only 6 of 15 ECOWAS members (Burkina Faso, Ghana, Guinea, Mali, Niger, and Senegal) had met or surpassed the 10% Maputo target rate for one or more years (Benin & Yu, 2013). According to the latest figures, only Burkina Faso, Gambia, Guinea Bissau, Nigeria, and Senegal have reached the 6% target for agricultural growth, likely due to lingering difficulties in securing public funds to support the sector (AFSA, 2017).

Although continental in scope, the CAADP framework was intended to be implemented through national and regional plans and programmes to promote agricultural growth. In West Africa, the CAADP was translated into ECOWAS' own regional agricultural policy (ECOWAP) in 2005. Supported by \$9 million of ECOWAS funding, ECOWAP has coordinated and implemented the Regional Agricultural Investment Plan (RAIP – or PRIA in French), and supported the development of National Agricultural Investment Plans (NAIP) and National Agricultural, Food and Nutrition Security Investment Programme (NAFNSIP) in line with CAADP.^{8,9} By 2014, all 15 member states had developed their own NAIPs (AFSA, 2017).

Until 2006-2007, investment in West African agriculture had been limited to state expenditure, official development assistance (ODA), concessional loans from the International Monetary Fund (IMF) and the World Bank, and largely neglected by private finance (Jorand, 2014). It was not until the 2007-2008 global financial crisis, and the related spike in agricultural commodity prices, that food security – and agriculture – was truly propelled to the top of the international agenda. Supply shocks and spiraling food prices undermined access to basic staple foods and sparked civil unrest in several African countries. In this context, increasing agricultural productivity was re-emphasized as a priority to fight hunger and malnutrition, with significant backing from international agencies and private companies. Indeed, the push to improve agricultural yields sparked new interest in African agriculture and farmland from global private investors and multinationals.

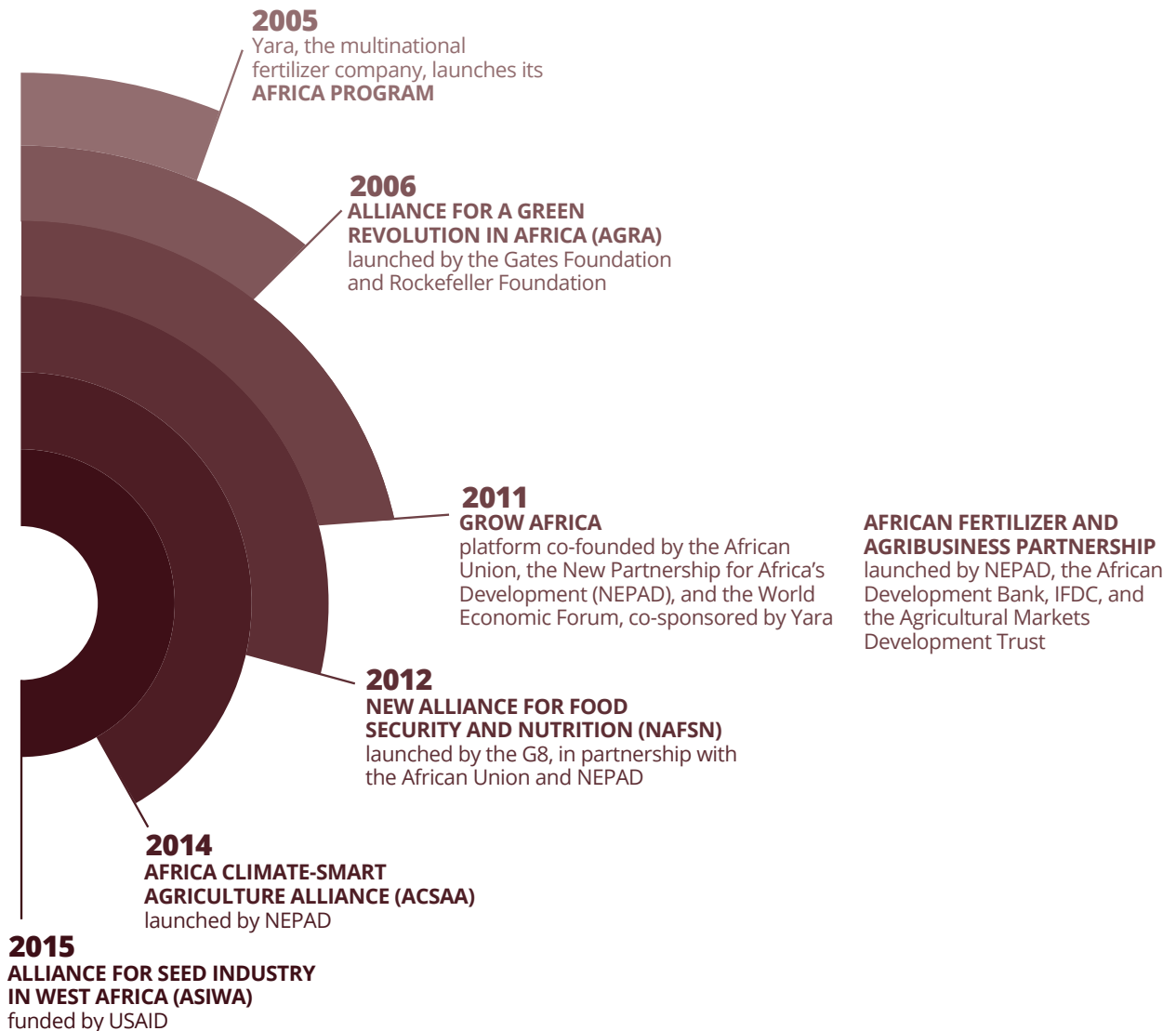
Sources of financing for West African agriculture rapidly multiplied over this period, via access to international bond markets (10% increase since 2010), and the involvement of private foundations (e.g. Bill & Melinda Gates Foundation), agribusinesses (e.g. Monsanto, Syngenta, Yara), guarantee funds, and investment funds. New partnerships for investing in African agriculture proliferated, including the Alliance for a Green Revolution in Africa (AGRA) funded by the Gates Foundation and the Rockefeller Foundation (2006), the Grow Africa platform co-founded by the African Union, the New Partnership for Africa's Development (NEPAD), and the World Economic Forum (2011), and the G8's New Alliance for Food Security and Nutrition (NAFSN) (2012) (Fouilleux et al., 2017).

⁸ In 2009, ECOWAP was formalized as a CAADP Regional Partnership Compact to facilitate and harmonize implementation of the CAADP within a regional framework. In 2013, ECOWAS further tasked the new Regional Agency for Agriculture and Food (RAAF) to serve as a technical body ensuring the regional implementation of agricultural investment plans and programmes.

⁹ As an additional regional strategy, the Economic and Monetary Union of West Africa (WAEMU) has sought to strengthen its commitment to agriculture through the Community Development Programme for the Transformation of Agriculture (2016-2025). The programme, aimed at eradicating hunger, poverty, and malnutrition, includes a number of provisions to support family farming through training and professionalization, while increasing access to technologies and inputs such as seeds and fertilizers. The programme also foresees the establishment of a system for Payment for Ecosystem Services (PES) as a way of protecting natural resources. In order to create an appropriate business environment for the development of the agricultural sector, the programme further defines objectives such as creating transport infrastructure to enable the growth of agropoles.

FIGURE 6

THE PROLIFERATION OF PRIVATE SECTOR INITIATIVES IN AFRICA



Between 2004 and 2011, foreign direct investment (FDI) in West African agriculture rose from \$5.5 million to \$510 million (FAO, 2004-2011). In 2007, FDI to West Africa increased by 63% – the fastest increase in FDI in the world that year (FAO, 2011a). A 2013 meta-study found that the food and drink processing sector accounted for the greatest share of FDI in the African agri-food sector (Dentoni & Mitsopoulos, 2013), with West Africa receiving the continent's highest levels of foreign investment in this sector (FAO, 2016b).

Emerging countries,¹⁰ including Brazil, China, and India, have also accounted for an increasing share of total FDI to Africa – rising from 8 to 12% between 2009 and 2012, while FDI from OECD countries almost halved following the 2008 financial crisis (from \$34 billion to \$15.7 billion between 2008 and 2012) (Adams & Opoku, 2017). Since 2013, 5 of the top 10 investor economies in African have been non-OECD countries – with their share of total FDI consistently on the rise (UNCTAD, 2019).

The influence of new actors over (West) African agricultural development became particularly evident over this period. Most notably, the CAADP was progressively reoriented towards an industrial ‘Green Revolution’ approach through a succession of initiatives heavily promoting the use of external inputs such as synthetic pesticides and fertilizers, and hybrid seeds (ActionAid, 2013; AFSA, 2017). This was most evident through the 2006 Abuja Declaration on Fertilizers for an African Green Revolution, under which the AU’s Ministers of Agriculture committed to increase fertilizer use from an average 8kg per hectare to 50kg.¹¹ The Declaration included further commitments to reduce the cost of fertilizer procurement through subsidization and the tax- and duty-free movement of fertilizers across regions, supported in part by the newly developed African Fertilizer Development Financing Fund (AfDB, n.d.).



¹⁰ The recent influence of new major bilateral donors, namely Brazil and China, is still being assessed today. However, early research has emphasized that these new investors have allowed for a wider range of government actors to interact with African states under potentially more flexible and experimental forms than traditional arrangements with post-colonial countries (Scoones et al., 2016). They have also significantly increased investments in sectors previously ignored by development actors (e.g. agriculture, SMEs), while allowing for new forms of technology and knowledge transfers (Marafa et al., 2020; Scoones et al., 2016). Uncertainties remain, however, on the ability of these new actors to support a shift away from productivist narratives and towards sustainable development, and on their willingness to break down the unequal power dynamics between donor and recipient countries still present in the region (Amanor & Chichava, 2016).

¹¹ While rates have been increasing, the use of synthetic fertilizers in West Africa remains very low compared to their use in other regions. Most West African countries’ average use of fertilizers were well below 40kg per hectare of arable land in 2016. In contrast, average use of fertilizers in Brazil was 186kg/ha, 208kg/ha in the European Union, and 500kg in China (FAO, 2016a).

BOX 5

SPOTLIGHT ON NATIONAL POLICIES: SUPPORTING THE DEVELOPMENT OF 'GREEN REVOLUTION' APPROACHES



- **Ghana's** Food and Agricultural Sector Development Policy (FASDEP II) aims to foster an enabling environment for the private sector, the enhancement of trade, the use of inputs, and the use of biotechnology tools in crop and livestock improvement research.
- **Senegal's** Agricultural Development Plan (PRACAS II) aims to "increase agricultural production by improving access to agricultural inputs and equipment, improving plant health through the safe use of pesticides, as well as providing adequate advisory support for these systems," and will support the development of three major agropoles.
- **Cote d'Ivoire's** National Agricultural Investment Plan (PNIA) promotes the use of climate-smart agriculture through policy and investment support. This approach is further supported by the 2014 National Communication on Climate-smart Agriculture, national research institutions (e.g. the CNRA), and through the support of international agribusinesses including Cargill and Saco-Barry Callebaut.
- **Nigeria's** Agricultural Transformation Agenda (ATA) encourages the development of biotechnology in the livestock and crop production sector, following low levels of production reported of indigenous cattle and cotton varieties.

ECOWAS's 2008 West Africa Agricultural Productivity Programme (WAAPP), funded by the World Bank, gave renewed attention to agricultural research, extension, and training to boost productivity in West Africa. Coordinated by the West and Central Africa Council for Agricultural Research and Development (CORAF), the programme's main objectives are to support national governments in reaching CAADP objectives, namely through the adoption of climate-smart technologies to boost productivity, reduce post-harvest losses, and improve nutrition.

The WAAPP's crop-specific research programmes have focused on improving the yields of major staple commodities including rice, maize, and wheat, to the detriment of local crops including yams in tropical West Africa or cowpeas in the Sahel region. One of WAAPP's main achievements, however, has been its ability to establish a regional approach to agricultural research. While most national research centers in the area were previously small, underfunded, and focused on similar research questions to its neighbors, the WAAPP has fostered cooperation and succeeded in pooling knowledge to reduce redundancies between research centers. Integration, however, runs the risk of simplifying the process for private investors to influence the orientation of regional research programmes.

'Green Revolution' approaches were further advanced by the African Fertilizer and Agribusiness Partnership developed in 2011, a collaborative partnership between NEPAD, the African Development Bank, the IFDC, and the Agricultural Markets Development Trust. Established to encourage regional harmonization of fertilizer policies and regulations, the partnership pushed to increase fertilizer use in national and regional agricultural development plans, and received strong backing from major multinational companies including Monsanto and Yara (AFSA, 2017). Similarly, NEPAD launched the Africa Climate-smart Agriculture Alliance (ACSAA) in 2014 to facilitate multi-sectoral collaboration to promote climate-smart agriculture¹² in the national implementation of CAADP.

The 2012 USAID-funded West African Fertilizer and Seed Programmes (WAFP and WASP)¹³ also sought to increase availability of commercial inputs in the region, as well as increasing the involvement of private sector actors in the development of West African agriculture. At the same time, ECOWAP and ECOWAS's Bank for Investment and Development have promoted Public Private Partnerships (PPPs) and greater involvement of multinational companies in the development of West African agriculture.

¹² While climate-smart agriculture has no agreed upon definition, it has largely been defined as an "integrated approach to managing landscapes that address the interlinked challenges of food security and climate change" (World Bank, 2019b; FAO, n.d.). Its solutions are primarily developed around increasing productivity and resilience, and reducing emissions. It includes strategies drawing from precision farming, no-till farming, and genetic engineering. Some definitions of climate-smart agriculture include approaches relating to organic and agroecological practices, but many proponents of these approaches reject this link due to perceived incompatibilities between them. For example, as described by ETC Group, "Climate-Smart Agriculture has become the new slogan for the agricultural research establishment and the corporate sector to position themselves as the solution to the food and climate crisis. For the world's small farmers, there is nothing smart about this. It is just another way to push corporate controlled technologies into their fields and rob them of their land." (Idel & Beste, 2020)

¹³ These programmes, running between 2012-2017 were supported by USAID. Following completion of these programs, the Alliance for Seed Industry in West Africa (ASIWA) and the West Africa Seed Committee (WASC) were created to pursue the further privatization of the regional seed and input industries.

But the 'reinvestment in agriculture' did not come with a major influx of public funding, which remained low even ten years after the Maputo Declaration (Inter-Réseaux, 2019). By 2013, only 13 of 55 member states had met or surpassed the Maputo commitments over one or more years (Benin & Yu, 2013). As such, the 2014 Malabo Declaration on Accelerated Growth and Transformation for Shared Prosperity and Improved Livelihoods reaffirmed African governments' commitment to meet the Maputo targets. The Malabo Declaration further underlined the need to enhance investment in agriculture, end hunger, reduce poverty, boost intra-African trade, and enhance resilience of livelihoods and food systems to climate change and related risks through mutual accountability. The effort proved successful. By 2015, 41 African Union Member States had signed on to CAADP, of which 33 have developed formal national agriculture and food security investment plans.

However, private sector actors have continued to use their growing leverage to push for a political, fiscal, and legal environment that is increasingly conducive to further food system industrialization and FDI opportunities (Dentoni & Mitsopoulos, 2013). The proliferation of PPPs has deepened the influence of private actors over natural resource use and the organization of agricultural value chains, particularly through the development of 'agricultural growth poles' (or 'agropoles') to support the further international market expansion of West African agriculture (Goïta, 2014). These partnerships have served to concentrate agricultural investments and capital in areas with high agronomic potential (irrigated or irrigable land) or areas already well-connected to global supply chains by existing infrastructure (Inter-Réseaux, 2016b).



SPOTLIGHT ON NATIONAL POLICIES: SUPPORTING THE DEVELOPMENT OF AGROPOLES



- **Benin's 2017-2021 food and nutrition security policy** (NAFNSIP 2017-2021) primarily supports the development of commodity supply chains including rice, corn, pineapple, cassava, and cashews, and a major agropole for cotton. The private sector is identified as a key partner in the implementation of the NAFNSIP, with agricultural investments structured through PPPs. It has primarily been tasked with creating value-adding opportunities, by improving processing infrastructure and opportunities for local agrifood businesses.
- **Togo's agricultural development strategy** (PA-PSTAT 2030) is based on a territorial approach that includes the development of 3 major agropoles: sesame, poultry, and beverages (in the Kara Bassin); rice, poultry, and livestock (Oti Bassin); and support for the development of a cashew agropole by private sector partners (Haut-Mono region).
- **Burkina Faso's agricultural development programme** (PNSR 2) is structured around the development of agropoles, including 9,000 ha of hydroculture. PPP and public funds have been earmarked to finance programme activities in its NAIP. In 2011, the Bagré Growth Pole was meant to become one of Burkina's largest PPP-based agro-industrial irrigation projects, but it is facing major challenges, including funding constraints and difficulties addressing community displacement.

Over the past two decades, however, calls for sustainable and equitable agricultural development trajectories have increasingly been made alongside these developments. At the international level, a number of landmark international treaties and agreements have been adopted, including the Cartagena Protocol on Biosafety (2003), the Strategic Plan for Biological Diversity 2011-2020 (2010), the Paris Agreement on Climate Change (2015), the Sustainable Development Goals (2015), the Sendai Framework for Action for Disaster Risk Reduction 2015-2030 (2015), and the Committee on World Food Security's draft Voluntary Guidelines on Food Systems and Nutrition (2019), amongst others. In addition, foreign governments have begun to express their disagreement with dominant agricultural trajectories.

In 2018, for example, France announced withdrawal of its support for NAFSN on the basis that its objectives were not serving to support smallholder farmers and promote inclusive rural development as stated, but rather to deliver increasing profits for multinational companies (Lorenz & Barbière, 2018).

At the pan-African-level, a growing number of frameworks and guidelines have also attempted to reorient agricultural development around a more multifaceted understanding of sustainability. The 2004 Sirte Declaration sought to enhance sustainable development in Africa by prioritizing the implementation of integrated land, water, and agriculture programs. Acknowledging the link between land governance, agricultural sustainability, and resilience, the AU adopted the Framework and Guidelines on Land Policy in Africa (F&G) in 2009 to address growing challenges around security of tenure due to an increase in foreign land acquisitions. The F&G on Land Policy formally acknowledged the importance of smallholder farmers in contributing to food security and poverty reduction, the need to end discrimination against women's ownership and control of land resources, and the need for inclusive, equitable, and sustainable development of land policy based on better integration between indigenous and modern land rights regimes (Institute for Poverty, Land & Agrarian Studies, 2014).

In 2013, the AU launched Agenda 2063, making a strong and unprecedented case to break away from the legacies left behind by colonialism, and asserted the need for self-determination, solidarity, and unity between African States (AU, 2015). Serving as a strategic framework to shape the continent's development over the next 50 years, Agenda 2063 calls for development based on "inclusive and sustainable [growth] driven by its own citizens" (AU, n.d.). In doing so, the strategy opens the door to agricultural development pathways that are more responsive to actors (e.g. family farmers, smallholders, women, youth) who have been marginalized by the continuous pressures of industrial development.

ECOWAS and other African regional economic communities have also worked to promote intra-African and intra-regional trade in more recent years (ECOWAS et al., 2017). With the aim of advancing food and nutritional security at the domestic and regional level, COMESA, EAC, and SADC established a Tripartite Free Trade Area in 2015. Reaffirming commitments to agriculture through the 2014 Malabo Declaration, signatory states also committed to triple intra-African trade in agricultural goods and services.

The Declaration on Women Empowerment and Development, adopted by the AU in June 2015, sought to prioritize the inclusion of women in agricultural entrepreneurship and to improve their rights to land, capital, and other productive assets. Further, the 2015-2025 Ecological Organic Agriculture Initiative (EOA) was developed to integrate organic agriculture and holistic production management in the development of national agricultural plans and policies. The initiative responded to a call from the AU to promote organic agriculture in Africa, and was developed in partnership with Biovision Africa Trust and PELUM Kenya. This NGO-led process emphasizes both scientific and traditional knowledge to support sustainable food systems development, local food security, and food sovereignty, based on optimal management of natural resources, biodiversity preservation, and promotion of research, training, and extension support systems. It further prioritizes women, youth, and smallholder communities as key partners in the development of sustainable production systems.

Following a reorientation of ECOWAP in 2016 and the release of the framework's Strategic Orientation Framework for 2025 (ECOWAP+10), ECOWAP also appears to be turning to an alternative paradigm based on "a modern and competitive, inclusive, and sustainable agro-sylvo-pastoral and fishery sector, guaranteeing decent jobs, food and nutritional security, and food sovereignty" (ECOWAS et al., 2017). This reorientation builds on ECOWAS' recognition that the dominant agricultural model – and its dependence on cheap labor, precarious livelihoods, and overexploitation of natural resources – had become "unsustainable" (ECOWAS, 2008). Through financial support from the French Development Agency (AFD), ECOWAS has also launched the Agroecological Transition Support Project in West Africa (PATAE) in 2018 to support the emergence, adoption, and dissemination of agroecological practices across family farms and communities in five pilot countries.

To address nutrition concerns, the Scaling Up Nutrition (SUN) Movement, launched in 2009, urged governments, private actors, researchers, and civil society to collaboratively invest in maternal and child nutrition as a key pathway towards sustainable development. Now adopted by 61 countries – including a majority of ECOWAS states, SUN encourages the uptake of an integrated, cross-sectoral, and rights-based approach to nutrition policy at all levels of governance. At the pan-African level, the AU also launched the African Regional Nutrition Strategy (ARNS) for 2015-2025 to address regionally-specific malnutrition issues, including reducing incidences of stunting and wasting among children under 5 years old. This strategy was translated into the development of broad regional food security and nutrition policy frameworks, including the RAIP for Food security and Nutrition (RAIPFNS) in

2016. In 2019, the AUDA-NEPAD Nutrition and Food Systems Implementation Plan (NFSIP) was further developed to foster multi-level alignment and harmonization between agriculture, food systems, and nutrition policies and programs in Africa. Indeed, the ARNS and NFSIP are part of a growing number of policies developed by the AU, recognizing the need for greater policy integration between health, agricultural, and related sectors to ensure food and nutrition security.

BOX 7

SPOTLIGHT ON NATIONAL POLICIES: RECOGNIZING THE ROLE OF FAMILY FARMERS AND MARGINALIZED GROUPS



Support and recognition for family farmers has made its way into a number of national agricultural development programmes, including:

- **Benin's** NAFNSIP supports “the progressive professionalization of family farms. This support will help strengthen family farmers’ central and essential role in ensuring food and nutritional security in the country, and build resilience for vulnerable populations, [...] including women, youth, and entrepreneurs.”
- **Burkina Faso's** PNSR 2 seeks to develop a “modern, competitive, sustainable agricultural sector, driver of economic growth, based on family farms and efficient agricultural businesses, ensuring that all Burkinabé have access to the food necessary to live a healthy and active life.”
- **Cote d'Ivoire's** NAIP was developed in part through consultations and workshops with farmers organizations, women, and youth “to ensure equal representation of all stakeholders, and to reinforce a multi-sector and multi-actor dynamic” within the agricultural sector.
- **Gambia's** GNAIP aims to “increase and sustain agricultural production and productivity growth by introducing improved agricultural practices through people-centered learning processes that enhance and conserve natural resources and the environment, help farmers to adapt to climate change, and increase household incomes.” (Republic of The Gambia, 2010).

- **Ghana's** FASDEP II targets different categories of farmers according to their needs, including subsistence farmers, smallholders, as well as semi-commercial and commercial farmers (Republic of Ghana, 2007).
- **Niger's** National Agricultural Plan aims "to contribute to national economic growth and to ensure lasting sovereignty and food and nutritional security, [...] by increasing, intensifying and diversifying production, by modernizing crop production systems, and encouraging sustainable land and ecosystem management."
- **Senegal's** PRACAS aims to strengthen "agricultural and rural entrepreneurship by developing synergies between agribusiness and family farming, respectful of the environment, concerned with adaptation to climate change, and based on a value chain approach." (Republic of Senegal, 2016).

CONCLUSION

This section has illustrated the major demographic, social, economic, and environmental changes facing West African agriculture today. While the effectiveness of specific policies (regional and national) has not been assessed here, it is clear that these frameworks emphasize different and potentially conflicting solutions, with long-standing pressures to modernize and commercialize the agricultural sector still very present. As West African policy-makers struggle to deal with a series of urgent and simultaneous crises (e.g. climate change, COVID-19, increasing unemployment, armed conflict), the need to find viable solutions and target resources effectively is clearer than ever.

FIGURE 7

THE POLICY FRAMEWORKS SHAPING WEST AFRICAN FOOD AND AGRICULTURAL SYSTEMS



SECTION 2

UNDERSTANDING AGROECOLOGY AND ITS POTENTIAL IN THE WEST AFRICAN CONTEXT



Agroecology is emerging as a compelling and viable response to the challenges in West African food systems. This section considers how proponents of agroecology understand the concept in West Africa. These findings are based on interviews, focus groups, and discussions held during a number of national and regional fora over 2016-2019 (see Box 1 for more details on the research process). Though agroecology has multiple definitions, applications, and entry points (see Box 7), they tend to converge on a set of holistic principles which are highly relevant to the challenges facing the region, and well-aligned with emerging political priorities, not least the SDGs.

Advocates of agroecology in West Africa see it as a **holistic approach** that reconciles various agronomic, climatic, ecological, economic, and social challenges (FAO, 2015c), standing in contrast to the singular productivity focus of industrial agriculture. A central principle of agroecology is system redesign, i.e. rethinking production systems to maximize their **resilience** and facilitate **ecosystem balance**, via practices¹⁴ that promote genetic, plant, animal, and cultural **diversity** (Gliessman, 2016).¹⁵ By **harnessing natural processes**, and by stimulating **synergies** between different species, these practices build resilience to climate change and disease outbreaks (Altieri et al., 2015; Kerr et al., 2016). Agroecology is thus seen as a way to increase agricultural productivity on the basis of preserving and rehabilitating natural resources. Through the **recycling** of nutrients and optimal management of water, soil, land, and biochemical cycles, agroecological practices promote **efficiency** (i.e. by producing more with less external inputs) and **farmer autonomy** (Pimbert, 2017). For proponents of agroecology in the region, the use of synthetic inputs is generally considered to be incompatible with agroecology, which relies on natural symbioses to protect crops and improve soils.¹⁶

¹⁴ Examples of agroecological practices include mixed crop-livestock systems, artisanal fishing, agroforestry, companion planting, crop rotation, varietal mixtures, mulching, composting, push-pull, zai and half-moon pits, green manure, stony cords, cover cropping, and peasant seed systems.

¹⁵ IPES-Food refers to "diversified agroecological systems" to highlight the importance of diversifying cultivated ecosystems and the systemic approach adopted within agroecology. IPES-Food defines agroecology as a "a universal logic for redesigning agricultural systems in ways that maximize biodiversity and stimulate interactions between different plants and animals. It is a holistic approach that aims to build long-term soil fertility, healthy agro-ecosystems and secure livelihoods. It is a broad landing space that can be reached via a variety of pathways and entry points, progressively or in more rapid shifts, as farmers free themselves from the structures of industrial agriculture and refocus their farming systems around a new set of principles." (IPES-Food, 2016)

¹⁶ Farmers who ascribe to agroecology but still use some synthetic inputs are considered to be 'in transition' and as part of the agroecological movement.

BOX 8

DEFINING AGROECOLOGY: CONSENSUS THROUGH DIVERSITY



Agroecology is simultaneously a set of agricultural practices based on lived experience, a science combining agronomy and ecology, and a social movement promoting food sovereignty and equity. For West African food systems actors, it is also a philosophy, an ethic, and a transformational paradigm.

Agroecology resonates differently depending on one's own set of values. While creating a singular, static definition of agroecology could serve to avoid its co-optation by organizations with divergent interests (e.g. green-washing), it also runs the risk of dividing actors with similar objectives, or limiting the meaning of an approach meant to be flexible, adaptable, and context-specific.

In West Africa, agroecology is often mistakenly associated with subsistence farming, and dismissed as unproductive, poorly connected to markets, or simply a 'return to the past' (Brüntrup & Heidues, 2002; FAO, 2015c). Though agroecology is often based on traditional knowledge and practices, it integrates technical and scientific innovations to maximize the agronomic, ecological, and economic performance of production systems. Flexible and adaptive agroecological models are built through participatory action research, while valuing the knowledge of previous generations (Inter-Réseaux, 2018b).

In West Africa, the main tenets of agroecology can be found in the following widely-used terms and concepts:

- **Healthy and Sustainable Agriculture** emerged as a key concept at a 2008 workshop co-organized by Enda Pronat, FAO, and the Senegalese Ministry of Agriculture held in Mbour. It refers to peasant farming practices that are productive, economically profitable, and respectful of environmental, human, and animal health, while emphasising local products, fair trade, environmental education for youth, and transparent policy-making (Enda Pronat, 2018a).

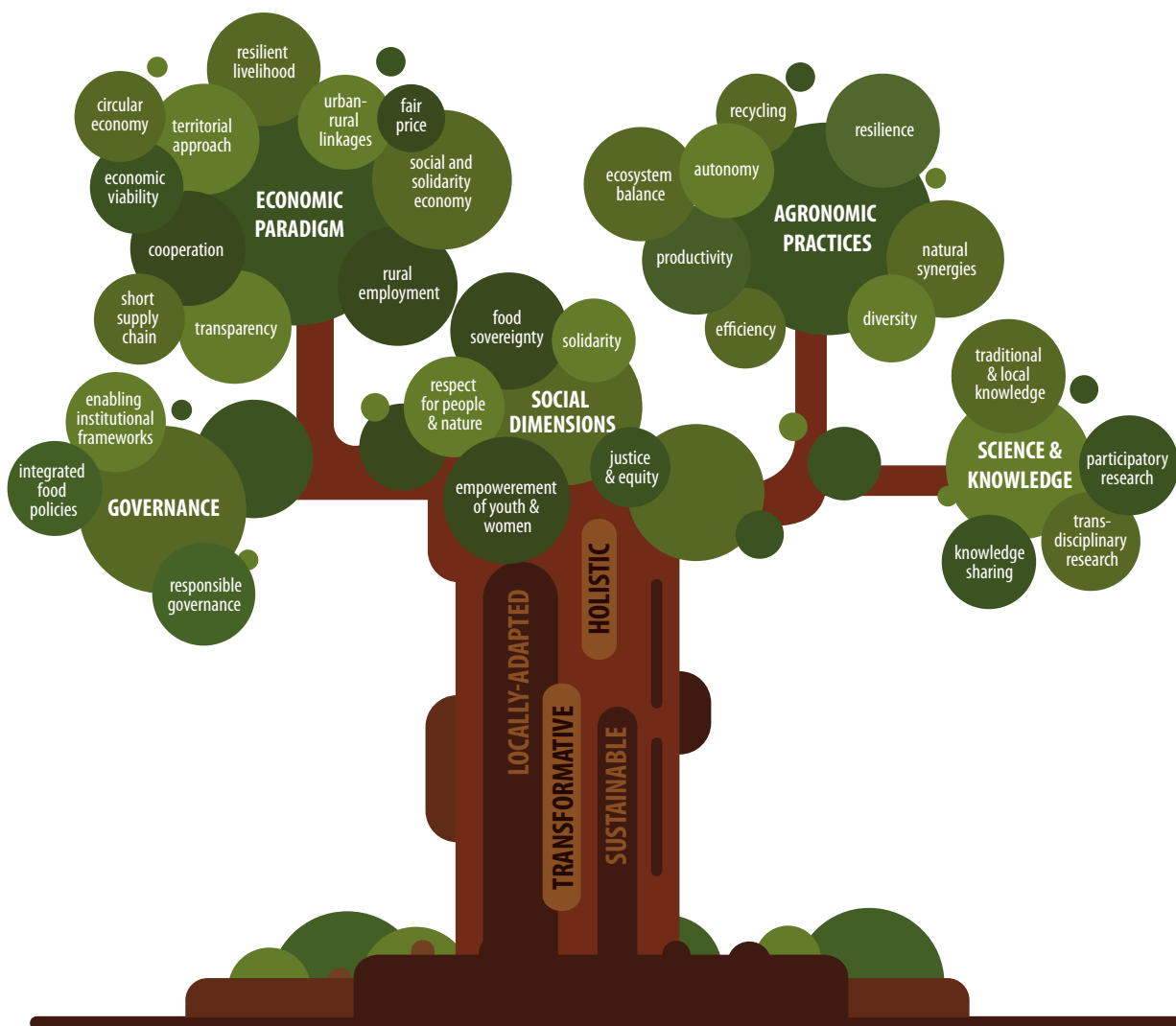
- **Ecological and Organic Agriculture** was defined in 2011 in an action plan developed by the African Union, in partnership with PELUM Kenya and Biovision Africa Trust (see Section 1.2). Promoted by leading organizations in Nigeria, Benin, Mali and Senegal, EOA refers to agricultural production systems that foster biodiversity, rely on natural nutrient cycles, and are based on local self-sufficiency, traditional and scientific knowledge, and the sustainable use and equitable sharing of genetic resources (Muchie et al., 2013; EOA, n.d.).
- **Peasant Agroecology**, co-defined by a wide range of actors brought together by CNOP-Mali in 2017,¹⁷ is a conception of food and farming systems rooted in food sovereignty and family farming, and based on: securing natural resources, safeguarding genetic diversity and cultivated heritage, developing practices based on complementarity and adaptability, valuing the role of women and youth, and promoting local food systems, collective action, and the development of public policies in support of agroecology (LVC, 2017).

Each of these approaches targets different audiences and focuses on different priorities, in line with varied social and political contexts. But they are generally seen as complementary (Inter-Réseaux, 2018b), and all three explicitly mention agroecology and/or its key principles, and align with internationally-endorsed visions of agroecology in the Nyéléni Declaration (LVC, 2015) and the FAO's recently developed 10 elements of FAO Agroecology (FAO, 2019c). Consensus is therefore emerging around common definitions of agroecology, and around its potential to guide food systems reform in West Africa.

¹⁷ "Peasant agroecology" was defined through a process led by CNOP-Mali, which brought together representatives of AOPP, PAIES, IRPAD, COFERSA, COASP-Mali, GRDR, AMASSA AFRIQUE VERTE, CGLTE, as well as Malian political decision-makers (Ministry of Agriculture, Livestock and Fisheries, Research and Environment) (LVC, 2017).

FIGURE 8

UNDERSTANDING AGROECOLOGY: A HOLISTIC AND COMPREHENSIVE APPROACH



Agroecology, in this holistic incarnation, is well placed to provide answers to some of the most pressing challenges in West African agriculture.

Firstly, it is well-adapted to the **structure, scale, and economic realities** of agriculture in the region. Its practices and values – combining tradition and modernity, and aiming to secure farmers' incomes while preserving natural resources – go hand in hand with family farming (Côte et al., 2019; Devèze, 2004; Inter-Réseaux, 2014).

Agroecological practices do not require major land restructuring or upscaling of farms, and are therefore well adapted to the small plots available to the majority of family farmers (IPES-Food, 2016). Furthermore, agroecology requires only modest financial investments at the outset, and delivers major cost savings over time (via lower reliance on external inputs, use of reproducible seeds, compost and manure for fertilization, nitrogen-fixing trees), making it well-adapted to the economic realities of family farms (AFSA, 2019; Isgren, 2018). A number of agroecological principles (e.g. crop diversification, natural synergies) are in fact already widespread in the region, although these practices may not be explicitly defined as “agroecological” by those who engage in them (FAO, 2015c). For example, polyculture is applied to almost 80% of cultivated areas in West Africa (Koochafkan & Altieri, 2017).

Furthermore, agroecological systems are designed around circularity and resource efficiency, and therefore offer viable solutions to the urgent challenges of **resilience and climate adaptation** (see Section 1.1). For example, diversifying agriculture through locally-adapted strategies (e.g. polyculture, mixed crop-livestock systems, agroforestry) reduces vulnerability to climate shocks while guaranteeing sustainable livelihoods. By increasing soil carbon sequestration (e.g. via no-till techniques, restoration of degraded land), and by reducing anthropic pressure on natural afforestation (e.g. via agroforestry), agroecological practices make it possible to combat resource scarcity, while mitigating the effects of climate change (ACF, 2017; FAO, 2015c; French Ministry of Agriculture and Food, 2017a, 2017b). Whether through plant mulch to retain soil moisture, precise micro-irrigation systems (e.g. drip), windbreak hedgerows, zaï, cover crops, or anti-erosion stone bunds that promote rainwater filtration and retention, agroecological practices optimize and minimize the use of water. This is crucial in a region where climate change has driven an increase in erratic and extreme rainfall patterns, leading to erosive runoff, salinization of groundwater, and long periods of drought (Gemmene et al., 2017).

On the basis of this diversity and resilience, agroecology can respond to another of West Africa's central challenges: ensuring **food security and improved nutrition** for all. By restoring soil fertility and drawing on natural cycles and synergies, agroecological techniques can considerably increase agricultural yields (Altieri, 2009; FAO, 2019c; Levard & Mathieu, 2018; SOS Faim, 2017). By combining different plants and animals, each with different planting and harvest times, agroecology makes it possible to promote access to a wider spectrum of fruits, vegetables, grains, and animal products throughout the year at affordable prices (Levard & Mathieu, 2018). It can also provide a response to the growing consumer demand for access to safe, nutritious, and high-quality foods (see Section 3.4).

The region's **socio-economic and demographic challenges** are vast and cut across the whole economy: overcoming them is likely to require a fundamental overhaul of economic policies to address the root causes of poverty and inequality (including access to land and other resources). Nonetheless, agroecology is well-placed to curb some of these problems and accelerate a broader economic transition. The need to revitalize rural areas, strengthen local economies, and attract youth to agriculture remains vital in light of rapid population growth and high poverty and unemployment in urban areas. The ongoing trend towards agricultural mechanization and labor-saving technologies threatens to reduce employment and spark new waves of rural exodus (Wise, 2019). In contrast, agroecology is anchored in **territorial approaches** based on ensuring the **economic viability of rural areas** and strengthening urban-rural linkages (De Schutter, 2010). Furthermore, agroecology tends to rely on the development of a **social and solidarity economy**¹⁸, and more specifically on new marketing channels through direct sales, **short supply chains**, and local and solidarity based partnerships, allowing for greater **transparency** and **cooperation** between producers and consumers (FAO, 2015a; Pimbert, 2017). By valuing food and farming professions, agroecology can create viable economic opportunities for youth and entrepreneurs in rural areas, thereby helping to limit rural exodus (Coordination Sud, 2020).

¹⁸ Social and solidarity economy (SSE) refers to a broad range of socio-economic enterprises and organizations that prioritize the needs of people and the environment over purely economic gains. These efforts may be formal (e.g. fair trade organizations) or informal (e.g. women's training groups), and individual (e.g. entrepreneur) or collective (e.g. cooperatives, community supported agriculture) in nature. They are guided by the principles of equity, solidarity, sustainability, inclusion, and participation.

Furthermore, agroecological modes of **knowledge co-creation and transmission** – key to building climate resilience and addressing other challenges – are already well embedded in West Africa. Farmer-to-farmer exchange, intergenerational knowledge and popular education are the dominant modes of knowledge transmission (LVC, 2015). Mutual learning and participatory approaches are also central to agroecology. These approaches draw from empirical, traditional, and **local knowledge**, including the **knowledge and know-how of peasant communities**. Furthermore, agroecology encourages exchange through **participatory and intergenerational dialogue**, on issues ranging from the economic profitability of small-scale family farming to showcasing agroecological innovations adapted to a given socio-cultural context (e.g. push-pull pest and weed management techniques, fertilizer trees) (Kerr et al., 2019). The existing tools and modes of knowledge transmission could therefore be leveraged in the service of agroecological transition as a natural progression, rather than requiring a new set of networks or institutions.

Finally, agroecology is well-adapted to the needs and realities of West Africa in that it is fundamentally **context-specific and adaptive**. It therefore stands in contrast to industrial approaches based on universal applications of the same technologies, specialization (at farm and regional levels), and homogenization of landscapes, that have not provided appropriate solutions for West Africa. Agroecology is based on a flexible, adaptive, and dynamic set of practices, determined and developed by local stakeholders themselves. Indeed, it is applied differently depending on local realities, customs, traditions, spiritualities, and social spheres, while sharing a **common set values**, centered on respect for people and nature. Furthermore, agroecology is conceptualized by West African actors as a social project based on the **unique social, cultural, and culinary** foundations of a community (Enda Pronat, 2018a). It is "**an ethic and a way of life**" based on lived experience (LVC, 2015; Rabhi & Caplat, 2015). For Ibrahima Seck, FENAB coordinator: "The UN claims that sustainable development rests on 3 pillars: economic, social and environmental. But here, we say that a house does not rest on three pillars. Our main pillar is our culture, our spirituality, and our values. That is the foundation on which agroecology will be built in the region."

Agroecology is therefore well-embedded in West Africa and poised to expand, on the basis of its fundamental compatibility with the realities of West African family farms, and its potential to respond to the region's rapidly-evolving social and environmental challenges. Agroecological initiatives, partnerships, programmes and policies are now springing up around the region (see Highlighting Alternatives boxes in Section 3).

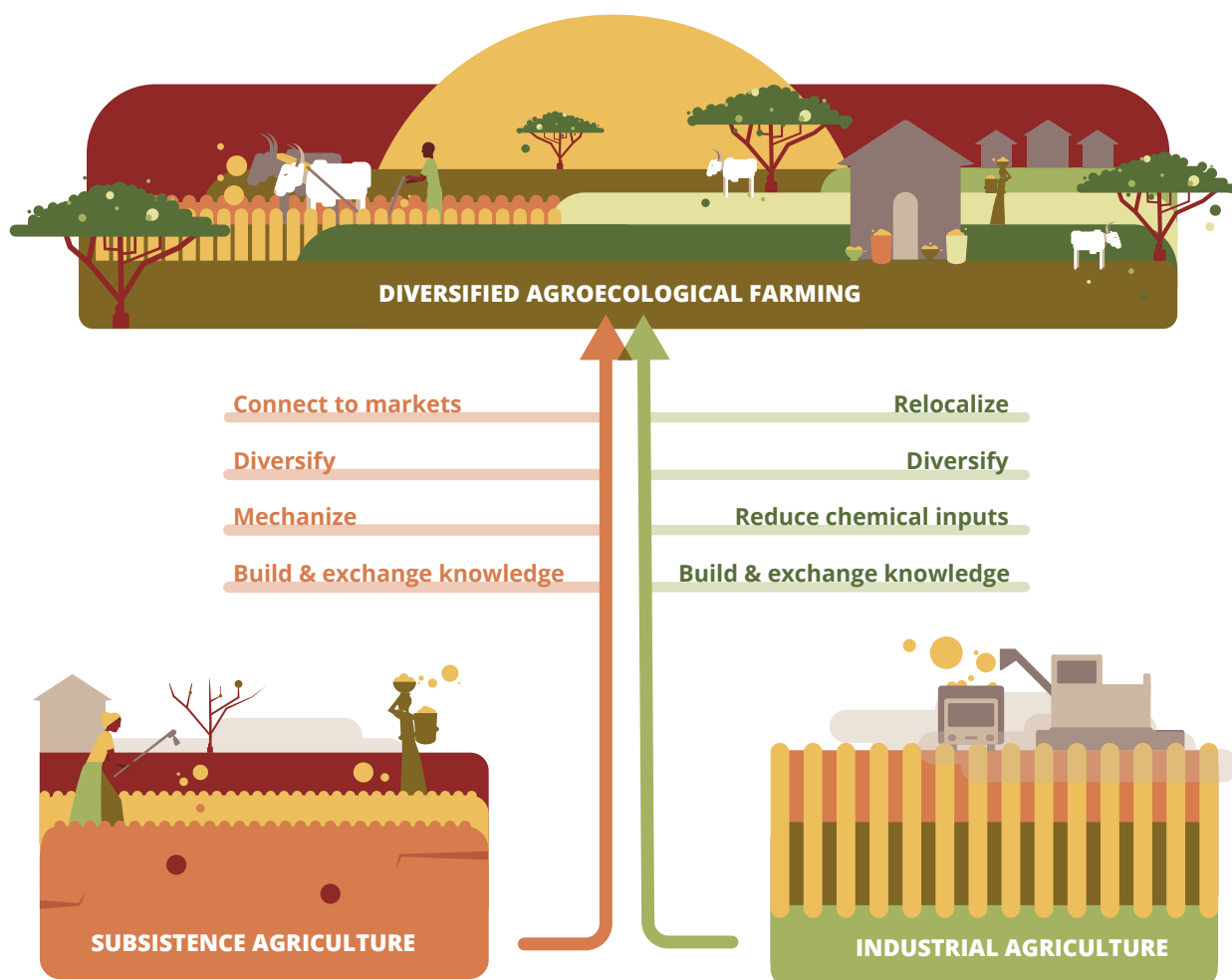
As more farmers seek to adopt agroecology, they will have to navigate diverse transition pathways. For the majority of West African farmers, the starting point for transition to agroecology will be subsistence agriculture or small-scale family farming with modest commercial activities. This pathway requires the scaling up of ecological principles already at work on the farm, in addition to the adoption of new practices, but does not require major structural changes (Altieri, 2009).

In a more limited number of cases, the challenge is to transition away from industrial modes of production that have been wholly (e.g. export-oriented cash crop production) or partially adopted (e.g. semi-subsistence, semi-commercial, semi-intensive farms). In these cases, transition will require a gradual restoration/regeneration of natural resources (e.g. soil, water), re-diversification of the agro-ecosystem, and the development of synergies between its different components (Côte et al., 2019). Ecosystem restoration is likely to increase productivity for subsistence farmers embarking on transition, while enabling the gradual reduction of synthetic input use without incurring a major yield loss for those transitioning from (semi-)industrial systems.



FIGURE 9

DIFFERENT STARTING POINTS TOWARDS AGROECOLOGICAL TRANSITION



However, there are many challenges along these transition pathways. Despite their potential, political, and financial support for agroecological alternatives remains negligible (see Section 1.2). Indeed, many actors seeking to transition to agroecology may be dependent on or 'locked into' the systems they are trying to move away from. These obstacles and lock-ins, which are discussed in Section 3, mean that transition pathways will be unpredictable and farmers will require patience, support, and solidarity. As stated by Ibrahima Coulibaly, President of ROPPA: "There are farmers who are stuck in situations of precariousness and dependence. We cannot exclude them. They cannot be left alone. We must open up to them, train them, make them aware of agroecological alternatives and how to implement them. We are leading a dynamic of change and transition: we must not fall into the trap of advancing only with leaders and pioneers, leaving all others behind" (3AO, 2020).

SECTION 3

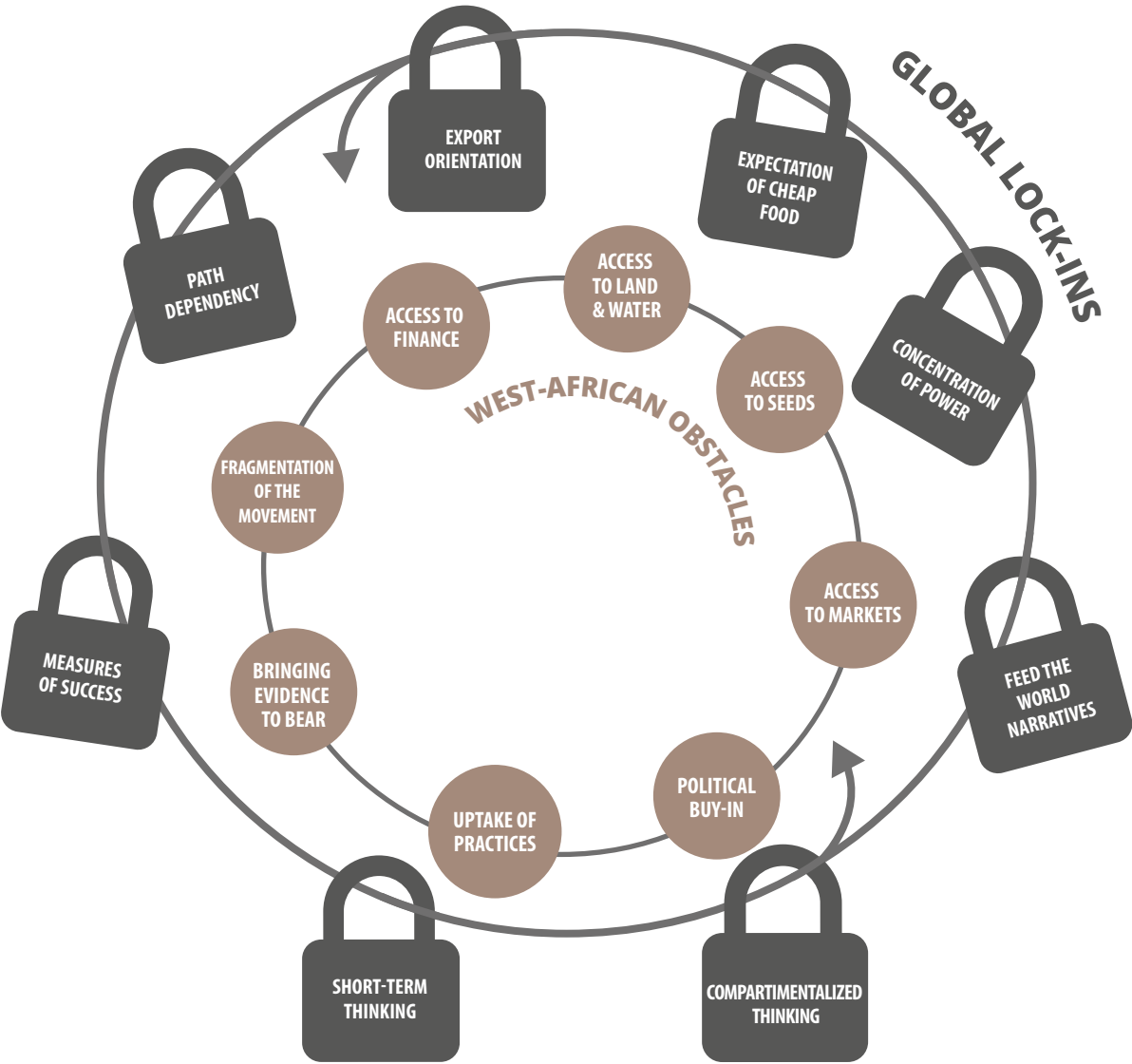
OBSTACLES TO AGROECOLOGICAL TRANSITION IN WEST AFRICA



In IPES-Food’s 2016 report, *From Uniformity to Diversity*, the panel identified eight ‘lock-ins’ keeping industrial food systems in place, and holding back agroecological transition around the world. These lock-ins play out in different ways in different contexts. In this section, we identify a series of locally-specific obstacles to agroecological transition, drawing on the insights of a range of West African food system actors (see Box 1). These obstacles are described below, with reference to the broader lock-ins underpinning them. The section also highlights initiatives that are already underway in each of these areas, and are challenging the tenets of industrial food systems and charting a new course.

FIGURE 10

THE REGIONAL OBSTACLES AND SYSTEMIC LOCK-INS THAT AGROECOLOGY MUST OVERCOME IN WEST AFRICA



3.1 OBSTACLE 1. ACCESS TO FINANCE

Agroecological systems require little investment in external inputs and heavy machinery, as a result of drawing on natural synergies, maximizing biodiversity, and using locally-available resources. This makes agroecology less costly than agro-industrial practices over the medium to long-term, and thus better suited to the economic realities of rural West Africa (see Section 2). As mentioned by one Senegalese farmer: "The cost of production is reduced with agroecology, as incomes increase over time because the cost of investment decreases. Adopting agroecology offers a real opportunity to free oneself from these constraints since all the inputs you need come from the land."

Nonetheless, shifting towards an agroecological production model entails a number of fixed costs at the outset: farmers may need to invest in securing plots (fencing), managing water resources (wells), and purchasing seeds, plants, or small-scale equipment, as well as developing the infrastructure to store, process, transport, and market a potentially wider variety of products. Farmers are likely to require support and training over the entirety of the transition period to agroecology.

However, securing the financing for agroecological transition remains a major global challenge, despite increases in public spending on agriculture. The recent influx of funding from a multitude of new sources (see Section 1.2) has had profound impacts on West African agricultural development pathways. New financial flows have primarily accrued to entrepreneurial export-oriented agriculture, high value-added sectors, and agropoles, much to the detriment of family farming, landlocked and remote areas, and the development of agroecology (AfDB, 2016 ; Inter-Réseaux, 2013, 2016b ; Republic of Mali, 2014 ; Ribier & Gabas, 2016 ; World Bank, 2013).

This has occurred for several reasons. Firstly, the accumulation of debt¹⁹ has left African countries with little choice but to increase exports of goods and services (UNCTAD, 2008) – particularly in the primary sector – in order to obtain the foreign currencies needed to repay public debts (e.g. in euro or dollar-bonds). This has reinforced the trend of replacing a diversity of food crops with a limited number of cash crops for export – a production model that is non-conducive to agroecology (see Box 9).

¹⁹ At the start of the 21st Century, public debt in sub-Saharan Africa was at an all-time low following the Heavily Indebted Poor Countries Initiative and the Multilateral Debt Relief Initiative. Borrowing levels dropped from a median debt-to-GDP ratio of 90% in the 2000s to 32% in 2010, rising to 53% in 2018 – an amount equivalent to \$500 billion, more than a fifth of which was in Eurobonds. However, the number of countries with 'over-indebted' or 'at risk of over-indebtedness' status more than doubled in the region between 2013 and 2018 (World Bank, 2019a; UNCTAD, 2016). The increase in borrowing levels, combined with structural changes in debt composition (i.e. greater dependence on financial markets and private creditors), has made the region even more vulnerable to trade, stock market, and climate shocks (Moody's, 2020).

BOX 9

WHAT'S LOCKING IN INDUSTRIAL FOOD SYSTEMS? EXPORT ORIENTATION



Over decades, production subsidies, energy subsidies, trade liberalization, and a range of other measures have been put in place with a view to producing large volumes of cheap commodity crops for global markets. Specific supply chains (e.g. for animal feed or processed food ingredients) have become increasingly export oriented. Supporting these chains has often been prioritized over ensuring resources for local food production, and in spite of the risks and negative impacts (e.g. price volatility, declining terms of trade, environmental degradation, competition for land, low income diversification and vulnerability to shocks; OECD, 2011). In West Africa, the majority of agricultural production is still accounted for by family farms growing a variety of foods for local or territorial markets, or for their own consumption (ECOWAS, 2015). Nonetheless, governments across the region have pursued trade liberalization and prioritized the expansion of cash crops for export, becoming increasingly reliant on this source of foreign exchange in order to service debts and develop their manufacturing and services sectors. West African trade flows are highly concentrated in specific sectors. Cocoa beans, cocoa butter and cocoa paste and powder make up as much as 39% of sub-Saharan Africa's agri-food exports to the EU in value terms (TFRA, 2019). Meanwhile, EU exports of chicken parts go largely to the 'hotspots' of Benin and Ghana; despite Mali's strong livestock sector, 90% of Bamako's consumption of dairy products is made up of imported milk powder (CIRAD, 2019; Pinaud, 2018; TFRA, 2019). As Ibrahima Coulibaly, president of ROPPA testifies, "We are the most open economic space to the world economy. We cannot continue like this if we want to ensure our food sovereignty." (Dytaes, 2020).

Secondly, West African countries remain significantly constrained by the funding modalities and development strategies of international organizations, bilateral donors, and private philanthropic foundations, with decision-making concentrated in the hands of a limited number of actors.

Agricultural aid continues to be largely project-based, and subject to a variety of frameworks, objectives and priorities. Despite the commitments made through the Paris (2005) and Accra Declarations (2008),²⁰ and despite the adoption of a West African agricultural policy framework ('ECOWAP'), bilateral donors have made little progress in aligning aid with the priorities of recipient countries (Biovision & IPES-Food, 2020; ROPPA, 2018). Philanthropic actors, meanwhile, have growing financial clout in the African agri-development world, exerting their influence through the projects and PPPs they fund, including AGRA (see Section 1.2).

Thirdly, the logic of private capital investment is increasingly permeating agri-development. Bilateral and multilateral aid flows to West Africa (and the African continent) have been on a downward trend since 2017 (OECDStat, 2020). As shown at the third international conference on development financing in Addis Ababa in 2015, public aid flows are increasingly seen as a means to leverage private financial flows (Gabas et al., 2017). For private investors, the actors, activities, and economic sectors that are financed must maximize returns on investment. This logic underpins the 'blended' (public-private) finance models that are increasingly prominent, leading to the promotion of capital-intensive, technology-centric and labour-reducing agri-development pathways (Gabas et al., 2017). According to Camilla Toulmin, economist and former Director of IIED, the very objective of agroecology, which aims to reduce farmers' dependence on synthetic inputs, considerably reduces its commercial appeal to private investors.



²⁰ The 2005 Paris Declaration serves as a practical roadmap to improve aid effectiveness for development. It provides a series of specific implementation measures and establishes a monitoring system to assess donors and recipients' accountability to their commitments. The 2008 Accra Agenda for Action was developed to strengthen implementation of the Paris Declaration, to take stock of progress, and set an agenda for the achievement of the Paris targets.

Fourthly, smallholders continue to face difficulties accessing credit. The investment capacity of small family farms is limited by a lack of access to appropriate financial services (i.e. insurance, investment funds, guarantee funds, special funds, bank loans, asset management) (FAO, 2012; HLPE 2013). As explained by Marcel Dhijoun, Coordinator of Agriprofocus Benin: “Small farmers neither have easy access to financial institutions, nor do these institutions have products and services adapted to help them. Today, if you manage to access credit, repayment must begin within one or two months, which does not take agricultural production cycles into account.” Further, the need to provide financial institutions with credit guarantees considerably reduces smallholders' access to bank loans. Public credit guarantee schemes prioritize agricultural entrepreneurs connected to international markets and/or those with existing assets (e.g. land, capital). In 2014, loans allocated to family farms constituted only 2% of all agricultural credit in West Africa, and these were mainly limited to short-term seasonal loans rather than the longer-term investments (e.g. wells, organic fertilizer) needed to transition to agroecology (ROPFA, 2018) – reflecting the short-term thinking that prevails across global food systems (see Box 10). While all ECOWAS countries now have national funds dedicated to agricultural investment, credit arrangements remain largely unfavourable for family farms, as a result of low involvement and consultation of producer organizations, weak targeting, insufficient provision of concessional loans by the region's central banks, and little awareness-raising about the funds (ROPFA, 2018).

Furthermore, women experience major constraints in accessing credit, as a result of a range of unfavourable economic conditions and social norms (Bay, 2019; Fletschner & Kenney, 2010). Women are rarely the heads of production units (especially on high value land), and often lack control over the income earned from the crops and livestock they manage (FAO, 2011c). With insufficient access to credit, women are unable to expand into new areas (e.g. processing enterprises), and their investments tend to be limited to crops for household consumption or niche activities (Allen et al., 2018; IPAR, 2014; Solidaridad Network, 2018). Lack of credit exacerbates the problems women face in accessing land, inputs, and extension services (see Obstacles 2, 3 and 6) (FAO, 2011c; Walther et al., 2019). These inequalities create missed opportunities to build on women's skills, networks, and knowledge, and to understand their needs and priorities when engaging in food system activities (Doss et al., 2018, Perez et al., 2015).

BOX 10

WHAT'S LOCKING IN INDUSTRIAL FOOD SYSTEMS? SHORT-TERM THINKING



The advantages of diversified agroecological systems are not immediately visible, given the time needed to rebuild soil health and fertility, to increase biodiversity in production systems, and to reap the benefits of enhanced resilience. However, key players in food systems are often required to deliver rapid results. For example, publicly traded agribusiness firms are required to deliver rapid returns to shareholders. Meanwhile, policymakers are locked into short-term electoral cycles that reward immediate results, leading to the adoption of techno-fixes rather than more systemic shifts. As expressed by Stéphane Parmentier, Oxfam Policy Advisory: “There is so much urgency in the region that it seems simpler to adopt the solutions that donors are ready to fund. For governments, it's easier to accept this type of solution when you've been programmed to think that modernizing agriculture means industrialized systems to boost productivity, without thinking at all about the type of productivity that entails, but only thinking about short-term gains.” The political instability of some West African countries (i.e. rapid turnover of governments), coupled with the exigencies of international donors, tends to exacerbate this logic and increase the incentives for rapid, tangible results.



A range of actions are being undertaken at various levels, from governments to grassroots organizations, to reduce West Africa's dependence on foreign investment and ensure financing for sustainable agriculture (CPF, 2016; Goïta, 2014):

- Nigeria, Liberia and Ghana have set up refinancing mechanisms at highly competitive rates to support private banks' agricultural lending (ROPPA, n.d.).
- In Mali, IRPAD and the GDSP have explored approaches to reallocate a portion of export earnings from natural resources (e.g. fisheries, oil, cash crops) to the development of smallholders and local value chains (GDSP, 2018).
- A number of actions are being taken at the grassroots level to develop financial tools and services to empower smallholders and encourage self-financing. This includes promoting access to microcredit and community-managed savings, facilitating monetary transactions by mobile phone, and encouraging banking institutions to offer simple procedures and long-term loans (10 years) at low interest rates (FAO, 2015a; GDSP, 2018; HLPE, 2013).

International NGOs and solidarity initiatives, in partnership with local groups, are also plugging gaps in agroecological financing in West Africa (e.g. ACF, OXFAM, Broederlijk Delen, AVSF, GRET, AGRISUD INTERNATIONAL, CARI, Both Ends, Secours Catholique, HEKS EPER, Terre et Humanisme, ASPS, Autre Terre, SOL, SOS Faim, Eclasio, ULB-Cooperation, CCFD-Terre Solidaire, Groundswell International etc.).

A number of regional and international organizations, as well as several bilateral donors, are also beginning to promote and finance agroecology in the West African region. Initiatives include ECOWAS's Agroecological Transition Support Project (PATAE), GIZ's Knowledge Hub for Organic Farming, FAO's Scaling Up Agroecology Initiative, the EU's One Health Project and DeSira initiative, the Sahel Alliance's Ouagadougou Declaration, and recent IFAD projects (3AO, 2020).

3.2 OBSTACLE 2. ACCESS TO LAND AND WATER

Rapid population growth, urban sprawl, and land grabbing by foreign investors and local elites, have created unprecedented pressure on land and water resources in West Africa, with legal protections and policy support for peasant land tenure generally lacking (see Section 1.2). According to a study focused on 9 West African countries,²¹ some 3 million hectares of land were subject to large-scale land acquisitions between 2000 and 2013 (IDRC, 2015). In Senegal alone, more than 650,000 hectares of land were granted to investors (foreign and domestic) between 2007 and 2016 – equivalent to 16% of the country's arable land (CGLTE, 2017). Foreign land investments made via Mali's 'Office du Niger'²² never concern less than 500 hectares (FAO, 2012). A range of negative consequences have been documented in the wake of large-scale land acquisitions in West Africa, notably the eviction of peasant farmers, the loss of access to grazing land for herders, and – with many investments focused on export cropping – the depletion of resources for local food production (GRAIN, 2012; IDRC, 2015; Koussoubé, E, 2013; Vellturo, 2020).

Furthermore, many of those farming without their own land and without security of tenure are reluctant to invest in agroecological practices that take time to deliver benefits in terms of soil quality and fertility (e.g. crop rotation, diverse fertilization treatments, agroforestry, assisted natural regeneration). Current land laws and policies – with their roots in the colonial era – generally fail to recognize customary tenure and land use rights (ECOWAS, 2011; Nelson, 2004; Wiley, 2011). According to Serge Simon, agronomist at CIRAD, improving the fertility of soils may even increase the risks of foreclosure, with landowners able and incentivized to recover their plots to take advantage of any improvements to soil quality and structure.

Access to water is also a major obstacle to the ability of farmers to sustain and transform their activities. Escalating climate impacts, combined with the development of large-scale irrigation projects led by large foreign investors (e.g. dams, diversion of waterways), have significantly reduced access to water for pastoralists and smallholders (Bazin et al., 2017; FAO, 2008; Sultan & Gaetani, 2016).

²¹ Bénin, Burkina Faso, Côte d'Ivoire, Guinea, Guinea-Bissau, Mali, Niger, Senegal and Togo.

²² Office du Niger is a semi-autonomous government agency in Mali that administers a large irrigation scheme in the Ségou Region of the country.

While agroecology helps to manage water efficiently over time (see Section 2), farmers face immediate constraints and difficult trade-offs as a result of water scarcity, as highlighted by Mansour Ndiaye, Director of APAF Senegal, with reference to agroforestry: "Trees must be maintained and irrigated for at least a year and a half to two years, but water supply for domestic use remains a primary concern here, for cooking, watering, etc. Water is increasingly scarce, the water table is depleted. For peasants, using water intended for family needs to irrigate trees and crops is a big luxury." The most fertile land, often located near waterways, tends to be claimed for export commodity production. As a result, agroecological production is often confined to marginal and low-fertility land, holding back its potential and skewing assessments of its productivity.

In the Sudano-Sahelian area, pastoralism has been particularly affected by the struggle to access land and water, in a context of climate change, land acquisitions, and the growth of extractive industries (e.g. mining in Burkina Faso and Niger) (Umutoni & Ayantunde, 2018); arms proliferation has also undermined traditional intra-communal governance mechanisms, leading to conflicts between communities, and between pastoralists and farmers (Vellturo, 2020). These phenomena have also led to the breakdown of traditional pastoral areas and the depletion of natural resources, sparking the widespread problem of livestock wandering. Plots which are not well fenced (e.g. via wire fencing, hedgerows, or use of *Acacia mellifera*) or protected (e.g. by use of spurses, netting), are left vulnerable to devastation by herds, exacerbating tension between farmers and pastoralists. As explained by Chantal Jacovetti, former head of Peasant Agroecology at CNOP-Mali: "Because of land grabbing, 100,000 hectares were taken in one fell swoop. All transhumance routes and water points have become inaccessible. It has disrupted everything."²³

These obstacles are particularly acute for women, who continue to face severe limitations in access to land and water across the region, are rarely placed in positions of responsibility or decision-making (FAO, 2011c), and are therefore held back in their ability to engage in transition efforts (Doss et al., 2018; CGLTE, 2017). The land they do own is often of poorer quality and their tenure more insecure, particularly as a result of traditional land rights and inheritance laws (Allen et al., 2018; Solidaridad Network, 2018).

²³ The quote makes reference to a land acquisition that occurred in 2009, during which Malibya, a subsidiary of a Libyan sovereign wealth fund, bought a 50 year land-lease from the government of Mali for 100,000 hectares of land in northern Mali. The deal was said to be part of Malian government efforts to promote private investment in rice production. The deal included the construction of a 40km irrigation canal, but raised significant concern over the livelihood of local farmers and pastoralists as a result of possible displacement and changes to the landscape.

BOX 12

HIGHLIGHTING ALTERNATIVES: ACCESS TO LAND



Many national, regional, and international organizations defending the rights of peasants are continuing to mobilize around access to land (See: AFSA's work on land tenure and management; No Vox Togo's fight against land grabbing; Terre & Paix's installation project for young people; OXFAM-Solidarité's "Stand for land rights" campaign; CSM's advocacy around Voluntary Guidelines on Land Tenure).

In response to these advocacy efforts, a number of reform processes to protect rural areas are underway in West Africa. For example, Malian deputies unanimously voted in favour of the Land Tenure Law (LFA) in March 2017, following the efforts of peasant organizations and social movements (e.g. CMAT, CGLTE, CNOP). The law offers enhanced recognition and protection of customary rights, while promoting women's access to agricultural land and decision-making. However, land conflicts persist due to the coexistence of different land tenure systems (FAO, 2017; Hub Rural, n.d.).



3.3 OBSTACLE 3. ACCESS TO SEEDS AND ORGANIC INPUTS

Farmer seed systems,²⁴ through which farmers select, multiply, conserve and exchange a wide range of reproducible varieties, are an essential component of agroecology, which relies on diversity at all levels (including crop genetic diversity). According to AFSA, these systems account for up to 90% of the seeds used in some African countries (AFSA, 2018; McGuire & Sperling, 2016). In Mali, peasant seed systems make up 75% of the varieties grown in the country (BEDE, 2016).

However, these systems are lacking in legal recognition and policy support. Meanwhile donor- and industry-led initiatives to promote hybrid commercial seeds²⁵ are gaining ground, despite ample evidence showing their inappropriateness in African contexts and their negative impact on farmers' autonomy and resilience (BEDE & IRPAD, 2016; Coulibaly et al. 2019; De Schutter, 2009; Djamen & Ouattara, 2017). The USAID-funded WASP programme has spearheaded efforts to increase the production and use of commercial seed from 12% in 2012 to 25% by 2017, via a range of steps: creating the Alliance for Seed Industry in West Africa (ASIWA); lowering barriers to transboundary seed trade; ramping up production of high-quality basic seed; bolstering West African private sector capacity to supply basic and certified seed; and strengthening national seed trade associations (CORAF, 2013; FIAN, 2018; USAID, 2015).

In this context, farmer seed systems are relegated to 'informal' status, and their potential to support diversified agroecological farming is held back. While farmer seed systems for cereal crops are highly developed, access to vegetable seeds remains low. As a result, the risks of genetic uniformity of crops, loss of biodiversity, and farmer indebtedness are high, and the prospects for agroecology are severely constrained. As Issouf Sanou, coordinator of FENOP, testifies: "In the beginning, people believed that improved seed would improve farmers' living conditions, but we very quickly realized that improved seeds had a lifespan [...] Improved seeds means pesticides, means fertilizers [...] And all this creates dependence."

²⁴ Sometimes referred to as 'peasant seed systems', which offers a literal translation of the French term used predominantly in the region: 'semences paysannes'.

²⁵ Hybrid commercial seeds generally cannot be efficiently reproduced, often come with intellectual property rights and imported legal approaches, and are optimized for responsiveness to chemical inputs.

BOX 13

WHAT'S LOCKING IN INDUSTRIAL FOOD SYSTEMS? CONCENTRATION OF POWER



Today's food systems are dominated by a handful of dominant actors. In 2015, Syngenta (Switzerland), Monsanto-Bayer (Germany), BASF (Germany), and DowDuPont (USA) accounted of 75% of the global agrochemical market, 63% of the commercial seed market and 75% of private sector research on seeds and pesticides (ETC Group, 2015; IPES-Food, 2017a). This economic power translates into political power, allowing a handful of companies to shape research trajectories and decision-making to meet their own commercial interests (e.g. sale of synthetic inputs, hybrid seeds) (IPES-Food, 2016). In West Africa, a number of these actors are taking their seat at the negotiating table, alongside philanthropic foundations, bilateral and multilateral donor agencies, and increasingly, emerging countries (see Section 1.2). As described by a representative of BEDE's West Africa Programme, "Agrifood lobbies and agrochemical companies just see West Africa as a marketing opportunity. They are really trying to develop input-intensive agriculture even more than it already is, despite the fact that on the ground, we see that peasant agriculture still exists, biodiversity is still here, knowledge is still being shared. But despite that, it just feels like we are being steamrolled by agro-industrial interests."

Farmers also face major challenges in accessing organic matter, as a result of desertification, deforestation and encroachment on land and natural woodlands, with climate change exacerbating these trends (FAO & IPTS, 2015; Jalloh et al., 2011). The majority of biomass produced on cultivated plots tends to be sold off-farm, limiting the amount of nutrients that are returned to the soil. In the case of sorghum production, for example, panicles are sold for human consumption and the stems are harvested for animal fodder (Dicko et al., 2006; Odhong, 2018). Even when farmers manage to keep collected biomass on-farm, they are still forced to make compromises. As explained by a former director of LMI IESOL: "Farmers often say they fully understand the use and importance of organic matter, but that they don't use plant residues for compost because they have to use it to feed livestock or to build fencing."

Meanwhile access to manure is limited by the large distances and poor linkages between animal rearing – generally in extensive grazing systems – and cropping zones. The difficulties accessing sufficient organic matter through the year hinders the development of agroecological practices such as composting and mulching. While private companies are investing in large-scale biofertilizer and composting plants (see Box 13), pricing can still limit access to these resources. As Laure Diallo, Monitoring and Evaluation Officer at Enda Pronat, stressed: "As long as these efforts are not subsidized, the situation will remain challenging, even when farmers are looking to buy ready-made organic inputs." Indeed, there is scant policy support for the provision of organic inputs. While several countries subsidize agricultural inputs, these schemes tend to be focused on synthetic fertilizer – and their effectiveness in meeting farmers' needs and addressing the multiple challenges in food systems is therefore widely questioned (Jayne & Rashid, 2013 ; OECD & FAO, 2016).



HIGHLIGHTING ALTERNATIVES: FACILITATING ACCESS TO ORGANIC INPUTS

Many initiatives are underway to train smallholders in the categorization, multiplication, and conservation of seeds (see UAVES/CAPROSET seed farm, FENOP); to raise awareness of different farmer-managed seed systems and of obligations made by signatory countries of the ITPGRFA* (see CNCR/ROPPA); to create and consolidate distribution and exchange channels (see ASPSP / COASP, FENOP, and COLUFIFA-Guinea seed fairs); and to support local and government authorities in reforming seed systems (see BEDE, IRPAD, COPAGEN).

Meanwhile, a number of techniques are being developed to increase access to and availability of organic inputs. These include guano-based fertilization (e.g. from bats) or the use of nitrogen-fixing trees to fertilize the soil (see respectively EOA Benin and APAF). The beneficial link between crops and livestock is also increasingly being emphasised. In Benin and Burkina Faso, some producers are beginning to engage in small-scale mixed crop-livestock farming, herders are opting to station their livestock on farms; and some farmers are producing hay during the rainy season in order to feed their livestock after wintering (COPAGEN-JINUKUN, 2014).

A number of organizations are also working on large-scale biofertilizer production (for example, Elephant Vert, Biotech Services Senegal) or urban household waste recovery for compost production, with a view to improving urban sanitation while creating jobs in the circular economy (see Accra Compost And Recycling Plant Limited).

* The International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA) affirms the right of farmers to use, exchange, and sell farm-saved seeds.

3.4 OBSTACLE 4. ACCESS TO MARKETS

Agroecological produce is valued by a growing number of West African consumers on the basis of its perceived advantages in terms of taste, quality, resistance to transport, and increased shelf life. Furthermore, an increasingly informed and health-conscious urban consumer base is driving demand for food produced organically (DeBon et al., 2018), amid growing concern about rising rates of diet-related diseases (e.g. diabetes, cardiovascular diseases, cancers) and the dangers of synthetic inputs (e.g. non-compliance with dosages, low visibility of the origin and content, environmental impacts). While sales of pre-packaged (including highly processed) foods are growing, and are often marketed as safe and healthy, many West African consumers in fact continue to see fresh, unpackaged produce as a guarantee that foods are nutritious *and* safe – although a diet composed of fresh foods (fruits, vegetables, fish etc.) is felt by many to be out of reach in price terms (Hollinger & Staatz, 2015; Miller et al., 2016). According to Famara Diedhiou, AFSA's program manager, many health concerns are even shared by producers, some of whom have even begun to cultivate small chemical-free plots for their own consumption, alongside their conventional crop production destined for market.

Nonetheless, reliable and remunerative sales outlets for agroecological produce are still lacking. Firstly, in a context of poor infrastructures and high post-harvest losses, producers of the same crop are forced to sell at the same time, resulting in oversupply and lower prices. In sub-Saharan Africa, on-farm losses are estimated at 14% of production (FAO, 2019b). Agroecological producers are often the first to experience difficulties as a result of supply chain gaps and disruptions, while farmers in remote areas have little capacity to negotiate prices with buyers. As Issouf Sanou, FENOP coordinator explains, "The lack of roads is a problem. In hard-to-reach villages, the first buyer who arrives gets to impose their price, and farmers prefer to accept it than to risk holding on to their product, which might rot." In some regions, the lack or deterioration of infrastructure makes it unprofitable to get food from farm to market, therefore encouraging the import of products already being grown in the region (CFSI, 2019).

BOX 15

WHAT'S LOCKING IN INDUSTRIAL FOOD SYSTEMS? THE EXPECTATION OF CHEAP FOOD



In the global North and increasingly in other parts of the world, industrial agriculture and shifting consumer habits have helped to facilitate the emergence of mass food retailing, characterized by the abundance of relatively cheap highly processed foods, and the year-round availability of a wide variety of foods. In many countries, consumers have become accustomed to spending lower percentages of their income on food – and increasingly detached from the realities of how that food is produced. The food industry has therefore become reliant on the cheap and flexible supply of uniform commodities that industrial agriculture is uniquely positioned to provide (IPES-Food, 2016). These dynamics are deeply entrenched: cheap food has allowed workers to be paid relatively low wages in the manufacturing sector, acting as a *de facto* social policy. High externalities or hidden costs – environmental contamination, the spread of unhealthy diets, and systematic exposure of food and farmworkers to occupational risks – are factored into this ‘low-cost food system’ (De Schutter, 2017; IPES-Food, 2017b; Patel & Moore, 2018). These cycles may be less relevant and less entrenched in West Africa than in other regions. Food purchases still represent a high percentage of household expenditure in the region, ranging from 35%-75% (Bricas et al., 2016b). Nonetheless, reliance on undifferentiated, low-cost (and imported) commodities is growing, particularly in urban areas. For example, the ‘dumping’ of low-priced goods onto West African markets (e.g. EU exports of chicks and milk powder) has had a major impact on the region. Imported food now accounts for 20% of the food consumed by households (CFSI, 2019) and 24% of total West African imports in volume terms (Lançon & Wade, 2016). Meanwhile, imported rice and wheat represent 72% of WAEMU urban households’ purchases of cereals (Bricas et al., 2016b).

Secondly, there is a lack of price differentiation or visual distinction between conventional and agroecological produce. In light of the supply chain issues described above, agroecological produce sometimes ends up being lumped together with conventional produce. According to Adama Thiégoum, Coordinator of the NGO UAVES-Mali: "We don't really make a distinction between what is agroecological, and what is not. [Agroecological products] are seen as the same thing and they're sold at the same price. People say a carrot is a carrot, lettuce is lettuce. This is why we need to advocate for greater recognition of the value and quality of these products." When agroecological produce is differentiated (e.g. via signage or labelling), it finds market outlets, so long as prices are roughly comparable to conventional items. According to CNOP Mali, agroecological products are often reserved directly from the farm, while Terre et Humanisme confirms that they disappear first off market stalls.

But this lack of price differentiation makes it hard to sustain or expand agroecological markets, particularly in a context where imported (and often subsidized) products drive down prices, and skew consumers' notion of a "fair price". Insufficient resources are dedicated to marketing and differentiating agroecological produce. Certified organic and agroecological-labelled product ranges can be found in the region, but tend to price out local consumers, who are generally skeptical about official certifications (Hollinger & Staatz, 2015). These challenges are widespread: a 12-country FAO study (including Benin and three other African countries) found that intermediaries and consumers often lack information about agroecological practices, and are highly influenced by untrustworthy or incorrect information about these products and their safety (FAO/INRA, 2018).

For Tabara Ndiaye, former program manager for JAFOWA, joined-up approaches are urgently needed to overcome these problems: "It is useless to produce agroecological products if producers cannot sell them at remunerative prices. Each actor makes up a link in the chain that unites us. Our actions are co-dependent, and we all have a role to play."



A large number of initiatives are working to make agroecological produce more accessible to low-income families through new value chains.

Within the framework of the Family Farming Promotion Program in West Africa (PAFAO), the CFSI and ROPPA led a discussion to identify concrete actions to promote the marketing of agroecological products (CFSI, 2017). Certification and product differentiation emerged as key elements that could raise consumer awareness on the benefits of agroecological production and to guarantee fair prices for producers (Levard & Apollin, 2013). To avoid cost barriers for consumers, it was highlighted that better differentiation of agroecological products must be accompanied by a reorganization of value chains that allows for the reduction of production costs (e.g. input costs, transport, distribution, limiting post-harvest losses) and less of the value being captured by middlemen.

Many organizations are also working to develop local supply chains and create opportunities for local value-adding. For example, AgriProfocus Benin works to disseminate technologies and innovations for food preservation. Enda Pronat is working on developing storage infrastructure using Nubian vault techniques to reduce losses of onions and potatoes. A number of additional organizations are strengthening urban-rural linkages (e.g. development of farm shops, linking producers to restaurants), and ensuring adequate marketing strategies for agroecological products via public procurement schemes (see Ecasard and Enda Pronat projects). In recent years, CFAPE-Togo and AMAP-Togo, for example, have worked in partnership to supply local airline companies with on-flight snacks using agroecological products.

In addition, strategies such as Participatory Guarantee Systems (PGS) and collective marks or certifications (*'marques collectives'*) have the potential to strengthen a community's social fabric while lowering costs (i.e. reduction of intermediaries, simplification of procedures, reduction of costs related to certification) (see the PGSs of CNABio, OBEPAB, and Helvetas Benin). The establishment of cooperatives, social and solidarity partnerships (e.g. Community Support Agriculture schemes) and other forms of short supply chains are also being pursued, with a view to building trust and cooperation between producers and consumers, improving the traceability of products, providing a fair income for producers, and offering affordable prices for consumers (see AMAP-BENIN, Marlene's Garden, UAC volunteers, Atacora-Donga and Mono-Couffo market gardeners, GIE Bioprotect, Seasonal associations, Béonèré, NAPOKO farm, AMPO Farm, Jain Modeste Slow farm, Food's Earth markets, UGPM, Paniers Bios, Ndoxum Tool).



3.5 OBSTACLE 5. POLITICAL BUY-IN

Agroecology has made its way into top-level policy documents and political debates in West Africa, with momentum gathering at regional and pan-African levels over a number of years (see Section 1.2). For example, agroecological practices focused on diversification were cited in ECOWAS' Regional Program for Agricultural Investment, Food, and Nutrition Security (PRIASAN) as a means of increasing the productivity of agro-sylvo-pastoral systems. Integrated soil fertility management, mixed farming, and the use of trees and shrubs to fertilize soils also feature in strategic documents published by ECOWAS (ECOWAS, 2008; ECOWAS et al., 2016). At the national level, Burkina Faso's rural development policy (PNSR II) tasks advisory services with "the promotion of good agricultural practices including agro-ecology" (Republic of Burkina Faso, 2018). More recently, Senegal has publicly committed to promoting agroecology as part of its Plan for an Emerging Senegal (PES) (3AO, 2020; APS, 2020; Republic of Senegal, 2018a). Agroecology is also included in the strategic orientations of Objective 2 of Senegal's NAFNSIP, which aims "to increase productivity and agro-sylvo-pastoral and fishery production via diversified, sustainable production systems that reduce post-production losses" (Republic of Senegal, 2018b).

However, statements of support for agroecological transition have not been systematically translated into political prioritization. Policies in the region continue to favor the intensification and industrialization of agriculture, notably through PPPs and input subsidies for cash crops (BEDE, 2016; COPAGEN-JINUKUN, 2014; SOS Faim, 2017). In Senegal and Burkina Faso, for example, the policies that mention agroecology also mandate the development of growth corridors for commodity production (Republic of Senegal, 2018a), as well as the modernization, upscaling, and intensification of family farms (Republic of Burkina Faso, 2018). Meanwhile, Togo pledges to support both chemical input-based intensification and agroecological practices under a single strategic axis of its 2030 Strategic Agricultural Development Plan (Republic of Togo, 2015).

When it comes to translating these imperatives into hard financing, there appears to be a clear preference for the industrial pathway: Togo has committed to invest 240 billion FCFA (€363 million) in the creation of growth poles, and 175 billion FCFA (or €264 million) to establish 5 major agro-industrial processing units (Republic of Togo, 2015). In addition, many governments in the region prioritize semi-intensive peri-urban livestock farming over pastoralism or agro-pastoralism.

In some cases, policy commitments may be intentionally ambiguous. In the words of Issouf Sanou, FENOP coordinator, there is a “double speak” whereby diverging and competing objectives – support for family farming *and* growth corridors, climate mitigation *and* large-scale irrigation projects – sit side by side in the discourse of politicians. Dr. Ibrahima Diedhiou of the University of Thiès identified the same problem with regard to research: “Research programs are supported by the state, and states have particular orientations that they put into practice that do not necessarily align with their discourse of moving towards agroecological transition”.

Furthermore, despite broad consensus around the definitions of agroecology in West Africa (see Box 7), its complexity makes it vulnerable to cooptation, and creates barriers to understanding and uptake of agroecology in the political sphere (Rivera-Ferre, 2018). Private companies are increasingly drawing on the language of environmental organizations to promote input-intensive Green Revolution-style approaches (Duru et al, 2015; IPES-Food, 2016). This risks diluting agroecological values and principles, and creating general confusion (Wezel et al., 2018).

In other cases, the failure to follow through on commitments to agroecology simply reflects incomplete policy implementation, weak government steering capacity, fragmented funding structures, and the ability of dominant financial partners to lobby for their own interests at the implementation stage. ECOWAP in particular suffers from persistent financial and technical constraints (OXFAM, 2015), while the ongoing security and humanitarian crises in the Sahel, coupled with recurrent public health crises (e.g. Ebola epidemic, COVID-19), are straining budgets and redirecting resources away from agricultural development commitments. Slow implementation has also led to missed opportunities to promote agroecology, for example the failure to complete action plans under the agricultural policy adopted in Mali (LOA) in 2005.²⁶ Alimata Traoré, president of COFERSA, attributes this to a failure to spread information on the new legislation among grassroots organizations, and insufficient involvement of those constituencies in the implementation process.

²⁶ The new law declares unreserved support for the development of “sustainable agriculture [...] based primarily on family farms [...] through the maximum development of agroecological potential and agricultural know-how” (Republic of Mali, 2005).

Ultimately, incoherent policy imperatives at the national level mirror the incoherence within and between the many agriculture, nutrition, and food security frameworks adopted at regional and pan-African levels, as well as reflecting the shifting priorities of long-standing donors and new bilateral actors (see Section 1.2). In some cases, there have been difficulties transposing these proliferating frameworks at the relevant levels. According to Peter Gubbels, Groundswell International's Director of Action-Research and Advocacy for West Africa, "the lack of institutional capacity at the local level represents a real constraint on the implementation of policies adopted at regional and national level".

BOX 17

WHAT'S LOCKING IN INDUSTRIAL FOOD SYSTEMS? PATH DEPENDENCY



Industrial agriculture requires significant up-front investments in terms of equipment, training, networks, and retail relationships. To see a return on these investments, farmers are often required to scale up to deliver sufficiently high volumes of (low-value) uniform commodity crops. Once these structural shifts have been made, and loans taken on to finance them, it is difficult for farmers to change course. Although highly-specialized large-scale industrial agriculture is not as widespread in West Africa as in other regions of the world, policies in support of industrial agriculture have been pursued since the colonial era (see Section 1.1) and are now well established. Major investments have been sunk into export agriculture, agropoles, and other components of this model, creating major path dependencies on the political level. The general promotion and prioritization of this model (via education, research, input subsidies, supply chain policies) weighs heavily on the capacity of farmers and researchers to embrace different pathways, with habits, social pressures, and mental representations all converging around the imperatives to scale up and industrialize agriculture.

The result of these multiple, overlapping policy commitments has been to drain funds, capacity, and energy that could otherwise be applied to concerted coordination and policy formulation for food system sustainability (Oxfam, 2015) – making policy integration an urgent priority (see Section 4). Whatever the causes, the failure to endorse agroecology on the political level, and to follow through with concrete support measures, has the effect of discrediting it in the eyes of farmers and reducing their ability to take on the costs and risks of transition. As Marcel Dhijoun, Coordinator of Agriprofocus Benin, pointed out: "All those who intervene (in the agricultural sector) are aware that they cannot do anything that is outside the priorities defined by the government." Anna Veillon Tavares, representative of Enda Pronat, confirmed that "political commitment is the key".

BOX 18

HIGHLIGHTING ALTERNATIVES: SECURING POLITICAL BUY-IN AT MULTIPLE LEVELS



In West Africa, joint political advocacy, led by actors from civil society, development, and research, has significantly contributed to the uptake of agroecology by elected officials at the local, national, and regional levels (see the work of Dytaes, CGLTE, GRDR, EOA, AFSA, ENDA PRONAT, ACF, CNABio, FENOP, ROPPA).

In several cases, political commitments have arisen from consultation with civil society groups. For example, the network of municipal mayors of municipalities and green cities of Senegal (REVES), formed in 2016 following the Agroecology Days, aims to develop territorial policies based on agroecology and sustainable governance of natural resources (Le Soleil, 2017). Furthermore, President Macky Sall made several statements to show his support for the agroecological transition. He also sponsored the 'Agroecology Days', co-organized by DYTAES in February 2020. On this occasion, the government reaffirmed its commitment to include the DYTAES movement in national decision-making processes on agroecological transition (see also Box 24).

In other cases, civil society groups have taken on an implementation role to ensure follow-through on policy pledges. For example, ECOWAS's Agroecology Transition Support Project is supported in its implementation by AVSF, IRAM, and INADES (AFD, 2016; AVSF, n.d).

3.6 OBSTACLE 6. UPTAKE OF AGROECOLOGICAL PRACTICES

One of the reasons why industrial agriculture may appeal to farmers is that it offers technologies that alleviate the burden of agricultural work, as well as reducing total labor requirements. As a representative of FENOP explains: “When improved seeds come with short planting cycles, and all you have to do is turn the soil, sow the seeds and spray the accompanying products, it's much less arduous than having to plan ahead and prepare your compost, being able to spread it, etc. That kind of land management is more time-consuming for farmers.” A number of agroecological practices require significant time and manual labour – particularly if the relevant tools are lacking – from the preparation of organic fertilizer and maintaining hedges, to gathering stones for the construction of filter bridges or digging half-moons.

The challenge of convincing farmers to take up these practices is compounded by the fact that agriculture is itself increasingly cast as a backward livelihood in the region. This is occurring in a context of narratives – in West Africa and beyond – suggesting that global food production must be doubled in order to ‘feed the world’ in 2050, and only industrial agriculture can achieve this (Clapp & Fuchs, 2009; Inter-Réseaux, 2018a; McKeon, 2015 – see Box 19). As a result, farmers tend to encourage their children to pursue more socially and economically gainful paths outside of agriculture. While this does not exclude the uptake of new practices by those remaining in agriculture, the widespread adoption of labour-intensive and knowledge-intensive agroecological farming systems is likely to require buy-in from a new generation.

BOX 19

WHAT'S LOCKING IN INDUSTRIAL FOOD SYSTEMS? 'FEED THE WORLD' NARRATIVES



Food security continues to be framed by many prominent actors as a question of how to 'feed the world', i.e. how to produce sufficient calories at the global level – particularly in the wake of the 2007–2008 food price spikes (Bricas & Daviron, 2008). These narratives predispose us to approach the question of food security in terms of global production volumes of mainly energy-rich, nutrient-poor crop commodities. This reaffirms industrial agriculture as the solution, while sidelining key questions such as nutritional quality, poverty, access, power, and equity. These narratives tend to ignore the fact that current production is more than sufficient to feed the world (Holt-Giménez et al, 2012), and that 30% of world agricultural production is lost or wasted every year (FAO, 2011b). In West Africa, productivist narratives are strong, and tend to focus on the need to modernize and industrialize agriculture in order to feed the local population – in light of the region's high malnutrition rates and rapid population growth – rather than 'feeding the world'.

Furthermore, agroecological practices are context-specific and require a breadth of skills and knowledge. This necessitates considerable training and support in the transition phases, to support the adoption of new practices while building on farmers' existing knowledge with relation to the specific biotic and abiotic factors of their local environment. Support is particularly important in West Africa, with high illiteracy rates meaning that many farmers are unable to take notes or refer to technical support documents. As Famara Diédhiou, AFSA program manager, explains: "If you leave the farmer to fend for himself, yields will fall a lot. He won't succeed the first time he tries. The second time, he'll go back to the system he knows." Serge Simon, an agronomist at CIRAD, adds that: "Yields do not decrease when there is a supportive framework."

The decline and defunding of public agricultural extension/advisory services therefore represents a major obstacle to agroecology in West Africa. These services have been increasingly privatized and refocused on applying industrial inputs.

A study conducted in Nigeria also found that extension services tended to focus on men and their production needs, thereby depriving women farmers of the support they need (Ben-Ari, 2014). Academic programs in West Africa also remain focused on conventional agronomic approaches (SOS Faim, 2017), while in general, education remains structured around single disciplines, and thus ill-adapted to agroecological approaches (see Box 21).

BOX 20

HIGHLIGHTING ALTERNATIVES: FACILITATING THE UPTAKE OF AGROECOLOGY THROUGH KNOWLEDGE AND TRAINING



Some of the solutions being advanced to reduce the burden of manual labor include developing tools adapted to female farm-workers, undertaking work through cooperative arrangements, developing less labor-intensive techniques (e.g. Kassine*, zero-tillage (Burger et al., 2013) or planting nitrogen-fixing trees in order to reduce the need for compost – see CNOP and APAF). While the compatibility of digital data-driven ‘precision agriculture’ technologies with agroecological systems remains contentious (IPES- Food, 2016), efforts are also being made to emphasize the technological and digital aspects of agroecological systems (e.g. apps for managing short supply chains), with a view to encouraging young people to take up agroecology.

Civil society organizations are filling the gaps in state provisioning by creating transformative agroecological training modules. Agroecological incubation hubs, including the Songhaï center in Benin, the Kaïdara farm school in Senegal, AVAPAS in Burkina Faso, and the CNOP in Mali, are developing training programs covering production and marketing practices and techniques for gathering and transmitting knowledge. Training courses on improving soil and making biopesticides have also been made available to farmers through AFSA’s Healthy Soils and Healthy Food programme, and Caritas Sahel under the Agroéco Sahel program. Agroecological training is also organized by the FEAB in Benin, the FENOP and ANSD in Burkina Faso (e.g. training for women’s groups, setting up field schools), by COLUFIFA in Guinea, by CFAPE in Togo, and by ANAA, CNCR, FENAGIE PÊCHE, ROPPA, GIE BALLAL, and CEEDD in Senegal.

Meanwhile, with the support of NGOs such as Terre et Humanisme and ASPS, networks of agroecology champions have developed in several West African countries (e.g. the Association Nationale des Animateurs en Agroécologie (ANAA) in Senegal or the Sahelian Network of Agroecological Initiatives RSIA in Burkina Faso). Farmer Organizations such as CFAPE, AOPP, CNOP, and ROPPA remain essential in disseminating agroecological practices through farmer-to-farmer learning programmes.

In the academic sphere, the Faculty of Sciences and Techniques of the Cheikh Anta Diop University of Dakar (UCAD) and the Higher Institute of Agriculture and Entrepreneurship (ISAE) have put transdisciplinary agroecological approaches into practice through a collaboration with Enda Pronat and FENAB – funded by Swedish International Development Cooperation Agency, and coordinated by Biovision Africa Trust – to offer agroecological training programs (see the Masters in Sustainable Horticultural Management (GEDA) and the Professional License in Ecological and Organic Agriculture (LAEB)) (Agri Info, 2016).

The association, Inter-Réseaux Développement Durable, puts out regular information bulletins and special issues that facilitate access to wide-ranging information and bring to light various reflections and testimonies on issues facing family farmers. Other information channels are also developing either rapidly (e.g. social networks), gradually (e.g. press, radio, television broadcasts - see the 2018 and 2020 'Agroecology Days'), or more periodically (e.g. symposia, conferences, workshops) (CNOP, 2017; Enda Pronat, 2018b; FAO, 2015b).

* The Kassine is a light tool holder with animal traction, handy and adjustable to all types of tillage and surfaces. Its simplicity of use, its versatility and its low cost make it a suitable tool for family farming (Dia & Duponnois, 2013; Prommata, n.d.).

3.7 OBSTACLE 7. BRINGING EVIDENCE TO BEAR

An extensive evidence base on the performance of agroecology in West Africa and globally is already taking shape (Loconto & Fougère, 2019). Long-term, multi-country studies have shown that organic and agroecological systems deliver major benefits in terms of environmental resilience (e.g. higher rates of biodiversity and carbon sequestration, resistance to shocks) as well as delivering yield and income benefits for farmers in developing countries (see Section 2 of this report and synthesis in IPES-Food, 2016). Recent studies have demonstrated benefits at scale. For example, under the TEEBAgriFood Framework, agroecological interventions in the rice value chain in Senegal are projected to yield a whole range of co-benefits by 2050 – in terms of produced capital (e.g. 40% increases in production, 15% reductions in debt servicing re imports) as well as natural, human and social capital (e.g. -6% undernourishment and poverty) (GAFF, 2019). Meanwhile, In the Indian state of Andhra Pradesh, some 580,000 farms have adopted ‘Zero Budget Natural Farming’ – and are seeing economic and environmental co-benefits (Bharucha et al., 2020).

However, the evidence base is not yet sufficient in the eyes of many stakeholders. The need for more data on yield, income, employment, and on the socio-economic performance of agroecology vs. conventional alternatives, has been widely recognized, including by the HLPE (2019), the agri-development donor community (Biovision & IPES-Food, 2020), and during the FAO’s regional dialogues²⁷ on agroecology (2014-2018). Poverty and food insecurity remain the overarching priorities for policymakers, as was underlined by Tharcisse Nkuzimana, Policy Officer, Agriculture and Climate Change at DG DEVCO, EU Commission: “We need to show decision-makers that the new approaches bring benefits for the environment, human health and society, and do so in a way that is economically viable and allows a growing population to be fed” (FAO, 2020).

²⁷ Participants highlighted the need for scientific data to convince policymakers, farmers, donors, and other stakeholders of agroecology’s relevance (vis a vis employment, equity, food security, health, nutrition, etc.), its effectiveness (with regard to yields, income, soil fertility, and other socio-economic indicators), and its cost efficiencies.

Bringing evidence to bear and getting it heard by decision-makers therefore remains a major challenge. The fact that this has not yet systematically occurred can be attributed to several factors. Firstly, there are significant challenges with regard to undertaking agroecological research in West Africa and documenting its benefits. Scientific research is highly reliant on and shaped by external donors. Total funding for agricultural research, education and extension is stagnating, and represented only 14% of agricultural aid to Africa in 2017 (Biovision & IPES-Food, 2020). While most countries in West Africa and across the continent generally bear the operating and structural costs of research (e.g. salaries, infrastructure), they remain largely dependent on bilateral, multilateral and philanthropic donors to finance their research programs, meaning that researchers must respond to the strategic agendas of donors – who are generally not prioritizing agroecological research. For example, 85% of agricultural research for development projects funded by the Gates Foundation in the Sub-Saharan region are limited to supporting industrial agriculture and related practices (e.g. animal vaccines, synthetic inputs, improved seeds, etc.); only 3% include agroecological components (e.g. diversity, resilience, sustainability, autonomy, etc.); even in countries like Kenya with high domestic expenditure on agricultural research, only 13% of projects are agroecological (Biovision & IPES-Food, 2020). As stressed by one entomologist researcher at the Institute of Rural Economy (IER) in Mali: "Our first constraint is the lack of funding. And if we have funding, it has to be sufficient funding. And if we have sufficient funding, it should come from reliable sources. And we don't have those."



WHAT'S LOCKING IN INDUSTRIAL FOOD SYSTEMS? COMPARTMENTALIZED THINKING



Around the world, highly compartmentalized approaches continue to govern priority-setting in politics, education, research, and business, allowing the solutions offered by industrial agriculture to remain at centre stage (IPES-Food, 2016). Agricultural ministries, committees, and lobbies retain a privileged position relative to other constituencies (e.g. environment, health) in determining the policies and controlling the budgets that shape food systems (i.e. agricultural policies and subsidies, trade policies). Compartmentalized approaches appear to be the norm in West African policy-making. For example, a study of Burkina Faso's food security policy found that like many analogous policies across Africa, it is heavily production-focused, reflecting fragmented institutional approaches, and the legacy of food security being framed historically as a question of cereal deficits (Alpha & Fouilleux, 2018). Compartmentalized approaches also play out in the research sphere. Increasingly privatized agricultural research and development programmes remain focused on the handful of commodities for which there is a large enough market to secure significant returns. In West Africa, siloed approaches have been identified in the production and dissemination of research, with clear disconnects between different areas of knowledge and spheres of action (advocacy, training, research, value chain).

Secondly, the benefits delivered by agroecology (and documented in the literature) are under-valued as a result of the way that agricultural performance is evaluated (see Box 22). The modalities of agroecological research limit its ability to produce evidence of the type valued by the mainstream. The local and traditional knowledge of farming communities is central to agroecology, with a focus on participatory approaches which generate context-specific research questions. Unlike conventional approaches, which tend to consider farmers as 'beneficiaries' of innovations, participatory agroecological research puts farmer knowledge at centre-stage and positions farmers as co-owners of solutions and co-creators of knowledge (FAO, 2018; FAO, 2019c). As illustrated by Dr. Ibrahima Diedhiou, researcher at the University of Thiès: "People have focused a lot on yields, but food and nutritional issues are not just questions of quantity. There are socio-cultural aspects to take into account."

There are questions of taste, of preserving food cultures. In what you grow, there are choices to be made, beyond performance techniques, we have to be able to satisfy food needs – and these affect cultural needs. Diversity is an extremely important criterion because it is the one that guarantees the stability of the system.”

Thirdly, there has been insufficient communication of findings beyond the research world. As Dr. Sami Hyacinthe Kambiré, researcher at INERA, explains: "Decision-makers are aware that agroecology is productive, but there is no buzz, there is no communication around these findings. The general public is not yet aware of these findings." Nor have the findings systematically reached farmers. The remit of researchers is generally seen to cover the creation of knowledge, but not the dissemination of findings to farming communities. Furthermore, scientific publications tend to use technical vocabulary and jargon, making them less accessible to intermediaries (e.g. NGOs, peasant organizations) who could potentially disseminate the results. This underlines the importance of undertaking participatory agroecological research, which builds in broad ownership and dissemination of the findings by including a wide range of actors (e.g. farmers, research, local authorities, civil society) in all phases (Côte et al., 2019).

Finally, where attempts are being made to amplify information outlets on agroecology and the risks associated with industrial agriculture (e.g. BT cotton in Burkina Faso, growth corridors), they are held back by a lack of human and financial resources. Civil society groups struggle to cover the costs of printing and translating documents into local languages, hosting radio or television programs, and other activities (BEDE & COFERSA, 2015). Furthermore, efforts to spread agroecology must compete with the endeavors of agribusiness agents, who travel to rural areas to market and sell their products. Agroecology does not currently generate market returns on the same level, and cannot rely on business representatives to disseminate its practices. This highlights the structural lock-ins of the current system, and raises questions about whether and under what conditions agroecology can thrive within a conventional market economy (see Section 4).

WHAT'S LOCKING IN INDUSTRIAL FOOD SYSTEMS? MEASURES OF SUCCESS



Diversified agroecological systems are by definition geared towards producing diverse outputs, while delivering a high degree of resource efficiency, reducing GHG emissions, and producing a range of environmental services and social benefits on and off the farm. To capture these crucial aspects, the performance of agriculture should be evaluated based on a wide range of agronomic, environmental, and socio-cultural criteria (D'Annolfo et al., 2017; Dawson et al., 2016). Instead, narrowly defined indicators of agricultural performance (e.g. yields of specific crops, productivity per worker) tend to be used. These measures reward large-scale industrial monocultures while failing to capture the benefits of alternative systems. Furthermore, the economic modelling systematically used to define development trajectories tends to be based on neoclassical theory, leading to the selection of parameters and variables based on highly subjective framings, and the skewing of results towards production modes that prioritize high returns on investment over other potential socio-economic or environmental benefits (Cornilleau, 2016; Fouilleux, 2000; Leblond & Trottier, 2016). Research (and researchers) also tend to be valued based on narrow criteria – principally the number of scientific publications. As a result, researchers are often discouraged from pursuing agroecological approaches which are more time-consuming, straddle disciplines, and are harder to convert into immediate 'value' (Biovision & IPES-Food, 2020).

BOX 23

HIGHLIGHTING ALTERNATIVES: BRINGING EVIDENCE TO BEAR



Several West African research teams are working on applying ecological principles to the management of agroecosystems. For example, in Burkina Faso, INERA's Department of Natural Resources Management and Production Resources is working on the optimization of organic fertilizers, reduced tillage, the rehabilitation of degraded land, integrated pest and disease management, and other techniques such as zaï (see work by Dr. Sami Hyacinthe Kambire). In Mali, IER / CRRRA is carrying out projects on push-pull, sub-threshold treatments and natural pesticides (see work by Entomologist Researcher Idrissa Tereta). In Senegal, the LMI IESOL, bringing together ISRA and IRD researchers, is working on the recovery of organic resources and waste, the use of biofertilizers, biogas etc. (see projects led by Yacine Ndour Badiane) (IRD, n.d.). The University of Thiès is developing studies on the role of shrubs in the establishment of sustainable cropping systems in the Sudano-Sahelian zone (see work by research director Ibrahima Diédhiou).

Participatory research is also growing in the region. For example, the TAMA project, co-led by CIRAD and AgriSud International, aims to develop agroecological systems within market gardening sectors (CIRAD, 2016). In addition, APAF has developed a partnership with the Joint Laboratory of Microbiology on the mycorrhization of fertilizer trees and the evolution of soil fertility in agroforestry. Meanwhile, the Senegalese multi-stakeholder task force to promote agroecology – the TaFaé – is an example of an initiative that addresses blockages in information flows by promoting meetings, dialogue, exchange of expertise, and mutual learning between researchers, farmers, and international organizations. Co-sponsored by the IRD, TaFaé organizes, for example, visits to multi-purpose sites (e.g. research hubs with demonstration farms) that promote synergies and mutual understanding between the rural and scientific worlds (IRD, 2017; Pfongue, 2017).

In order to improve the evaluation of agroecological performance, the GTAE sought to produce a database of evidence using harmonized evaluation criteria. By building on AVSF's 2017 CALAO project, GTAE convened a multi-actor reflexive process on evaluating the performance of agroecology (see Memento for the evaluation of agroecological performance) (Levard et al., 2019). In parallel, Groundswell International has developed a research program on multi-criteria assessment of the impacts of agroecology. In addition, as part of the Agroéco Sahel program that brings together the SCCF and the Caritas networks in the Sahel, the partners have established technical and economic benchmarks to measure the performance of experimental plots. France is supporting the Transformative Partnership Platform to accelerate and co-ordinate the work of the CGIAR and partners on agroecology across international, national and local scales, with the aim of fostering transitions to more sustainable agricultural and food systems (CGIAR, 2020). Finally, FAO has created a tool – 'TAPE' – to assess the performance of agroecology in environmental, social, cultural, economic, health, nutrition and governance terms. This tool aims to inform policymakers in their assessments of the multidimensional impacts of agroecological systems, and their potential to contribute to the Sustainable Development Goals (SDGs) (FAO, 2019a).



3.8 OBSTACLE 8. FRAGMENTATION OF THE MOVEMENT

As Adama Thiegoum, UAVES coordinator puts it, "it takes the wings of multiple birds to make a powerful sound." While many initiatives and platforms are developing in the region in support of agroecological transition, they often remain isolated, poorly documented, and insufficiently coordinated with each other.²⁸ According to Bertrand Mathieu, Program Manager for Peasant Agriculture and Agroecology at AVSF: "It is a significant challenge in West Africa to create linkages between these initiatives and experiences, and to bring out the most pertinent information to show the relevance of agroecology to governments." Indeed, networking is essential to build bonds of trust, encourage common ownership of the issues, and ensure that the plans, strategic actions, and needs of grassroots actors are transmitted into policy debates (URGENCEI, 2018). As stated by Marcel Djihoun of Agriprofocus Benin: "Peasant organizations facing governments are always in a weaker position, that's why we tell them they need to be united and strong to get our point of view across, otherwise people will try to bypass you, dominate you. That is a permanent struggle and shows the need to be in synergy. This synergy is necessary to be able to put real pressure on the government."

How the movement is represented at the political level, and by whom, is also crucial. As Serge Simon, an agronomist at CIRAD, explains: "Dispersion is harmful when you want to do advocacy. You shouldn't turn up one after the other, you should turn up together." The prevalent role of social movements in promoting agroecology can lead decision-makers to see agroecology as a form of militant action and therefore a source of political instability. This underlines the urgent need for constructive multi-stakeholder dialogue allowing for convergence points to be found and a climate of trust to be built between social and political actors. According to a former FAO Agricultural Officer: "We must produce evidence to reassure people. We have to come and say 'agroecology is a solution for food security', it's not a religion, it's not an ideology, we are not activists, we are realists".

²⁸ This analysis is drawn from a mapping exercise conducted in 2017, but the picture has evolved significantly in the following years (see Box 24).

HIGHLIGHTING ALTERNATIVES: MOVEMENTS COMING TOGETHER

Across West Africa, there are many examples of movements coming together to undertake joint advocacy. For example:

COPAGEN (Coalition pour la Protection du Patrimoine Génétique africain), was founded in 2004 in Grand-Bassam (Côte d'Ivoire). In order to promote community rights over genetic resources in a context of GMO authorisations, biopiracy and land grabbing. With a parallel focus on opposing GMOs, fighting land grabbing, and promoting agroecology, this platform has brought broad interests in defense of sustainable food systems.

Meanwhile, the Senegalese organization, Enda Pronat, started as a pro-agroecology, anti-pesticide platform, but has progressively integrated the struggle for land rights after forging strong alliances with peasant groups. As Marième Sow, Executive Secretary of Enda Pronat, puts it: "We realized that agroecology can only work if peasant farmers are able to own and govern and make decisions over resources. That's what ties us to land rights."

Progress has also been made in unifying the agroecology and food sovereignty movements, in line with the Nyeleni definition which situates agroecology within the broader frame of food sovereignty and struggles for social justice. A 2016 Nyéléni bulletin identified agroecology as a vehicle for resistance and transformation of food systems, particularly with regard to blocking land grabs and protecting territories. Moreover, the Alliance for Food Sovereignty in Africa (AFSA) has embraced agroecology as part of its core vision. The CGLTE alliance, meanwhile, has brought together groups promoting agroecology with struggles against land-grabbing, and aspires to unify West African movements around the defense of community rights and the promotion of peasant agroecology (including peasant seeds) and food sovereignty.

Through forums, workshops, hearings and conferences held recently across the region, bridges have been built between different actors, initiatives and constituencies involved in the agroecological transition (see FAO Symposium in 2015, Days of the agroecology in Dakar in 2016, 10 years from Nyéléni to Sélingué in Mali in 2017). The 3AO Alliance, founded at a meeting convened by IPES-Food and ROPPA in 2018 in Dakar, brings together 69 organizations, including farmers' organizations, social movements, research institutes, and international organizations. It seeks to broaden and strengthen collaborative work under the banner of agroecology, with a detailed action plan for advancing transition on multiple fronts. The challenges and opportunities for accelerating agroecological transition through alliance-building, and particularly through 3AO, are discussed in Section 4.

In 2019, around fifty Senegalese organizations came together to create DYTAES, a movement aimed at supporting the actions of the Senegalese government in favor of the agroecological transition. After a consultation process including some thousand Senegalese stakeholders, DYTAES drew up a series of recommendations to guide political decisions in favor of this transition. The document "Contribution to national policies for an agroecological transition in Senegal" was officially presented to the Minister of the Environment at the Night of Agroecology, in January 2020.



SECTION 4

THE WAY FORWARD



As shown in Sections 1-2, the long-standing quest to industrialize West African agriculture is accelerating, with FDI flooding into the region, vast tracts of land changing hands, and new players applying pressure through new initiatives. And yet, the foundations of different food systems and different economic systems have remained intact. Vibrant movements to defend farmer seed systems, smallholder land tenure, and peasant agriculture are building on these foundations, bringing agroecological alternatives to light, and finding footholds of support in some emerging policy frameworks at national, regional, and pan-African level. They are poised to expand: agroecology is well-embedded in West Africa, and well-placed to provide responses to the region's social, environmental, and demographic challenges.

But as Section 3 demonstrates, the obstacles to agroecology remain numerous. They are also mutually-reinforcing. For example, without a secure resource base for agroecological production (Obstacles 2 and 3) and without remunerative sales outlets (Obstacle 4), agroecology remains on the fringes and struggles to be economically viable. This limits its attractiveness to farmers (Obstacle 6) and to policymakers (Obstacle 5). In turn, low political buy-in accentuates funding shortfalls for agroecology (Obstacle 1): external donors, in particular, are unlikely to push for agroecological development pathways without a clear signal from national governments.

Furthermore, the obstacles facing West African farmers and food system actors on a daily basis are reinforced by dynamics that lock industrial agriculture in place at the global level. Most of these lock-ins appear to be as deeply rooted in West Africa as in other parts of the world, although they manifest in the region with some unique dimensions. For example, in West African food systems, power is concentrated not only among specific actor groups but also among organizations based *outside* the region – thereby linking back to dependencies from the colonial era. The regional analysis also shows that it is not just agricultural production models but also *policies* that are path dependent, i.e. policy frameworks whose overlapping objectives constrain and pre-determine one another.

Actions in different domains and at different scales are therefore required to overcome these obstacles and lock-ins. Through well-coordinated and mutually-reinforcing actions, the vicious cycles described above could become virtuous circles. For example, the more the advantages of agroecology are proven and disseminated, the stronger the movement and its demands will be, and the greater the chances of them gaining political traction. A clear display of political support for agroecology could accelerate progress on multiple fronts, from creating new market openings to injecting new directions and dynamics into education, research, and training.

Ultimately, power relations must change: while many of the initiatives described above are making important progress on specific issues, fundamental change is unlikely to occur without enhanced action to address the root causes of poverty and inequalities (e.g. basic lack of access to land and resources, the disadvantages facing women) or to build capacity and unity through alliances. Furthermore, action must occur at multiple scales: steps to address West Africa-specific obstacles to agroecology are likely to loosen the grip of industrial food systems globally (i.e. by eroding one of its sources of economic value creation/extraction and political power); while steps to challenge the primacy of industrial agriculture in global fora will, in turn, empower West African decision-makers to pay due attention to the evidence and advocacy in favour of alternative pathways.

Below, we identify four leverage points where sustained action could build on progress already being made, overcome key obstacles, and accelerate the agroecological transition in West Africa. These leverage points are based on tackling the more movable obstacles and circumventing the lock-ins of current systems, while harnessing opportunities in the current political landscape.

4.1 LEVERAGE POINT 1: ALLIANCE-BUILDING AND COLLECTIVE ACTION

A vocal, visible, broad-based, and unified agroecological movement is essential for advancing change on multiple fronts and unlocking transition in West Africa.

Agroecology is already well-embedded in the region as science, practice, and social movement, providing strong foundations for broad-based alliances. Furthermore, there are signs that the fragmentation of the movement is being increasingly overcome. As described in Box 24), the agroecology and food sovereignty movements are finding common cause, with diverse groups coming together around struggles to resist land grabs, counter GMOs and pesticides, and protect peasant seeds. And since 2018, some 69 organizations have joined the Alliance for Agroecology in West Africa (3AO – see Box 25) and committed to working with a breadth of partners (farmers organizations, social movements, advocacy NGOs, research networks and international organizations) to develop a multi-country, multi-scale action plan for advancing agroecology.



THE ALLIANCE FOR AGROECOLOGY IN WEST AFRICA (3AO)

3AO is a cross-sectoral cooperation platform aiming to collectively define how to move beyond the systemic barriers to agroecological transition in West Africa. The Alliance was founded in April 2018 at a Dakar meeting convened by IPES-Food and ROPPA: 41 participants, representing 31 organizations, came together at the meeting to develop a joint strategy to support the transition to agroecology and sustainable food systems in West Africa. Some 38 organizations have since joined the Alliance – now made up of 69 members.

Drawing from the African proverb, “if you want to go fast, go alone. If you want to go far, go together,” the Alliance bases its theory of change on the notion that “every actor, no matter their starting point, is essential to transition” (3AO, 2018). As such, 3AO is based on the principles of participation, empowerment, appropriation, self-evaluation, transparency, and solidarity to lead an agroecological transition in West Africa. Through a series of concrete and coordinated actions, the Alliance seeks to:

1. Enhance the visibility of actors involved in agroecological transition;
2. Link food system actors involved in different policy areas and at different levels of governance;
3. Pool knowledge and know-how by promoting information sharing;
4. Coordinate actions to maximize the efficiency and effectiveness of human and financial resources dedicated to agroecology, i.e. – avoid duplication of efforts in pursuit of shared goals.

Numerous inputs into this report, particularly the identification of obstacles to agroecology (Section 3), were made by individuals and organizations who are now members of 3AO. The report therefore seeks to capture 3AO's underlying 'theory of change', as well as drawing lessons in real time from the alliance-building process itself. Those lessons are drawn in this section and in more detail in the Toolkit in Annex 1 to this report.

Alliances are crucial in a context where making the case for agroecology relies on combining multiple strands of activity more effectively than ever before. Given the global and systemic nature of the lock-ins of industrial agriculture, only a series of complementary measures, implemented at all levels of governance, are capable of addressing them. Proponents of agroecology must show that it is already a reality on the ground, while advocating for profound policy changes to create an environment that is conducive for it to spread, and resisting further encroachment of industrial agriculture that could reverse the fragile progress to date. These multifaceted efforts need to be sustained over time, given the challenging nature of political buy-in (see Section 3.5): securing a favourable policy environment for agroecology is likely to require more evidence, more communication of that evidence to policymakers, more efforts to defend agroecological components in the policy implementation phase, and more scrutiny of overlapping or overarching frameworks which may undermine nascent support for agroecology.

Participatory alliance-building helps actors to see themselves as part of this interconnected landscape, making it possible to collectively analyze the challenges being faced and to co-develop solutions (Enda Pronat, 2019). Collaboration increases creative learning, experimentation, and innovation due to the many perspectives and insights involved (Fireman & Gamson, 1979). With greater collective vision, the goal no longer becomes to repair the dominant system, but to collectively build ambitious strategies that can shape a more sustainable future. It also allows actors to become visible, heard, and understood, to assert their individual interests as part of a broader whole, and to develop lasting bonds of solidarity.

The 3AO experience testifies to the ability of actors to devise and implement a common action plan whose scope goes well beyond the activities and ambitions of any specific organization. Indeed, alliances allow individual actors and activities to be joined up with complementary ones, thereby increasing their chances of success. Diversity of membership, and the construction of broad-based alliances, is therefore paramount. In 3AO, this breadth has allowed, for example, a farmers' group to interact with an international research body in neutral territory, while advocacy groups have been able to draw lessons from the experiences of analogous organizations in neighbouring countries.

Alliances also transform the modalities and mindsets of their members. By adapting working methods, coordinating actions with partners and agreeing on a shared division of tasks, members of multi-stakeholder alliances are in fact restructuring the very nature of socio-professional dynamics. New modes of cooperation and solidarity are particularly important given that these values are at the heart of an agroecological food system. In other words, "there is a need to transform in order to be transformative" (Pimbert, 2010), and alliance-building can facilitate that process.

However, the challenges remain vast for emerging agroecological alliances to meet their potential. The fragmentation of the movement has presented and can still present obstacles, while compartmentalized approaches – which lock in current pathways in policy, research, and business – can also manifest in civil society and prevent broad-based alliances from forming. Alliances are themselves the site of power imbalances and competing claims for visibility, prioritization, and control of narratives. Nonetheless, the 3AO experience has shown that these issues can be managed by ensuring sensitivity to the concerns of various actors, remaining aware of competition between organizations, and being ready to address and accommodate different worldviews and norms (see Annex 1 – Toolkit). This underlines the need to emphasise common values and goals in order to foster constructive dialogue and trust-based relationships. It requires flexible and innovative tools for coordination, management, communication, monitoring and evaluation, promoting stakeholder inclusion and multi-sectoral exchange, while maximizing the efficiency of such a process, in a context where human and financial resources are limited. These challenges are evolving by their nature, and require constant and candid self-reflection. Learning to overcome them will be more relevant than ever as alliances expand and new constituencies come on board (see Leverage Point 2).

4.2 LEVERAGE POINT 2: INTEGRATED FOOD POLICIES

Reforming the governance of food systems is a powerful vehicle for advancing agroecology in West Africa and beyond.

In response to the lock-ins identified in *From Uniformity to Diversity* (IPES-Food, 2016), and particularly the *compartmentalized approaches* that dominate in policymaking, research, and business, IPES-Food recommended the adoption of integrated food policies as a vehicle for agroecological transition. Integrated policy frameworks can overcome the traditional biases in sectoral policies (e.g. export orientation in agricultural policy), allow trade-offs to be weighed up, align various policies with overarching food system objectives (e.g. agroecological transition, healthy diets for all), assign accountability over multi-year timeframes, and allow diverse constituencies (e.g. farmers, food businesses, environmental NGOs, health groups, development organizations) to co-define priorities on equal footing. This approach was subsequently developed into a 'Common Food Policy' blueprint for the EU (IPES-Food, 2019), and has been taken up by AFSA in its campaign for an African Food Policy, launched in Addis Ababa in November 2019 (AFSA, 2019).

Policy integration is particularly relevant in West Africa. In CAADP, the African continent already has the basis of an integrated, inclusive food policy framework, and West African countries have made strides in implementing it through national plans ('NAIPs') and regional policies such as ECOWAP.

However, there is an urgent need to reconcile the competing initiatives espoused by governments, to realign them with CAADP/NAIPs, to join up supply- and demand-side actions, and to establish agroecological transition as a top priority. Regional and pan-African frameworks range from commitments to promote increased synthetic fertilizer usage (Abuja Declaration), commercialize seeds (WASP), and unlock agribusiness investment (NAFSN), to initiatives promoting organic (EOA) and 'nutrition-sensitive' (SUN) agriculture (see Sections 1.2 and 3.5). Initiatives like SUN have focused squarely on biofortification and supplementation, while largely ignoring the potential to boost nutrition by improving the livelihoods of farmers and producing diverse, healthy food in agroecological systems. Meanwhile, the EOA initiative is yet to harness major investment in developing markets and value chains, and remains largely production-focused (FAO & AU Commission, 2018).

These overlapping and sometimes contradictory initiatives have also created inter-institutional tensions and competition for resources (Vanheukelom, 2016), particularly between pan-African frameworks and the Regional Economic Communities (RECs). While RECs have already made progress in developing their own agricultural policies (e.g. ECOWAP), they have not been given a clear mandate to implement CAADP through tools such as trade policies (Tondel, 2017). As a result of this fragmented governance, work on implementing CAADP has continued in silos, reducing the scope for coherence between agriculture, industry, and trade policies, and adding to the bureaucratic burden on governments (Vanheukelom, 2016).

Furthermore, integrated food policies can provide an opportunity to deepen and broaden the multi-stakeholder and cross-sectoral approaches that are already embedded in CAADP via country teams and Agriculture Donor Working Groups. Food policies can provide a focal point for bringing together an ever-broader coalition of actors with a shared interest in transforming food systems, including consumers, supply chain actors, public health organizations, youth movements, municipal policymakers, and many others. Where agroecological markets are emerging, consumers are directly influencing the way products are marketed, and are playing a multifaceted role in developing and sustaining those markets (FAO & INRA, 2018). Although building broad-based alliances is inherently complex (see Leverage Point #1 and Toolkit), bringing these different actors together is necessary in order to build an increasingly holistic vision of food system reform, and to create a critical mass of support for agroecology. Multi-stakeholder approaches, as AFSA plans to undertake to develop an African Food Policy, are therefore crucial in order to ensure broad-based participation and ownership of food policy-making processes.

While integration of food system policies can and must happen at multiple levels (national, regional, pan-African), the adoption of a West African food policy by ECOWAS could be particularly effective in accelerating progress towards sustainable, agroecological food systems. A West African food policy could be developed using ECOWAP as a foundation, setting overarching food system objectives (e.g. food security/sovereignty, climate resilience) and broadening its scope into areas like trade policy, land policy, and climate mitigation. Such an effort would further align ECOWAP with CAADP in the more holistic approach mandated under the 2014 Malabo Declaration and in its newest and most systemic iteration: the AUDA-NEPAD Nutrition and Food Systems Implementation Plan.

A West African food policy could be implemented through existing initiatives to advance agroecology and food sovereignty (e.g. under ECOWAS' Agroecological Transition Support Project, EOA, the FAO Scaling Up Agroecology programme, and several national policies), as well as through some elements of SUN and WAAPP. The inclusion of civil society in designing, implementing, and monitoring a West African food policy would be essential in order to ensure consolidation and harmonization of existing frameworks (rather than the creation of new action plans), establish broad food system objectives and maintain them over time, align national level policies with regional food policy objectives, and build on the many civil society-led initiatives highlighted in Section 3.



4.3 LEVERAGE POINT 3: FOOD SOVEREIGNTY, TERRITORIAL DEVELOPMENT, AND A NEW ECONOMIC PARADIGM

As economic orthodoxies are questioned and new priorities and paradigms gradually take root, favourable conditions for agroecology could start to emerge.

It is clear from the analysis in Sections 1-3 that agroecology struggles to emerge and compete in highly liberalized and financialized market systems. It involves shorter supply chains and fewer transactions: an FAO study of agroecological markets in 12 countries found that produce changes hands only twice on average, with four to five different actors typically working together in non-hierarchical networks (FAO & INRA, 2018). Agroecology recycles value into the agroecosystem rather than creating surpluses and delivering big returns to capital. And it is based on different values, as recognized by the FAO study mentioned above: “It is important to bear in mind that products are not the only goods being valued here – cultural traditions, ideas, vision and knowledge are also being exchanged” (FAO & INRA, 2018). The *concentration of power* (see Box 13) in mainstream food systems shuts out the type of innovations delivered by agroecology. Highly consolidated markets fail to promote genuine innovation and adaptation to changing conditions; instead, they incentivize growth through mergers and acquisitions, barriers to entry, rent-seeking, and the incorporation of smallholders into lengthy value chains under unfavourable conditions (IPES-Food, 2017a).

Nonetheless, agroecology can thrive when the additional value it creates – for ecosystems and for society – is rewarded. For example, when the relatively high costs of synthetic inputs are factored in (i.e. when they are not subsidized) and when organic inputs are readily available, large numbers of farmers are shifting towards agroecological models *in order to become* economically viable (see for example van der Ploeg et al., 2019). The conditions become increasingly favourable for agroecology when a polluter-pays-principle is enforced, when negative externalities are penalised, and when positive externalities (e.g. the provision of ecosystem services) are rewarded. Furthermore, the case studies documented by IPES-Food (2018) found that communities and regions are able to transition to agroecology when hybrid systems (e.g. new knowledge exchanges, new modes of accessing and sharing resources, solidarity-based marketing structures and sales outlets) emerge alongside the mainstream economy.

In other words, a broadening of what is valued, measured, and incentivized is required for agroecology to thrive, but economic indicators do not need to be discarded altogether. Agroecology can be advanced in West Africa by harnessing several emerging shifts in economic thinking and framing, with trade- and export-based growth mantras giving way to new paradigms.

Firstly, as civil society and scientific actors have increasingly argued, agroecology may in fact be the most cost-efficient way, and perhaps the only way, for countries to meet the majority of the SDGs and address climate change. According to the FAO's latest global food security assessment: "In terms of outlook for 2030, Africa is significantly off track to achieve the Zero Hunger target, even without considering the impact of COVID-19" (FAO, 2020c). This realization could prompt a reorientation of economic strategies to align with agroecology, via realignment with the original CAADP and NEPAD goals, a renewed focus on macro-economic stability goals (i.e. avoidance of future malnutrition-related health expenditures, reduction in debt levels, reduction of foreign reserve requirements), and redirection of some FDI flows towards agroecological markets as a commercialization opportunity.

This shift may already be occurring in the shape of emerging political commitments to *food sovereignty*. As a new collective right emerging from civil society and social movements, food sovereignty has clear political dimensions: it asserts the right of peoples to participate in decision-making and to define their own food and farming systems (Claeys, 2015). The stated objective of Benin's food security policy (PSDSA) is to allow the country's farmers to ensure Benin's food sovereignty, food and nutrition security, and to meet the SDGs (Republic of Benin, 2017). Niger's agricultural policy, meanwhile, places food sovereignty alongside food and nutrition security and economic growth as a core objective (Republic of Niger, 2016). In Senegal, where agroecological transition is included as one of the five pillars of the 'Plan for an Emerging Senegal' (2019-2024), a broader vision of food sovereignty has anchored this approach: Moussa Baldé, the Agriculture and Rural Affairs Minister, has described agroecology as an opportunity for the country to "increase its food security and preserve its resources to food future generations" (FAO, 2020a). Meanwhile in Ghana, calls for food sovereignty have translated into plans to reduce rice imports by 50% between 2019 and 2020, and to ban them from 2022, with other imported foods (e.g. tomatoes) also likely to be restricted (Olodo, 2019).

Furthermore, *territorial* rural development approaches are receiving increasing support. While territorial (domestic) markets are the reality for the majority of farmers and food companies in West Africa, policies generally remain *export oriented*, with many governments putting export growth at the centre of their agri-development strategies, to the detriment of many farmers producing food for local communities (see Section 3). Most West African states have now signed and ratified Economic Partnership Agreements (EPAs) ensuring reciprocal trade liberalization with the EU, although the process has been bumpy. Meanwhile, all states in the region have signed up to the African Continental Free Trade Area (AfCFTA), and most have ratified the agreement.

However, these orthodoxies are being challenged. As acknowledged by the EU Taskforce Rural Africa (TFRA, 2019) and the European Commission's chief sustainability advisor (Falkenberg, 2016), market liberalization and export-led growth no longer offer an obvious route to prosperity for developing countries, in a context of highly competitive – and saturated – global markets. Through the 2020 'Farm to Fork' strategy, the European Commission has in fact committed to put its trade and development policies in the service of "the global transition to sustainable agri-food systems, in line with the objectives of this strategy and the SDGs". Furthermore, the EU Taskforce Rural Africa (TFRA, 2019) has called for African agri-development to be recentred on "functional territories – i.e. places with active economic linkages, social networks and, most often, common identity and heritage which inspire ownership and solidarity." This "paradigm shift" would entail a major role for the state, requiring African countries to "look beyond the agricultural sector per se, unlock the potential of rural areas and secondary cities, strengthen the capacity of local people, notably women and youth, and empower local, regional and national institutions." Similarly, the OECD has underlined the importance of foodsheds, city-region food systems, and other "self-reliant locally or regionally-based food systems" as tools for understanding how food systems are structured, while highlighting "the need for a territorial approach to more resilient food systems and sustainable development strategies" in the wake of COVID-19 (OECD/SWAC, 2020).

Territorial approaches are already embedded in the work of West African social movements, and go hand in hand with agroecology. A 2018 colloquium, *Les Batailles de Consommer Local*, found that territorial supply chains, markets and food system initiatives are being embraced by West African producers and consumers as a clear alternative to the agro-industrial model; are emerging via innovative producer-led and cooperative initiatives with local and regional-level policy support; and are advancing new forms of participatory governance (CFSI, 2019). In this context, greater cooperation between neighbouring producers – which can take the shape of group farming arrangements²⁹ or cooperatives – may also find opportunities to thrive and to transform supply chains by increasing farmers' bargaining power.



²⁹ Group farming is a daily production arrangement based on sharing land, labour, capital or farm management responsibilities. It is particularly beneficial for farmers working on small plots with little bargaining power, low access to resources, and high vulnerability to economic and environmental risks. Cooperation and the sharing of resources improves farmers' ability to invest, innovate, and negotiate price, and alleviate the burden of informal labour from family members for agricultural work. (Agarwal, 2018)

4.4 LEVERAGE POINT 4: AGROECOLOGY AS CRISIS RESPONSE

As disease and climate threats multiply, agroecology can be positioned as a systemic solution to prevent and build resilience to future shocks.

Agroecology can and must be placed at the heart of the radical climate mitigation strategies the region urgently needs. Through its focus on diversity at all levels, agroecology has in-built resilience to shocks (Altieri et al., 2015). Meanwhile, its adaptability and economic viability for family farms makes agroecology appropriate for the various parts of West Africa and the various forms of extreme weather they will face (Barry et al., 2018; Sultan & Gaetani, 2016).

The COVID-19 pandemic is also highlighting the need for food systems transformation. The COVID-19 crisis is already hitting the region hard. Market and border closures across West Africa – including in Burkina Faso, Mali, Nigeria, and Senegal – have cut off vital provisioning routes for communities, pastoral routes for nomadic herders, and sales outlets for farmers (IPES-Food, 2020; FAO, 2020b). Food insecurity is projected to rise as a result of supply chain interruptions, access problems and lost income. The crisis is also threatening to severely disrupt financial flows: FDI to West Africa already decreased by 21% to \$11 billion in 2019, with a further 25%-40% drop-off foreseen in 2020 due to the COVID-19 pandemic and a drop in commodity prices (UNCTAD, 2019).

However, the pandemic is also creating opportunities for new investments and new thinking. Six West African countries have prepared response plans worth 1.85 trillion CFA (€2.8 billion), but implementation and mobilization of resources is proving challenging.³⁰ Action is also being stepped up at the pan-African and regional levels. In April 2020, all 55 AU member states committed to strengthen their social safety nets, bolster intra-regional food and agricultural trade, and support access to food and nutrition for their most vulnerable populations.

³⁰ The measures being taken by West African countries include the following: Burkina has specific measures in place to facilitate access to cereals for the most vulnerable people at subsidised prices by opening outlets across the country; Cote d'Ivoire is supporting its agricultural sector with 311.6 billion CFA (€457.2M), including agricultural kits for producers, building storage facilities, promoting ploughing and mechanical harvesting (but mostly with an export-oriented crop focus); Nigeria has focused on nutrition issues for young and vulnerable groups and immediate conditional cash transfers for 2 months, while internally displaced people will receive 2 months of food rations; Senegal is distributing food kits for 1 million vulnerable households (comprising rice, sugar, oil, pasta); and Togo is providing cash transfers – a form of 'universal ultra-basic income' – to those affected by the crisis (Duflo & Banerjee, 2020). The scheme, linking an electronic wallet to peoples' cell phones, already has 1.3 million people registered and has sent money to 500,000 in the region of Greater Lomé (the capital) alone.

ECOWAS, together with WAEMU, CILSS, and RPCA members, is mobilising to coordinate the implementation of various initiatives aimed at tackling the food and nutrition crisis in the context of COVID-19, and the persisting security crisis. A Regional Task Force has been set up for ECOWAS's agricultural ministers to monitor the impact of COVID-19 on food and nutrition security. In response to COVID-19, a number of leading peasant organizations have identified the need for policy measures to support the restoration of production capacity and stimulate transition towards sustainable, employment-creating rural development (ROPPA et al., 2020).

In other words, new ways of intervening in and governing food systems are rapidly being adopted, suggesting that the 'lock-ins' of current food systems do not seem to apply in the COVID-19 context. While agroecology has not been prioritized among initial responses, there is major scope to place it at the centre of crisis responses. As the COVID-19 and climate crises unfold, and the SDGs loom large in the background, the need for cost-effective solutions to support the livelihoods of family farms *and* deliver access to healthy and nutritious food will become more acute. In other words, agroecology must become a byword for *systemic response* and for *resilience*. The challenge is not only to revive public and private financial flows into West African agriculture, but to reorient them significantly.

CONCLUSION



This report aimed to enrich the discussion on food systems reform in West Africa. A complex but promising picture emerged: agroecology faces a number of obstacles, and yet a whole host of these obstacles could be rapidly overcome by applying pressure at a limited number of leverage points. Current conditions make these openings all the more promising.

Agroecology is well-embedded in the region – as practice, science and social movement – and the key leverage point is to convert this into increasingly broad-based and vocal alliances. Whether the Alliance for Agroecology in West Africa (3AO) can be sustained and strengthened over time will therefore be the greatest indicator of this report's relevance and validity. The work of the Alliance, and of many other organizations, embodies what needs to change, and how it can be changed, to advance agroecological transition in West Africa. The initial signs are positive, and there is major scope to expand its reach. In a region where 60% of people are employed in agriculture, the political weight of bottom-up, farmer-driven alliances should not be under-estimated.

The report also sought to add a new layer to IPES-Food's understanding of agroecological transition, as part of an ongoing, dynamic and bi-directional learning process: just as the global lock-ins help to understand the obstacles in West Africa, the regionally-specific analysis in this report helps to refine our understanding of how the systemic lock-ins operate.

Additional layers of analysis are needed to further enrich our understanding. Country-level analysis is already being undertaken by civil society groups in various parts of West Africa, and will provide crucial insights into the barriers to and opportunities for change in each unique context. Understanding the state of play in anglophone West Africa will be particularly important, given the under-representation of those countries in this analysis and in the current membership of 3AO.

At this juncture, it is also important to look outward. Expanding this type of analysis to other parts of Africa, and other regions of the world, will be crucial to unearth the specific obstacles facing farmers and food system actors in different geographies, to further our understanding of the lock-ins of industrial food systems as they evolve over time and space, and to understand where food movements in different regions can draw lessons from each other, reinforce one another's actions, and build critical mass for reform at the global level.

This process is already underway in a range of geographies: recent studies have analysed how the lock-ins play out in China and Australia, and have drawn powerful insights into the respective opportunities for transition (Si, 2019; Iles, 2020). As studies of this nature are undertaken in additional regions, and as the evidence base on agroecology grows, it is crucial to cross-fertilize and consolidate the findings, and feed them into global processes such as the FAO's Scaling Up Agroecology initiative.

While the region remains delicately poised at the threshold of different pathways, West Africa has all the ingredients to become the epicentre of the global agroecology movement, and one of the frontrunners in transition to sustainable and equitable food systems. All of this relies, most of all, on the continued willingness of those working towards agroecology to keep cooperating, sharing and working together – in line with the foundational principles of agroecology.

ANNEX 1

ALLIANCE BUILDING TOOLKIT



CORE PRINCIPLES, CHALLENGES, AND OPPORTUNITIES FOR INTERSECTORAL COOPERATION:

LESSONS FROM THE ALLIANCE FOR AGROECOLOGY IN WEST AFRICA (3AO)

Understanding how to create change within our food systems requires us to identify the actors and structures that facilitate or inhibit change. Research has found that change is determined by a series of economic, political, social, and technological structures that condition the environments in which we operate. These environments are made up of a set of visible (e.g. governance, marketing), hidden (e.g. lobbies), and invisible (e.g. speech, cultures, values, perceptions, definitions) factors that shape our choices and capacity to drive change (see Harris et al., 2019). Section 3 of this report demonstrates how dominant actors and structures work to perpetuate a series of obstacles to agroecological transition. Section 4 confirms that unlocking the status quo requires multiple factors of change to come together, and in order to achieve this, it identifies four leverage points to overcome current obstacles to transition in West Africa.

Multi-stakeholder alliances are recognized as one powerful lever to unlock an agroecological transition as they combine the expertise, skills, and experiences of different actors across a diversity of sectors (e.g. farmers, policy-makers, development actors, researchers, private sector). Alliances can also undertake a wide array of coordinated actions at multiple levels of governance. Such intersectoral cooperation offers a framework for dialogue and consultation that highlights the complementarity of the actors involved in it. Further, alliances represent a major opportunity to collectively define new narratives to promote social and economic innovations – for example, by providing tangible evidence on agroecology's potential by combining scientific research and advocacy efforts. They also act to build bridges between civil society actors and policy-makers – translating a 'collective awakening' into concrete and concerted actions. In other words, multi-stakeholder alliances have the ability to affect a number of the economic, political, and social factors that shape our food systems.

Given this potential, it becomes crucial to identify the difficulties and challenges in the alliance-building process, in order to ensure that alliances are viable over the long-term, and evolve in a way that fosters listening, inclusion, understanding, and co-creation. Alliance-building should not simply be reduced to a set of operational steps (e.g. analysis of needs, identification of partners, formalization of objectives); instead, alliance-building processes are inherently complex, and require many overlapping interests, visions, and perspectives to be taken into account. As such, developing an understanding of the political economy of multi-stakeholder alliances – in other words, the power relations between actors, and the opportunities and constraints resulting from them – serves as a useful starting point to recognize how to engage in successful collective action for change.

Drawing on a political economy analysis, this toolkit examines the main founding principles and dynamics needed to engage in intersectoral cooperation. It draws on lessons learned from the Alliance for Agroecology in West Africa (3AO), and aims to identify where challenges in collective action remain and how they could be addressed.

BOX 1

WHAT IS 3AO? KEY OBJECTIVES AND ACTION STRATEGY



Founded in 2018, the Alliance for Agroecology in West Africa (3AO) is made up of 69 organizations, including West African civil society organizations, farmers' organizations, research centers, universities, and international NGOs and institutions, seeking to "work together, by sharing their experiences and uniting their voices to promote and support the development of sustainable agricultural and food systems in West Africa." As a platform for dialogue, consultation, and intervention, 3AO organizes its activities around 4 key objectives:

1. Increase the visibility of actors involved in the agroecological transition in West Africa by broadening dissemination of research and actions advancing agroecology;
2. Connect actors working in different sectors (farming, research, policy, development) and at different levels of governance (local, national, regional, international) through the development of interdisciplinary initiatives;

3. Pool knowledge and know-how by promoting information and resource sharing;
4. Coordinate individual and collective actions to maximize the effectiveness and efficiency of human and financial resources allocated to agroecology.

3AO's activities are based on an evolving action plan. Collaboratively developed by Alliance members, the action plan serves as a frame of reference and coordination (i.e. by determining who does what, where, when, and how). It is made up of some fifty collaborative initiatives divided into five key themes:

- Theme 1: Improve and strengthen food system governance and reorient agricultural financing
- Theme 2: Optimize peasant knowledge and science through participatory research and knowledge consolidation
- Theme 3: Consolidate agroecological networks and mobilize civil society
- Theme 4: Strengthen farmer-to-farmer training systems
- Theme 5: Develop and strengthen local food systems, local solidarity partnerships and market access

The 3AO Secretariat can be contacted by email at contact3AO@gmail.com

KEY PRINCIPLES FOR BUILDING MULTI-STAKEHOLDER ALLIANCES

The following key principles were identified and adopted early on by 3AO members as the necessary building blocks to ensure the longevity and success of this multi-stakeholder alliance.

1. Participation: NGOs, universities, philanthropic foundations, development aid organizations, and government bodies have come to agree that “grassroots” actors must be involved in political consultations and in the implementation of projects (Oakley, 1991). As a result, inclusive participation now serves as a benchmark for leveraging collective intelligence and encouraging joint action. A challenge, however, lies in the way in which this participation is envisaged.

‘Participation’ is sometimes used as a means to justify or legitimize government or donor actions, implying that the interests of grassroots actors (e.g. peasant communities) have been taken into account following some degree of consultation in the decision-making process (Chauveau, 1994; Lavigne Delville, 2011; Mazeau & Nonjon, 2015). In this light, 3AO seeks to ensure that its participatory approach for collective action is based on empowerment, through which the needs, aspirations, and realities of stakeholders are fully considered and accounted for in the conceptualization and implementation of policies and projects (see Altieri, 2012).

2. Accountability: In order to act in a concerted manner and ensure that each organization feels heard and included, it is necessary to clarify the distribution of roles within multi-stakeholder alliances. Clearly explaining different roles are assigned to different actors is essential to ensure that all stakeholders recognize one another’s legitimacy in the process (HLPE, 2018). This makes it possible to promote trust between partners, and promotes transparency – avoiding potential power asymmetries between alliance members or conflicts of interest that could arise (McKeon, 2017). 3AO bases its partnerships on the notion that each actor, through their own expertise, capacities, and networks, is essential to change; creating individual accountability within a collective whole tends to improve the efficiency and impact of the collective actions carried out. Regularly clarifying roles and responsibilities makes it possible to highlight these complementarities (Enda Pronat, 2019).

3. Appropriation of issues: In any collective effort, a sense of ‘belonging’ to the group or cause is crucial. The degree of ownership and identification with the collaborative work in question – including the principles and values behind it – guarantees personal and professional investment (Chanez & Lebrun-Paré, 2015; Claeys, 2012). An organization always evaluates the potential costs and benefits of engagement, and will be more likely to take on collective action if it identifies a specific advantage in doing so (Fireman & Gamson, 1979). In the co-development of its action plan, and through regular communications, 3AO works to make its members understand the value of personal contributions to a project. Taking ownership of collaborations allows alliances to avoid a situation in which some members “free-ride” – i.e. when one actor benefits from collective action without investing effort in it (Olson, 1971).

4. Horizontal democracy: Equity and solidarity amongst members of multi-stakeholder alliances is essential to promote inclusion and participation. These principles – operationalized through horizontal democracy – must be a central pillar of the governance of multi-stakeholder partnerships. Horizontal democracy balances power between actors by giving visibility and promoting the voice of all participants – especially vulnerable, less visible groups. It also gives all participants equal means to influence decision-making (HLPE, 2018). This form of governance also ensures that organizational bodies (e.g. general assembly, advisory bodies, secretariat) adopt mechanisms for internal and external accountability (e.g. who takes decisions? On behalf of whom? For whose interest?). When applying horizontal democracy, the vision, actions, and objectives are the result of joint reflection and agreement among all stakeholders. This is a prerequisite for long-lasting partnerships, and allows for constant reflection on how best to serve the interests of all stakeholders, thereby avoiding fragmentation of the movement (Enda Pronat, 2019; HLPE, 2018).

CHALLENGES AND LEVERS OF INTERSECTORAL COOPERATION

Intersectoral collaborations must also overcome a set of challenges in order to succeed. While these challenges remain a reality, the 3AO experience provides some preliminary insights into how they can be overcome:

1. Leadership and Legitimacy: The organizers of any new collective action process must be recognized as legitimate and well positioned to take on this role. It is equally important to consider that organizations already working on a given topic or a given region may perceive new initiatives as encroaching on or interfering with their ongoing efforts. 3AO was created following the explicit recommendation of local actors who participated in a large multi-stakeholder meeting conducted by ROPPA and IPES-Food in April 2018 (see Box 2). This meeting aimed to bring together all organizations already working to strengthen the agroecological movement in West Africa. The Alliance, therefore, sought not to duplicate but build on existing efforts: the meeting included a mix of organizations already leading similar initiatives, as well as less visible actors, to co-define the terms and scope of collective action.

As a network of farmers' organizations and producers from 13 West African countries, ROPPA occupied a unique position in the region to support this process. Already bringing together national farmers' platforms at the regional level, ROPPA was able to ensure active participation of producers in the Alliance. At the intersection of science, civil society, and policy, IPES-Food drew its legitimacy not only from the actions of its individual members, but also from public reception of its scientific work (e.g. publication of our 2016 report, "From Uniformity to Diversity"). In addition, during the conceptualization phase of our work in West Africa, we regularly questioned what was needed, what to do, and how to position ourselves to best support existing agroecological initiatives in the region. As a young organization with more modest involvement in West Africa at the time, IPES-Food was nevertheless perceived as strategically well placed to co-organize and initiate collaborative work in the region.

BOX 2

ORIGINS OF 3AO: KICK-OFF MEETING



In April 2018, ROPPA and IPES-Food invited 31 organizations from civil society, farmers' organizations, development, and research, to co-develop a strategy to promote agroecology in West Africa. Following a number of regional events on the same topic (e.g. 2015 FAO Regional Symposium on Agroecology; 10 years of Nyéléni in 2017; 2016 and 2018 Days of Agroecology), a shared framework of understanding was set at the beginning of the meeting through ROPPA's position paper on agroecology (agreed on by its members in preparation for the meeting) as well as IPES-Food's mid-term report on agroecology in West Africa.* The meetings concluded with the decision to launch the Alliance for Agroecology in West Africa (3AO), in order to develop a coordinated framework for strengthening intersectoral exchanges and cooperation.

*IPES-Food's mid-term report presented the conclusions of a consultative process with more than 150 actors working in West Africa on the obstacles to agroecological transition in the region.

2. Competition: According to Geels and Schot, alternatives to dominant systems are developed within “niches” – i.e. small networks of actors carrying out innovative initiatives which seek to respond to more sustainable objectives than the status quo (Geels & Schot, 2007; Bui, 2015). When developing simultaneously, the actors in these niches may be in competition with one another for visibility and resources. For example, organizations likely to participate in an alliance-building process may also be responding to the same funding calls, or soliciting the same donors – financial pressures that can diminish the willingness and incentives to cooperate (Enda Pronat, 2019). 3AO attempts to address potential competition between members by encouraging mediation, agreeing on a clear distribution of roles and responsibilities, and pursuing joint funding applications, thus highlighting the complementarity of the various actions carried out by each partner. 3AO is also committed to developing partnerships with many emerging agroecological initiatives with the aim of consolidating and amplifying the movement (see Box 3). Attempts have also been made to mitigate competition between actors by communicating regularly on the benefits of collaborative work (e.g. expansion of networks, greater visibility of actors, effectiveness of projects, transdisciplinary exchanges).

BOX 3

STRENGTHENING SYNERGIES - STRATEGIC MEETING OF 3AO - JANUARY 2020



Over 2018 and 2019, 3AO developed and implemented various initiatives under its shared action plan. The time and resources mobilized over the first two years of the Alliance served to clarify and deepen a collective strategy, develop communication tools, and explore how best to maintain regular dialogue between members working across 15 countries, in addition to many international partners. In January 2020, Alliance members and strategic partners met again in Dakar to strengthen collaborative dynamics and refine the coordination of individual and collective projects operating at various scales. This meeting made it possible to i) discuss new avenues for coordination between the national and regional level; ii) update, amend, and agree on how to operationalize the 3AO action plan; and iii) refine 3AO's internal organizational strategy (e.g. governance, communication, representation). The meeting also served as an opportunity to strengthen cooperation between 3AO and a number of major programmes that had recently emerged across the region.

Avenues for collaboration included government-led initiatives (e.g. ECOWAS's "Agroecology Program", FAO's Scaling Up Agroecology Initiative, or the African Union's Initiative for Ecological and Organic Agriculture), scientific collaborations (e.g. GIZ's Agroecology Knowledge Hub), or efforts to increase financing for agroecological research (e.g. Alliance Sahel project within the framework of the Ouagadougou Declaration).

See 3AO's [meeting summary](#) for more details (available in FR only).

3. Risks of cooptation or discrediting: Given the transformative potential of multi-stakeholder alliances, their creation may arouse the interest and/or skepticism of policy-makers and other dominant actors. These actors may contribute to the success of a process (e.g. through positive incentives including technical or financial support) or to its failure (e.g. discrediting efforts through oral or written communications, lack of uptake in policies) (Golshorkhi et al, 2011).

To limit any risk of co-optation or criticism, it is necessary to inform public authorities of ongoing efforts early on in the process; this includes aligning initiatives with existing institutional frameworks when possible, and establishing and maintaining strong links with state actors. In this regard, strategic discussions are underway to formalize the relationship between 3AO and ECOWAS within the framework of ECOWAS's Agroecological Transition Support Project, as well as with the regional office of the FAO, and with a number of development aid agencies (see Box 3).

4. Human and financial resources: Undertaking collective action can prove challenging due to limited human and financial resources. Collaborative efforts are often time-consuming (e.g. frequency of exchanges and meetings to reach consensus, learning new communication tools), and may discourage certain stakeholders from engaging. Indeed, organizations will generally prioritize their own resources (i.e. staff, funds) to complete projects already within their work plan or approved by their management. Encouraging organizations to take on collective action thus requires building collaborative initiatives around stakeholders' existing priorities and projects.

Doing so would bring greater visibility to existing projects, maximize their dissemination, and optimize their relevance at various levels of action. In accordance with these principles, 3AO members developed an evolving action plan (see box 1) based on building out existing initiatives; organizations already leading these initiatives act as *de facto* project leaders. In this way, lead organizations benefit from the support, additional expertise, and experience of the organizations involved in the initiative's working group. Working group members are then free to choose and plan their engagement, depending on their availability and areas of expertise. This internal organization and distribution of roles is intended to maximize efficiency, while promoting shared commitment and participation.

Nevertheless, while the long-term benefits of alliance-building may largely outweigh its costs, the time and resource commitment to effectively mobilize a network, and supervise, coordinate, and monitor collaborative initiatives, should not be underestimated (Bayle & Hocdé, 2014; Desmarais, 2007). For example, the Alliance's face-to-face meetings were made possible thanks to the generosity of partners and donors (e.g. meeting space, travel and accommodation costs) and the pooling of human and financial resources (e.g. financial contribution of the members of the steering committee up to their capacity; employees carrying out logistical tasks; payment of accommodation and catering costs by member organizations with the financial means).

5. Semantics and vision: How does a diverse group of stakeholder with different worldviews and priorities (e.g. researchers, farmer organizations, decision-makers) overcome the lack of a common definition of agroecology? Within 3AO, many partners may have felt initial concern that the definition of agroecology would be diluted, or that a lack of harmonization between visions would lead project objectives to be taken over by actors whose goals were less ambitious than theirs. However, 3AO preferred to adopt an inclusive approach. It was deemed beneficial to include organizations less familiar or less invested in agroecology in the process; the Alliance sought to include these actors to foster and acknowledge these actors' growing interest in food system change. 3AO relies not only on movement leaders and pioneers seeking system transformation, it also encourages new and unlikely actors to work together in a spirit of openness, dialogue, and knowledge-sharing to determine a shared framework of action.

6. Mutual trust: Differences of opinion or pre-existing relationship dynamics between different actors can generate mistrust and create reluctance to speak freely or build collaborative strategies together. However, to be effective, collective action must be rooted in trust (Fireman and Gamson, 1979). A climate of mutual trust, however, requires that stakeholders meet regularly, get to know each other, and share their points of view for the purpose of constructive exchange – requiring time and resources (see Challenge 4 above). For example, 3AO emerged following a one and a half year consultation process, which included a partnership between CNOP Mali, URGENCI, CFAPE-Togo, IPES-Food and Bread for the World. These organizations pooled their respective resources and skills to organize 6 roundtable discussions in 6 West African countries (Senegal, Mali, Benin, Togo, Burkina Faso and Ghana). Moderated by CNOP-Mali, these meetings made it possible to meet farmers, consumers, and local organizations; and account for their interests and needs into account as the process evolved. They served to lay the foundations for establishing trust and cooperation between Alliance members – which would later include a number of farmers’ organizations – and organizers. The Alliance’s face-to-face meetings also serve as key moments to strengthen unity and a sense of belonging to the group.

7. Group size and pluralism: The growth in membership of multi-stakeholder alliances affects their ability to function coherently and cohesively, raising questions about group size and heterogeneity: How can an inclusive and participatory approach be ensured within an expanding alliance? How can consensus be reached in a large group with wide-ranging viewpoints? What tools should be developed to ensure consent and transparency in decision-making? What communication tools have to be put in place to facilitate exchanges and overcome sectoral and/or linguistic barriers?

To address these questions, 3AO formed a Steering Committee responsible for monitoring, supervising, and driving forward the work of the Alliance. The Committee is made up of ROPPA, AFSA, ENDA PRONAT, ACF, CIRAD and IPES-Food – organizations representing the 4 founding communities of the Alliance (i.e. peasant organizations, civil society, development organizations, and research). Bimonthly Steering Committee meetings allow 3AO members to discuss progress on the action plan and identify new opportunities for engagement (e.g. partnerships, events, political opportunities). The Committee’s composition ensures that the interests of all sectors are considered when making decisions, even as the number of Alliance members grows. The 3AO secretariat, responsible for coordinating the network, also facilitates the integration of new members by

maintaining regular contact and feedback. Moreover, the 3AO action plan was created to be scalable and flexible in nature; new members are thus easily able to join existing initiatives, or propose new courses of action, facilitating their investment in shared objectives.

The configuration of the 3AO Steering Committee is nevertheless intended to evolve to represent new sectors should they be integrated into the Alliance, and to better accommodate English-speaking members. Improving the multi-lingualism of the Alliance would allow the interests of more members to be better taken into account, and to strengthen the geographical coverage of 3AO throughout West Africa. Following this logic, the Alliance ensures that its collaborative actions are not limited to French-speaking actors, and seeks to mitigate language being an obstacle to co-construction (e.g. bilingual communication materials, in-person meeting interpretation). To encourage broad inter-sectoral exchanges, Alliance activities are also organized around an online communication platform that allows for regular communication and information sharing. Uptake of this communication tool has, however, been slow and uneven, with members often resorting to other, more conventional means of communication, such as telephone calls, to share information. This implies that it takes time for new intersectoral working methods to be adopted by actors from a range of backgrounds, sectors, and countries takes time, and underlines the need to adapt to the tools most accessible to the largest number of members. To accommodate an expanding group, some activities are also broken down into actions by national chapters of the Alliance. Meetings of national sub-sections of 3AO have already taken place in Senegal and Burkina Faso, and are likely to take place in a number of other countries across the region over the coming years.

Building multi-stakeholder alliances therefore requires careful navigation of the sensitivities of a large number of actors. It requires mitigating competition, and addressing differences in viewpoints and worldviews. It calls for an emphasis on shared values and objectives to foster constructive dialogue and the development of relationships of trust. It requires putting flexible and innovative coordination, management, communication, monitoring and evaluation tools in place. It benefits from promoting the inclusion of diversity of stakeholders, while ensuring efficiency, in a context where human and financial resources are often limited. Although 3AO has sought to address these many concerns through its working methods and governance, these challenges evolve by nature and require constant and candid self-reflection, all the more so as the alliance grows.

KEY ADVANCES OF 3AO

- The Alliance has made it possible to provide a solid framework for bringing together a wide variety of stakeholders, including peasant organizations, researchers, and development actors. This has provided 3AO with a strong voice from the 'grassroots', and has increased the Alliance's visibility in the field and during strategic events. Since its creation, 3AO has been represented at **some 50 high-level meetings** – access to which has often been facilitated by individual Alliance members.
- Alliance partners have collectively developed a number of advocacy strategies, which have had a **decisive impact on decision-making**. For example, following a strategic dialogue of the members of the Alliance with Senegalese authorities, the Ministry of Agriculture was tasked by the Prime Minister to endorse the agroecological transition and include it in the PRACAS II (the agricultural component of the Emerginc Senegal Programme). More recently, the Senegalese President, Mr. Macky Sall, pledged to support an agroecological transition as one of the priorities of his five-year term. Since then, a group of Senegalese actors – including the Senegalese platform of 3AO – came together to outline a government support strategy to ensure the success of the agroecological transition (see work by Dytaes).
- In January 2019, the 3AO Steering Committee **provided a written contribution to FAO decision-makers to develop its 'Scaling up agroecology' initiative in West Africa**, in particular by supporting Senegal's candidacy as a pilot country of this program. This contribution was heard, and Senegal became a pilot country of the initiative. FAO has subsequently extended its program to all ECOWAS countries.
- Since October 2019, **four strategic meetings bringing together around fifteen international donors, foundations, and official development aid agencies** have been organized by IPES-Food, the Agroecology Fund and the GAFF, in order to raise awareness on financing agroecology and promoting investments in this area. These meetings led to the creation of a donor working group on West Africa, which aims to support efforts to fund the agroecological transition in the region and encourage other donors to contribute.

- In order to promote the scaling up of agroecology and bring visibility to existing efforts, **3AO members have extensively mapped out their respective networks to identify agroecological projects and programs at work in the region**; these initiatives will be highlighted in a “mapping of initiatives” by CIRAD. Discussions are also underway to pool efforts with the Agriculture and Food Commission (C2A) of Coordination Sud to identify additional agroecological initiatives.
- Participatory research in the region has been strengthened by **an initiative aimed at operationalizing the “Evaluation methods of agroecology performance” report developed by the GTAE**. Members of the Alliance are also working to integrate agroecological training into several university departments as formal academic training courses.
- To strengthen the agroecological movement, **3AO continuously encourages new organizations to join or partner in the Alliance to achieve common goals and objectives**. Over two years, around 40 new organizations have joined the Alliance, now made up of 69 organizations.

More information about 3AO’s action plan and progress is available in its [2018-2019 monitoring report](#).

BIBLIOGRAPHY

- Altieri, M. (2012). *The scaling up of agroecology: spreading the hope for food sovereignty and resiliency*. Retrieved from <https://foodfirst.org/wp-content/uploads/2014/06/JA11-The-Scaling-Up-of-Agroecology-Altieri.pdf>
- Baculard, O., Barthélémy, A., Lewis, E., & Slitine, R. (2012). *Intrapreneuriat social: la nouvelle frontière de l'innovation sociale pour l'entreprise*. Paris, France: AA éditions.
- Bayle, E., & Hocdé, H. (2014). Changer d'échelle: expériences du Brésil et d'Amérique centrale. *Grain de sel*, 6366. Retrieved from http://www.inter-reseaux.org/IMG/pdf/gds63_37-39.pdf
- Bui, S. (2015). *Pour une approche territoriale des transitions écologiques. Analyse de la transition vers l'agroécologie dans la Biovallée (1970-2015)*. Retrieved from <https://tel.archives-ouvertes.fr/tel-02116016/document>
- Chanez, A., & Lebrun-Paré, F. (2015). Villeray en transition: initiatives citoyennes d'appropriation de l'espace habité ? *Cahiers de recherche sociologique*, (58), 139163. <https://doi.org/10.7202/1036210ar>
- Chauveau, J.-P. (1992). Le «modèle participatif» de développement rural est-il «alternatif»? *Bulletin de l'APAD*, 3(3). Retrieved from <https://journals.openedition.org/apad/380>
- Chauveau, J.-P. (1994). Participation paysanne et populisme démocratique: Essai d'histoire et de sociologie de la culture du développement. In J.-P. Jacob & Ph. Lavigne Delville (Éd.), *Les associations paysannes en Afrique* (p. 25 60). Paris/Marseille/Uppsala: Karthala-IRD-APAD.
- Claeys, P. (2012). The Creation of New Rights by the Food Sovereignty Movement: The Challenge of Institutionalizing Subversion. *Sociology*, 46(5), 844860. <https://doi.org/10.1177/0038038512451534>

De Schutter, O. (2010). *Report submitted by the Special Rapporteur on the right to food, Olivier De Schutter (Human Rights Council, 16th Session, Agenda item 3 No. A/HRC/16/49), Promotion and protection of all human rights, civil, political, economic, social and cultural rights, including the right to development*. Retrieved from http://www.srfood.org/images/stories/pdf/officialreports/20110308_a-hrc-16-49_agroecology_fr.pdf

Desmarais, A. A. (2008). The power of peasants: Reflections on the meanings of La Vía Campesina. *Journal of Rural Studies*, 24(2), 138149. <https://doi.org/10.1016/j.jrurstud.2007.12.002>

El Bilali, H. (2019). The Multi-Level Perspective in Research on Sustainability Transitions in Agriculture and Food Systems: A Systematic Review. *Agriculture*. 9. 74.

Elzen, B., van Mierlo, B., & Leeuwis, C. (2012). Anchoring of innovations: Assessing Dutch efforts to harvest energy from glasshouses. *Environmental Innovation and Societal Transitions*, 5, 118. <https://doi.org/10.1016/j.eist.2012.10.006>

Enda Pronat. (2019). *Etude de faisabilité : partenariat multi-acteurs pour la transition agroécologique*. Retrieved from http://www.endapronat.org/wp-content/uploads/2019/06/RAPPORT-ETUDE-TAE_Enda-Pronat_Version-finale-1.pdf

Fireman B. & Gamson W. (1979). «Utilitarian Logic in the Resource Mobilization Perspective», dans M. Zald et J. McCarthy (eds), *The Dynamics of Social Movements*, Cambridge (Mass.), Winthrop, p. 8-44.

Geels, F. W., & Schot, J. (2007). Typology of sociotechnical transition pathways. *Research Policy*, 36(3), 399417. <https://doi.org/10.1016/j.respol.2007.01.003>

Golsorkhi, D., Bergeron, H., Castel, P., Durand, R., & Leca, B. (2011). Les mouvements sociaux, organisations et stratégies. *Revue française de gestion*, 37(217), 7991. <https://doi.org/10.3166/RFG.217.79-91>

Harris, J., Molly, A., Clément, C., & Nisbett, N. (2019). The Political Economy of Food. IDS Bulletin 50.2. Retrieved from: <https://bulletin.ids.ac.uk/index.php/idsbo/issue/view/239>

HLPE (2018). Multi-stakeholder partnerships to finance and improve food security and nutrition in the framework of the 2030 Agenda. Retrieved from <http://www.fao.org/3/CA0156EN/CA0156en.pdf>

HLPE (2019). *Agroecological approaches and other innovations for sustainable agriculture and food systems that enhance food security and nutrition*. Retrieved from <http://www.fao.org/3/ca5602en/ca5602en.pdf>

IPCC. (2019). *Climate Change and Land: an IPCC special report on climate change, desertification, land degradation, sustainable land management, food security, and greenhouse gas fluxes in terrestrial ecosystems*. Retrieved from <https://www.ipcc.ch/srccl-report-download-page/>

IPES-Food. (2016). *From uniformity to diversity: a paradigm shift from industrial agriculture to diversified agroecological systems*. International Panel of Experts on Sustainable Food Systems, Brussels. Retrieved from http://www.ipes-food.org/_img/upload/files/UniformityToDiversity_FULLL.pdf

IPES-Food, (2017). *Unravelling the Food–Health Nexus: Addressing practices, political economy, and power relations to build healthier food systems*. The Global Alliance for the Future of Food and IPES-Food. Retrieved from: [http://www.ipes-food.org/_img/upload/files/Health_FullReport\(1\).pdf](http://www.ipes-food.org/_img/upload/files/Health_FullReport(1).pdf)

IPES-Food, (2018). *Breaking away from industrial food and farming systems: Seven case studies of agroecological transition*. International Panel of Experts on Sustainable Food Systems, Brussels. Retrieved from http://www.ipes-food.org/_img/upload/files/CS2_web.pdf

Larousse (2019). Définitions : écoblanchiment - Dictionnaire de français Larousse. <https://www.larousse.fr/dictionnaires/francais/%C3%A9coblanchiment/10910961>

Lavigne Delville. P. (2011). Du nouveau dans la "participation" ? : populisme bureaucratique, participation cachée et impératif délibératif. Une anthropologie entre pouvoirs et histoire: conversations autour de l'oeuvre de Jean-Pierre Chauveau in Jul-Larsen, E., Laurent, P.-J., Le Meur, P.-Y., Léonard, E. (Eds.), *Une anthropologie entre pouvoirs et histoire. Conversations autour de l'oeuvre de Jean-Pierre Chauveau*, (pp.160-187). Paris/Marseille/Uppsala: Karthala-IRD-APAD.

Mazeaud, A. and Nonjon, M. (2015) 'De la cause au marché de la démocratie participative', *Agone*, 56(1), pp.135-152.

McKeon, N. (2017). Are equity and sustainability a likely outcome when foxes and chickens share the same coop? Critiquing the concept of multistakeholder governance of food security. *Globalizations*, 14(3): 379–398. doi:10.1080/14747731.2017.1286168

Oakley, P. (1991) 'The concept of participation in development', *Landscape and Urban Planning*, 20(1-3), pp.115–122.

Olson, M. (1971). *The logic of collective action: public goods and the theory of groups*. Cambridge, USA: Harvard University Press.

ANNEX 2

METHODS OF DATA COLLECTION AND ANALYSIS



In January 2017, the International Panel of Experts on Sustainable Food Systems (IPES-Food) launched a process to support and stimulate an open reflection on the future of agricultural development in West Africa. Through dialogue and consultation, IPES-Food engaged with local partners to explore how agroecology is understood and applied in the West African context, and identify the opportunities and obstacles it faces. The key objectives of the project were to consolidate and expand the knowledge base on agroecological alternatives, to bring these alternatives to the political arena, and to foster meaningful debate to collectively define a way forward.

To address these goals, a **'Stakeholder Database'** was created to map out key organizations and actors engaged in the development of agriculture in West Africa. The database brings together 180 organizations involved in different sectors (research, development, policy, farming) and at different scales (national – Mali, Senegal, Benin, Burkina Faso, regional, international).

An **interview process** was then conducted to build an understanding of the state of play and identifies various impediments to the development of agroecology in West Africa. 29 semi-structured interviews were conducted with farmers' groups, NGOs, research institutes, and international organizations by Skype or in-person. Interview participants were identified based on eight sampling criteria to maximize the diversity of perspectives included in our approach. Simultaneously, IPES-Food developed a partnership with URGENCI, Bread for the World, and CNOP Mali, to conduct **6 full-day focus group meetings** in Senegal, Mali, Benin, Togo, Burkina Faso, and Ghana, to gain first-hand knowledge from farmers and consumers.

The **analysis** of the 29 interview transcripts and the 6 focus groups summary reports was carried out using qualitative and manual coding. A code was assigned to each hypothesis of the study (i.e. the 8 lock-ins of industrial agriculture). Additional codes were associated with each new obstacle to the agroecological transition. Once the coding was completed, the interview excerpts were reclassified by themes. A second inductive and transversal analysis was carried out to produce meaning, establish correlations and comparisons, and generalize, contextualize or limit the scope of certain hypotheses.

On April 19-20, 2018, IPES-Food and ROPPA (Network of Farmers Organizations and Agricultural Producers of West Africa) co-convened a 2-day **kick-off meeting** with local and regional actors to jointly develop a strategy to support sustainable food system reforms in West Africa. Taking place in Dakar, the meeting gathered 43 participants (IPES-Food experts, ROPPA national platforms, civil society organizations, researchers, international organization, and foundations). The meeting culminated in the creation of the Alliance for Agroecology in West Africa (3AO).

In January 2020, the steering committee of 3AO organized a 3-day **high-level strategic meeting** in Dakar, gathering 114 people from CSOs, farmer groups, research organizations, governments, regional and international organizations, international NGOs, foundations, amongst others, representing Alliance member organizations and key partners. The meeting provided a framework to highlight the progress of initiatives and collectively refine the Alliance's action plan.

Ultimately, this report is based on a **qualitative approach** aiming to study causal links between different phenomena in a particular local context. This report draws on the **insights of more than 150 organisations** engaged in different sectors and scales of actions, via an interview process; six full-day focus group meetings; and 2 major multi-stakeholders meetings. In support of this paper, IPES-Food has conducted a comprehensive literature review, as well as an extensive analysis of recent studies on the performance of agroecology published since 2016, that were compiled in a database.

LIMITATIONS OF THE STUDY

Qualitative approaches are now recognized for their effectiveness in making sense of complex situations, behaviors, and practices in a given context (Paillé, 1994; Kaufmann, 1996). However, it is necessary to recognize the limitations of this study and the methodology used to achieve its results. West Africa encompasses a variety of agricultural systems located in diverse ecological and climate zones. Due to timing and feasibility, some of the activities planned within the framework of this research (e.g. stakeholder database, focus group discussions) were limited to a smaller number of target countries, mainly Francophone, where agroecological projects and programs are already on the rise. The sampling and analysis of the interviews allowed us to derive generalizable trends, drawing out logics and mechanisms that are potentially applicable in other situations (Yin, 2012). However, some initiatives described in this report correspond to specific situations; although their lessons and outcomes may be transferable, replication of these initiatives will require a degree of redesign to fully meet local needs and specificities. Moreover, the study recognizes that participants' responses and researchers' analysis are based on their own sets of experiences, values, constructs, and expertise. Thoughts, perceptions, interpretations, concepts, and theoretical preconceptions are unique to each individual and reflect only part of reality.



REFERENCES



3AO [Alliance for Agroecology in West Africa] (2018). 3AO: The Alliance for Agroecology in West Africa. Retrieved from: http://www.ipes-food.org/_img/upload/files/3AO_brochure%20EN.pdf

3AO. (2020). *Rencontre Stratégique de l'Alliance pour l'Agroécologie en Afrique de l'Ouest*. Compte rendu. Retrieved from: http://www.ipes-food.org/_img/upload/files/R%C3%A9union%20Strat%C3%A9gique%203AO%20-%20Compte%20rendu%20-%20Janvier%202020%20-%20Dakar_pour%20diffusion%20publique%282%29.pdf

Action contre la Faim [ACF]. (2017). *Fiche étude: gestion de l'eau en agroécologie*. Retrieved from: <https://www.coalition-eau.org/wp-content/uploads/fiche-etude-gestion-de-leau-en-agroecologie-acf-vf.pdf>

ActionAid. (2013). *Fair shares: is CAADP working?*. Retrieved from: https://reliefweb.int/sites/reliefweb.int/files/resources/fair_shares_caadp_report.pdf

Adams, S., & Opoku, E. E. O. (2017). BRIC versus OECD foreign direct investment impact on development in Africa. In *Foreign capital flows and economic development in Africa* (pp. 147-161). Palgrave Macmillan, New York.

AFD. (2016). *Projet d'appui à la transition agroécologique en Afrique de l'Ouest*. Note de communication publique d'opération. Retrieved from: <http://docplayer.fr/25291423-Multi-pays-afrique-de-l-ouest-cedeao-projet-d-appui-a-la-transition-agroecologique-en-afrique-de-l-ouest-sommaire.html>

AFD. (2019, June 4th). *By 2050, more than half of Africa's population will be under 25 years old*. Retrieved from: <https://www.afd.fr/en/actualites/2050-more-half-africas-population-will-be-under-25-years-old>

African Development Bank [AfDB]. (2016). *Togo: Document de stratégie pays 2016-2020. Départements orwa/orts/tgfo*. Retrieved from: https://www.afdb.org/fileadmin/uploads/afdb/Documents/Project-and-Operations/Togo_-_Document_de_strat%C3%A9gie_pays_2016-2020.pdf

AfDB. (n.d.). *Abuja Declaration on Fertilizer for the African Green Revolution*. Retrieved from: <https://www.afdb.org/en/topics-and-sectors/initiatives-partnerships/africa-fertilizer-financing-mechanism/about-affm/abuja-declaration>

Alliance for Food Sovereignty in Africa [AFSA]. (2017). *A Study of Policies, Frameworks And Mechanisms Related To Agroecology And Sustainable Food Systems In Africa*. Kampala, Uganda. Retrieved from: <https://afsafira.org/wp-content/uploads/2018/09/agroecology-policy-eng-online-single-pages.pdf>

AFSA. (2018). *Les droits des agriculteurs africains sur les semences sont menacés*. Briefing. Retrieved from: <https://afsafira.org/wp-content/uploads/2019/04/briefing-de-lafsa-les-droits-des-agriculteurs-africains-sur-les-semences-sont-menacs-finale.pdf>

AFSA. (2019). *A Common Food Policy for Africa*. Retrieved from: <https://afsafira.org/towards-a-common-food-policy-for-africa/>

African Union [AU]. (2003). *Declaration on Agriculture and Food Security in Africa*. Assembly/AU/Decl.4- 11 (II). Assembly of the African Union, Second Ordinary Session. July, 10-12, 2003. Maputo, Mozambique. Retrieved from: <http://www.focusonland.com/download/51fb7120557dd/>

AU. (2015). *Agenda 2063: Framework document. The Africa we want*. The African Union Commission. Retrieved from: <https://www.un.org/en/africa/osaa/pdf/au/agenda2063-framework.pdf>

AU. (n.d.). *Agenda 2063: The Africa We Want*. Retrieved from: <https://au.int/en/agenda2063/overview>

AU, & NEPAD. (2006). *Comprehensive Africa agriculture development programme. Integrating livestock, forestry and fisheries subsectors into the CAADP*. Companion Document. Retrieved from: <http://www.fao.org/3/a0586e/a0586e00.htm>

Agence Ecofin. (2019, November, 27). *Ghana: le gouvernement envisage de bannir les importations de riz d'ici 2022*. En ligne: <https://www.agenceecofin.com/riz/2711-71537-ghana-le-gouvernement-envisage-de-bannir-les-importations-de-riz-d-ici-2022>

Agarwal, B. (2018). Can group farms outperform individual family farms? Empirical insights from India. *World Development*, 108, 57-73.

Agri Info. (2016). *Nadjirou Sall, nouveau président du CNCR*. Issn 0850-8844 - N°94. Retrieved from: http://www.inter-reseaux.org/IMG/pdf/agri_infos_no94_juil_aout_2016.pdf

Allen, T., P. Heirigs. & I. Heo. (2018). "Agriculture, alimentation et emploi en Afrique de l'Ouest", *Notes ouest-africaines*. N°14. Edition OCDE, Paris. DOI: 10.1787/24151149

Alpha, A., & Fouilleux, E. (2018). How to diagnose institutional conditions conducive to inter-sectoral food security policies? The example of Burkina Faso. *NJAS - Wageningen Journal of Life Sciences*, 84, 114-122. DOI: 10.1016/j.njas.2017.07.005

Altieri, M. A. (2009). Agroecology, Small Farms, and Food Sovereignty. In *Monthly Review*, Volume 61, Issue 03 (July-August). Retrieved from: <http://monthlyreview.org/2009/07/01/agroecology-small-farms-and-food-sovereignty>

Altieri, M. A., Nicholls, C. I., Henao, A., & Lana, M. A. (2015). Agroecology and the design of climate change-resilient farming systems. *Agronomy for sustainable development*, 35(3), 869-890.

Amanor, K. S., & Chichava, S. (2016). South-south cooperation, agribusiness, and African agricultural development: Brazil and China in Ghana and Mozambique. *World Development*, 81, 13-23.

Angelucci, F., Balié, J., Gourichon, H., Aparisi, A. & Witwer, M. (2013). *Monitoring and Analyzing Food and Agricultural Policies in Africa: MAFAP Synthesis Report 2013*. MAFAP Synthesis Report Series. FAO. Retrieved from: <http://www.fao.org/3/a-i3513e.pdf>

Agence de presse sénégalaise [APS]. (2020). *L'agroécologie, "pilier" du développement durable*. Retrieved from: <http://www.aps.sn/actualites/economie/agriculture/article/l-agro-ecologique-pourra-etre-un-des-piliers-de-developpement-durable-et-equitable-envers-les-generations-futures-ministre>

Austin, G. (2010). Développement économique et legs coloniaux en Afrique. *Revue internationale de politique de développement*, 1(1), 1136. DOI: 10.4000/poldev.135

Agriculteurs et Vétérinaires Sans Frontières [AVSF]. (n.d.) *Transitions agroécologiques en Afrique de l'Ouest*. Retrieved from: <https://www.avsf.org/en/posts/2315/full/transitions-agroecologiques-en-afrique-de-l-ouest>

Barry, A. A., Caesar, J., Klein Tank, A. M. G., Aguilar, E., McSweeney, C., Cyrille, A. M., ... & Touray, L. M. (2018). West Africa climate extremes and climate change indices. *International Journal of Climatology*, 38, e921-e938.

Bassermann, L., and Urhahn, J. (2020). False Promises: The Alliance for a Green Revolution in Africa (AGRA). Retrieved from: https://www.rosalux.de/fileadmin/rls_uploads/pdfs/Studien/False_Promises_AGRA_en.pdf

Bay, E. G. (2019). *Women and work in Africa*. Routledge.

Bazin, F., Hathie, I., Skinner, J., and Koundouno, J. (eds). (2017) Irrigation, food security and poverty – Lessons from three large dams in West Africa. GWI West Africa.

BEDE. (2016). *État des lieux du cadre normatif et institutionnel du système semencier et de la place des semences paysannes et des droits des agriculteurs au Mali*. Retrieved from: <https://www.bede-asso.org/droits/semences-normes-paysans-processus/etude-semences-normes-et-paysans/>

BEDE, & IRPAD. (2016). *Étude Semences, Normes et Paysans: État des lieux du cadre normatif et institutionnel du système semencier et de la place des semences paysannes et des droits des agriculteurs au Mali*. Retrieved from: https://www.bede-asso.org/wp-content/uploads/2017/05/WEB_Etude_SNP_Light.pdf

BEDE, & COFERSA. (2015). *Consommer la biodiversité locale pour mieux se nourrir*. Retrieved from: https://www.bede-asso.org/wp-content/uploads/2016/01/consommer_biodiversite_locale_cofersa_bede.pdf

Ben-Ari, N. (2014) Gendering Agriculture. Africa Renewal Special Edition on Agriculture 2014. Retrieved from: <https://www.un.org/africarenewal/magazine/special-edition-agriculture-2014/gendering-agriculture>

Benin, S., & Yu, B. (2013). Complying the Maputo Declaration Target: Trends in public agricultural expenditures and implications for pursuit of optimal allocation of public agricultural spending. *ReSAKSS Annual Trends and Outlook Report 2012*. International Food Policy Research Institute (IFPRI). Retrieved from: <http://ebrary.ifpri.org/utils/getfile/collection/p15738coll2/id/127946/filename/128157.pdf>

Biovision Foundation for Ecological Development [Biovision] & IPES-Food. (2020). *Money Flows: What is holding back investment in agroecological research for Africa?* Biovision Foundation for Ecological Development & International Panel of Experts on Sustainable Food Systems. Retrieved from: http://www.ipes-food.org/_img/upload/files/Money%20Flows_Full%20report.pdf

Bharucha, Z.P., Mitjans, S.B. & Pretty, J. (2020). Towards redesign at scale through zero budget natural farming in Andhra Pradesh, India. *International Journal of Agricultural Sustainability*, 18:1, pp.1-20. DOI: [10.1080/14735903.2019.1694465](https://doi.org/10.1080/14735903.2019.1694465)

- Bonneuil, C. & Kleiche, M. (1993). *Du jardin d'essais colonial à la station expérimentale - 1880-1930: Éléments pour une histoire du CIRAD. Autrefois l'Agronomie*, CIRAD. Retrieved from: http://agritrop.cirad.fr/321550/1/document_321550.pdf
- Bosu, W. K. (2015). An overview of the nutrition transition in West Africa: implications for non-communicable diseases. *Proceedings of the nutrition society*, 74(4), 466-477.
- Bricas, N. (2019). Urbanization Issues Affecting Food System Sustainability. In: Brand C. et al. (eds) *Designing Urban Food Policies*. Urban Agriculture. Springer, Cham. DOI: 10.1007/978-3-030-13958-2_1
- Bricas, N. & Daviron, B. (2008). 'De la hausse des prix au retour du « productionnisme » agricole: les enjeux du sommet sur la sécurité alimentaire de juin 2008 à Rome'. *Hérodote*, 131(4), pp.31-39.
- Bricas, N., Tchamda, C., Martin, P. (2016a). Les villes d'Afrique de l'Ouest et du Centre sont-elles si dépendantes des importations alimentaires ?, *Cahiers Agriculture*, 25(5), DOI: 10.1051/cagri/2016036
- Bricas, N., Tchamda, C., & Mouton, F. (2016b). *L'Afrique à la conquête de son marché alimentaire intérieur. Enseignements de dix ans d'enquêtes auprès des ménages d'Afrique de l'Ouest, du Cameroun et du Tchad*. Paris, AFD, collection « Études de l'AFD », no 12, 132 p. Retrieved from: <https://www.afd.fr/fr/ressources/lafrique-la-conquete-de-son-marche-alimentaire-interieur-enseignements-de-dix-ans-denquetes-aupres-des-menages-dafrique-de-louest-du-cameroun-et-du-tchad>
- Brooks, G. (1975). Peanuts and Colonialism: Consequences of the Commercialization of Peanuts in West Africa, 1830-70. *The Journal of African History*, 16(1), 29-54.
- Brüntrup, M. & Heidues, F. (2002). *Subsistence Agriculture in Development: Its Role in Processes of Structural Change*. Institute of Agricultural Economics and Social Sciences in the Tropics and Subtropics (Eds.), Discussion Paper n°1/2002. Research in Development Economics and Policy. Center for Tropical Agriculture, University of Hohenheim, Germany. Retrieved from: https://entwicklungspolitik.uni-hohenheim.de/fileadmin/_migrated/content_uploads/DP_0_2002_Bruentrup_03.pdf
- Burger, P., Berton, S., Billaz, R., Lebreton, A., & GTD. (2013). *Agroécologie, une transition vers des modes de vie et de développement viables*. Paroles d'acteurs, Groupe de Travail Désertification.
- Comité Français pour la Solidarité Internationale [CFSI]. (2017). *Discussion n°5 : La mise en marché des produits agroécologiques*. Synthesis. Forum ROPPA PAFAO JAFOWA. Retrieved from: <https://www.alimenterre.org/system/files/ressources/pdf/1104-discu-5-synthese-agroecol.pdf>
- CFSI. (2019). *Les batailles du consommateur local en Afrique de l'Ouest*. Retrieved from: <https://www.alimenterre.org/system/files/2019-01/batailles-consommer-local-pp-bd.pdf>
- CGIAR (2020). Agroecological approaches to building resilience of livelihoods and landscapes. <https://www.foresttreesagroforestry.org/wp-content/uploads/pdf/TPP-Agroecological-approaches-to-building-resilience-of-livelihoods-and-landscapes.pdf>

Convergence Globale des Luittes pour la Terre et l'Eau [CGLTE]. (2017). *Droits à la Terre et à l'Eau, Une Lutte Commune: livret vert de la convergence*. Document de plaidoyer. Retrieved from: https://africaconvergence.net/IMG/pdf/livre_vert_fr.pdf

CIRAD. (2016). *Transition Agroécologique du Maraîchage en Afrique de l'Ouest (TAMA)*. Retrieved from: <https://afrique-ouest.cirad.fr/recherches-en-partenariat/principaux-projets/tama>

CIRAD. (2019). Afrique de l'Ouest: la diversité des produits laitiers menacée par les importations. Retrieved from: <https://www.cirad.fr/actualites/toutes-les-actualites/articles/2019/science/afrique-de-l-ouest-diversite-des-produits-laitiers-menacee>

Claeys, P. (2015). *Les droits à la souveraineté sur les ressources naturelles, au développement et à la souveraineté alimentaire: Dans la déclaration des Nations Unies sur les droits des paysans et des autres personnes travaillant dans les zones rurales*. Note d'analyse, FIAN International. Retrieved from: http://www.fian.org/fileadmin/media/Publications/Peasants_Rights/PeasantsRights_Droits_souverainete_ressources_naturelles_FR.pdf

Clapp, J., & Fuchs, D. (2009). *Corporate power in global agrifood governance*. Cambridge: MIT Press. DOI: 10.7551/mitpress/9780262012751.001.0001

CNOP (2017). *Communiqué de la rencontre commémorative des 10 ans de Nyeleni*. Retrieved from: <https://www.bede-asso.org/wp-content/uploads/2017/10/communique-de-Nyeleni-final-2017.pdf>

Codjoe, S. N. A., Okutu, D., & Abu, M. (2016). Urban household characteristics and dietary diversity: an analysis of food security in Accra, Ghana. *Food and nutrition bulletin*, 37(2), 202-218.

Confédération Paysanne du Faso [CPF]. (2016). *Mémoire des organisations professionnelles agricoles du Burkina Faso*. Note de contribution à l'élaboration du programme national du secteur rural (PNSR) – Phase 2. Retrieved from: http://cpf-bf.org/IMG/pdf/memoradum_opa_051216_final_cpf_3_.pdf

Coordination Sud (2020). *L'agroécologie paysanne: alternative sociétale pour des systèmes agricoles et alimentaires durables*. Les Note du Sud N. 22. Mars. Retrieved from: <https://www.sol-asso.fr/wp-content/uploads/2020/04/L'agroécologie-paysanne-alternative-sociétale-pour-des-systèmes-agricoles-et-alimentaires-durables.pdf>

COPAGEN-JINUKUN (2014). *Projet de Soutien à l'Extension de l'Agriculture Agro-Ecologique au Bénin: Etude des pratiques agro-écologiques au Bénin*. Rapport final. Retrieved from: <https://jinukun.files.wordpress.com/2014/05/rapport-final-sur-etude-agroo-ecologie18052014-2.pdf>

CORAF. (2013). West Africa Seed Program (WASP) / Programme Semencier d'Afrique de l'Ouest (PSAO): Termes de Références. In CORAF. *Appel à manifestation d'intérêt: West Africa Seed Program (WASP) / Programme Semencier d'Afrique de l'Ouest (PSAO)*. AMI n°20-2013, pp. 3-11. Retrieved from: http://www.coraf.org/documents/annonces-offres/2013-03/20-2013-AMI-CONSULTANCY-BASELINE-OF-THE-WASP_French-version.pdf

Cornilleau, L. (2016). La modélisation économique mondiale, une technologie de gouvernement à distance ? : Généalogie, circulations et traductions d'un modèle de la sécurité alimentaire globale de l'IFPRI. *Revue d'anthropologie des connaissances*, 10,2(2), 171. DOI: [10.3917/rac.031.0171](https://doi.org/10.3917/rac.031.0171).

Côte, F.-X., Poirier-Magona, E., Perret, S., Roudier, P., Rapidel, B., & Thirion, M.-C. (Eds.). (2019). *The agroecological transition of agricultural systems in the Global South*. éditions Quae. DOI: [10.35690/978-2-7592-3057-0](https://doi.org/10.35690/978-2-7592-3057-0).

Cotula, L. (ed.) (2007). *Changes in "customary" land tenure systems in Africa*. FAO & IIED. ISBN: 978-1-84369-657-5. Retrieved from: <https://pubs.iied.org/pdfs/12537IIED.pdf>

Coulibaly, M., de la Perrière, R.A.B, & Shashikant, S. (2019). A Dysfunctional Plant Variety Protection System: Ten Years of UPOV Implementation in Francophone Africa. Working Paper, April 2019. APBEBES. https://www.apbrebes.org/files/seeds/APBEBES_OAPI_EN_def_0.pdf

Culliney, T. W. (2013). Role of arthropods in maintaining soil fertility. *Agriculture*, 3(4), 629-659.

Curry-Machado, J. (2013). *Global Histories, Imperial Commodities, Local Interactions*. Cambridge Imperial and Post-Colonial Studies Series. Palgrave Macmillan, UK. DOI: [10.1057/9781137283603](https://doi.org/10.1057/9781137283603)

D'Annolfo, R., Gemmill-Herren, B., Graeub, B., & Garibaldi, L. A. (2017). A review of social and economic performance of agroecology. *International Journal of Agricultural Sustainability*, 15(6), 632–644. DOI: [10.1080/14735903.2017.1398123](https://doi.org/10.1080/14735903.2017.1398123)

Dawson, N., Martin, A., & Sikor, T. (2016). Green Revolution in Sub-Saharan Africa: Implications of Imposed Innovation for the Wellbeing of Rural Smallholders. *World Development*, 78, 204–218. DOI: [10.1016/j.worlddev.2015.10.008](https://doi.org/10.1016/j.worlddev.2015.10.008)

De Bon, H., Temple, L., Malézieux, E., Bendjebbar, P., Fouilleux, E., & Silvie, P. (2018). Organic agriculture in Africa: A source of innovation for agricultural development. Perspective N.48. October. Retrieved from: https://agritrop.cirad.fr/589176/1/Perspective_48_DeBon_ENG.pdf

Deere, C.D. (2005). The feminization of agriculture? Economic restructuring in rural Latin America. Occasional paper 1. UN Research Institute for Social Development, Geneva.

De Schutter, O. (2009) The Right to Food: Seed policies and the Right to Food: enhancing agrobiodiversity and encouraging innovation. interim report of the Special Rapporteur on the right to food. A/64/170.

De Schutter, O. (2010). *Report submitted by the Special Rapporteur on the right to food, Olivier De Schutter (Human Rights Council, 16th Session, Agenda item 3 No. A/HRC/16/49), Promotion and protection of all human rights, civil, political, economic, social and cultural rights, including the right to development*. Retrieved from: http://www.srfood.org/images/stories/pdf/officialreports/20110308_a-hrc-16-49_agroecology_fr.pdf

De Schutter, O. (2017). The political economy of food systems reform. *European Review of Agricultural Economics*, 44(4), 705731. DOI: [10.1093/erae/jbx009](https://doi.org/10.1093/erae/jbx009)

Dentoni, D. & Mitsopoulos, D. (2013). Literature review on formal private investments in African agriculture. In D. Tschirley, S. Haggblade & T. Reardon (eds). *Africa's emerging food system transformation*, pp. 95–109. White Paper. East Lansing, USA, Michigan State University Global Center for Food Systems Innovation. ISBN: 978-0-9903005-2-6.

Devèze, J. (2004). Les agricultures familiales africaines entre survie et mutations. *Afrique contemporaine*, 210(2), 157-170. DOI: 10.3917/afco.210.0157.

Dia, A., & Duponnois, R. (2013) *Le projet majeur africain de la Grande Muraille Verte: concepts et mise en œuvre*. IRD Éditions. ISBN: 978-2-7099-1696-7. Retrieved from: https://horizon.documentation.ird.fr/exl-doc/pleins_textes/divers11-06/010050326.pdf

Dicko, M. H., Gruppen, H., Traoré, A. S., Voragen, A. G., & Van Berkel, W. J. (2006). Sorghum grain as human food in Africa: relevance of content of starch and amylase activities. *African journal of biotechnology*, 5(5), 384-395.

Djamen, P., & Ouattara, S. (2017). *Secteur semencier au Burkina Faso: Recommandations pour une meilleure intégration des producteurs*. Bioversity International. DOI: 10.13140/RG.2.2.36507.77605

Doss, C. (2014). If women hold up half the sky, how much of the world's food do they produce?. In *Gender in agriculture*(pp. 69-88). Springer, Dordrecht.

Doss, C., Meinzen-Dick, R., Quisumbing, A., & Theis, S. (2018). Women in agriculture: Four myths. *Global food security*, 16, 69-74.

Duflo, E., & Banerjee, A. (2020, May 7th). *Coronavirus is a crisis for the developing world, but here's why it needn't be a catastrophe*. The Guardian. Retrieved from: <https://www.theguardian.com/commentisfree/2020/may/06/vulnerable-countries-poverty-deadly-coronavirus-crisis>

Duru, M., Therond, O., & Fares, M. (2015). Designing agroecological transitions; A review. *Agronomy for Sustainable Development*, 35(4), 1237–1257. DOI: 10.1007/s13593-015-0318-x

Dynamique pour la transition agroécologique au Sénégal [DyTAES]. (2020). *Journées de l'Agroécologie au Sénégal*. Meeting minutes. 3rd Edition, January 30th-February 1st 2020. Musée des civilisations noires, Dakar. Retrieved from: <https://docplayer.fr/179891578-Journees-de-l-agroecologie-3eme-edition-30-janvier-au-1er-fevrier-2020-rapport-dytaes-dynamique-pour-une-transition-agroecologique-au-senegal.html>

ECOWAS. (2008). *Regional Agricultural Policy for West Africa, ECOWAP*. ECOWAS Commission. Retrieved from: https://www.diplomatie.gouv.fr/IMG/pdf/01_ANG-ComCEDEAO.pdf

ECOWAS (2011). *Land Policy in Africa: West Africa Regional Assessment*. Addis Ababa, AUC-ECA-AfDB Consortium.

ECOWAS (2015). *Agriculture and Food in West Africa: trends, performances and agricultural policies*. 138 p. Retrieved from: <http://www.hubrural.org/IMG/pdf/LivretEcowap2014-fr-Light.pdf>

ECOWAS, AU & NEPAD. (2016). *Programme Régional d'Investissements Agricoles et de Sécurité Alimentaire et Nutritionnelle. PRIASAN 2016-2020*. Document adopté par le Comité Consultatif pour l'Agriculture et l'Alimentation. Abuja – 9 et 10 décembre 2016

- ECOWAS, AU & NEPAD. (2017). *2025 Strategic Policy Framework. Summary*. Retrieved from: <http://araa.org/sites/default/files/media/ECOWAP%202025%20Strategic%20Policy%20Framework%20ENG.pdf>
- Elbehri, A., Kaminski, J., Koroma, S., lafrate, M., & Benali, M. (2013). West Africa food systems: An overview of trends and indicators of demand, supply, and competitiveness of staple food value chains, In: *Rebuilding West Africa's Food Potential*, A. Elbehri (ed.), FAO/IFAD.
- Enda Pronat. (2018a). *Promouvoir l'agriculture saine et durable auprès des exploitations familiales: Voies durables pour un meilleur système alimentaire au Sénégal*. Retrieved from: http://www.endapronat.org/wp-content/uploads/2018/10/Etude_agroe%CC%81cologie.pdf
- Enda Pronat. (2018b). *Rapport sur Les journées de l'agroécologie et de la sécurisation foncière*. 05 et 06 février 2018. Place du Souvenir Africain, Dakar, Senegal.
- Enda Pronat. (2019). *Etude de faisabilité : partenariat multi-acteurs pour la transition agroécologique*. Retrieved from: http://www.endapronat.org/wp-content/uploads/2019/06/RAPPORT-ETUDE-TAE_Enda-Pronat_Version-finale-1.pdf
- EOA-I. (n.d.). *Our Approach*. Retrieved from: <https://eoai-africa.org/our-approach/>
- ETC Group. (2015). Breaking Bad: Big Ag Mega-Mergers in Play Dow + DuPont in the Pocket? Next: Demonsanto?. *ETC Group Communiqué 115*. Retrieved from: http://www.etcgroup.org/files/files/etc_breakbad_23dec15.pdf
- Falkenberg, K. (2016, July). "Sustainability Now!: A European vision for sustainability", *EPSC Strategic Notes*, EU Commission, Issue 18. Retrieved from: https://ec.europa.eu/epsc/file/strategic-note-18-sustainability-now_en.
- Fletschner, D. & Kenney, L. (2010). *Rural women's access to financial services: credit, savings, and insurance*. Background paper prepared for *The State of Food and Agriculture 2010–11*. Rome, FAO.
- Food and Agriculture Organization of the United Nations [FAO]. (1997). *Land tenure, governance and sustainable irrigation development*. Retrieved from: <http://www.fao.org/3/w7314e/w7314e0a.htm>
- FAO. (2004–2011). *FAOSTAT [Database]*. Retrieved from: <http://www.fao.org/faostat/fr/#data/FDI>
- FAO (2008). Resources and challenges in the context of climate change. Water for agriculture and energy in Africa: The challenges of climate change. Report of the ministerial conference of 15-17 December 2008. Sirte, Libya. Retrieved from: <http://www.fao.org/3/i2345e/i2345e04.pdf>
- FAO. (2011a). *Why has Africa become a net food importer?: Explaining Africa agricultural and food trade deficits*. Rome: FAO. Retrieved from: <http://www.fao.org/3/a-i2497e.pdf>
- FAO. (2011b). *Global food losses and food waste: Extent, causes and prevention*. Rome: FAO. Retrieved from: <http://www.fao.org/3/a-i2697e.pdf>
- FAO. (2011c). *The State of Food and Agriculture. Women in Agriculture: Closing the gender gap for development*. Food and Agriculture Organization of the United Nations, Rome. Retrieved from: <http://www.fao.org/3/i2050e/i2050e.pdf>

FAO. (2012). *The State of Food and Agriculture 2012: Investing in agriculture for a better future*. Rome: FAO. Retrieved from: <http://www.fao.org/docrep/017/i3028f/i3028f.pdf>

FAO. (2014). Assessment on the Right to Food in the ECOWAS region. Retrieved from <http://www.fao.org/3/a-i4183e.pdf>

FAO. (2015a). *Regional Meeting on Agroecology in Sub-Saharan Africa*. Retrieved from: <http://www.fao.org/africa/events/detail-events/en/c/330741/>

FAO. (2015b). *Agroecology for Food Security and Nutrition: Proceedings of the FAO International Symposium*. 18-19 September 2014, Rome, Italy. Retrieved from: <http://www.fao.org/documents/card/en/c/d1f541b5-39b8-4992-b764-7bdfffb5c63f/>

FAO (2015c). *Report on the regional meeting on agroecology in Sub-Saharan Africa*. Dakar, 5-6 November 2015. Retrieved from: <http://www.fao.org/3/a-i6364e.pdf>

FAO. (2016a). *Fertilizer consumption (kilograms per hectare of arable land) - Country Ranking*. Retrieved from: <https://www.indexmundi.com/facts/indicators/AG.CON.FERT.ZS/rankings>

FAO. (2016b). *Trends in Foreign Direct Investment in food, beverages and tobacco*. FAO Commodity and Trade Policy Research, Working paper n°51. Rome: FAO. Retrieved from: <http://www.fao.org/3/a-i5595e.pdf>

FAO. (2016c). *Promoting gender equality and women's empowerment in fisheries and aquaculture*. Retrieved from: <http://www.fao.org/3/a-i6623e.pdf>

FAO. (2017). *Country fact sheet on food and agriculture policy trends: Mali*. Retrieved from: <http://www.fao.org/3/a-i7617e.pdf>

FAO. (2018). *Scaling Up Agroecology to achieve the Sustainable Development Goals*. Proceedings of the 2nd FAO International Symposium on Agroecology. Rome, Italy, 3-5 April 2018. Retrieved from: <http://www.fao.org/3/ca3666en/ca3666en.pdf>

FAO. (2019a). *TAPE Tool for Agroecology Performance Evaluation 2019: Process of development and guidelines for application*. Test version. Rome:FAO. Retrieved from: <http://www.fao.org/3/ca7407en/CA7407EN.pdf>

FAO. (2019b). *The State of Food and Agriculture 2019. Moving forward on food loss and waste reduction*. Rome. Licence: CC BY-NC-SA 3.0 IGO. Retrieved from: <http://www.fao.org/3/ca6030en/ca6030en.pdf>

FAO. (2019c). *The ten Elements of Agroecology*. CL 163/13 Rev.1. FAO Council, 163rd Session, 2-6 December 2019. Rome: FAO. Retrieved from: <http://www.fao.org/3/ca7173en/ca7173en.pdf>

FAO. (2020a, February, 3rd). *3ème édition des journées de l'agroécologie au Sénégal*. Retrieved from: <http://www.fao.org/senegal/actualites/detail-events/fr/c/1268900/>

FAO. (2020b). "COVID-19 could not have come at a worse time for vulnerable communities across West Africa". Q&A with Coumba Sow, FAO Resilience Coordinator for West Africa. Retrieved from: <http://www.fao.org/news/story/en/item/1271835/icode/>

FAO (2020c). The State of Food Security and Nutrition in the World. Retrieved from <http://www.fao.org/documents/card/en/c/ca9692en>

FAO (2020d). World Agriculture Watch: WAW's working definition of family farming. Retrieved from: <http://www.fao.org/world-agriculture-watch/tools-and-methodologies/definitions-and-operational-perspectives/family-farms/en/>

FAO. (n.d.). *What is climate smart agriculture?* Retrieved from: <http://www.fao.org/climatechange/epic/activities/what-is-climate-smart-agriculture/en/#.XvIrAJNKi8p>

FAO & AU Commission. (2018). *Achieving Social and Economic Development in Africa Through Ecological and Organic Agricultural Alternatives*. Proceedings of the Plenary Presentations of the 3rd African Organic Conference. Lagos, Nigeria, 5-9 October 2015. Retrieved from: <http://www.fao.org/3/ca0307en/CA0307EN.pdf>

FAO & INRA. (2018). *Constructing markets for agroecology – An analysis of diverse options for marketing products from agroecology*, by Loconto, A., Jimenez, A. & Vandecandelaere, E. Rome, Italy: FAO. Retrieved from: <http://www.fao.org/3/i8605en/I8605EN.pdf>

FAO & ITPS (2015). Status of the World's Soil Resources (SWSR) – Main Report. Rome, Food and Agriculture Organization of the United Nations and Intergovernmental Technical Panel on Soils.

FIAN. (2018). *Business for profits or diverse food systems?: Threats to peasant seeds and implications in West Africa*. Retrieved from: www.fian.org/fileadmin/media/publications_2018/Reports_and_guidelines/180329_FIAN_FFM_BurkinaFaso_EN_Web.pdf

Fireman B. & Gamson W. (1979). « Utilitarian Logic in the Resource Mobilization Perspective ». In M. Zald et J. McCarthy (eds), *The Dynamics of Social Movements*, Cambridge (Mass.), Winthrop, p. 8-44. ISBN 0-7623-0786-2.

Fouilleux, E. (2000). Entre production et institutionnalisation des idées: la réforme de la politique agricole commune. *Revue française de science politique*. 50(2): 277-306. Sciences Po University Press. DOI: 10.2307/43119730

Fouilleux, È. & Balié, J. (2009). The Double Paradox of Establishing Common Agricultural Policies in Africa. An Improbable Case of Transfer of Public Policy. *Pôle Sud*, no 31(2), 129-149. Retrieved from: <https://www.cairn.info/journal-pole-sud-2009-2-page-129.htm>.

Fouilleux, E., Bricas, N., & Alpha, A. (2017). 'Feeding 9 billion people': Global food security debates and the productionist trap. *Journal of European Public Policy*, 24(11), 1658–1677. DOI: 10.1080/13501763.2017.1334084

Frankema, E. & van Waijenburg, M. (2012). Structural Impediments to African Growth? New Evidence from Real Wages in British Africa, 1880-1965, *Journal of Economic History*, 72(4), 895-926.

French Ministry of Agriculture and Food. (2017a, 3 novembre). *Stocker 1,2 milliard de tonnes de carbone dans les sols, un engagement fort !*. Retrieved from: <https://agriculture.gouv.fr/stocker-12-milliard-de-tonnes-de-carbone-dans-les-sols-un-engagement-fort>

French Ministry of Agriculture and Food. (2017b, 7 novembre). *4 pour 1000: séquestration du carbone dans les sols* [Infographie]. Retrieved from: <https://agriculture.gouv.fr/infographie-4-pour-1000-la-sequestration-du-carbone-dans-les-sols>

Gabas, J. (2011). Les investissements agricoles en Afrique: Introduction thématique. *Afrique contemporaine*, 237(1), 45-55. DOI:10.3917/afco.237.0045.

Gabas, J., Ribier, V. & Vernières, M. (2017). Présentation. Financement ou financiarisation du développement ? Une question en débat. *Mondes en développement*, 178(2), 7-22. DOI: 10.3917/med.178.0007.

Gann, L., Duignan, P. & Turner, V. (1975). *Colonialism in Africa: 1870-1960 (Vol. 4)*. Cambridge University Press. DOI: [10.1080/03612759.1976.9945449](https://doi.org/10.1080/03612759.1976.9945449)

Gemmene, F., Blocher, J., De Longueville, F., Vigil Diaz Telenti, S., Zickgraf, C., Gharbaoui, D., & Ozer, P. (2017). Catastrophes naturelles et déplacements de populations en Afrique de l'Ouest. *Geo-Eco-Trop: Revue Internationale de Géologie, de Géographie et d'Écologie Tropicales*, 41. Retrieved from: https://orbi.uliege.be/bitstream/2268/218730/1/Gemenne%20et%20al_Geo-Eco-Trop_Final.pdf

Gliessman, S. (2016). Transforming food systems with agroecology.

Global Alliance for the Future of Food [GAFF]. (2019). *True cost accounting for transformative change: What we are learning from early applications - A compendium*. Retrieved from: https://futureoffood.org/wp-content/uploads/2019/03/Compendium_TCA-Strategic-Convening_April-2019.pdf

Goïta, M. (2014). Les défis du développement agricole en Afrique et le choix du modèle: Révolution verte ou agroécologie? Luxembourg: SOS Faim, 21 p.. Retrieved from: http://www.agroecologyinaction.be/IMG/pdf/irpad_revolution_verte_ou_agroecologique.pdf

Gollin, D. (2014). Smallholder agriculture in Africa: An overview and implications for policy IIED Working Paper. IIED, London.

GRAIN. (2012). *Accaparement des terres et souveraineté alimentaire en Afrique de l'Ouest et du Centre*. Retrieved from: <https://www.grain.org/fr/article/4565-accaparement-des-terres-et-souverainete-alimentaire-en-afrique-de-l-ouest-et-du-centre>

GRET. (2017). *Pour un soutien accru à l'élevage agropastoral en Afrique de l'Ouest*. Retrieved from: <http://www.gret.org/2017/01/soutien-accru-a-lelevage-agropastoral-afrique-de-louest/>

Groupe de Dialogue Social et Politique [GDSP]. (2018). *Propositions des organisations de producteurs et de la société civile dans le cadre de la formulation du Programme national d'Investissement Agricole et de Sécurité Alimentaire et nutritionnelle (PNIASAN)*. Janvier 2018. Retrieved from: <https://docplayer.fr/84947911-Groupe-de-dialogue-social-et-politique-gdsp.html>

High Level Panel of Experts on Food Security and Nutrition [HLPE]. (2013). *Investing in smallholder agriculture for food security*. A report by the High Level Panel of Experts on Food Security and Nutrition, Rome. Retrieved from: http://www.fao.org/fileadmin/user_upload/hlpe/hlpe_documents/HLPE_Reports/HLPE-Report-6_Investing_in_smallholder_agriculture.pdf

HLPE. (2019). *Agroecological and other innovative approaches for sustainable agriculture and food systems that enhance food security and nutrition*. A report by the High Level Panel of Experts on Food Security and Nutrition of the Committee on World Food Security, Rome. Retrieved from: <http://www.fao.org/3/ca5602en/ca5602en.pdf>

Hollinger, F. & Staatz, J. (2015). *Agricultural growth in West Africa: Market and policy drivers*. Rome: FAO & AfDB. Retrieved from: <https://reliefweb.int/sites/reliefweb.int/files/resources/a-i4337e.pdf>

Holt-Giménez, E., Shattuck, A., Altieri, M., Herren, H., & Gliessman, S. (2012). We Already Grow Enough Food for 10 Billion People ... and Still Can't End Hunger. *Journal of Sustainable Agriculture*, 36(6), 595–598. DOI: 10.1080/10440046.2012.695331

Hub Rural. (n.d.). *Mali: l'Assemblée nationale adopte le projet de loi sur le foncier agricole*. Retrieved from: <http://www.hubrural.org/Mali-l-Assemblee-nationale-adopte-le-projet-de-loi-sur-le-foncier-agricole>

Idel, A., & Beste, A. (2020). *The Myth of Climate-Smart Agriculture – Why less bad isn't good*. European Greens/EFA. Retrieved from: <https://www.arc2020.eu/wp-content/uploads/2020/05/Myth-of-climate-smart-agriculture-final.pdf>

Iles, A. (2020). Can Australia transition to an agroecological future?. *Agroecology and Sustainable Food Systems*. DOI: 10.1080/21683565.2020.1780537

IDRC (2015). Large-scale agricultural land acquisitions in West Africa. Retrieved from: <https://www.idrc.ca/en/project/large-scale-agricultural-land-acquisitions-west-africa>

Institute for Poverty, Land and Agrarian Studies. (2014). *International and regional guidelines on land governance and land-based investments: An agenda for African states*. Retrieved from: <http://www.future-agricultures.org/policy-engagement/policy-briefs/1932-international-and-regional-guidelines-on-land-governance-and-land-based-investments-an-agenda-for-african-states/file>

Inter-réseaux. (2013). Coopération pour le développement agricole en Afrique: Le rôle des entreprises et des fondations privées. *Bulletin de Synthèse Souveraineté Alimentaire*, n°10. SOS Faim. Retrieved from: http://www.inter-reseaux.org/IMG/pdf/BDS_No10_final.pdf

Inter-Réseaux. (2014). Agroécologie: une diversité de définition et de visions. *Grain de sel*, 6366, 810. Retrieved from: http://www.bfc-international.org/IMG/pdf/gds63_complet.pdf

Inter-Réseaux. (2016a). Quel bilan pour la politique ouest-africaine, dix ans après son adoption?. *Bulletin de Synthèse pour la Souveraineté Alimentaire*, n°19. SOS Faim. Retrieved from: http://www.inter-reseaux.org/IMG/pdf/bds19_ecowap_mars2016.pdf

Inter-réseaux. (2016b). Les pôles de croissance agricole: la panacée aux maux de l'agriculture africaine?. *Bulletin de Synthèse Souveraineté Alimentaire*, n°24. SOS Faim. Retrieved from: http://www.inter-reseaux.org/IMG/pdf/bds_no24_poles_de_croissance.pdf

Inter-réseaux. (2018a). Quelle implication du secteur privé dans les politiques agricoles et alimentaires en Afrique? . *Bulletin de Synthèse Souveraineté Alimentaire*, n°27. SOS Faim. Retrieved from: https://www.inter-reseaux.org/IMG/pdf/bds_no27_secteur_privé.pdf

- Inter-Réseaux. (2018b, october). *Journée de partage d'expériences sur les dynamiques d'accompagnement des OP pour le changement d'échelle en agroécologie: compte rendu*. Retrieved from: <http://www.inter-reseaux.org/IMG/pdf/compte-renduatelieragroecologiebfinal.pdf>
- Inter-Réseaux. (2019). *The growing role of the private sector in agricultural and food policy in Africa*. Retrieved from: http://www.inter-reseaux.org/IMG/pdf/ir-issala-sos_note_privatesector_en.pdf
- IPAR. (2014). *Accès des femmes au foncier: Seules 4% des femmes au Sénégal ont des terres*. Ipar, initiative prospective agricole et rurale. Retrieved from: <https://www.ipar.sn/Acces-des-femmes-au-foncier-Seules-4-des-femmes-au-Senegal-ont-des-terres.html>
- IPES-Food. (2016). *From uniformity to diversity: a paradigm shift from industrial agriculture to diversified agroecological systems*. International Panel of Experts on Sustainable Food Systems, Brussels. Retrieved from: http://www.ipes-food.org/_img/upload/files/UniformityToDiversity_FULL.pdf
- IPES-Food. (2017a). *Too big to feed: Exploring the impacts of mega-mergers, concentration, concentration of power in the agri-food sector*. Retrieved from: http://www.ipes-food.org/_img/upload/files/Concentration_FullReport.pdf
- IPES-Food. (2017b). *Unravelling the Food-Health Nexus: Addressing practices, political economy, and power relations to build healthier food systems*. The Global Alliance for the Future of Food and IPES-Food. Retrieved from: [http://www.ipes-food.org/_img/upload/files/Health_FullReport\(1\).pdf](http://www.ipes-food.org/_img/upload/files/Health_FullReport(1).pdf)
- IPES-Food. (2018). *Breaking away from industrial food and farming systems: Seven case studies of agroecological transition*. Retrieved from: http://www.ipes-food.org/_img/upload/files/CS2_web.pdf
- IPES-Food. (2019). *Towards a Common Food Policy for the European Union: The policy reform and realignment that is required to build sustainable food systems in Europe*. Retrieved from: http://www.ipes-food.org/_img/upload/files/CFP_FullReport.pdf
- IPES-Food. (2020). *Special Report: COVID-19 and the crisis in food systems: Symptoms, causes, and potential solutions*. Communiqué by IPES-Food, April 2020 Retrieved from: http://www.ipes-food.org/_img/upload/files/COVID-19_CommuniqueEN%283%29.pdf
- IRD. (2017). *TaFAé: Au Sénégal, chercheurs, ONG et paysans s'organisent et partagent leurs savoirs*. Retrieved from: <https://senegal.ird.fr/toute-l-actualite/l-actualite/2017/tafae-au-senegal-chercheurs-ong-et-paysans-s-organisent-et-partagent-leurs-savoirs>
- IRD. (n.d.). *LMI IESOL: Intensification Écologique des Sols Cultivés en Afrique de l'Ouest*. Brochure de présentation. Retrieved from: https://www.ird.fr/content/download/51111/391507/version/3/file/Brochure_LMI_IESOL.pdf
- Isgren, E. (2018). *Between Nature and Modernity: Agroecology as an alternative development pathway: the case of Uganda*. Lund University.
- Jalloh, A., Rhodes, E.R., Kollo, I., Roy-Macauley, H., and Sereme P. (2011). *Nature and management of the soils in West and Central Africa: A review to inform farming systems research and development in the region*. Conseil Ouest et Centre Africain pour la Recherche et le Développement Agricoles/West and Central African Council for Agricultural Research and Development (CORAF/WECARD). CORAF/WECARD, Dakar, Senegal.

Jalloh, A., Nelson, G.C., Thomas, T.S., Zougmore, R. & Roy-Macauley, H. (eds.). (2013). *West African agriculture and climate change: a comprehensive analysis*. Washington, DC, International Food Policy Research Institute (IFPRI). DOI: [10.2499/9780896292048](https://doi.org/10.2499/9780896292048)

Jayne, T. S., & Rashid, S. (2013). Input subsidy programs in sub-Saharan Africa: a synthesis of recent evidence. *Agricultural Economics*, 44(6), 547–562. DOI:10.1111/agec.12073

Jorand, M. (2014). À qui profite l'aide agricole en Afrique ?. *Alternatives Internationales* n.15, *Alternatives Économiques*. Retrieved from: <https://www.alternatives-economiques.fr/a-profite-laide-agricole-afrique/00076149>

Kairé, M., Sarr, B., Yaro Bottoni, E., & CILSS. (2015). *Enjeux des mécanismes de financement de l'adaptation au changement climatique en Afrique de l'Ouest*. Présenté lors de la Semaine du Sahel et de l'Afrique de l'Ouest, Milan, Italie. Retrieved from: <https://www.oecd.org/swac-expo-milano/presentationsanddocuments/session-2-pager-maguette-kaire-cilss-agrhymet.pdf>

Kaufmann, J.-C. (1996). *L'entretien compréhensif*. Paris: Nathan.

Kerr, R. B., Nyantakyi-Frimpong, H., Lupafya, E., Dakishoni, L., Shumba, L., & Luginaah, I. (2016). Building resilience in African smallholder farming communities through farmer-led agroecological methods'. In *Climate Change and Agricultural Development: Improving Resilience through. Climate-Smart Agriculture, Agroecology and Conservation* (pp. 109-130). Routledge London and New York.

Kerr, R. B., Kangmennaang, J., Dakishoni, L., Nyantakyi-Frimpong, H., Lupafya, E., Shumba, L., ... & Maona, E. (2019). Participatory agroecological research on climate change adaptation improves smallholder farmer household food security and dietary diversity in Malawi. *Agriculture, Ecosystems & Environment*, 279, 109-121.

Koohafkan, P., & Altieri, M. A. (2017). *Forgotten Agricultural Heritage: Reconnecting food systems and sustainable development*. Taylor & Francis. ISBN 9781138204157.

Koussoubé, E. (2013). Land Purchases by Elites: The Other Face of Land Grab in Africa? BSI Economics. 29 November. Retrieved from: <http://www.bsi-economics.org/222-land-purchases-by-elites-the-other-face-of-land-grab-in-africa>

Krapohl, S. & Van Huut, S. (2020). A missed opportunity for regionalism: the disparate behaviour of African countries in the EPA-negotiations with the EU. *Journal of European Integration*, 42:4, 565-582, DOI: 10.1080/07036337.2019.1666117.

La Via Campesina [LVC]. (2015, February). *Déclaration du Forum International de l'Agroécologie*. February, 24-26, 2015, Centre Nyéléni, Selingué, Mali. Retrieved from: <https://viacampesina.org/fr/declaration-du-forum-international-sur-l-agroecologie/>

LVC. (2017). *Le manifeste de l'agroécologie paysanne de Nyéléni*. Adopted during a conference hosted by CNOP, Mali, April, 22-24, 2017. Retrieved from: <https://viacampesina.org/fr/wp-content/uploads/sites/4/2017/05/manifeste22avr2017.doc>

Le Soleil. (2017). *Communes et villes vertes du Sénégal: Le réseau des maires écologistes mis en place*. Retrieved from: <http://www.inter-reseaux.org/ressources/article/communes-et-villes-vertes-du?lang=fr>

- Lançon, F., & Wade, I. (2016). Urbanisation, changing tastes and rural transformation in West Africa. *IIED Briefing*. Retrieved from: <https://pubs.iied.org/pdfs/17334IIED.pdf>
- Leblond, N., & Trottier, J. (2016). Performing an Invisibility Spell: Global Models, Food Regimes and Smallholders. *International Journal of Sociology of Agriculture and Food*, Research Committee on Sociology of Food and Agriculture (RC40), 23 (1), pp.21-40. Retrieved from: <https://pdfs.semanticscholar.org/1139/e51afda35bd1db0bb8a70bd8ceb0c8520b55.pdf>
- Lee, J., Gereffi, G., Beauvais, J. (2012). Global value chains and agrifood standards: Challenges and possibilities for smallholders in developing countries. *PNAS* 109, 12326–12331. doi:10.1073/pnas.0913714108
- Levard, L., & Apollin, F. (2013). *Répondre aux défis du XXIème siècle avec l'agro-écologie: pourquoi et comment ?*. Retrieved from: <https://www.gret.org/wp-content/uploads/Rapport-Agroecologie-2e-%C3%A9dition.pdf>
- Levard, L. & Mathieu, B.. (2018). *Agroécologie: capitalisation d'expérience en Afrique de l'Ouest*. Rapport d'étude du projet Capitalisation d'expériences d'acteurs pour le développement de techniques agroécologiques résilientes en Afrique de l'Ouest (CALAO). Retrieved from: https://www.avsf.org/public/posts/2211/rapport_etude_calao_2018-web_avsf_gret_cedeao.pdf
- Levard, L., Mathieu, B., & Masse, P. (2019). *Mémento pour l'évaluation de l'agroécologie, Méthodes pour évaluer ses effets et les conditions de son développement*. GTAE-AgroParisTech – CIRAD - IRD. Retrieved from: https://www.avsf.org/public/posts/2349/memento_evaluation_agroecologie_gtae-2019.pdf
- Loconto, A. M., & Fouilleux, E. (2019). Defining agroecology: Exploring the circulation of knowledge in FAO's Global Dialogue. *The International Journal of Sociology of Agriculture and Food*, 25(2), 116-137. Retrieved from: <http://ijsaf.org/index.php/ijsaf/article/view/27>
- Lorenz, A. & Barbière, C. (2018). *A small setback for intensive agriculture in Africa*. Retrieved from: <https://www.euractiv.com/section/africa/news/a-small-setback-for-intensive-agriculture-in-africa/>
- Marafa, L., May, J., & Tenebe, V. A. (2020). Upscaling Agriculture and Food Security in Africa in Pursuit of the SDGs: What Role Does China Play?. In *Africa and the Sustainable Development Goals* (pp. 165-175). Springer, Cham.
- Matuschke, I. (2009). *Rapid urbanization and food security: using food density maps to identify future food security hotspots*. Rome: FAO. Retrieved from: http://www.fao.org/fileadmin/user_upload/esag/docs/RapidUrbanizationFoodSecurity.pdf
- McGuire, S., & Sperling, L. (2016). Seed systems smallholder farmers use. *Food Security*, 8(1), 179-195.
- McKeon, N. (2015). *Food security governance - Empowering communities, regulating corporations*. London: Routledge. DOI: 10.1080/03066150.2015.1072974
- Miller, V., Yusuf, S., Chow, C. K., Dehghan, M., Corsi, D. J., Lock, K., ... & Mony, P. (2016). Availability, affordability, and consumption of fruits and vegetables in 18 countries across income levels: findings from the Prospective Urban Rural Epidemiology (PURE) study. *The lancet global health*, 4(10), e695-e703.

Moody's. (2020). *Increasing external risks, muted growth and weak public finances keep 2020 outlook on SSA sovereigns*. Retrieved from: https://www.moody's.com/research/Moodys-Increasing-external-risks-muted-growth-and-weak-public-finances--PBC_1209781

Muchie, M., Lukhele-Olorunju, P., & Akpor, O. B. (2013). *The African Union Ten Years After*. Pretoria, South Africa: Africa Institute of South Africa.

Nelson, J. (2004). A survey of indigenous land tenure in sub-Saharan Africa. Retrieved from: <http://www.fao.org/3/y5407t/y5407t0d.htm>

NEPAD. (2013). *Les agricultures africaines, transformations et perspectives*. Retrieved from: <http://www.un.org/fr/africa/osaa/pdf/pubs/2013africanagriculturesf.pdf>

NEPAD. (n.d.). *NEPAD in Brief*. Retrieved from: <https://www.nepad.org/publication/nepad-brief>

Nyéléni. (2016, décembre). "L'agroécologie comme résistance et transformation: la Souveraineté Alimentaire et la Terre Mère", *Bulletin Nyéléni*, 28. Retrieved from: https://ddd.uab.cat/pub/nyeleni/nyeleni_a2016m12n28FR.pdf

Odhong, J. (2018) Dual-purpose sorghum varieties improving food and feed security for crop-livestock farmers in southern Mali. Retrieved from: <https://www.ilri.org/news/dual-purpose-sorghum-varieties-improving-food-and-feed-security-crop-livestock-farmers-southern>

Organisation for Economic Co-operation and Development [OECD]. (2011). *Volatilité des prix agricoles et alimentaires Vues et perspectives africaines*. Présenté during G20's «Outreach» Session, Centre de conférence de l'OCDE, Paris, France. Retrieved from: <https://www.oecd.org/fr/csao/evenements/48492857.pdf>

OECD. (2015). *Stats of the Week: Food Security in West Africa*. Retrieved from: <http://www.oecd.org/statistics/stats-of-the-week-food-security-in-west-africa.htm>

OECD. (2016), "Women's Roles in the West African Food System: Implications and Prospects for Food Security and Resilience", *West African Papers*, No. 3, OECD Publishing, Paris. Retrieved from: <http://dx.doi.org/10.1787/5jlpl4mh1hxn-en>

OECD. (2018). *West Africa's transforming food economy & innovative approaches to food system policies*. Retrieved from: <https://www.oecd.org/swac/topics/food-system-transformations/innovative-approaches-food-systems.htm>

OECDStat. (2020). Aid (ODA) disbursements to countries and regions. Data extracted on 27 July, 2020. Retrieved from: <https://stats.oecd.org/Index.aspx?DataSetCode=Table2A>

OECD/Sahel and West Africa Club [SWAC]. (2007). *L'Afrique de l'Ouest: Une région en mouvement; Une région en mutation; Une région en voie d'intégration*. Retrieved from: <https://www.oecd.org/fr/csao/publications/38512130.pdf>

OECD/SWAC. (2020). *When a global virus meets local realities: Coronavirus (COVID-19) in West Africa*. Retrieved from: https://read.oecd-ilibrary.org/view/?ref=132_132742-b9si5r6w73&title=when-a-global-virus-meets-local-realities-coronavirus-COVID-19-in-West-Africa

OECD & FAO. (2016). *L'agriculture en Afrique subsaharienne: Perspectives et enjeux de la décennie à venir, Perspectives agricoles de l'OCDE et de la FAO 2016-2025*. Éditions OCDE, Paris.

DOI: 10.1787/agr_outlook-2016-f

Olodo, E. (2019). Ghana: le gouvernement envisage de bannir les importations de riz d'ici 2022. Agence Ecofin. 27 November. Retrieved from: <https://www.agenceecofin.com/riz/2711-71537-ghana-le-gouvernement-envisage-de-bannir-les-importations-de-riz-d-ici-2022>

Otoo, M. et al. (2009), *Women Entrepreneurship in West Africa: The Cowpea Street Food Sector in Niger and Ghana*, Institut National de Recherche Agronomique du Niger, Niamey.

Oxfam. (2015). *ECOWAP, a fragmented policy. OXFAM Briefing paper, November 2015*. Retrieved from: https://oi-files-d8-prod.s3.eu-west-2.amazonaws.com/s3fs-public/file_attachments/bp-ecowap-fragmented-policy-131115-en.pdf

Oxfam (2020). Covid-19: 50 million people threatened by hunger in West Africa. 21 April. <https://www.oxfam.org/en/press-releases/covid-19-50-million-people-threatened-hunger-west-africa>

Paillé, P. (1994). L'analyse par théorisation ancrée. *Cahiers de recherche sociologique*. 23, p.147–181. DOI: 10.7202/1002253ar.

Palacios-Lopez, A., Christiaensen, L., and Kilic, T. (2015) *How much of the labor in African agriculture is provided by women ? (English)*. Policy Research working paper. No. WPS 7282. Washington, D.C.: World Bank Group. Retrieved from: <http://documents.worldbank.org/curated/en/979671468189858347/How-much-of-the-labor-in-African-agriculture-is-provided-by-women>

Patel, R., & Moore, J. W. (2018). *A History of the World in Seven Cheap Things*. Berkeley, USA: University of California Press. ISBN 9780520299931.

Perez, C., Jones, E. M., Kristjanson, P., Cramer, L., Thornton, P. K., Förch, W., & Barahona, C. A. (2015). How resilient are farming households and communities to a changing climate in Africa? A gender-based perspective. *Global Environmental Change*, 34, 95-107.

Pfongue. (2017). *Centre ISRA/IRD Bel Air ouvre ses portes à la TaFAé*. Retrieved from: <https://pfongue.org/Centre-ISRA-IRD-Bel-Air-ouvre-ses-portes-a-la-TaFAe.html>

Pimbert M. (2010). *Towards food sovereignty: reclaiming autonomous food systems*. CAFS, IIED and RCC, London and Munich. Retrieved from: <https://pubs.iied.org/pdfs/G02268.pdf>

Pimbert, M. P. (Ed.). (2017). *Food sovereignty, agroecology and biocultural diversity: constructing and contesting knowledge*. Routledge.

Pimentel, D., & Peshin, R. (eds.). (2014). *Integrated pest management: pesticide problems* (Vol. 3). Springer Science & Business Media.

Pinaud, S. (2018). Économie politique de la poudre de lait en Afrique de l'Ouest. *Techniques & Culture*. 69. Retrieved from: <http://journals.openedition.org/tc/8832>

Prashar, P., & Shah, S. (2016). Impact of fertilizers and pesticides on soil microflora in agriculture. In *Sustainable agriculture reviews* (pp. 331-361). Springer, Cham.

Republic of Togo. (2015). *La Politique Agricole assortie du Plan Stratégique pour la Transformation de l'Agriculture au Togo à l'horizon 2030 (PA-PSTAT 2030): Document de politique agricole pour la période 2016-2030*. Lomé, Togo. Retrieved from: <https://agriculture.gouv.tg/wp-content/uploads/2020/06/Document-de-politique-agricole-du-Togo-Version-finale-du-30-12-2015.pdf>

Ribier, V., & Gabas, J. (2016). Vers une accentuation des disparités dans le financement de l'agriculture en Afrique de l'Ouest ? *Cahiers Agricultures*, 25(6), 65007. DOI: 10.1051/cagri/2016045

Rivera-Ferre, M. G. (2018). The resignification process of Agroecology: Competing narratives from governments, civil society and intergovernmental organizations. *Agroecology and Sustainable Food Systems*, 42(6), 666–685. DOI: 10.1080/21683565.2018.1437498

Réseau des Organisations Paysannes et des Producteurs Agricoles d'Afrique de l'Ouest [ROPPA]. (2018). *Étude sur les mécanismes/outils nationaux et régionaux de financement du secteur agricole et rural en Afrique de l'Ouest*. Retrieved from: http://roppa-afrique.org/IMG/pdf/004-synthese_regionale-v5_bdef.pdf

ROPPA. (n.d.). *Le ROPPA: Missions*. Retrieved from: <https://www.roppa-afrique.org/spip.php?article3>

ROPPA (n.d.) *Note exploitation du rapport du ROPPA - évaluation ECOWAP*. Retrieved from: https://roppa-afrique.org/IMG/pdf/note_exploitation_du_rapport_du_roppa_-_evaluation_ecowap.pdf

ROPPA, APESS & RBM. (2020). *Un Comité de Veille et d'Action: Mission, Organisation et Fonctionnement*. Retrieved from: <http://roppa-afrique.org/IMG/pdf/roppa-a5-160420-1.pdf>

Sachs, C. E. (2018). *Gendered fields: Rural women, agriculture, and environment*. Routledge.

Sánchez-Bayo, F., & Wyckhuys, K. A. (2019). Worldwide decline of the entomofauna: A review of its drivers. *Biological conservation*, 232, 8-27.

Scoones, I., Amanor, K., Favareto, A., & Qi, G. (2016). A new politics of development cooperation? Chinese and Brazilian engagements in African agriculture. *World Development*, 81, 1-12.

Shiva, V. (2016). *Who really feeds the world?: The failures of agribusiness and the promise of agroecology*. North Atlantic Books.

Si, Z. (2019). *Shifting from Industrial Agriculture to Diversified Agroecological Systems in China*. Reclaiming Diversity and Citizenship Series. Centre for Agroecology, Water and Resilience (CAWR), Coventry University, UK. Retrieved from: http://ipes-food.org/_img/upload/files/coventry-china-agriculture-aw-new-style.pdf

Sodjinou, R., Agueh, V., Fayomi, B., & Delisle, H. (2009). Dietary patterns of urban adults in Benin: relationship with overall diet quality and socio-demographic characteristics. *European journal of clinical nutrition*, 63(2), 222-228.

Solidaridad Network. (2018). *Supporting Female Farmers In West Africa Become Agri-Entrepreneurs*. Retrieved from: <https://www.solidaridadnetwork.org/news/supporting-female-farmers-in-west-africa-become-agri-entrepreneurs>

SOS Faim. (2017). *Agroécologie, un modèle qui tient la route ? Des principes à la pratique avec Apil au Burkina Faso*. Retrieved from: <https://www.sosfaim.be/wp-content/uploads/2017/02/SOS-17-DP43-FR-num.pdf>

Sultan, B., & Gaetani, M. (2016). Agriculture in West Africa in the Twenty-First Century: Climate Change and Impacts Scenarios, and Potential for Adaptation. *Frontiers in Plant Science*, 7. DOI: 10.3389/fpls.2016.01262

Szabo, S. (2016). Urbanisation and Food Insecurity Risks: Assessing the Role of Human Development. *Oxford Development Studies*, 44(1), 28–48. DOI: 10.1080/13600818.2015.1067292

Task Force Rural Africa [TFRA]. (2019). *An Africa-Europe Agenda for rural transformation*. A Report by the Task Force Rural Africa, EU Commission. Retrieved from: https://ec.europa.eu/info/sites/info/files/food-farming-fisheries/farming/documents/report-tfra_mar2019_en.pdf

The Growth Lab at Harvard University. (n.d.). *The Atlas of Economic Complexity*. Retrieved from: <http://www.atlas.cid.harvard.edu>.

Tondel, F. (2017). EAC food security: Private sector ambitions facing political headwinds. *ECDPM background paper*. Retrieved from: <https://ecdpm.org/wp-content/uploads/EAC-Food-Security-Background-Paper-PEDRO-Political-Economy-Dynamics-Regional-Organisations-Africa-ECDPM-2017.pdf>

Umutoni, C., & Ayantunde, A. A. (2018). Perceived effects of transhumant practices on natural resource management in southern Mali. *Pastoralism*, 8(1), 8.

UN. (2017). *United Nation Decade of Family Farming*. Resolution adopted by the General Assembly on 20 December 2017. A/RES/72/239. Seventy-second session, Agenda item 25. Retrieved from: <https://undocs.org/en/A/RES/72/239>.

UN. (2018). *Urbanisation and Migration in Africa*. Expert Group Meeting, United Nations Headquarters in New York. Retrieved from: https://www.un.org/en/development/desa/population/events/pdf/expert/28/EGM_Joseph_Teye_ppt.pdf

UN (2020). The Impact of COVID-19 on Food Security and Nutrition. June. Retrieved from: https://namibia.un.org/sites/default/files/2020-06/sg_policy_brief_on_covid_impact_on_food_security.pdf

UN Conference on Trade and Development [UNCTAD]. (2008). *Economic Development in Africa 2008: Export Performance Following Trade Liberalization: Some Patterns and Policy Perspectives*. Geneva and New York: United Nations. Retrieved from: https://unctad.org/en/Docs/aldcafrica2008_en.pdf

UNCTAD. (2016). *Développement économique en Afrique: Dynamique de la dette et financement du développement en Afrique*. United Nations publication. New York and Geneva. Retrieved from: https://unctad.org/meetings/fr/SessionalDocuments/tdbex63d3_fr.pdf

UNCTAD (2019). Foreign direct investment to Africa defies global slump, rises 11%. Retrieved from: <https://unctad.org/en/pages/newsdetails.aspx?OriginalVersionID=2109>

UN Development Programme [UNDP]. (2020). *Western Africa*. Retrieved from:

<https://www.adaptation-undp.org/explore/western-africa>

UN Economic Commission for Africa [UNECA]. (2004). *Principles, Methodology and Strategy for Promoting the African Green Revolution: A Design and Training Manual*. Retrieved from:

https://repository.uneca.org/bitstream/handle/10855/3985/bib.%2030196_I.pdf?sequence=1&isAllowed=y

UN Population Fund [UNFPA]. (2018). *Adolescents and Youth Report: West and Central Africa*.

Retrieved from: <https://reliefweb.int/report/world/adolescents-and-youth-report-west-and-central-africa>

URGENCI, (2018). *Retisser le lien cassé entre producteurs et consommateurs: cartographie des partenariats locaux et solidaires en Afrique de l'Ouest*. Retrieved from: https://urgenci.net/french/wp-content/uploads/2018/04/UR_CARTO_AFRIQUE.compressed.pdf

United States Agency for International Development [USAID]. (2015). *Fact Sheet: West African Seed Program (WASP)*. Retrieved from: <https://2012-2017.usaid.gov/sites/default/files/documents/1860/WASP%20Fact%20Sheet%20November%202015.pdf>

USAID. (2018). *Climate risk profile: West Africa*. Retrieved from: https://www.climatelinks.org/sites/default/files/asset/document/West_Africa_CRP_Final.pdf

USAID. (2019, avril). *Global Climate Change*. Factsheet. Retrieved from: https://www.climatelinks.org/sites/default/files/asset/document/2019_USAID_West%20Africa%20Regional%20GHG%20Emissions%20Factsheet.pdf

Van der Meer, C. (2006). Exclusion of small-scale farmers from coordinated supply chains, in: Ruben, R., Slingerland, M., Nijhoff, H. (Eds.), *The Agro-Food Chains and Networks for Development*. Springer, Dordrecht.

Van der Ploeg, J. D., Barjolle, D., Bruil, J., Brunori, G., Madureira, L. M. C., Dessein, J., ... & Gorlach, K. (2019). The economic potential of agroecology: Empirical evidence from Europe. *Journal of Rural Studies*, 71, 46-61.

Vanheukelom, J. (2016). *The Political economy of regional integration in Africa: The African Union*. Synthesis Report, ECDPM. Retrieved from: <https://ecdpm.org/wp-content/uploads/ECDPM-2016-Political-Economy-Regional-Integration-Africa-Synthesis-Report.pdf>

Van Lexmond, M.B., Bonmatin, J.-M., Goulson, D., Noome, D.A., 2015. Worldwide integrated assessment on systemic pesticides: Global collapse of the entomofauna: exploring the role of systemic insecticides. *Environmental Science and Pollution Research* 22, 1–4. doi:10.1007/s11356-014-3220-1

van Wessenbeeck, C. (2018). Disentangling urban and rural food security in West Africa. *West African Papers* 15, OECD Publishing. DOI: [10.1787/e0c75266-en](https://doi.org/10.1787/e0c75266-en)

Vellturo, M. (2020). The Erosion of Pastoralism in the Sudano-Sahel. International Order & Conflict Issue Brief. <https://www.stimson.org/2020/the-erosion-of-pastoralism-in-the-sudano-sahel/>

Walther, O. J., Tenikue, M., & Trémolières, M. (2019). Economic performance, gender and social networks in West African food systems. *World Development*, 124, 104650.

West Africa Health Organization [WAHO]. (2017). *15th ECOWAS forum on Nutrition: nutrition surveillance for the improvement of planning and evidence-based decision-making in nutrition security in West Africa*. Retrieved from: <https://w3.wahooas.org/web-ooas/en/actualites/15th-ecowas-forum-nutrition-nutrition-surveillance-improvement-planning-and-evidence>

Wezel, A., Goris, M., Bruil, J., Félix, G., Peeters, A., Bàrberi, P., Bellon, S., & Migliorini, P. (2018). Challenges and Action Points to Amplify Agroecology in Europe. *Sustainability*, 10(5), 1598. DOI: [10.3390/su10051598](https://doi.org/10.3390/su10051598)

Wiley, L. A. (2011). Customary Land Tenure in the Modern World. Rights to Resources in Crisis: Reviewing the Fate of Customary Tenure in Africa Brief 1. Rights and Resources Initiative. Retrieved from: <https://rightsandresources.org/wp-content/exported-pdf/rightstoresourcesincrisiscompiledenglish.pdf>

Wise, T. A. (2019). *Eating Tomorrow*. Amsterdam, Pays-Bas: Amsterdam University Press. 336 p. ISBN 978-1-62097-422-3

World Bank (2013). *World Bank Finances Senegal's Agribusiness Plans to Boost its Food Production and Jobs; Will Also Help the Wider Sahel Region*. Press Release. Retrieved from: <https://www.worldbank.org/en/news/press-release/2013/12/19/world-bank-senegal-agribusiness-sahel>

World Bank. (2018). *The challenges of urbanization in West Africa: Guinea*. Retrieved from: <http://documents.worldbank.org/curated/en/389881528873419842/pdf/127145-WP-PUBLIC-TheChallengesOfUrbanizationInWestAfrica.pdf>

World Bank. (2019a). *Africa's Pulse, No. 19: Analysis of Issues Shaping Africa's Economic Future*. Washington, DC. Doi: 10.1596/978-1-4648-1421-1. Retrieved from: <https://openknowledge.worldbank.org/handle/10986/31499>

World Bank. (2019b). *Climate-smart agriculture*. Retrieved from: <https://www.worldbank.org/en/topic/climate-smart-agriculture>

Yin, R.K. (2012). *Applications of Case Study Research*. 3rd ed. Sage Publications: Thousand Oaks (CA).

Zhuo, Y. & Staatz, J. (2016). Project demand and supply for various foods in West Africa: Implications for investments and food policy, *Food Policy*, 61, 198-212. DOI: [10.1016/j.foodpol.2016.04.002](https://doi.org/10.1016/j.foodpol.2016.04.002)

ABOUT IPES-FOOD

The International Panel of Experts on Sustainable Food Systems (IPES-Food) seeks to inform debates on food systems reform through policy-oriented research and direct engagement with policy processes around the world. The expert panel brings together environmental scientists, development economists, nutritionists, agronomists, and sociologists, as well as experienced practitioners from civil society and social movements. The panel is co-chaired by Olivier De Schutter, former UN Special Rapporteur on the Right to Food, and Olivia Yambi, nutritionist and former UNICEF representative to Kenya.

PANEL MEMBERS

Bina Agarwal	Mamadou Goïta	Maryam Rahmanian
Molly Anderson	Hans Herren	Cécilia Rocha
Million Belay	Phil Howard	Johan Rockström
Nicolas Bricas	Melissa Leach	Ricardo Salvador
Joji Carino	Lim Li Ching	Laura Trujillo-Ortega
Olivier De Schutter	Desmond McNeill	Paul Uys
Jennifer Franco	Pat Mooney	Nettie Wiebe
Emile Frison	Raj Patel	Olivia Yambi
Steven Gliessman	P.V. Satheesh	Yan Hairong

VISIT OUR WEBSITE: www.ipes-food.org

CONTACT US: contact@ipes-food.org