IN COLLABORATION WITH

AFSA

ALLIANCE FOR FOOD SOVEREIGNITY IN AFRICA

CONSUMPTION OF RESILIENT ORPHAN CROPS & PRODUCTS FOR HEALTHIER DIETS

MAPPING OF POLICIES, FRAMEWORKS, MECHANISMS, AND INITIATIVES RELATED TO SEED SYSTEMS IN CHAD AND CENTRAL AFRICA

FULL REPORT
TABLE OF CONTENTS

1 BACKGROUND AND RATIONALE 6
2 METHODOLOGY 8
3 RESULTS 9
3.1 SEED SYSTEMS IN CHAD AND CENTRAL AFRICA 9
  3.1.1 Traditional or informal farmer seed system 9
  3.1.2 Formal or official seed system 9
3.2 National mapping of seed policies and regulatory frameworks 10
  3.2.1 National Seed Policy (NSP) 10
  3.2.2 Legal framework for the implementation of the national seed policy 11
3.3 National Mapping of Seed Law and Regulations 12
  3.3.1 Seeds of Plant Origin Act 12
  3.3.2 Chad’s current seed regulatory framework 13
3.4 National mapping of seed actors 14
  3.4.1 Public sector and stakeholders 14
  3.4.2 Private Sector 14
3.5 Mapping of seed regulations at Community level 16
  3.5.1 Central African Seed Regulations 16
  3.5.2 Seed regulations at the West African level 17
3.6 Types of seed legislation promoted by the breeder-centred industry 18
  3.6.1 Protection of the industrial property of seeds 18
  3.6.2 Plant Breeders’ Rights (PBR) 18
  3.6.3 International Union for the Protection of New Varieties of Plants (UPOV) 19
  3.6.4 Obligation to preserve biodiversity 19
  3.6.5 Legal and institutional framework for biosafety 20
  3.6.6 Patent on plants 21
  3.6.7 Biosafety of seeds of GMO varieties 21
3.7 Instruments committing States at the international level to promote the right of peasants 22
  3.7.1 International Bill of Human Rights (IACHR) 21
  3.7.2 African Charter on Human and Peoples’ Rights (ACHPR) 21
  3.7.3 International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA) 21
  3.7.4 United Nations Declaration on the Rights of Peasants and Other Rural Workers (or UNDROP) 23
3.8 Action and advocacy strategies to strengthen PSS policies in Chad and Central Africa 23
3.9 Recommendations to inform the implementation of the advocacy strategy 24
CONCLUSION 26
BIBLIOGRAPHIC REFERENCES 27
ANNEX 30
<table>
<thead>
<tr>
<th><strong>ACRONYMS AND GLOSSARY</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>AFSA</strong></td>
</tr>
<tr>
<td><strong>ARIPO</strong></td>
</tr>
<tr>
<td><strong>CAADP</strong></td>
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<td><strong>CADHP</strong></td>
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<td><strong>CEMAC</strong></td>
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<td><strong>CILSS</strong></td>
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<td><strong>CNCERT</strong></td>
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<tr>
<td><strong>DOV</strong></td>
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<tr>
<td><strong>CNEV</strong></td>
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<tr>
<td><strong>CNSP</strong></td>
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<tr>
<td><strong>COAEV</strong></td>
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<tr>
<td><strong>COASEm</strong></td>
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<td><strong>COPAGEN</strong></td>
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<td><strong>CRRA</strong></td>
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<td><strong>DHS</strong></td>
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<td><strong>DOV</strong></td>
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<td><strong>DSP</strong></td>
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<td><strong>ECOWAS</strong></td>
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<td><strong>FAO</strong></td>
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<tr>
<td><strong>FARA</strong></td>
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<td><strong>FIBL</strong></td>
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<td><strong>GMO</strong></td>
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<tr>
<td><strong>ICRISAT</strong></td>
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<tr>
<td><strong>ITPGRFA</strong></td>
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<td><strong>ITRAD</strong></td>
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<td><strong>NARS</strong></td>
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<td><strong>NGO</strong></td>
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<td><strong>OSR</strong></td>
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<td><strong>PASB</strong></td>
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<tr>
<td><strong>PNIASAN</strong></td>
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<tr>
<td><strong>PNS</strong></td>
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<tr>
<td><strong>PRIASAN</strong></td>
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<td><strong>PROPAC</strong></td>
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<td><strong>PSO</strong></td>
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<td><strong>SDC</strong></td>
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<tr>
<td><strong>UEMOA</strong></td>
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<tr>
<td><strong>UNDROP</strong></td>
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<tr>
<td><strong>VATE</strong></td>
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<td><strong>VOCS</strong></td>
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EXECUTIVE SUMMARY

This mission aimed at generating the necessary knowledge to explore mechanisms that could allow a better consideration of smallholder concerns in seed systems. The methodology used included characterisation of the legislative and regulatory environment of the seed sector, rapid diagnosis of the existing seed systems, identification of gaps in existing policies and specific bottlenecks with regard to farmer seed systems and seed rights, identification of areas of action and formulation of recommendations for a better consideration of smallholder concerns. In-depth study of the nature of the seed system in Chad, by analysing its structure and functioning and the community regulations to which it has adhered. Two main seed systems coexist, with more or less specific actors, products and operating modes. These are the traditional or «informal» system which still supplies 95% of the producers and the «formal» system. The majority of public policies and investments for the production, marketing, distribution and use of seeds are mainly aimed at the formal system. The study confirms that the regulations were designed to frame the institutional and industrial seed system and facilitate seed trade in a liberalized economic space. The place given to the peasant seed system is reduced, sometimes non-existent and underestimated by politicians and legislators, to the point where this peasant seed system, which is the majority and historically the oldest, is sometimes referred to as «informal». However, the contribution of both seed systems to food and nutritional sovereignty should not be overlooked. At the end of this study, it is clear that there is a lack of representation of family farmers in the elaboration and implementation of laws that influence seed systems. These include not only the seed law, but also laws specifically related to intellectual property (OAPI), biosafety of GMO seeds and the International Plant Treaty (ITPGRFA) that support farmers’ rights to conserve and use the genetic resources of traditional peasant varieties. Farmers’ participation still appears to be minimal or non-existent. It is therefore necessary that the participation of the first concerned, the small family farmers, be fully ensured in order to make the regulations favourable to their situation, whether they are in one or the other of the two seed systems. It is imperative that these measures are developed through a process that ensures effective participation of farmers. The planned revision/update of the seed law in the context of its alignment with the sub-regional harmonization framework presents an opportunity to fill the existing gaps in relation to farmers’ seed, farmers’ seed systems and farmers’ rights.

At the end of this study, some recommendations can be made, including (i) To submit a draft law on access to plant genetic resources for food and agriculture and the sharing of benefits arising from their use; (ii) To enshrine the right to food and nutrition as well as the right of peasants to seeds and biodiversity; (iii) To adopt legal provisions/measures that effectively recognize and protect peasant seed systems, and guarantee the rights of peasants to save, use, exchange and sell peasant seeds; (iv) Develop, through a process that ensures effective participation of peasants, guidelines for seed policies and legal frameworks that promote the realization of the human right to food and nutrition; (v) Fulfil their commitments made in ratifying the ITPGRFA and support the implementation of its Article 9; (vi) Refrain from any intervention aimed at promoting the introduction of IPR protection regimes on plant genetic resources in other countries, etc.

The results of the study should help guide action and advocacy strategies to strengthen PSS-friendly policies in Chad and Central Africa.
Chad covers an area of 1,284,000 km² and has a population of 16,877,357 (2020) which is growing at an annual rate of 3.6%, 51% of whom are women.

The majority of the Chadian population lives in rural areas (80%) and is characterized by its extreme youth (51% of the population is under 15 years old). The primary sector accounted for 31.9% of GDP in 2015. It employs the vast majority of the population. But agriculture accounts for only 23% of GDP, of which 20% is food crops and 3% is cash crops.

Despite the advent of the oil era, agriculture in Chad remains one of the most important sectors of the economy. The majority of the Chadian population lives in rural areas (80%) and is characterised by its extreme youth (51% of the population is under 15 years old). Its contribution to the formation of the gross domestic product amounted to 40% in 2013. The primary sector accounted for 31.9% of GDP in 2015. It employs the vast majority of the population. But agriculture accounts for only 23% of GDP, of which 20% is food crops and 3% is cash crops.

However, particular attention should be paid to the potential of easily irrigated land already identified in the country, which amounts to about 335,000 ha, distributed around Lake Chad (90,000 ha), in the Chari-Logone valley (80,000 ha), in the ouadis of Kanem and Lake (10,000 ha), and around Lake Fitri (15,000 ha) in the Sahelian zone, and in the Chari (20,000 ha) and Logone (115,000 ha) valleys in the Sudanese zone. These easily irrigated lands can be grouped into recession lands, lands of the floodplain areas, polders and Ouadis.

Despite the joint efforts of the Chadian government and development partners, agricultural yields are low. Several factors explain the low productivity of the Chadian agricultural sector, including the low availability of quality seeds, the lack of agro-ecological practices, which in the Chadian context is one of the primary factors for improving productivity and production and the one most requested by producers, but also an important factor for coping with the effects of climate change.

Quality seed is a term related to standards (germination rate, varietal quality, specificity and moisture content) and commercial seed. This qualifier discredits the quality of farmer seed, which is mostly of very good quality, but cannot be certified and sold like the varieties listed in the catalogue.

Quality seeds have been identified as one of the inputs to intensify agricultural production, but the seed sector in Chad is poorly structured and organized, not very efficient and does not meet the demand by far. The use of improved seeds is synonymous with improved yields and living conditions for those who practice it. This is not often the case, as it must really meet the needs of farmers and the seeds must be sold at affordable prices.

Considering the preponderant role that seed plays in any agricultural production and in food security and the role played lately by the State in organizing this sector by providing it with all the legislative and regulatory texts. But in spite of this policy displayed by the State, much remains to be done for the operationalization of the seed policy.

In Chad, as in most countries of the sub-region, seeds are one of the main determinants of agricultural yields. Increasing the rate of use of quality seeds is necessary to meet the food, nutritional and economic challenges. Two main seed systems coexist in Chad as in the sub-region, with more or less specific actors, products and operating modes. On the one hand, there is the traditional/community system where the producer himself carries out a massal selection for the next season. On the other hand, there is the “formal” system based on varietal creation by research, multiplication and distribution by the private sector (companies, POs) in more or less strict compliance with the regulations set up by the multinationals. The improvement of small producers’ living conditions through a sustainable increase of their farms’ performances requires the establishment of efficient seed systems that take into account their needs. Public policies and research and development interventions tend to privilege these formal systems and ignore the traditional systems still used by the majority of small producers (95%).
Most farmers do not have the resources to access the various improved seeds. There is insufficient information on the availability and importance of improved seeds. The use of traditional systems by smallholder farmers would implicitly reflect the fact that the formal systems as they currently exist and operate do not sufficiently address their concerns despite multiple promotional efforts by the Government and development partners. This gap must be bridged for the development of the seed sector to be inclusive and produce the expected effects, particularly in terms of food security and sustainable economic growth. It is therefore important to set up, promote and experiment innovative mechanisms for an inclusive development of the national seed industry. This inclusive development implies, among other things, a better consideration of the concerns of small producers and their participation in the processes of prioritization of new plant varieties as well as in seed production and distribution activities.

The present mission was part of the deepening of the nature of the seed system in Chad, by analyzing its structure and functioning. As the understanding of the system goes beyond the sole framework of the seed law, we will broaden our investigation to other legal texts that affect farmers’ rights over their seeds and specifically those related to the protection of industrial property, those related to the biosafety of GMO seeds and more positively, the rights that support the conservation and use of genetic resources of traditional farmers’ varieties. We will then provide a critical analysis of the legal framework, highlighting gaps in existing policies and specific bottlenecks regarding peasant seed systems and seed rights. Recommendations will complete the study to propose ways to improve seed regulation to make it more favourable to the needs of family farming and small producers. The results of the study should help orient action and advocacy strategies to strengthen policies favourable to PSS in Chad and Central Africa.

The aim of this study is to establish a mapping of existing seed policies and regulatory frameworks, a national mapping of laws and regulations related to seeds and a mapping of actors who intervene politically, legally and technically at national and regional level on seeds by analysing their structure and functioning. In addition, these mappings should identify the existing threats and opportunities for the promotion of biodiversity and farmers’ seed systems. Finally, the study should identify the political, legal and financial forces in the Central African regional economic community that influence seed policy and regulation in Chad.
The consultant’s work consisted in preparation of the mission, characterization of the legislative and regulatory environment of the seed sector, diagnosis and participatory identification of action areas and formulation of recommendations. The preparation phase consisted in the finalization of the methodological approach chosen for an efficient achievement of the mission objectives. The characterization phase of the seed sector consisted in collecting existing literature on the seed sector in Chad and Central Africa. The exploitation of the collected documents allowed us to have an overview of the structuring and functioning of the seed sector. This documentary analysis focused on policies, legislative and regulatory texts, both at national and regional levels. Online interviews were organized with resource persons, representatives of different categories of actors. The aim was to collect their point of view on texts and policies governing the seed sector, to identify gaps in existing policies and specific bottlenecks regarding farmers’ seed systems and the right to seeds, to analyse the roles and functions of the different seed systems existing in Chad and in Central Africa.

These interviews with stakeholders were semi-open and focused on the following topics: (i) their positions and analyses in relation to policies, legislative and regulatory environment, (ii) their point of view on the functioning of the seed sector and the level of consideration of the traditional seed system; (iii) their perceptions and difficulties encountered in the consideration of varietal diversity and seed systems and (iv) their suggestions on actions to be taken at the level of policies, structuring and functioning of seed systems to improve their performance with particular attention to the consideration of smallholder farmers’ concerns. The list of people contacted is presented in Annex 2 of this document.

In addition, a consultation workshop (or validation of the study) with identified stakeholders on strategies for a better consideration of small producers’ concerns in the seed sector in Chad was organized. This workshop aimed precisely at: (i) provide recommendations to inform the implementation of the AFSA advocacy strategy and the consortium, including policy spaces, entry points, and advocacy opportunities, (ii) identify key policy actors, policy fora, meetings and platforms for potential advocacy intervention for policies that support PSS.
In Chad, as in other countries of the Central African sub-region, two seed production dynamics coexist.

### 3.1.1 TRADITIONAL OR INFORMAL FARMER SEED SYSTEM

The traditional or informal peasant seed system has been provided for thousands of years by generations of Chadian farmers. The farmers’ initiatives are numerous and constitute an interesting approach and translate the farmers’ desire to find local solutions to seed problems. Producers select and produce their own seeds in their fields, this is the massal selection according to the types of crops and soils. The activities related to the so-called traditional seeds tend to be integrated and organized at the local level. They include most of the other means by which farmers select, produce, and exchange seeds among friends, neighbours, relatives, and at local markets or grain traders. This farmer seed system is horizontally structured by producers who select massively, multiply and exchange varieties according to rules of use that they themselves define. Unlike the conventional seed sector, which separates seed production from food production, traditional farmer seed systems integrate both functions, allowing them to regularly adapt their varieties to their new needs. The great diversity of seeds of the so-called traditional varieties thus maintained is considered by the State as national heritage (Article 14 of Law n°016/PR/2015 of 15 November 2016). It is the genetic resources from this heritage that are used to feed the selection programs of certified seeds.

### 3.1.2 FORMAL OR OFFICIAL SEED SYSTEM

This is a regulated system to preserve the identity and purity of the varieties and to guarantee their physical, physiological and sanitary quality. The marketing of these seeds is done in officially recognized seed sales outlets and through national agricultural research systems. This so-called official system is regulated by texts (legal and regulatory) putting into force standards and rules to be respected in all activities related to seeds and in the sub-region. Also, a set of legal standards governs the actors and their activities such as selection, multiplication, distribution and quality control. The regulations and technical standards define the varietal purity, homogeneity, germination and sanitary qualities of these so-called improved seeds. In this so-called formal and certified system, these seeds are developed by research in laboratories using different technologies. Genetically modified varieties: these are varieties resulting from laboratory manipulation work. Chad has not yet officially opted for or against genetically modified organisms (GMOs). It includes all the actors of a vertical chain in charge of different activities related to seed production which are found within three essential functions namely: i) selection of new varieties involving research institutions, ii) large scale multiplication of officially released varieties, and iii) commercial distribution of certified quality seeds. A fourth function that cuts across the other three is carried out by the actors in charge of control to regulate the sector and ensure seed quality.

The current regulations were designed to regulate the conventional and industrial seed system and to facilitate the seed trade in a liberalized economic space. The place given to the peasant seed system is reduced, sometimes non-existent and underestimated by politicians and legislators alike, to the point where this peasant seed system, which is the majority and historically older, is sometimes referred to as «informal». However, the contribution of the two seed systems to the food sovereignty of the country, which is firmly established by the Constitution, should be taken into consideration in the study, even if through the texts of seed policy,
legislation and regulations, we have more elements on a conventional and industrial seed system that we try to develop, than the traditional peasant seed system. Seed services have shown their limitations (low quantities of seed produced, high costs of improved seed). Several reasons have been put forward to explain these under-performances.

These include:

- The centralized organization of the conventional system which does not adapt to the realities of small producers.
- The inadequacy of seed legislation to meet the needs of smallholder farmers.
- The complexity of the variety evaluation and release system.
- The high cost of improved seed compared to farmers’ seed.
- Faced with this situation, several alternative strategies have been developed to find an appropriate solution to the lack of quality seeds.

**3.2 NATIONAL MAPPING OF SEED POLICIES AND REGULATORY FRAMEWORKS**

**3.2.1 NATIONAL SEED POLICY (NSP)**

To concretize these commitments and boost the seed sector in Chad, the Government decided to equip itself, through a participatory process, with a NSP, on the one hand, and, on the other hand, to create an institutional environment in harmony with regional provisions in the ECOWAS/CILSS and CEMAC spaces in terms of seed regulation. These regulations n° 01/14-CCEAC-224/CM-27 of 20/10/2014 and n° 02/14-CCEAC-224/CM-27 of 20/10/2014 of CEMAC concern both the harmonization of rules governing quality control, certification and marketing of plant seeds and the creation and organization of the catalogue of plant species and varieties. The national seed policy document (PNS) was validated at the Council of Ministers on October 15, 2015. As part of the fight against food insecurity, the NSP aimed at producing adequate quantities and accessibility to farmers of quality seeds adapted to the country’s agroecological conditions. More specifically, to regularly provide producers with improved seeds of sufficient quality and quantity, at the right time and at an affordable price, to broaden the range of plant species and varieties to contribute to the diversification of agricultural sectors and to promote the partnership between the public and private sectors.

Chadian agriculture is characterized by one of the lowest rates of use of modern inputs. The State’s strategy of strengthening the agricultural sector only through the subsidy of chemical fertilizers without taking into account agroecology and farmers’ seeds. More specifically, it is a question of regularly supplying producers with improved seeds of sufficient quality and quantity, at the right time and at an affordable price, broadening the range of plant species and varieties to contribute to the diversification of agricultural sectors and promoting the partnership between the public and private sectors.

Also, as part of the National Development Plan (NDP 2017-2021) «The Chad we want», aims to increase the coverage rate of quality seeds from its current level of about 4% of the sown areas in 2014 to 20% by 2030. The 2018 Agro-Sylvo-Pastoral and Halieutic Orientation Law stipulates in its Article 87: the State, in collaboration with the Autonomous Communities and professional agricultural organizations and the private sector, shall put in place a national and regional mechanism necessary to support the production, multiplication and dissemination of improved plant, animal and halieutic seeds and breeding nuclei and the control of genetically modified organisms and transgenic animals. Full sovereignty of countries implies that each country has the responsibility to assess, decide and manage GMOs.

Article 81 also states that: Agro-sylvo-pastoral and fisheries development requires the rational use of production factors by farmers in order to ensure food and nutritional security and poverty reduction in Chad. The guiding principles of the PNS take into account all plant species, cultivated or not, constituting the plant genetic heritage. This policy integrates a set of actors, actions and measures capable of reinforcing the various components of the seed sector in order to enable them to evolve harmoniously in the direction of the emergence of a reliable national seed industry.
For our study we have tried to identify the space left to the seeds of traditional peasant varieties, which still represent more than 95% of the seed sector, taking into account the recognition of the rights of the communities (collective rights of farmers) that maintain these varieties. We would like to highlight the following points, on the one hand to inform the producers and the NGOs that support them, who are for the most part still very ignorant of the Law. Is it possible to use these points to defend the interests of small producers?

In point 4 The national seed policy takes into account all the plant species, cultivated or not, which constitute the phylogenetic heritage of Chad. This policy aims at being horizontal and integrating a set of actors, actions and measures capable of strengthening the different components of the seed sector in order to enable them to evolve harmoniously towards the emergence of a reliable national seed industry.

In 4.5 The community participatory approach called «Community Seed Development Program» (CSDP), one of the strategies to increase the use of quality seeds by producers for their communities and neighbouring communities. This approach could be fully exploited for the promotion of farmer seeds by small-scale producers.

In point 4.10, the State considers that «traditional varieties», or «local ecotypes» constitute a national heritage and must therefore be managed in the interests of the nation and in accordance with the international conventions ratified by Chad. To that end, the State shall ensure the preservation of this plant material selected in situ over decades by the people and consequently guarantee the preservation of the resulting seed heritage.

In section 6.4, the NSP does not appear to address the intellectual property rights aspects of its many merits, the regulation of which is fully delegated to the African Intellectual Property Organization (OAPI) through the Bangui agreements. However, she says that the government will encourage this protection to stimulate not only national researchers but also foreign companies that could make available to Chadian producers improved varieties that are adapted and perform better than local varieties. In this case, they can be registered in the national catalogue of species and varieties.

Specifically, traditional varieties, which represent a reservoir of genes of certain economic importance, belong to the communities and can be used according to their needs without meeting the criteria for granting the right to protection. However, the State, through research, is obliged to inventory and characterize them and then give them the place they deserve in the national plant genetic resources.

Point 8 Moreover, the legislative and regulatory texts, while remaining in conformity with those in the CEMAC and ECOWAS/CILSS areas, will leave, on a transitional basis, the possibility for the great majority of smallholders to have access to another category of seeds than certified ones. The proposed certification system does not automatically apply to all seeds put on the market. It will be implemented progressively by species, if necessary, taking into account the economic interest and the technical and socio-economic constraints of the various players and producers. A qualification system which leaves responsibility for quality control in the field to the seed establishment with the possibility of labels (seeds declared to be of acceptable quality or seeds suitable for germination).

With regard to the revision or updating of the SNP, the dynamic consultation process that led to the formulation of this policy will be used for its evaluation and updating. The revision will be periodic every 5 years, therefore in principle in 2020, and will be based on a need expressed by the various actors who will judge the need for its success. The meetings of the CNSP (see Chapter 4 where the CNSP is described in detail) will be the appropriate framework for discussing and proposing modifications deemed useful for this updating, which may be submitted to the Minister of Agriculture, Chairman of this Committee.

3.2.2 LEGAL FRAMEWORK FOR THE IMPLEMENTATION OF THE NATIONAL SEED POLICY

3.2.2.1 ACTION PLAN FOR THE REVIVAL OF THE SEED SECTOR IN CHAD

The Action Plan for the revival of the seed sector in Chad 2016-2020 was developed in 2015 with the support of FAO. The programme proposed a scheme for the revival of quality seed production and a plan for the development of the sector based on appropriate legislation.
The overall objective of the action plan is to contribute to the food and nutritional security of the Chadian population by improving producers’ access to improved (certified) seeds. Specifically, the aim is to produce and make available to producers a quantity of improved seeds covering at least 20% of their needs over the next five years and to guarantee good quality seeds by strengthening support and control services. Out of a potential need of 92,986 tons of seeds of different species, the action plan would make it possible to produce 5,611 tons in 2016 to reach 35,822 tons in 2020. This progression would allow for an increase in sowing from 1.7% to 20% in 2020, i.e. 1,232,685 tons or a monetary value of 308,171,000,000 FCFA.

3.2.2.2 NATIONAL CATALOGUE OF AGRICULTURAL SPECIES AND VARIETIES VULGARIZED IN CHAD

Article 4 of Law No. 16/PR/2016 creates a national catalogue of species and varieties (CNEV) and a register of traditional varieties. A decree establishing the national catalogue of plant species and varieties in Chad in 2017 was issued by the President of the Republic. From now on, to be registered in the national catalogue, a new variety must be released. The conditions for release are as follows:

- Be recognized as Distinct, Homogeneous and Stable (DUS) through a DUS test protocol in accordance with UPOV guidelines.
- Be recognized as sufficiently efficient in relation to the range of the most widely used varieties and without major defects for users through a protocol for examining the Agronomic, Technological and Environmental Value (VATE).
- Be designated by an approved name. The species and varieties are entered in the catalogue for a period of five years, renewable.
- The DUS and VATE tests are conducted under the supervision of the CNSP for at least two years in a single location for DUS and several locations for VATE.

The sub-committee within the CNSP responsible for evaluating new varieties is not always operational and, in addition, the lack of funding to conduct DUS and VATE tests means that variety release has not really started. Registration in the catalogue is compulsory to be able to market the seed of a variety, hence the interest if a collective of producers wishes to multiply the seed of certain farmers’ varieties. The risk is that the criteria for registration in the catalogue may distort the farmers’ variety (varietal purity leads to genetic homogeneity and then to dependence on inputs).

3.3 NATIONAL MAPPING OF SEED LAW AND REGULATIONS

Two main legislative and regulatory texts organize the activities of seed sectors. These are (i) Law N° 016/PR/2016 of November 15, 2016, on the regulation of seeds of plant origin in Chad and its enforcement texts.

3.3.1 SEEDS OF PLANT ORIGIN ACT

Law N°016/PR/2016 of November 15, 2016, deals with the regulation of seeds of plant origin, harmonizing the rules governing the production, quality control, certification and marketing of seeds and seedlings in Chad. It governs at the national level all activities related to plant seeds. This law aims at creating conditions to promote quality, increase production, develop distribution and marketing strategies and the use of seeds to contribute to the achievement of the national objective of intensification, modernization of agriculture and increase of agricultural production and food security. It applies to all plant seeds of improved or traditional varieties (Art. 2). But it does not apply to GMOs.

Article 12: Any breeder of a new variety who meets the required conditions may enjoy Plant Breeders’ Rights (PBR).

Article 13 Despite the fact that the law provides that «the protection conferred by the plant variety right shall not affect the right of farmers to use the variety for food production purposes or the right to use the variety for research or training purposes (this article is admittedly restrictive, it is the transposition of European industrial law, somewhat attenuated; but it is possible to use it as a basis)», this is of little comfort, since most of the improved varieties in the catalogue are based on traditional varieties that have been purified. The sectoral texts do not provide any more support for protecting traditional farmers’ varieties.

Article 14 of the Law entrusts the State with the task of protecting plant genetic resources and traditional varieties as national heritage, particularly with a view to the conservation of biological diversity and the protection of the interests of local populations. Traditional varieties are the property of the breeder and are subject to protection.

Article 15, a third party may have access to local plant
MAPPING OF POLICIES, FRAMEWORKS, MECHANISMS, AND INITIATIVES RELATED TO SEED SYSTEMS IN CHAD AND CENTRAL AFRICA

genetic resources after requesting and obtaining a formal authorization from the Ministry of Agriculture in accordance with the legislation in force.

Furthermore, Article 16, no person shall export seeds of traditional varieties from the national territory without prior authorization from the Ministry in charge of Agriculture. The management of local plant genetic resources collected or conserved by foreign research organizations is carried out in accordance with the regulations in force. However, other articles may be subject to a more questionable interpretation.

Article 17, the benefits derived from the exploitation of local plant genetic resources shall accrue to the local populations who are the users and custodians of these resources in accordance with the regulations in force. Indeed, the notion of a variety being created is always relative. Some breeders have not hesitated to claim ownership of a traditional variety. As most of the improved varieties in the current catalogue are based on traditional varieties that have been purified, this cannot be sufficient to register an intellectual property right. It seems problematic to make such a distinction at the risk of giving free rein to biopiracy.

Moreover, articles 47-54 on the availability of criminal law in the penal code can lead to the criminalization of small farmers who are exercising their rights to produce, exchange and sell their seeds. Indeed, are punished by a poisoning of one month to one year and a fine of or one of these two penalties except derogation granted by the Minister of Agriculture, those who will have produced seeds without a professional card, usurp the quality of seed producer, put seeds in circulation, engage in the distribution of seeds without approval, make false declarations, any seed producer or distributor who will have omitted to keep the register, introduced or marketed seeds or any other plant genetic material not registered in the official seed catalogue».

3.3.2 CHAD’S CURRENT SEED REGULATORY FRAMEWORK

Pursuant to Article 5 of Law n°016/PR/2016 of November 15, 2016, relating to seeds and seedlings of plant origin, the purpose of this Implementing Regulation is to establish the specific technical regulations relating to the rules governing, production, quality control, certification and marketing of the different categories of seeds for each species or groups of species of the different food and vegetable crops in Chad, the following technical regulations are constituted:

- The general technical regulation, which deals with general aspects applicable to all species.
- The technical regulations specific to the different species, which set out and specify the specific conditions of production, control and certification of the different food and vegetable crops.

3.3.2.1 GENERAL TECHNICAL REGULATION, WHICH DEALS WITH GENERAL ASPECTS APPLICABLE TO ALL SPECIES

Inter-ministerial Order N°81/PR/PM/MPIEA/MESRI/MDICPSP/2017 on the general technical regulations for the production, control and certification of seeds, serving as specifications. It deals with the general aspects applicable to all species, production, quality control, certification and marketing of the different categories of seeds for each species or groups of species of the different food and vegetable crops in Chad and all the rights and obligations of the different categories of actors of the seed sector. It applies to species or groups of species currently contained in the National Catalogue of Plant Species and Varieties. As a result, other species and categories are excluded such as farmers’ seeds and orphan plants.

When the conditions for admission to inspection are met, a professional card is issued by the Official Quality Control and Certification Department to natural or legal persons. The issuance of this card is subject to the payment of a single registration fee relating to the type of activity, the amount, the payment methods and the conditions of allocation of the fees collected for the single registration fee are specified by the State concerned.

A certification fee shall be charged for all services relating to certification, both in the field and in the laboratory. The fees for inspection and certification are collected by the official service or any other body responsible for inspection and certification when the labels or analysis reports are handed over. The regulations do not clearly differentiate the status of the professionals in the sector, in that there are no texts identifying the producers and/or distributors of certified seed in the legislation, for the purposes of issuing an approval
for each group. The same applies to the marketing of seed by producer-distributors and distributors, which is subject to approval, the conditions for which are specified in the CEMAC Regulation (Article 67).

Two decrees were signed in 2019: on the one hand, the decree fixing the rates and modalities of payment and collection of taxes and fees in the framework of control, certification and marketing of plant seeds and seedlings and on the other hand, the decree on the rules governing the obtaining of approval for the marketing of seeds of plant species and seedlings were recently signed by the Ministry of Finance.

3.3.2.2 TECHNICAL REGULATIONS SPECIFIC TO THE DIFFERENT SPECIES

Order N°070/PR/PM/MPLEA/SE/SG/2017 on specific technical regulations for different species of food and vegetable crops. Pursuant to Article 28 of Law n°016/PR/2016 of November 15, 2016, relating to seeds and seedlings of plant origin, this Implementing Regulation has established the specific technical regulations relating to the rules governing, production, quality control, certification and marketing of the different categories of seeds for each species or groups of species of the different food and vegetable crops in Chad. Administrative documents and technical regulations relating to the rules of quality control and certification of seeds of plant species and seedlings in Chad. It applies to species or groups of species currently contained in the National Catalogue and does not apply to grains and farm seeds which are free to use, nor to GMOs, traditional varieties and orphan plants.

3.4 NATIONAL MAPPING OF SEED ACTORS

The map of the seed actors involved politically, legally and technically are:

3.4.1 PUBLIC SECTOR AND STAKEHOLDERS

3.4.1.1 PUBLIC SECTOR

National Seed and Plant Committee (CNSP)

The National Seed and Plant Committee (CNSP) is an advisory body whose mission is to guide the government on seed activities at the national level. It is the technical arm of the Ministry of Agriculture. The CNSP was established in 2017 by an Order of the Prime Minister. The creation of the CNSP is provided for in Article 32 of Law 016/PR/2016. The CNSP has 2 sub-committees: the Sub-Committee on Admission to the Catalogue of Varieties (SCACV) and the Sub-Committee on Seed Standards, in short (SCNS). The 2 Sub-Committees are not operational like the National Seed Committee (NSC). The National Seed Committee is composed of representatives of public and private structures, professional organizations, seed producers’ organizations, different categories of stakeholders and specialists in seed issues. Out of the 27 members, 8 non-state representatives participated: members of farmers’ organizations (FENOPS-T). On the other hand, the absence of farmers’ organizations, especially from the main commodity chains concerned (maize, rice, vegetable species) raises a major problem of representativeness of the main stakeholders.

The issue of the low representation of small producers representing the majority traditional seed system remains unresolved. The representation of small producers representing the traditional seed system in the National Seed and Plant Committee (CNSP) remains a central governance issue to be resolved.

Support Fund for the Seed Sector (FASS)

Its creation was provided for in the National Seed Policy, placed under the supervision of the Ministry of Agriculture. It is planned to be administered by a joint Board of Directors and by the CNSP. The FASS is intended to ensure the financing of seed activities and certain infrastructures governed by legislative and regulatory texts. This fund for the implementation of the seed policy is intended to (i) finance the development of seed activity in order to ensure sufficient production of good quality seeds, (ii) facilitate the access of actors to credit and financing of various activities in the seed sector (training, extension, research). It appears that the fund provided for in the PNS was omitted in the law. The creation of the fund which was not taken into account and requested by the technical and financial partners remains a basic problem that must be solved quickly.

Seeds and Plants Directorate (SPD)

The Directorate of Seeds and Plants (DSP) was created in place of the National Agency of Seeds and Plants (ANSP), without financial autonomy and with the
same prerogatives. It is placed under the supervision of the Ministry of Agriculture under the General Technical Directorate of Agricultural Production and Training. It is the body in charge of quality control, inspection and certification of seeds of improved varieties. The creation of the DSP is provided for by Article 33 of Law n°016/PR/2016, of November 15, 2016, relating to seeds and plants of plant origin. When the conditions for admission to the control are met, a professional card is issued by the Official Service of Quality Control and Certification, to natural or legal persons.

A certification fee shall be charged for all services relating to certification, both in the field and in the laboratory. The fees for inspection and certification are collected by the official service or other body responsible for inspection and certification when the labels or analysis reports are issued. The regulations do not clearly differentiate the status of the professionals in the sector, in that there are no texts identifying the producers and/or distributors of certified seed from the legislation for the issue of an approval for each group. The same applies to the marketing of seed by producer-distributors and distributors, which is subject to approval, the conditions for which are specified in the CEMAC Regulation (Article 67).

Two decrees were signed in 2019: on the one hand, the decree fixing the rates and modalities of payment and collection of taxes and fees in the framework of control, certification and marketing of plant seeds and seedlings and on the other hand, the decree on the rules governing the obtaining of approval for the marketing of plant seeds and seedlings were recently signed by the Ministry of Finance.

3.4.1.2 STAKEHOLDERS

Agricultural research institutions

Activities related to breeding and varietal improvement will be the responsibility of national agricultural research and higher education organizations.

The Chadian Institute of Agricultural Research for Development (ITRAD) is a public institution of a scientific nature, with civil status and management autonomy. It works in close collaboration with regional organizations (International Crops Research Institute for Semi-Arid and Tropics (ICRISAT), Africa Rice Centre (AfricaRice), International Institute of Tropical Agriculture (IITA), NARS). At this level, the State is called upon to strengthen the capacity of some private companies in the selection and production of pre-basic and basic seeds that will request it. The seed unit is equipped with analysis, treatment, packaging and conservation of plant material (cold room).

Advisory support structures

The structures in charge of advisory support are the deconcentrated services of the State (ANADER, DPVC...) and the NGOs. The support-advisory will be devoted to the dissemination of production techniques and the use of seeds of improved varieties, capacity building and the emergence of Seed Producers’ Organizations. These structures are expected to play an important role in the implementation of the national seed policy, promotion and use of seeds of improved varieties on the whole territory. Capacity building, sensitization of producers by organizing and structuring them will lead to the creation of seed production cooperatives.

3.4.2 PRIVATE SECTOR

Consisting of individuals, groups of individuals, seed companies, professional organizations, traders and producers involved in seed production, distribution, dissemination and adoption.

National Federation of Seed Producers’ Organizations of Chad (FENOPS-T)

The National Federation of Chadian Seed Producers’ Organizations (FENOPS-T) was born from the will of the actors of the certified seeds production link to make the seed sector one of the main levers of growth of the country’s agricultural productivity and production.

FENOPS- Chad has 7 regional and interregional federations covering 15 of the 23 regions. They obtain basic seeds from ITRAD to multiply them into certified seeds. These producers promote improved seeds registered in the national catalogue of species and varieties.

The use of improved seed is synonymous with improved yields and income, but in reality, this is often not the case. In addition, the seed must really meet farmers’ needs and be sold at affordable prices. Moreover, the term «improved seed» is ambiguous as it can refer to the genetic potential of the variety as well as to the qualities of the seed itself, and these are two quite distinct aspects of seed technology. It is therefore necessary to identify the improvements that farmers need most, both at the level of each of the species they grow and at the more global level of their production system.
3.5 MAPPING OF SEED REGULATIONS AT COMMUNITY LEVEL

Chad, like other countries in Central and West Africa, has opted for the harmonization of seed regulations.

3.5.1 CENTRAL AFRICAN SEED REGULATIONS

3.5.1.1 REGULATION N°01/14-UEAC-224-CM-27 OF 20 OCTOBER 2014

The Regulation n°01/14-UEAC-224-CM-27 of 20 October 2014 on the harmonization of rules governing the production, quality control, certification and marketing of seeds and seedlings in the CEMAC zone. This regulation is made possible thanks to the CAADP-NEPAD process through the Regional Programme for Agricultural Investment, Food Security (PRIASAN) and the National Programme for Agricultural Investment, Food Security and Nutrition (PNIASAN). In coherence with the African Union’s African Seed and Biotechnology Programme (ASBP). The objective is to create conditions for the emergence of a strong seed industry capable of ensuring a regular supply, at the right time, of quality seeds, in sufficient quantity and at affordable prices in the 6 CEMAC member countries.

The legal system put in place at the regional level, operationalized through Directives and Regulations, operates in the form of treaties with supranational legal value. The regulations on seeds became applicable to all CEMAC countries including Chad and enforceable against all citizens as soon as they were published in the Official Journal, without any parliamentary procedure. Its main objective is to harmonize the rules governing quality control, certification and marketing of plant seeds and agricultural seedlings in the CEMAC zone. This harmonization aims at guaranteeing the good quality and determining the origin of seeds of varieties of plant species listed in the Catalogue of Plant Species and Varieties. Specifically, the harmonization should facilitate the local production of quality seeds, encourage private investment in the seed industry and promote the partnership between the public and private sectors.

The Community regulation is being implemented gradually. At the beginning of 2017, the harmonization of national texts with this regulation was effective in the 6 CEMAC countries. Moreover, it is important to note that the effectiveness of the harmonization of texts does not necessarily mean the effective application of the harmonized regulation. In fact, some provisions of the community regulation although transcribed in the national legislative frameworks need time to be operationalized, this is for example the case of the seed sector support funds whose creation is recommended in article 10 of the harmonized regulation.

All these regulations are structured around three priorities: (i) the primacy of direct application of the regulations throughout the territory of the six (6) CEMAC Member States; (ii) complementary measures to be taken by Member States and complementary measures under the CEMAC Commission; (iii) implementation procedures in Member States.

3.5.1.2 REGIONAL CATALOGUE OF PLANT SPECIES AND VARIETIES IN THE CEMAC ZONE (CEVAC)

CEVAC is created by Article 78 of Regulation n°01/14-UEAC-224-CM-27 of October 20, 2014, harmonizing the rules governing the production, quality control, certification and marketing of seeds and seedlings in the CEMAC zone. The decision adopting the catalogue of plant species and varieties in the CEMAC zone is adopted by Decision n°10/14-UEAC-224-CM-27 of 20 October 2014. The purpose of Regulation n°02/14-UEAC-CM-27 is to create and organize the catalogue of plant species and varieties in the CEMAC zone. It is the official document common to the Member States which contains the list of all the plant species and varieties of the various national catalogues. This document presents the restrictive list of varieties or varietal types whose seeds can be produced and marketed on the territory constituted by the 6 countries of the CEMAC. This means a contrario that all the varieties that are not registered can no longer be produced and marketed as conventional seeds but can be reproduced by the farmer as farm seeds. In principle, farm-saved seed is produced by the farmer for his own use, but there is no provision to prevent exchange and donation. It is for marketing that advocacy is needed, as Article 66 of the said Regulation states that only seeds of varieties registered in the catalogue are marketed at the regional level. The advocacy will focus on the formalization of the
cohabitation of the two systems. Variety release tests for registration in the catalogue are the key elements of the seed regulation system. Varietal purity criteria have been considerably relaxed to allow each State to register in this first catalogue many varieties already registered in national catalogues without going through the DUS and VATE tests, as the system has not yet been set up.

The registration of a genetically modified variety according to Article 33 of Regulation No. 01/14-UEAC-224-CM-27 of 20 October 2014 in this case the application is filed and examined like any other variety provided that its creation and use is authorized under the texts in force in the member states of the community. More common, however, is the rule that only commercialized seed must be registered and certified. This is the case in the seed laws of Chad and Central Africa. In most of these laws, the term «commercialized» is not defined. This means that even the informal exchange of traditional seeds between farmers is not prohibited.

### 3.5.1.3 REGIONAL SEED COUNCIL (CRS)

Regulation n°01/14-UEAC-224-CM-27 of 20 October 2014, on the harmonization of rules governing the production, quality control, certification and marketing of seeds and seedlings in the CEMAC zone provides in its Article 79 for the Regional Seed Council (CRS). The Regulation n°03/14-UEAC-224-CM-27 of October 20, 2014, provides for the creation, composition and functioning of the Regional Seed Council (CRS). The Regional Seed Council (RSC) is the main management body for the implementation of the harmonized regulation. It ensures the operationalization of the regulations in force in terms of quality control, certification and marketing of seeds, in order to contribute to the development of the seed sector in the Member States. This committee works in close collaboration with the national committees of member countries. It comprises 6 representatives of the National Seed Councils, 1 representative of the CEMAC Commission, the other representatives of regional producers’ organizations, representatives of the private sector and international organizations attend as observers. Civil society is not represented, as is the case with the Regional Platform of Central African Farmers’ Organizations (PROPAC). Each member state provides, at the request of the SRC, the necessary information to verify the conformity of the information received.

The seed sector in Central Africa is faced with many constraints, including lack of seed policies and regulations, weak institutional, technical and human capacities, lack of financing mechanisms and lack of an effective and accessible information system.

### 3.5.2 SEED REGULATIONS AT THE WEST AFRICAN LEVEL

At the end of a long process conducted between 1999 and 2007, ECOWAS, UEMOA and CILSS, set up a legal system on seeds at the regional level, and coordinated its implementation at the level of Member States. The consensus reached in 2014 between the three bodies (ECOWAS, CILSS and UEMOA) set up a single Regional Seed Committee in charge of accompanying them in the implementation of the harmonized regional seed regulation.

In 2008 the process produced two major legal instruments:

1. **ECOWAS Regulation N°C/REG.4/05/2008** on the harmonization of rules governing quality control, certification and marketing of plant seeds and seedlings in the ECOWAS space, extended to the UEMOA and CILSS spaces.

2. The West African Catalogue of Plant Species and Varieties (COAfEV).

#### 3.5.2.1 **ECOWAS REGULATION N°C/REG.4/05/2008**

«This regulation is in line with the fundamental options of the common agricultural policy (ECOWAP) and aims, among other things, to create favourable conditions for the emergence of a strong seed industry capable of ensuring a regular supply, at the right time, of quality seed in sufficient quantity and at affordable prices in the 17 countries of the sub-region. The regulation has the value of a community law and therefore produces the same legal effects as a national law at the internal level. The legal system put in place at the regional level, operationalized through Directives and Regulations, operates in the form of treaties with supranational legal value. Community regulations are
Six implementing texts have been drafted.

The West and Central African Council for Agricultural Research and Development (CORAF/WECARD) is one of the four sub-regional organizations (SROs) that form the Forum for Agricultural Research in Africa (FARA). As the technical arm of ECOWAS, it is in charge of coordinating and facilitating the Regional Seed Committee as well as the establishment of the 17 National Seed Committees. There is a general consensus on a regional system, covering several countries, for registering plant varieties that are distinct, uniform and stable (DUS), with only minimal consideration for local adaptability and performance. Thus, regional harmonization was primarily intended to facilitate trade, with the active collaboration of the international seed industry. On the other hand, farmer-produced seed systems are rarely recognized, as if they were a necessary evil destined to disappear with the completion of the organization of official seed systems. The little attention given to smallholder seed systems in policy debates is mainly on how to regulate them, through «Quality Declared Seed» systems.

### 3.5.2.2 REGIONAL CATALOGUE OR COAFEV

The West Africa Catalogue of Plant Species and Varieties (COAFEV/WACPSV) is the official document common to the Intergovernmental Organization (UEMOA-ECOWAS-CILSS) which gathers 17 Member States, contains the list of all the plant species and varieties of the different national catalogues. This document presents the restrictive list of varieties or varietal types whose seeds can be produced and marketed on the territory constituted by the seventeen ECOWAS countries. This means a contrario that all the varieties which are not registered can no longer be produced and marketed as conventional seeds but can be reproduced by the farmer as farm seeds. In principle, farm-saved seed is produced by the farmer for his own use, but there is no provision to prevent exchange and donation. It is for marketing that advocacy is needed, as Article 70 of the regional regulation’s states that only seeds of varieties registered in the catalogue are marketed at the regional level. The advocacy will focus on the formalization of the cohabitation of the two systems. COAFEV/WACPSV is in its second version, catalogue 1 (2016-2018).

Variety release testing for listing is the centrepiece of the seed regulatory system. Varietal purity criteria have been made considerably more flexible to allow each state to list a significant number of varieties in this first catalogue without going through DUS and VATE testing, as the system is not yet in place.

### 3.6 TYPES OF SEED LEGISLATION PROMOTED BY THE BREEDER-CENTRED INDUSTRY

#### 3.6.1 PROTECTION OF THE INDUSTRIAL PROPERTY OF SEEDS

Industrial property protection of seeds refers to the rights to protect new varieties bred by an intellectual property right. This is an exclusive right that privatizes the seed for 25 years and now limits the rights of farmers to produce, multiply, exchange and sell seeds of protected varieties produced in their fields. Chad has transferred jurisdiction over intellectual property law to the African Intellectual Property Organization (OAPI) based in Yaoundé, Cameroon. The applicable law on the three types of protection of particular interest to seeds is the revised Bangui Agreement, a text adopted in 1999 by OAPI. These are industrial property rights: plant breeders’ rights (PVR), patents, and geographical indications.

#### 3.6.2 PLANT BREEDERS’ RIGHTS (PBR)

The revised Bangui Agreement is directly applicable in 17 African countries that have joined OAPI. Annex X (ten) of this agreement recognizes the breeder (public or private) as the exclusive owner of the seed to which the plant variety certificate (VPC) relates. The breeder then has the right to prohibit any person from commercial exploitation, i.e. use, reproduction, for profit. This has the following implications (according to articles 28 to 36 of Annex X of the revised Bangui Agreement):
• The same DUS criteria must be met, in addition to the novelty of the variety, in order to obtain the PVP. It should be noted here that the DUS test for inclusion in the OAPI list of protected varieties is carried out by a structure approved by the same organization.

• The registration of a new variety is done in return for a registration fee, the amount of which is fixed by OAPI for 25 years. During this period, other users of the seed of the variety that is the subject of this PVC cannot exploit this seed without the consent of the breeder.

• Farmers may, however, use the seed of the protected variety in their own fields (Article 16, Bangui Agreement). They also have the right to exchange, to give away, the seeds of the said variety subject to the PVP. These practices only violate the breeder’s right if they are done for commercial purposes, which means that only the sale of the seed is prohibited or authorized with the breeder’s consent.

• The holder of the VOC shall have the right to institute legal proceedings against any person who exploits the seed subject to the VOC without his consent.

3.6.3 INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS (UPOV)

OAPI has established a regime based on the model of the 1991 International Union for the Protection of New Varieties of Plants (UPOV) convention, which it joined in 2015. It works exclusively and explicitly for the privatization of seeds around the world by imposing intellectual property rights on plant varieties.

Article 12: The protection afforded by the plant variety right shall not affect the right of farmers to use the variety freely for sowing in their own fields.

Article 15. Any production or reproduction, packaging for propagation, offer for sale, sale or marketing, import and export, storage of a variety or protected material shall require the authorization of the right holder. The holder of the rights may authorize the use of his variety subject to certain conditions or limitations.

No claims for royalties to persons who have exploited a variety for commercial purposes without the consent of the holder (breeder) have been made in Chad.

3.6.4 OBLIGATION TO PRESERVE BIODIVERSITY

The main objectives of the Convention on Biological Diversity (CBD) and its related protocols are «the conservation of biological diversity, the sustainable use of its components and the fair and equitable sharing of the benefits arising out of the utilization of genetic resources,» including seeds. The Convention on Biological Diversity was adopted at the Rio Conference on Environment and Development in 1992 and entered into force in 1993. Signed by 196 States Parties including Chad, it is now almost universally accepted. The CBD protects the right to seeds of indigenous and local communities, including farmers, and guarantees appropriate access to these resources and the protection of traditional knowledge and practices of indigenous and local communities. In the context of seeds and plant genetic resources, it is important to emphasize that by ratifying the CBD, States have committed themselves to integrate the conservation and sustainable use of biological diversity into all their relevant sectoral and cross-sectoral plans, programmes and policies.

The CBD explicitly recognizes «the close and traditional dependence of many local communities and indigenous peoples on the biological resources on which their traditions are based and the desirability of sharing equitably the benefits arising from the use of traditional knowledge, innovations and practices relevant to the conservation of biological diversity and the sustainable use of its components. It also recognizes the crucial role that women play in the conservation and sustainable use of biological diversity and affirms the need to ensure their full participation at all levels of policy-making and implementation concerning the conservation of biological diversity.

The CBD further stresses the primary importance of conserving biodiversity in situ, which means - in the case of agricultural biodiversity - conserving biodiversity in farmers’ fields. Article 8 states that each State shall «respect, preserve and maintain knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles relevant for the conservation and sustainable use of biological diversity and promote their wider application with the approval and involvement of the holders of such knowledge, innovations and practices and encourage the equitable sharing of the benefits arising from the utilization of such knowledge, innovations and practices. With regard to the sustainable use of components of biological diversity, the Convention obliges States to protect and encourage «customary use of biological resources in accordance
with traditional cultural practices consistent with their conservation or sustainable use. Article 12 contains provisions on research and training, which should aim to contribute to the conservation and sustainable use of biological diversity. In addition, the CBD provides for the assessment and monitoring by States of biodiversity-related issues, including the assessment of the environmental and biodiversity impacts of [their] programmes and policies, including those that may have significant adverse effects on biological diversity. With regard to access to genetic resources and the fair and equitable sharing of the benefits arising out of their use, the United Nations has adopted a related protocol to the CBD, the Nagoya Protocol. This protocol was adopted in 2010 and ratified by over 70 states, including Chad. The Nagoya Protocol stipulates that States must take legislative, administrative and policy measures «to ensure that benefits arising from the utilization of traditional knowledge associated with genetic resources are shared fairly and equitably with the indigenous and local communities holding such knowledge.» Access to genetic resources and traditional knowledge is subject to the prior informed consent of the provider country, and on mutually agreed terms (art. 6). The protocol further stipulates that states must take measures to ensure that «access to traditional knowledge associated with genetic resources held by indigenous and local communities is subject to prior informed consent or the agreement and participation of those indigenous and local communities» and that «mutually agreed terms are established.» In addition, States have committed to respect the customary rights of indigenous and local communities in all matters related to traditional knowledge associated with genetic resources, and not to restrict «customary use or exchange of genetic resources and associated traditional knowledge within and between indigenous and local communities ...».

3.6.5 LEGAL AND INSTITUTIONAL FRAMEWORK FOR BIOSAFETY

Chad does not yet have a specific legal framework for biosafety. However, some existing texts in the different ministerial departments or other institutions with environmental connotations allow the foundations of the national law on biosafety to be laid. In Chad, the texts on biosafety are at the draft stage in the Ministry of the Environment and are awaiting the community regulations - namely the draft regulation drawn up at the level of the CILSS/ECOWAS/UEMOA. In Central Africa, there is no text that has been elaborated. It should be noted that the draft law on biosafety had been submitted to the National Assembly for adoption, before being withdrawn following comments from parliamentarians. Chad is therefore awaiting approval of this regulation, which will automatically be applied in all countries. Chad is a Party to the Convention on Biological Diversity (CBD). The text of the CBD was adopted on 22 May 1992 at the Nairobi Conference. The Convention entered into force on 29 December 1993. Within the framework of the implementation of the CBD, the Parties agreed on a Protocol to the said Convention which would be specialized on biosafety related to transboundary movements of genetically modified organisms (GMOs) resulting from modern biotechnology.

The National Biosafety Framework (NBF) will enable our country to take stock of biosafety in Chad and to adopt guidelines for the safe use of GMOs in agriculture and food. Indeed, the new biotechnologies are the subject of major issues that go far beyond national and regional frameworks. Thus, many international agreements have an impact on biotechnology and biosafety policies. Most of these are international trade agreements or environmental protection agreements for sustainable development. This transboundary dimension of the management of biotechnological risk calls on the African countries, particularly those of the West and Central sub-regions, signatories of such international agreements, to harmonize their regulatory texts to deal with the international trade of GMOs. At present, there is no protection at the national level since there is no regulatory text. There is no biotechnology laboratory. There are no quarantine measures or procedures. The risks are managed directly by the ministries concerned of the Environment, Health and Food Hygiene, Trade and the Directorate of Standardization.
In the absence of a specific law on biosafety, the management of the biotechnological risk linked to the circulation of GMOs should be based on the existing institutional mechanisms so that the related activities benefit from the financing of these different structures. At the national level, there are in particular

- the plant protection and control system, responsible for controlling the circulation of agricultural products and pesticides. It is an operational system but is not trained to identify GMOs or to manage their risks. Plant protection implements risk management provisions similar to those used in the management of biotechnological risks.

- the same system exists for the veterinary services working under the same conditions as the plant protection service.

- water and forestry officers, customs officers and gendarmerie officers who carry out border controls and other controls (including airport controls) on the national territory. They are likely to identify the products in circulation; moreover their collaboration with the agents of the protection of the plants is essential for the execution of the conservatory provisions facing the circulation of the GMOs.

- The Food Quality Control Centre (CECOQD) can play an important role in the implementation of the national biosafety framework, especially the identification of GMO products.

- phytosanitary control, for example, in order to identify suspect products; reference to regional or international risk assessment structures in order to know the harmfulness of possible GM products in order to take the appropriate decisions for the preservation of consumers. To support countries in adopting a national biosafety law, which protects the interests of citizens.

3.6.7 PATENT ON PLANTS

Patents on plants are members of OAPI through Annex I of the revised Bangui Agreement 1999. This annex clearly mentions in its article 6.c) that plant varieties cannot be protected by patent. This is logical when these varieties are protected, as we have seen above, by PVP. But the same article mentions that microbiological processes and products obtained by these processes «not essentially biological processes for obtaining plants or animals», as well as «microbiological processes and products obtained by these processes» can be protected by patent. Genetically modified plants and their propagating material, in this case seeds, are therefore also protectable by means of a patent. In Chad, there is no patent on plants. The patent grants its holder the exclusive right to exploit the patented invention and to prohibit third parties from doing so. In addition, he has the right to institute legal proceedings before the court of the place of unauthorized exploitation against any person who exploits the invention without his consent.

3.6.7 BIOSAFETY OF SEEDS OF GMO VARIETIES

Chad signed the Cartagena Protocol in May 2000 and ratified it in December 2004. Chad does not yet have a specific legal framework for biosafety. However, some existing texts in the different ministerial departments or other institutions with environmental connotations allow to lay the foundations of the national law on biosafety. In Chad, the texts on biosafety are at the draft stage in the Ministry of the Environment and are awaiting community regulations, namely the draft regulation developed by the CILSS/ECOWAS/UEMOA. In Central Africa, no text has been elaborated. It should be noted that the draft law on biosafety had been submitted to the National Assembly for adoption, before being withdrawn following comments from parliamentarians. Chad is therefore awaiting approval of this regulation, which will automatically be applied in all countries. Chad is a Party to the Convention on Biological Diversity (CBD). The text of the CBD was adopted on 22 May 1992 at the Nairobi Conference. By virtue of the precautionary principle prescribed by this protocol and while waiting to legislate on the matter, all West African states have put in place national biosafety frameworks and developed national action plans for their implementation. At the sub-regional level, biosafety has become a topic of discussion in sub-regional organizations such as the Economic Community of West African States (ECOWAS) and the Permanent Inter-State Committee for Drought Control in the Sahel (CILSS). The West and Central African Council for Agricultural Research and Development (CORAF) has published a biotechnology and biosafety action plan, while the Sahel Institute (INSAH), a specialized institution of CILSS, has drawn up a framework convention to regulate conventional and transgenic seeds in its member countries. This program aims at setting up a community legal framework for biosafety, so as to ensure the prevention of risks related to the possible introduction of Living Modified Organisms in the Union. Chad and most Central African countries do not yet have a biosafety law, therefore Articles 51, 52, 57, 127 and 171 of the Constitution of Chad of May 4, 2018, of which the following extracts have taken into account some aspects:

**Article 51:** Everyone has the right to a healthy environment.

**Article 52:** The State and the Autonomous Communities must ensure the protection of the environment. The conditions of storage, handling and evacuation of toxic or polluting waste from national activities are determined by law. The transit, import, storage, burial and dumping of foreign toxic or polluting waste on the national territory are prohibited.

**Article 57:** The protection of the environment is a duty for all. The State and the Autonomous Communities shall
ensure the defence and protection of the environment. Any damage caused to the environment shall be fairly compensated.

**Article 172:** The law shall be passed by the National Assembly in accordance with the distribution of powers between the central State and the Autonomous Communities. The law shall lay down rules concerning: the protection of the environment and the conservation of natural resources; agriculture, livestock, fishing, wildlife, water and forests. The provisions of this article may be specified and supplemented by an organic law.

**Article 171:** A National Human Rights Commission is hereby established. The National Human Rights Commission (CNDH) is an independent administrative authority.

**Article 172:** The National Human Rights Commission has the following mission To formulate opinions to the Government on human rights issues, including the status of women, the rights of the child and the disabled; to assist the Government and other national and international institutions in all matters relating to human rights in Chad in accordance with the Charter on Human Rights and Fundamental Freedoms To participate in the revision of existing legislation and the drafting of new human rights standards with a view to building the rule of law and strengthening democracy; to carry out surveys, studies and publications on human rights; to advise the Government on the ratification of international legal instruments relating to torture, inhuman and degrading treatment.

### 3.7 INSTRUMENTS COMMITTING STATES AT THE INTERNATIONAL LEVEL TO PROMOTE THE RIGHT OF PEASANTS

#### 3.7.1 INTERNATIONAL BILL OF HUMAN RIGHTS (IACHR)

The human rights obligations of states are not limited to their territory. International human rights law obliges states to respect, protect and fulfill human rights outside their borders. These extraterritorial obligations require states to refrain from actions/inactions that may give rise to human rights violations in third states (obligation to respect), to ensure that non-state actors based in their territory, whom they are in a position to regulate, do not commit human rights violations (obligation to protect), and to contribute to the creation of an international environment conducive to the universal realization of human rights (obligation to fulfill). The extraterritorial obligations of states derive originally from Articles 55 and 56 of the UN Charter, which oblige states to universal respect for human rights and to act jointly to that end, clearly implying that their obligations do not stop at their borders.

#### 3.7.2 AFRICAN CHARTER ON HUMAN AND PEOPLES’ RIGHTS (ACHPR)

The African Charter on Human and Peoples’ Rights was adopted on 27 June 1981 in Nairobi (Kenya) at the 18th Conference of the Organization of African Unity. It entered into force on 21 October 1986, after ratification by 25 States. Article 21 defines the right of peoples, considered as equal, to the free disposal of their wealth and natural resources. This right is exercised in the exclusive interest of the people. In no case may a people be deprived of it. In case of spoliation, the spoliated people have the right to the legitimate recovery of their property as well as to adequate compensation. The free disposal of natural wealth and resources shall be without prejudice to the obligation to promote international economic cooperation based on mutual respect, equitable exchange, and the principles of international law. States Parties to the present Charter shall undertake, individually and collectively, to exercise the right of free disposal of their wealth and natural resources with a view to strengthening African unity and solidarity.

#### 3.7.3 INTERNATIONAL TREATY ON PLANT GENETIC RESOURCES FOR FOOD AND AGRICULTURE (ITPGRFA)

Access to and use of plant genetic resources for food and agriculture has been recognized as a key element of food security in the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA). This treaty was negotiated over 20 years and adopted by consensus by FAO member states in 2001. It now has more than 130 States Parties, including Chad and the other West African countries. It is the most important international treaty for the recognition and protection of farmers’ rights to seeds. The objectives of the ITPGRFA are the conservation and sustainable use of plant genetic resources and the fair and equitable sharing of the benefits arising out of their use, in order to ensure sustainable agriculture and food security. The Treaty also establishes a multilateral system to facilitate access to seeds and propagating material and to share the benefits of their use in a fair and equitable manner. A key element of the ITPGRFA is the recognition of farmers’ rights in many of its provisions, in order to address the threats posed by intellectual property and to «draw attention to the unremunerated farmer innovation that is considered the foundation of all modern plant breeding. In Article 9, States recognize «the enormous contribution that local and indigenous communities and farmers in all regions of the world, particularly those in centres of origin and crop diversity, have made and will continue to make to the conservation and development of the plant genetic resources that are the basis of food and agricultural production throughout the world. Based on this fundamental contribution of farmers, the Treaty
recognizes their right to «save, use, exchange and sell farm-
saved seed and other propagating material. To protect
and promote these rights, the Treaty requires states to
protect «traditional knowledge relating to plant genetic
resources for food and agriculture» and affirms the right
of farmers «to participate equitably in the sharing of
benefits arising from the use of plant genetic resources
for food and agriculture. In addition, it guarantees their «right
to participate in decision-making at the national level on
matters related to the conservation and sustainable use
of plant genetic resources for food and agriculture. It should
be noted that Article 4 of the Treaty states that national laws
must be consistent with the ITPGRFA, which means that
national legal frameworks must also guarantee farmers’
rights to seeds. Although Article 9 contains the proviso
that farmers’ rights apply «as appropriate and subject
to national legislation», the ITPGRFA stipulates that its
provisions should not be interpreted as «limiting the rights
of farmers to save, use, exchange and sell farm-saved seed
or propagating material». Finally, the ITPGRFA establishes
a multilateral system to facilitate access to plant genetic
resources for food and agriculture and to share fairly and
equitably the benefits arising from them.

3.7.4 UNITED NATIONS DECLARATION ON THE RIGHTS
OF PEASANTS AND OTHER RURAL WORKERS (UNDROP)

The United Nations Declaration on the Rights of Peasants
and Other Rural Workers (UNDROP) is a non-legally
binding, universal resolution adopted by the United
Nations General Assembly in December 2018. It adds to the
body of international human rights law. The concept of the
right of peasants is based on, and complements, the rights
of farmers, already recognized in the International Treaty
on Plant Genetic Resources for Food and Agriculture or the
Convention on Biological Diversity, as well as the rights of
indigenous peoples already recognized in 2006 in the United
Nations Declaration on the Rights of Indigenous Peoples. In
September 2012, the UN Human Rights Council officially
launched a process towards the drafting of a Declaration
on the Rights of Peasants and Other Rural People. This was
a request from the peasant movements, grouped in La Via
Campesina, supported by international NGOs, including
FIAN, to address the discrimination faced by peasants
around the world. The draft Declaration includes a specific
article on the right to seeds that guarantees peasants the
right «to protect, store, transport, exchange, give away,
sell, use and reuse farm-saved seeds, crops and plants».
The adoption of the Declaration would represent a major
step forward in protecting the rights of peasants at the
international level against the excesses of the global agro-
industrial system. Unfortunately, most European states
have so far refused to engage positively in the process.

3.8 ACTION AND ADVOCACY STRATEGIES
TO STRENGTHEN FSS POLICIES IN CHAD
AND CENTRAL AFRICA

Based on these different specific actions to be carried out
for the advocacy presented in the following table to best
address the concerns of small-scale producers.

Table. Advocacy themes for improving smallholder access
to seed

<table>
<thead>
<tr>
<th>Advocacy theme</th>
<th>Leadership</th>
<th>Main Targets</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seed autonomy for producers and their freedom to choose the species and varieties that best suit their production objectives</td>
<td>NGOs, Agricultural Research</td>
<td>Government, National Assembly</td>
</tr>
<tr>
<td>Emergence and strengthening of seed POs</td>
<td>CNCPRT, Economic and Social Council</td>
<td>Support services (ANADER), NGOs</td>
</tr>
<tr>
<td>To submit a bill to the National Assembly on access to plant genetic resources for food and agriculture and the sharing of benefits arising from their use, thus</td>
<td>CNCPRT, Economic and Social Council</td>
<td>National Assembly</td>
</tr>
<tr>
<td>Improving the effectiveness of seed subsidy programs</td>
<td>CNCPRT, Economic and Social Council</td>
<td>Government, technical and financial partners</td>
</tr>
<tr>
<td>Revision or updating of the SNP document and its action plan</td>
<td>CNCPRT, Technical and Financial Partners</td>
<td>National Assembly, Government</td>
</tr>
<tr>
<td>Strengthening the participation of end-users in governance bodies in order to achieve this autonomy</td>
<td>CNCPRT, Technical and Financial Partners</td>
<td>Government</td>
</tr>
<tr>
<td>Strengthening public-private partnership (PPP) and operationalizing regulatory and strategic frameworks for the seed sector</td>
<td>CNCPRT, Government, technical and financial partners, CNCPRT</td>
<td>National Assembly, Government, technical and financial partners</td>
</tr>
</tbody>
</table>

Legend: CNCPRT= Cadre National de Concertation des Producteurs Ruraux du Tchad; NGO= Non-Governamental Organization
3.9 RECOMMENDATIONS TO INFORM THE IMPLEMENTATION OF THE ADVOCACY STRATEGY

At the end of this study, it is obvious that family farmers are not sufficiently taken into account in the elaboration and implementation of the packages that influence the seed systems. The following recommendations can be made to the State of Chad, to the African Commission on Human and Peoples’ Rights and to the States of the Community:

Recommendations to the Chadian State

1. Include the right to food and nutrition as well as the right of peasants to seeds and biodiversity (based on their customary rights) in the new Constitution to be adopted in 2022.

2. Adopt legal provisions/measures that effectively recognize and protect farmers’ seed systems, and guarantee the rights of farmers to save, use, exchange and sell farmers’ seed.

3. Formalize the cohabitation between the two seed systems, the traditional peasant seed system and the minority conventional seed system which seeks to make room for a seed industry linked to the international market. To try to enlighten small producers on the stakes of seeds and to set up institutional mechanisms to really involve them in the regulation of seed systems.

4. Organize a consultation space between all the actors of the seed system (with a consequent representation of small producers) who should be previously consulted and exchange on the proposals concerning the legal and regulatory framework of seeds. The National Committee for Plant Seeds and Seedlings (CNSP) does not seem to us to be suitable as a consultation space, because the participation of farmers’ organizations is very limited.

5. Introduce the Declared Quality Seed (DQS) system, which is less demanding than seed quality certification schemes, but guarantees a satisfactory level of quality for smallholder seed by ensuring a market.

6. Adopt legal provisions/measures that effectively recognize and protect farmers’ seed systems, and guarantee the rights of farmers to save, use, exchange and sell farmers’ seed.

7. Reorient national and regional seed, agricultural and food policies towards farmer agroecology through a process that ensures effective farmer participation. This process should take into account the recommendations from the Regional Meeting on Agroecology for Sub-Saharan Africa, co-organized by the Government of Senegal and FAO, held in November 2015.

8. Reorient public agricultural research and training towards farmers’ rights, needs and interests. This includes, among others, (i) integrating peasant agroecology and agroecological transition into national research programmes and those of higher education institutions, at the level of pedagogical programmes of peasant training centres, such as farmer field schools, farmer farm schools, peasant training for peasants and school gardens; (ii) supporting inclusive and participatory agricultural research that involves peasants and puts them on an equal footing with researchers, aiming at a co-construction of knowledge.

9. To develop, through a process that ensures effective farmer participation, guidelines for seed policies and legal frameworks that promote the realization of the human right to food and nutrition.

10. Submit a bill to the National Assembly on access to plant genetic resources for food and agriculture and the sharing of benefits arising from their use.

11. Identify gaps in all regulatory frameworks on food systems that do not align with the transition to agroecology, the 2030 Agenda on SDGs and related international obligations. Promote stakeholder engagement in review processes to ensure that policies remove barriers and constraints such as chemical input subsidies; support agroecological approaches to restore soil biodiversity and soil health; strengthen land tenure security for smallholder farmers.

Recommendations to Central African States

1. To revise the Regulation on the Harmonization of the Rules Governing the Quality Control, Certification and Marketing of Plant Seed and Propagating Material, complemented by provisions that protect and promote farmers’ seed systems and seeds.

2. To ensure that the Biosafety Regulation, which is in the process of being approved, and its application are based on the precautionary principle, and effectively protect the public from the risks associated with biotechnology.

Recommendations to the African Commission on Human and Peoples’ Rights

To develop, through a process that ensures effective farmer participation, guidelines for seed policies and legal frameworks that promote the realization of the human right to food and nutrition.

Recommendations to all States

1. Support and adopt the UN Declaration on the Rights of Peasants and Other Rural Workers, currently being drafted by the UN Human Rights Council, with the aim of strengthening the human rights protection of these
groups, including in the context of access to and use of seeds.

2. Support and participate in the process before the UN Human Rights Council for the adoption of an international legally binding instrument to regulate, within the framework of international human rights law, the activities of transnational corporations and other business enterprises, in order to introduce binding international principles.

3. Fulfil their commitments made by ratifying the ITPGRFA and support the implementation of its Article 9, including the ad hoc group of technical experts, which was established by the Governing Body of the ITPGRFA at its seventh session in October 2017 with the mandate to develop guidance to countries on the implementation of the said Article.

4. To revise the Common Regulations governing the quality control, certification and marketing of plant seeds and seedlings and to take into account during the revision provisions that protect and promote farmers’ seed systems and seeds, while establishing mechanisms to regulate conflicts that may arise between the commercial seed system and farmers’ systems.

5. To ensure that the Regulations on Biosafety in West and Central Africa that are in the process of being approved, as well as its implementation, are based on the precautionary principle, and effectively protect the population of Central Africa from the risks associated with biotechnology, as each State is left to decide for or against.

6. To refrain from any action aimed at promoting the introduction of IPR protection regimes for plant genetic resources in other countries, including by promoting their accession to UPOV.
At the end of this study, it is obvious that family farmers are not sufficiently taken into account in the elaboration and implementation of the seed law and policy. This is not only the case for the seed law, but also for the laws concerning the intellectual property of varieties, genetic resources and local knowledge, or the law on biosafety to prevent biotechnological risks (GMOs) on crops. The decisive role of seeds in improving food security and producers’ income is unanimously recognized. The main challenge today is not to create varieties with the highest potential, but above all to ensure that small-scale producers, who still constitute the majority of the agricultural population, have access to quality seeds adapted to their concerns. The consultation process with seed stakeholders has shown that for some years now several initiatives have been taken to develop the national seed sector. Regulatory texts and strategic frameworks are quite innovative, thus creating a favourable environment for the formal seed system compared to the sub-regional context. However, we have to admit that all these provisions have not yet had the expected effects on the access of small producers to seeds. Several concerns more or less strong exist and translate the fact that the traditional seed sector which remains in majority has not been sufficiently taken into account in the interventions. The problem of producers’ access to seeds adapted to their needs is therefore systemic and requires actions both at the global level and at the level of the different links. The actions identified by the stakeholders during this process constitute a good basis for initiating interventions to improve the existing situation. Increased decentralization of seed chains and adoption of a more integrated approach taking into account all systems (formal, traditional) with their specificities is fundamental. The strategic actions identified for advocacy reflect first of all the need to recognize that if seed systems obey economic laws, they remain strategic, and their control should not escape small producers for whom seed is the first and most important input. The crucial role of traditional seed systems should be better recognized and benefit from specific actions not aiming at their absorption by formal systems, but at enhancing their potential. A more integrated approach recognizing the diversity of situations is needed. Logically, the State which has the mandate to organize the seed sector, to facilitate the definition of strategic orientations and to ensure regulation is the main recipient of these advocacy actions. The organizations proposed to conduct advocacy are indicative. This choice must be validated for each field of activity by the concerned actors. In addition, in developing and conducting advocacy, the suggested lead organizations should initiate collaboration with all other actors likely to contribute to the success of the actions to be undertaken.


5. ECOWAS, ECOWAS Regulation C/REG.21/11/10 harmonizing the structural framework and operational rules on food, plant and animal health safety within the ECOWAS region

6. ECOWAS, ECOWAS Regulation C/REG.22/11/10 on Community procedures for the management of Veterinary Drugs in the ECOWAS region

7. ECOWAS, ECOWAS Regulation C/REG.23/11/10 establishing and operating a Regional Veterinary Committee (RVC) within ECOWAS

8. ECOWAS, ECOWAS, 2015. Action plan of the West African Seed Committee (COASem)

9. ECOWAS, ECOWAS 2008. Regulation C/REG.4/05/2008 harmonizing the rules governing quality control, certification and marketing of plant seeds and seedlings in the ECOWAS region, 28 pages.


11. ECOWAS-UEMOA-CILSS Manual of procedures for the import and export of seeds

12. ECOWAS-UEMOA-CILSS Manual of procedures for the registration of varieties in the national vs. regional catalogue of plant species and varieties

13. ECOWAS-UEMOA-CILSS Manual of procedures for seed quality control and certification, and for accreditation

14. ECOWAS-UEMOA-CILSS Implementing Regulations laying down annexed technical regulations concerning the methods of production, quality control and certification of seed

15. ECOWAS-UEMOA-CILSS Implementing regulations relating to the organization, operation and financing of the West African Seed Committee

16. ECOWAS-UEMOA-CILSS Rules of Procedure of the West African Seed Committee

17. ECOWAS-UEMOA-CILSS Technical regulation on the import and export of seeds

18. ECOWAS-UEMOA-CILSS Technical Regulations for the organization of the Regional Catalogue of Plant Species and Varieties (West African Catalogue of Species and Varieties (COAEVF)


20. CEMAC, 2014. Decision n°10/14-UEAC-224-CM-27 of 20 October 2014, adopting the catalogue of plant species and varieties in the CEMAC zone. 1p


24. CEMAC, 2014. Regulation n°02/14-UEAC-224-CM-27 of 20 October 2014, on the creation and organization of the catalogue of plant species and varieties in the CEMAC zone. 17p


30. ETO Consortium 2011. Maastricht Principles on the extraterritorial obligations of States in the field of economic, social and cultural rights (http://www.etoconsortium.org/nc/en/main-navigation/library/maastricht-principles/?tx_drblob_pi5%5DdownloadUid%5D=22)


41. GIZ 2018. Opérationnalisation de la filière semencière au Tchad, project document, ProDoc final, phase 2, GIZ, December


46. ITRAD 2009. Medium Term Plan for Agricultural Research in Chad 2010-2014, June 2009

47. MA 2013. Five-year plan for agriculture in Chad (2013-2018), main document, April 2013, FAO


50. MPIEA Order on the rules for obtaining approval for the marketing of seeds of plant species and seedlings, 4p


52. Primature 2017. Decree establishing, attributions, organization and functioning of the national committee of seeds and plants, 5p


54. MPIEA Project document for phase II of the program «operationnalization of the seed chain in Chad» OFST, Oct 2017, 68xp

56. MPIEA 2016. Inspector’s guide to seed control and certification, FAO/OFST, 19p
57. MPIEA 2015. The National Seed Policy, report, 45p
59. MPIEA 2016. Action plan for the revival of the seed sector in Chad FAO/GIZ/DDC, 2016, 40p
63. Report Corporate profits or diversity of food systems? Threats to farmers’ seeds and their implications in West Africa. 94p.
64. Secretariat@biodiv.org Cartagena Protocol on Biosafety, 2000, 30p
65. Ordinance N°043/PR/2018, on agro-sylvo-pastoral and halieutic orientation 55p
## ANNEX

### APPENDIX 1: LIST OF PERSONS CONSULTED

<table>
<thead>
<tr>
<th>Name</th>
<th>Function</th>
<th>Contact</th>
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CROPS4HD (Consumption of Resilient Orphan Crops & Products for Healthier Diets) is an international collaborative project of three NGOs co-financed by the Swiss Agency for Development and Cooperation and the Global Programme for Food Security (SDC GPFS). Under the overall coordination of Swissaid, it started in 2021 and will run for ten years. The collaborators of CROPS4HD are SWISSAID, FiBL (Research Institute of Organic Agriculture) and AFSA (Alliance for Food Sovereignty in Africa).

The project deploys its potential and leverage to influence global policy frameworks to adopt farmer seed systems (FSS) as an important pillar for food security and agrobiodiversity. AFSA, which is in charge of the advocacy component, is a broad alliance of civil society actors involved in the struggle for food sovereignty and agroecology in Africa. Its members represent small-scale farmers, pastoralists, hunter/gatherers, indigenous peoples, faith-based organisations and environmentalists from across Africa. It is a network of networks, currently with 37 members operating in 50 African countries.