SUMMARY OF SURVEY RESPONSES

Following is a summary of the themes that emerged around key questions posed to convening participants through a pre-convening survey.

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ABOUT THE NEED TO TRANSITION TO AGROECOLOGICAL FOOD SYSTEMS

- To shift from destructive industrial agriculture to sustainable agroecological approaches and practices
- Agricultural biodiversity and farmer-managed seed systems are cornerstones of agroecological systems
- Recognize the contributions of diversified agricultural landscapes and practices across the globe

AWARENESS IS RISING...

ABOUT THE IMPORTANCE OF SEED SYSTEMS AND THE NEED TO STRENGTHEN, PROTECT AND IMPROVE THESE SYSTEMS AT ALL SCALES (LOCAL TO INTERNATIONAL)

- The crucial need to strengthen, protect and improve seed systems and agricultural biodiversity at all levels (local to international)
- The role farmers play in the conservation of agricultural biodiversity, as seed savers
- The connections between seeds and the systems within which they thrive including but not exclusive to water, soil, microbial and insect life; cultural systems (and preferences) of diet, nutrition and production, understanding of non-food plant life within agricultural systems and more
- To make visible the multiple services provided by agricultural biodiversity
- That the agroecology movement is not only driven by farmers, but also by a wide swathe of society, including youth, consumers, and others
- About biocultural food systems and the importance of traditional knowledge, practices and innovations
- The need to document indigenous knowledge on agrobiodiversity

**ABOUT HEALTHY, DIVERSE AND CULTURALLY APPROPRIATE DIETS**
- About the increasing health challenges posed by the industrial food system, providing opportunities to promote diversified diets, for which agricultural biodiversity and farmer managed seed systems can contribute
- There is new appreciation from the market/consumers/citizens for cultural crop diversity and varieties with a history/story
- The importance of diversified diets is gaining attention
- Healthy and sustainable gastronomy/local gastronomy and tourism are on the rise
- Work closely with healthy nutrition advocates and traditional environmental conservationists
- There is increasing societal awareness and scientific evidence that healthy nutritious diets depend on seed and crop diversity
- Food security is integrally linked to diversity and access to health food

**ABOUT THE NEED FOR RESILIENCE IN THE CONTEXT OF CLIMATE CHANGE**
- Climate change requires improved adaptation in agricultural and leads to increasing interest in better adapted seeds/crops
- Greater recognition of the resilient traits of local seeds and genetic resources to climatic variability
- Linking seed/food system resilience to climate change
- Promotion of seed banks and in-situ conservation in light of climate change and resilience building
- The urgent need for climate resilient agriculture, to which agricultural biodiversity and farmer-managed seed systems can contribute
- Local seed systems have the diversity we can use to face climate change
- Integrated breeding and innovations in agriculture support adaptation to climate change and improve resilience in production systems

**OPPORTUNITIES EXIST TO...**

**CONNECT TO SDGS**
- Efforts to reach the UN Sustainable Development Goals should be used to also strengthening seed systems around the globe

**AMPLIFY EXISTING MODELS AND EXPERIENCE**
- There are existing models and experiences, including community innovations that demonstrate huge potentials to strengthen seed systems and agricultural biodiversity
- Demonstrate scale, sustainability and impact of supporting farmers' seed systems
- Understand existing local seed systems
- Share concrete world experiences about how civil society groups and farmer groups have defended farmer managed seed systems
STRENGTHEN LINKAGES BETWEEN FORMAL AND INFORMAL SEED SYSTEMS
- Foster lateral (i.e. community to community) and intersectoral (i.e. scientific to in-situ) exchange, linkages and networking around seed systems to support knowledge building, practice and research
- Improve the capacity of seed suppliers to supply diverse quality seed
- Understand how informal and formal seed systems are complementary
- The need for adapted varieties/seeds (there is market)

STRENGTHEN THE ROLE FARMERS PLAY IN THE SEED SYSTEM AND ACROSS THE FOOD SYSTEM
- Strengthen the role of the small farmer. Ensure their voice is represented at all levels.
- Recognize Farmers Rights as part of human rights (with specific attention to collective rights and intellectual property rights) and governance of seed systems
- Use grounded evidence to support and implement Farmers Rights
- Support national and local farmers organizations whose platform is to advance farmers right to seeds
- Promoting farmers’ rights to save, sell and exchange seed
- Strengthened women farmers movements to help increase their control over seeds including diversity and resilience
- Strengthen and support farmer and community management of seed, seed stewardship and seed banks
- Significant number of small holder farmers are reclaiming their traditional seed systems and building up their capacities for breeding and conservation
- Support farmers to have access to diverse quality seed that can increase productive gains, while at the same time maintaining resilience against the probability of future crop and ecosystem service losses due to external shocks, including support against post-harvest losses
- Work with farmers to develop strong biodiversity-based value chains
- Support seed restoration programs that include cultural restoration/cultural memory components
- Strengthen small-scale farmers’ organizations

SHAPE ENABLING POLICIES, LEGAL FRAMEWORKS AND PUBLIC INVESTMENT
- Develop enabling policies, legislation and legal frameworks at global and national levels
- Design seed legislation that supports farmer-managed seed systems
- Ensure international, national and local Treaties and Declarations, laws and policies recognise and protect Farmers’ Rights and reflect the realities of smallholder farmers
- Acknowledge and support farmer seed systems in agricultural policy and seed regulations
- Change of seed laws to recognize open source seed systems and farmer-based seed systems
- Amplify positive examples, such as the ongoing revision of the Philippine Seed Act 1994 led by the Bureau of Plant Industry (BPI) and with the active participation of Philippine Seed Industry Council
- Change policies to promote autonomous, local seed systems in the hands of families
- Seed laws are often revised in different countries - such opportunities should be used to strengthen seed systems and their co-existence
- Strengthen policy supportive of democratically-owned-driven seed research, distribution and markets
- Enable modular regulatory tools (instead of uniform and frozen rules) to manage seed systems
- Prevent the spread of laws and policies that undermine farmer managed seed systems
- Shift perverse subsidies from industrial agriculture to agroecology
- Enhance interdependence between various levels of governing systems
- Establishment of ‘Food Sovereignty’ agenda in political discussions (e.g. in constitutions of Nepal)
- Address national policy constraints
- Promote public investment in agriculture research, agriculture biodiversity preservation
- Better understand seed regulatory frameworks and trends in seed sector, Intellectual Property Rights regulations, seed laws, Seed policies, ITPGRFA, etc.

STRENGTHEN THE GLOBAL NETWORK OF PEOPLE CONCERNED ABOUT RSS
- Create a global connection of partners
- Use information platforms to share experiences about seed diversity
- Create opportunities for seed and knowledge exchange across borders
- Enhance collaboration between private and/or public seed institutions and small holder farmers
- Expand the connections and knowledge that movements and farmers have about the strategies, methods and knowledge needed to strengthen seed systems
- Ensure seed networks have a central focus on farmers’ capacities and needs

SUPPORT RESEARCH THAT IS FARMER CENTRED
- Support to farmer-researcher (including professional seed breeders) collaborations
- Document and research of the practice of agroecology by small farmers
- Research needs to be farmers centred, conducted on the farmers’ terms
- Invest in participatory research to breed and adapt crops to local climates and agroecological production systems
- Improving farmers capacity to save seeds and conserve agriculture biodiversity through training and events
- Undertake community seed sovereignty assessments
- Support farmer-oriented research to produce new varieties that fit into the local agroecological zone

PROMOTE INTEGRATED LANDSCAPE APPROACHES
- Support biocultural landscapes conservation, agroecology and integrated systems/landscape approaches

SUPPORT LOCAL COMMUNITY INITIATIVES TO STRENGTHEN THE LOCAL SEED AND FOOD SECTOR
- Develop curriculum to educate children about the importance of seed systems and agricultural biodiversity
- Support local partnerships that enhance sustainable seed systems, including local farmers’ markets and businesses
- Growing opportunities for ‘premium price’ for local/traditional seeds in niche market, if proper marketing method is applied
- Still huge potential for seed sector growth
- The demand for quality seeds of adapted genetics is far below the supply thereof in West and Central Africa
- Engage multiple stakeholders for a vibrant seed sector
- Plant breeding and the creation of varietal diversity, as the source of value creation, needs to be regarded as an integral component of functioning seed systems
BUILD CAPACITY
- At the local community level, policy level, in civil society organizations and in extension services
- For mentorship and training

CHALLENGES TO SEED SYSTEMS AND AGRICULTURAL BIODIVERSITY

LACK OF UNDERSTANDING AND RECOGNITION
- Ignorance about who ‘feeds the world’
- Lack of support for agroecological approaches
- Lack of balance between rhetoric and practice on supporting farmers’ seeds
- Poor understanding of strengths of farmers’ seed systems
- Lack of recognition of the importance of farmer-managed seed systems
- Lack of integration of scientific research and political empowerment of farmers
- Lack of research centers and weak collaboration between scientists and farmers
- The lack of active citizen engagement on the matter
- Lack of information (of the consumer) about the needs and importance of local small-scale agricultural systems
- Too many conflicting interests are generated by a large number of stakeholders claiming to have a say in the discussion

FOOD SYSTEM DYNAMICS
- Industrial agriculture and monocultures
- The ‘old’ powers that do not want to change while our current food systems do not deliver the food we want and need
- Economic pressure on agriculture
- Reductionist thinking linked to the approach that promotes green revolution type approaches based on the myth that only these led by MNCs can come up with the answers to feed the world.
- Polarized views and positions within the seed sector
- Low competitiveness of local varieties in comparison with the hybrid and industrial varieties. Farmers, who grow local varieties, argue about the low competitiveness of local varieties on the market. Since consumers pay more attention to the appearance of products, preference is given to the imported and industrial varieties. Although the local varieties possess valuable nutritional and have better tasting qualities, people still do not realize these factors and their importance for human health and subsequently the importance of local agricultural products and their preservation.
- Economically and socially, the majority of the African population rely on agricultural production for their survival. There is also widespread poverty. This is not because smallholder agriculture automatically induces poverty, but because of unequal terms of trade, extraction of value from farmers, and lack of appropriate support to build smallholder agriculture. The long-term effect is concentration of land and wealth amongst the top layer, and land dispossession, displacement and deepening poverty for others.
- Change in market preference
- Supporting nourishing food systems for all that are not reliant on exploitative labor or ecological practices
- Loss of cultural identity in the food systems
- Loss of indigenous knowledge
INTELLECTUAL PROPERTY RIGHTS, POLICY AND LEGAL CONTEXT

- Imposition of Intellectual Property Rights and corporate seed laws
- Intellectual property rules that undermine farmers’ rights and farmer-managed seed systems
- Seed harmonization legislation & broad application of UPOV 91 in inappropriate contexts & regions
- Getting stronger Intellectual Property Rights which restricts access of farmers to seeds and limits agricultural biodiversity
- Legal factors that are impeding the agricultural practices tied to seeds
- Seed and IP laws favouring industrial seeds and plant breeders
- International seed law and the National and Regional policies that flow from this
- The current adoption of legal systems (read UPOV 91) in Africa that lead us away from farmers being enabled to contribute to diversity (and even being criminalized).
- Policies restricting control, experimentation and access to existing biological and genetic resources
- Weak enforcement of Intellectual Property Rights against counterfeit/adulterated seeds
- Seed laws, systems for certification and Intellectual Property Rights such as WTO TRIPS and UPOV91
- Policies that jeopardize agrobiodiversity and access to seeds
- Outlawing of local seed practices
- Current legal and financial system is focused on the formal seed system without any support and interest in the informal seed system that still holds farmer varieties.
- Lack of policy framework to provide a conducive environment for integrated seed systems
- Policies and regulations are linear, they oftentimes do not recognize or consider the dynamics of informal seed systems and networks, therefore jeopardize and undermine them
- Ability to design original and creative legal and governance systems enabling the modularity and diversity of systems and practices to live
- The policy and legal frameworks under which current formal seed systems develop, do not promote conditions that support the adaptation and evolution of the diverse planting materials needed by communities to meet the continuously changing economic and environmental/climatic conditions that affect their agricultural production system, and government subsidies
- In agriculture, African governments have bought into the Green Revolution modernisation agenda. This commercialisation extends to agricultural production itself, even though the very wide base of smallholder producers will not benefit from such policies. Such strategies are oriented towards a top layer of producers who can become commercial producers in formal markets. Today farm input subsidy programmes (FISPs) play a central role in the financing and delivery of Green Revolution technologies. These programmes secure guaranteed (and subsidised) markets for corporate products at public expense. Currently a strong push to secure private commercial interests in agricultural input supply, especially seed, is especially evident in GM, plant variety protection (PVP), plant breeder’s rights (PBRs), and seed certification laws and regulations. These are asserting exclusive rights of ownership and control, with punitive consequences for smallholder farmers for not obeying. The African Regional Intellectual Property Organisation (ARIPO)’s draconian PVP regulations are a strong case in point.
- Regional and global harmonization of laws to facilitate trade and movement of seeds across boarders
- National policies constrained by international agribusiness
- Current subsidy structures and rural patronage systems which favor chemical input packages for farmers
- Policies and laws often are lagging behind environmental, agricultural and societal needs and realities; they often lean towards one system to the detriment of the other
- Reduced public investment in agriculture biodiversity and ag research and extension
- Increasing criminalisation of local seed systems
CORPORATE CONCENTRATION AND CONTROL

- Influence of MNCs
- Industry controlled research, which has obliterated public research systems/institutions, is proprietary, and geared to its own interests (+major crops, usually for export)
- Economic and political power of agroindustry input business
- Seed system is dominated by big multinational seed companies and government policies generally favor these seed companies
- Increased emphasis on agricultural inputs, homogenization and reduction in number of seed companies, and the functioning of global markets, has pushed conventional agricultural production towards emphasizing crop uniformity
- Multinational interests in commercializing and owning seeds
- Politically we are operating in an environment of strong financial and corporate power. Nation states are becoming subordinated to the multinational corporations. Laws and regulatory systems are structured to favour corporate interests, and public resources are channelled to support private profit. The contradictions of this system and popular responses are producing increasing global instability and a tendency towards authoritarianism
- Undue influence of biotechnology companies & agribusiness industry in policy development in global South
- Expansion of agro-industrial models, agrochemical packages and their seeds
- Large seed company whose marketing techniques make farmers doubt their own seeds
- There is a lack of transparency and solidarity (including aspects of social justice) within the breeding industry
- Aiming for a larger diversity of regionally adapted varieties per crop species including those of small (orphan) crops does not suit the current corporate seed industry model
- Strong philanthropic support for imported, GMO, hybrid and high-fertilizer / pesticide dependent regimes in global south

ROLE OF PRIVATE SECTOR

- Insufficient involvement of the Private Sector, particularly for non-commercial crops
- It is challenging for involving private sector on increasing seed business and improving quality of local seeds because local seeds/varieties cannot enter the formal system without registration. The variety registration process is very cumbersome in countries like Nepal

UNRELIABLE DATA AND INFORMATION

- Lack of clear and reliable data and information about the actual situation on the ground in terms of number and size of farmers, their needs and preferences, their productivity etc.
- Lack of data and information, good analysis and communication strategy

CLIMATE CHANGE

- Rapidly changing climate and production context, including challenges of water, viable landscapes etc.
- Climate change is a big threat and we do not have systems in place that help us to adapt (although this has also turned to be an opportunity with financial resources becoming available)
- Increased vagaries in the environmental conditions, pest and disease pressure
- Majority of varieties bred today are for large-scale farming solutions that assume predictable temperature and precipitation patterns
- Ecologically, climate change and other critical planetary processes such as biodiversity loss and the nitrogen cycle are already in excess of their safe operating boundaries. Agriculture has a major role to play in responding to the challenges of climate change, since plant growth is the main source of absorption of carbon dioxide from the atmosphere. However, the industrial agro-food model, of which the Green Revolution is an extension, is a major producer of greenhouse gases and an intensive water user. Changes are required in the way food is produced and distributed to reduce these damaging ecological effects. There is global movement towards support for agro-ecological alternatives that can be built on.

- The farmers most vulnerable to climate change have less access to diversity.

**AGRICULTURAL BIODIVERSITY MANAGEMENT AND ACCESS TO SEED**

- Genetic concentration
- Insufficiently developed seed certification systems and quality control systems
- Appropriate dissemination / commercialization system for seeds
- Mainstream corporate breeding and funding of breeding is too focused on technical advancement of the breeding process for higher efficiency and better protection against competition rather than collaboration
- Promotion of the formal seed system only which promote mono culture and enhance loss of agrobiodiversity
- Promotion of uniform varieties
- Limited use of quality seed by farmers
- No or little incentives to breeders
- Access to sufficiently diverse seed materials
- Absence of Plant Variety Protection
- Disconnect between PGRFA community and Crop Improvement/Seed system development agenda
- Lack of an efficient national seed demand articulation system
- Strong push by government for high-input based commercial agriculture has also led to higher pressure to local seed system because local seeds/varieties are lower input responsive than hybrids or other new seeds
- Seed inaccessibility due to high cost, lack of supply, unsuitable distribution channels
- Exchange of diversity between countries and agroecologies have become more and more complex, therefore undermine the ways farmers can access new germplasm that may be adapted to new conditions

**WEAK FARMER-MANAGED SEED SYSTEMS**

- Lack of support for farmer-managed seed systems and agroecology
- Local seed system is closely associated with traditional/cultural/customary bonds/networks of people, which is being weak due to various social and economic changes happening around the world. This has led to weakened tradition of seed saving and exchange which is the glue for holding seed system intact.
- Disorganized small-scale sector
- Poor support to seed banks
- Reversing the current trend of biodiversity loss and loss of farmers’ traditional knowledge and cultures embedded in seed systems
- Building farmer capacities, strengthening organisations is a long-term process and commitment
- Gender responsiveness for seed system development rarely targeted
- Lack of support for participatory plant breeding with farmers
- De-skilling of farmers as they rely on external inputs and technologies brought about by inappropriate government programs and policies and alarming loss of agricultural biodiversity
- Limited participation of farmers in decision making processes
- Local farmers and population have insufficient and low level of knowledge about the genetic and breeding quality values of local varieties of crops
- Lack of seed literacy in communities

**ACCESS TO FUNDING AND RESOURCES**
- Access to and control over seed resources
- Insufficient access to land by young farmers
- Funding the organisations working with this issue
- Inadequate financial resources in rural areas
- Lack of funds to support farmer-scientist collaborative work

**OTHER**
- Population growth
- Building a win-win partnership for all stakeholders of seed systems
- GMO contamination of traditional corn varieties

**AREAS OF CONSENSUS**
Participants perceive these issues as areas of consensus...

**DIVERSITY’S CONTRIBUTIONS**
- Recognition of importance of diversity and the need to protect agricultural biodiversity
- Importance of cultural diversity and its connection to biodiversity
- Diversity is important to environmental sustainability, food and nutrition security and human health
- Diversity is dwindling with only 25% of the varieties remaining (leading e.g. to support for Svalbard)
- Conservation and availability of genetic diversity is important
- The importance of local seeds to preserve food biodiversity and food culture
- That we as a global community have lost a big part of our food biodiversity
- The critical role of in-situ conservation, and the need for more support to this area
- The danger of genetic uniformity
- That current rates of biodiversity loss (and associated knowledge) is very problematic e.g. that current food systems come with extensive negative environmental impacts
- Farmers' varieties and germplasm under the control of farmers are vital for the maintenance of biodiversity, support of farming systems, ensuring nutrition security and resilient seed and food systems in the face of climate change
- Within the seed sector there is consensus that conservation of genetic resources is key and that it is a joint responsibility of breeders, farmers, governments and others
- People agree that we should invest in conservation of local seeds, if not for economic reasons, for their intrinsic social and cultural values
- 'Conservation through use’ is the potential market-based strategy for strengthening local seed system
- Increasing diversity builds greater resilience and sustainability
- Farmer managed seed systems essential to future
- Increased threat of extinction of farmers' varieties
- Traditional and Indigenous knowledge
- Women are central to any conversation and are left out
- There is agreement that both in-situ and ex-situ conservation is required, and strengthening local seed system is essential for in-situ conservation
- Importance of role of women in seed and agriculture biodiversity preservation
- We need to connect diversity to the market
- Conservation of the biodiversity for sustainable use
- Local, landraces and indigenous seed/crops are well adapted to their domiciled environments
- Agricultural biodiversity is important for our future food
- We need to foster local seed systems to have resilient agricultural systems
- Collective management of cultivated biodiversity (OPV)

THE THREAT OF CLIMATE CHANGE
- The key role of agricultural biodiversity in responding to climate change
- On the need to immediately address climate change impacts to agriculture
- That healthy soils and = climate change mitigation and adaptation
- Climate change will require new thinking and practices to maintain healthy diets globally
- Within the seed sector there is consensus that plant breeding is playing a key role in providing solutions to fight against the challenges of food security and climate change
- Addressing the impact of climate change will require breeding of climate resilient seed varieties
- Global challenges such as climate change and food and nutrition security require global action from key players and stakeholders
- Importance of reducing the vulnerabilities of farmers through disaster risk reduction programs at the community level
- Seed diversity to manage abiotic risk of unpredictable rainfall (drought environments) and temperatures (frost fruit tree productivity)
- We need to understand how to manage diversity to reduce the impact of pest, diseases and climate change
- Ways to engage private sector (various levels) in increasing the portfolio of varieties available to farmers in climate change vulnerable areas

THE NEED TO SUPPORT FARMERS
- It is necessary to carry out a study to assess the current situation to preserve agricultural biodiversity of seed produced by local farmers in the country, their potential, and work out recommendations and proposals for the strengthening of community-based seed production.
- Reducing the risk of crop loss for poor farmers through enhancing traditional seed systems and diverse quality seed
- Seed rescue after disaster (Nepal earthquake)
- Rural development through small scale production and processing
- Support to farmers to access good quality seeds
- Seeds must remain in the public commons, there is a need to protect our rights to steward and share seeds
- Farmers hold valuable information and their IP needs to be protected
- Voices of farmers are fundamental in the struggle for food and seed sovereignty
- Germplasm in banks needs to get out to farmers and be used
- There is a lot of educational/mentorship work to be done on the community level to ensure sustainable seed security
- Importance of focus on smallholder farmers
- In Nepal, people agree that the use of ‘Community Seed Bank’ or similar community-based models should be promoted
- On the need to develop capacities of farmers but which capacities and how are contentious

THE NEED FOR SUSTAINABLE FOOD SYSTEMS
- The industrial food system faces serious challenges
- Transformational change to foster sustainable food systems
- Increase agricultural productivity without compromising biodiversity
- Produce enough food
- Shift to a more sustainable way of food production
- Produce healthy, nutritious food
- Allow for equitable access to food
- Importance of resilient food systems
- Good nutrition is based on a diverse diet
- The importance of investing in low-input production systems
- Green revolution/industrial agriculture approaches are not sustainable
- Systems approaches/integrated solutions, including addressing multiple SDGs, and the inefficiency of ‘silied’ solutions
- Current investment in agriculture needs to be rethought to support alternative systems
- Increased knowledge and understanding of nutrition issues increases interest among farmers, especially women to test new diversity
- Mass urbanization is creating urgent demand for a new food system

AGROECOLOGY AS A PATHWAY FORWARD
- Agroecology is an alternative system to industrial agriculture
- Agroecology produces healthier food and soil
- Diverse small agroecology businesses are good for local economies
- A diversity of options is required to meet the needs of the diversity of farm households

THE CO-DEPENDENCE OF INFORMAL AND FORMAL SEED SYSTEMS TO MANAGE AGRICULTURAL BIODIVERSITY
- Formal seed sector relies heavily on informal seed sector
- Disconnect between the informal and formal seed systems
- Profitability and sustainability of seed business should go hand in hand
- Enabling regulatory environment is needed in terms of access and benefit-sharing
- Varietal performance, superiority for specific traits is necessary to create demand for the seed
- Need for benefit sharing in profits arising from biodiversity conservation
- Majority of seeds used by smallholder farmers comes from the informal system
- Difficult to access plant genetic resources and move it across borders, hence the need to globally harmonize phytosanitary test procedures
- Promotion of the use of quality seeds by farmers
- Local crop germplasm is a good starting point for varietal improvement
- Formal seed system does not cater to farmer managed seed systems
- Better adapted seeds
- Seed exchange networks are key to agrobiodiversity conservation
- Open source seed systems
- Mechanism where the formal and informal seed systems combine to provide access to diverse seeds/varieties to farmers
- Small grains rather than / as well as maize for dry areas
- Cost of conservation (of local seed) should not be bared by local farmers
- Most small-scale farmers depend on informal seed systems for agricultural production
- Ways to strengthen informal seed systems and networks as legitimate and vital components of resilient seed systems
- Need for integrated seed sector development
- Quality through the supply chain
- Harmonization of seed regulations at trading block level
- Enabling pluralistic seed policy environment
- Gene banks at national level can contribute to increase farmers access to diversity

**IMPORTANCE OF PLANT BREEDING**
- Strong and effective IP protection for plants and seeds is necessary to ensure continuous innovation in plant breeding
- Participatory variety selection and enhancement is important
- Production of seeds of preferred varieties (local and research)
- The need to improve the resource use efficiency of crops/varieties.
- Efficiency of on-farm conservation and community seedbanks
- Varietal mixtures to reduce current pest and diseases and future losses
- Strong, strict and effective seed laws are needed for the formal seed sector to ensure investment and innovation in plant breeding and with that growth in agricultural productivity

**RESEARCH NEEDS**
- Participatory research on technologies and systems
- Collaboration between farmers and academia is a good thing (although not always carried out fairly)
- Farmer led research is productive
- Research funds for agroecology are insufficient
- Participation of farmers and consumers in research and policies
- Role of public agriculture investment for poverty eradication and development

**NEW NETWORKS AND CAPACITY**
- Strengthen the networks on seed systems
- Trust between buyer and provider/seller of seed is necessary for seed exchange
- Develop and adopt a special program in the country for establishment and development of agrobiodiversity conservation of seed’s production at the community level with involvement of specialists, experts, experienced farmers, agricultural scientists.
- Improvement of knowledge and understanding of the various sectors of society - public and private sectors, community members - women, leaders, school children about the conservation of agrobiodiversity in seed production system based on the community, their value and importance, the need for their distribution
- 'Next generation' strategy and the role of youth
- Building capacity of the stakeholders at all levels
- Alternative information channels may work around existing power structures
- Work together as different actors to strengthen the global agenda as we are weak compared to the industrial agricultural advocates who work with states and governments
- Enhance capacity and build social capital in community levels to access and use diversity as part of a large resilient society (seed resilience is just one aspect)

**RIGHTS**
- Access to land and weak land tenure is a constraint
- Secure land rights = better land, water and seeds stewardship
- Regional food sovereignty
- Farmer’s right to exchange, produce and sell their own seeds
- Importance of women’s rights to land and productive resources
- The links between seed sovereignty and food sovereignty - food sovereignty does not exist without seed sovereignty
- Farmers have internationally recognised rights that need to be respected, protected and fulfilled
- Seed sovereignty is inextricably linked to food sovereignty and agroecological food systems
- Regional and local seed is essential and a foundation to a durable and sustainable local food system. We need seed sovereignty if we are seeking food sovereignty as native people

**FUNDING**
- More public and private funding for rural areas is needed
- Funders need to collaborate to understand the context holistically (this is understood by the majority of funders, but not all)

**OTHER**
- extreme concentration of wealth and power in the seed sector should be addressed
- Importance of inclusive governance

**AREAS OF NON-CONSENSUS**
Participants perceive these issues as areas of non-consensus...

**IMPORTANCE OF AGRICULTURAL BIODIVERSITY**
- Why agrobiodiversity is important, how and for who
- Views of complementarity of in-situ and ex-situ conservation
- On how to treat seeds (common heritage or trade commodity)
- Costs/benefits of seed production and conservation
- Lack of understanding of how to restore local seed systems
- What is the best way to strengthen the seed systems
- No or limited agreement on power and control issues
- Ownership and control of seed and all forms of life
- Low productivity of the local seeds/varieties, when there is need for immediately increasing food productivity due to hunger and food insecurity
- The value of local/indigenous knowledge
- The role and control of seeds by different actors
- Who holds the rights on local seeds? How their rights are protected in the process of access and benefit sharing? Who hold the rights i.e. communities (regional) vs. indigenous people (ethnicity)
- Local seed varieties versus food security
- The role of formally bred seed versus farmers' local varieties
- Importance of cultural diversity and identity
- Lack of understanding by tribal leadership and community members on the importance of both food and seed sovereignty
- Ensuring greater linkage between in-situ management and ex-situ conservation (e.g. Community Seed Banks and Gene Banks). These two seem completely disjointed
- Timeless royalty (in perpetuity) required by local (government-funded) gene banks for accessed germplasm
- Differing views on whose knowledge is relevant, and who should lead change efforts
- Free seed distributions can cause serious harm to the resilience of seed systems

**FOOD SYSTEMS TENSIONS**
- Who can and should 'feed the world', principles of a healthy global food system
- Sustainable production and consumption at agri-chain level
- On the kind of agricultural systems which should be promoted and supported
- Dichotomy between simple metric approach just looking at yield, and a systems approach looking at a wide range of metrics including soil carbon, remineralisation, nutrition, dependency, etc.
- 'We know best' approach compared to respect of traditional systems and the diversity and production potential they hold
- The means to reach the sufficient food production
- The potential of agroecology to "feed the world"
- Model of agriculture - industrial vs agroecological
- Differing views on the 'best' production systems to feed the world in a changing climate
- The promotion of Climate Smart Agriculture
- How to obtain a nutritious diet and what constitutes 'healthy' and 'nutritious' food
- High external input agriculture and cultivation methods
- Poor understanding/appreciation of the role of pollination
- Differing views on power imbalances in food and seed systems
- Rights to resources in a broader sense, as managing biodiversity is linked to issues of control over knowledge, genetic resources and territories
- Causes of climate change
- The means and form / economic model of the system that could enable us to reach food security/sovereignty
- Co-existence of monoculture farming and agroecology
- The need to address long-term goals and complex traits in breeding such as ecosystem services (including improving root characteristics, selecting for improved collaboration of roots with beneficial soil micro-organisms (e.g. mycorrhiza’s), improved flower morphology that does not reduce access to pollinators, etc.)
- The green revolution of food production is the only model of food production that can feed the world, provide nutrition security and help with facing climate change challenges
- Short supply chains
- Non-consensus around land and water rights, role or technologies and labor, Intensification/scaling up v. diversifying systems/shifting models
- Causes of hunger
- Globalized markets based on imports and exports or local markets based on local production
- access to good arable land
- fundamental respect for women's rights and for ecological justice
- The agricultural supply industry approach that is to increase yield with inputs that take the farmer into debt, in order to pull them into the cash economy, versus the approach of building fertility
slowly using low cost local resources and good management. These two systems are at odds with each other.

- Lack of global understanding about different global models of food production and consumption contexts (dominant western diet where most citizens purchase the majority of their food, have an abundance of choices of agricultural biodiversity and industrialized/package food products v. areas where securing nutritional diversity is a challenge, etc.)

**POLICY AND LEGISLATION**

- Certain details of seed legislation
- Appropriate criteria for verifying quality of farmer seeds
- Type of IP rights that should be used/allowed for the protection of plants and seeds
- Seed policy/seed law harmonisation
- The effectiveness of working to change policies
- Creating open seed source systems (and advocating fair seed) and thus moving away from the system of financing breeding through royalties and patenting, but then the question arises who then pays for breeding activities?
- To register or not register varieties
- Government subsidies for uniform varieties
- Conflicting government priorities e.g. like increasing seed replacement rates & conservation of local seeds
- Ways to transfer germplasm between countries (which is a key challenge)
- Seed quality, quality control and seed production standards
- Seed laws allowing farmers rights to save and sell seeds
- Implementation of the seed regulations
- Seed laws and property rights, including systems for certification and Intellectual Property Rights such as WTO, TRIPS and UPOV91
- Support from the policy makers in the region
- Seed legislations are biased towards the formal seed sector
- Respecting farmers’ rights and the need for seed sovereignty as key to food security (not forcing governments to accept UPOV’91 but keep UPOV’78 in place) which is not in favour of corporate seed businesses
- Role of seed registration and restriction on farmers rights
- Benefit sharing of profits arising from biodiversity conservation resources
- Role of plant variety protection in promoting use of diversity; though some initial movement towards more pluriform systems
- Voluntary monetary contribution for the accessed MLS material
- Cross-border seed trade
- Who are allowed to produce and sell seeds? Private seed companies Vs. farmers’, farmers’ groups and seed producer associations? How flexible national PVP law can be to allow farmers’ customary rights on saving, exchanging and selling seeds of Intellectual Property Rights protected varieties?

**ROLE OF FARMERS**

- Recognition of farmers’ rights
- Role of farmers in crop improvement, seed development and management
- Farmer participation in the early stages of variety development improves chances or genetic gain
- Farmers should be empowered to define problems and solution
- Organization at farmer level/local level
- Farmers seed systems are legitimate and viable and should be supported, integrated but not replaced
- Lack of concrete steps and methods to translate Farmers Rights into women's rights
- Gender responsiveness of breeding and seed programs is essential
- the value of promoting farmer-saved seeds
- How to support in situ seeds (multiplication, selection, breeding). Ex situ gene banks have received support and are functioning to some extend in many countries
- An effective balance between formal and informal seed systems
- The role of smallholder farmers in maintaining employment in rural areas
- Hybrid and GM seed versus vs. farmer accessibility
- Farmers' seed systems are viewed as backward and responsible for crises in African agriculture
- How to fund our community seed initiatives in ways that are still in alignment with our unique cultural values
- Strengthening farmer cooperatives and their networks contributes to adoption of new diversity
- Formal seed systems see farmer varieties as inferior, not seeing or acknowledging the richness of diversity, non-uniformity.
- Promotion of production of land-races among farmers
- Some critical food provisioners are often left out of the picture (fishers, livestock keepers, ag workers, landless, indigenous peoples)
- The need to incorporate aspects of social justice in seed production (fair prices for contract farmers who produce seed for the seed industry) and breeding models collaborating with farmers (or farmer breeders)
- Tension between academics and farmers regarding their roles, visibility and ability to change policy
- Balance between supporting farmers/communities as custodians, ways to make these systems sustainable (financially; legally)
- Farmers and their cooperatives can manage hybrids and hybrid seed
- Tension between NGOs and social movements, and the need to provide space for farmer organizations at the table

ROLE OF PRIVATE SECTOR
- The role of the private sector in seed systems
- Role and potential of non-conventional seeds (e.g. genetically-modified crops)
- Registration and commerce of local seeds
- Intersection between informal and formal seed systems
- Breeding methods
- Corporate needs of profit over public wellbeing
- Tension around profitable market-driven food systems and local control
- Efforts to co-opt major corporate seed and food interests
- How to improve the diversity on formal seed systems
- Corporate control and megamergers, opposing narratives regarding the role they play related to food security
- On the reward system to encourage innovations among researchers especially plant breeders

GMOs
- The risks of GM technology adoption in global South contexts (health vs socioeconomic)
- Need for hybrids and GMOs
- For the people in power, in control of finance, solutions are expected to be found in doing more of the same (GMOs; improved varieties of maize) and not in diversity
- Improved hybrid seeds and GMOs vs traditional varieties for food security, food sovereignty and nutrition
- Divergent views and understanding of biotech and new technologies

INVESTMENT
- On agricultural investments to ensure food security
- Financial support
- Public or private extension services and research
- Little agreement and understanding about the role of investment in this work
- Where funding should flow and why.

ROLE OF TECHNOLOGY
- There is a tension around who should drive research and technological advancements in seed and production systems (i.e. need for centralized control, distribution, regulation, vs. open source model,
- appropriate, affordable technology vs. high tech patented technologies
- Technology for seed preservation and storage
- Differing views on the role and use of technology in seed and food systems

IDEAS FOR DISCUSSION, KEY THEMES AND ISSUES

FRAMEWORK IDEAS
- What are the realities that we are discussing and wish to solve through the Shared Action Framework. It is key to have a common understanding of the problems that the initiative is meant to solve in order to be able to target the actions
- What are the opportunities and challenges for multi-stakeholder collaboration?
- An advocacy strategy to support agrobiodiversity and farmer-managed seed systems
- Networking on resilient seed systems
- A roadmap to engage different donors
- Ways to strengthen seed networks
- Coordination of initiatives
- Connecting the stakeholders
- Strategy for sharing key initiatives
- Where is the financing for supporting resilient seed systems?
- RSS network and platform/To have a space for sharing experiences would contribute to foster RSS
- Coherence amongst stakeholders
- Collaboration on resilient seed systems
- Collaboration in promoting resilient seed systems
- Sharing knowledge
- Action plan with realistic targets for promotion and advocacy of resilient seed systems
- Structures of organisation
- A shared action framework for seed sovereignty assessments; how does each community approach the stability of resilient seed systems in their region or locale
- Updates on Resilient Seed system initiatives
- Designing strategies to diversify food systems in the pursuit of sustainable food production and healthy diets.
- A joint action plan - clever networking - unity in diversity
- Common global Direction on Seed Systems
- Capacity building
- Basis for either a global or regional project to strength RSS and start the needed transformational change
- Best ways for private philanthropies to partner with farmer organizations
- How best to involve all relevant stakeholders while keeping the efficiency of the initiative.
- Best ways for private philanthropies to partner with development agencies to further agroecology
- How do we showcase good practice in order to keep the global conversation going, to best advantage the work on the ground?
- Timetable
- Support to grassroots initiative on seeds- local initiative on seeds hardly get support

CLIMATE CHANGE AND AGROECOLOGY/AGRICULTURAL BIODIVERSITY
- Threats to resilient seed systems: e.g. climate change, technological and legal enclosures. If we are to address the threats, we need to understand them well.
- Resilient Seed System in context of Climate Change and Increased Disaster Risks
- Agroecology and agrobiodiversity in light of climate change
- Climate resilience and resilient seed systems - to understand the links in order to promote these
- What are the challenges given climate change?
- Seed in disaster preparedness

SEED LEGISLATION AND POLICY
- How to best challenge the factors that undermine them (seed laws, Intellectual Property Rights, policies, etc.)
- Relevant policies, e.g. seed laws (including seed registration and certification), plant variety protection law, patent, etc. These policies, if inappropriate can kill whatever good initiatives on the ground
- Requisite policy environment to enable resilient seed systems to thrive and what are the barriers to that policy adoption
- The relevance / irrelevance of the ITPGRFA
- The impact of seed policy harmonization
- The importance of seed laws
- Plant variety protection (Breeders rights vs farmers rights)
- Regulations and political advocacy – it is necessary political support
- Government involvement/Government is a key player in regulation framework for RSS
- policy initiatives to favor diverse seed systems and biodiversity
- advocacy strategies to influence govt policies
- Policies laws that favour plant breeders and not small farmer systems are getting stronger. How can we strategically counter this?
- How to invest in work to overcome policy and regulatory barriers to seed system resilience
- policy issues affecting farmer access and control over seeds
- Compulsory seed registration and certification as given in most national seed laws is a menace to agrobiodiversity
- Government policy for Resilient Seed Systems
- What legal and governance mechanism could support the development of resilient seed systems?
- Local Seed systems policy framework
- Treaties and Policies on Seed System
- Policy support for the farmers right over seed system
- How to move forward in relation to the laws and policies being promoted around the world that favour professional plant breeders and undermine farmer managed seed systems.
- Legal challenges around resilient seed systems
- Policy affecting access to PGR and seed diversity Access to seeds is crucial to maintain agrobiodiversity and in developing climate change resilient crops. Appropriate policies can also promote access to diversity through support to farmer-maintained varieties, community seed banks, participatory plant breeding and seed diversity fairs. Such support may be through national legislation, regulations, guidelines, national plans, financial support, or decisions that favour the use of greater diversity by local, regional or national authorities. At the national level, the full implementation of farmers’ rights as enshrined in the Plant Treaty is perhaps the single most important step.
- Breeders exemption in Plant Variety Protection laws and in patent laws in index countries Sustainable food production cannot exist without innovation, as it is innovative research that leads to better performing varieties that ensure farmers get higher yield and sufficient income for their families. East-West Seed believes that strong and effective Intellectual Property (IP) protection is important in innovation, supporting R&D in continuously providing products for smallholder farmers in index countries. East-West Seed adheres to the preferred form of protection for plant variety, traits, and methods wherein there is allowable access to and use for further breeding. Patenting when used as incentive for innovation should not be applied to native traits which are found in nature but can be modified if applied to traits derived from mutants, and methodology is only deemed patentable if it is not a biological process. The patenting of a certain methodology/trait/variety would largely rely on country patent laws, the definition of patentable subject matter, the scope and quality of patent claims, and also the duration of patent protection. In most markets where East-West Seed operates, patent laws are either not enacted yet, or if a patent law has been enacted, native traits/varieties are not deemed patentable.
- Develop concrete alternatives to INTELLECTUAL PROPERTY RIGHTS and the current mainstream legislation for seed trading
- Benefit sharing
- Impacts of seed and intellectual property laws and policies on farmers’ rights - to anticipate the challenges for advocacy purposes
- The blurred line between proprietary and public genetic resources
- The design of seed legislation serving the needs of smallholder farmers and commercial seed business
- Advocacy strategies, including legal and anti-competition approaches, to block oppressive seed laws
- Are there ways to open boundaries between countries for diversity for the sake farmers needing access to more diversity for their resilience

**FARMERS’ RIGHTS**
- Advocating for farmers rights in light of multinational seed systems capture
- Farmers Rights as part of human rights (with particular focus on collective rights and intellectual property rights, right to land, right to knowledge) and governance of seed systems.
- How to have farmers rights implemented
- Ensuring farmers’ rights to keep and trade seeds.
- Defining strategies to safeguard/promote seed sovereignty/farmers’ rights to farm-saved seeds.
LINKAGES: EX-SITU | IN-SITU | FORMAL | INFORMAL
- The role of ex situ and in situ conservation
- Informal/formal seed system interface
- Unpacking formal seed systems -understanding power relationships, linkages with industrial food production and chains; social justice and equity issues, technology, ownership and technology
- A portfolio approach to seed systems -- Move from the classic approach that considers varieties in isolation to a new approach where various varieties are promoted and eventually cultivated together, at different levels and scenarios
- Collaborative arrangements between farmer organizations and plant breeders
- how can we strengthen connections between community based in-situ practices and centralized or extension research and practice
- Integrated Seed System (linking formal and informal seed system) as the Resilient Seed System
- Linking formal and informal seed sectors
- Unpacking farmer managed seed systems- understanding function of, linkages with food and seed sovereignty, culture, traditional knowledge systems and autonomy, marginalisation, threats and opportunities
- How to reduce the impact of the coordination breakdown among different stakeholders to improve seed systems. It is because I think there is a disconnection between stakeholders and therefore the motivations are pulling the seed system apart
- How formal and informal sectors can mutually co-exist and co-create solutions where they have common agenda Breeding institutions develop improved varieties for dissemination to farmers. Traditionally, farmers are considered as beneficiaries and mere adopters of improved varieties/technology. However, East-West Seed Company is actively engaging smallholder farmers during the process of hybrid variety development. They are active partners and participates in evaluating high performing hybrids that are adapted to local conditions. Through focused group discussion, farmer partners recommend the best performing hybrids to the “Product Advancement Committee” for commercial seed production. It is important to discuss how this partnership can be strengthened.
- role of private sector (wide sense) in increasing diversity available to farmers
- Options for collaboration between national gene banks and farmers.
- rethinking conservation...ex situ vs in situ balances
- ways to break boundaries between gene banks and community-based organizations and farmers
- Enabling environment for the seed business. Without a good environment, seed companies will not be able to operate freely to avail quality seed to farmers in sustainable manner
- Successful models of seed supply can rely on a combination of formal sources -- Incentives to diversity seed variety (intra-specific diversity) portfolios of seed suppliers
- Get an overview of all the perspectives about seed systems and ways how to find ways for them to co-exist
- Management of the coexistence of certified and non-certified seeds

LANDSCAPE, EVOLUTIONARY APPROACHES/OPEN SOURCE SEED SYSTEMS
- How to best support local seed activities
- Community initiatives and farmers' innovations: what models are already there and are proven effective. This can be replicated, supported and promoted and scale up to achieve resiliency.
- Seed and food sovereignty
- Researches and studies that will help strengthen seed systems and achieve resiliency. One of the key issues that led to agricultural researches biased to industrial type of agriculture is the dwindling
funds for public research which forces research institutions to accept funds from private sector and/or multinational corporations who dictate on what they should research.

- Women, youth and culture for resilient seed systems. The role of women as caretakers of agricultural biodiversity and the youth as future food producers are very crucial to consider in planning any intervention. Culture is very much linked to agricultural biodiversity and traditional practices that promote conservation and sustainable use of agricultural resources.

- Seed systems for a diversity of farmers - what works for whom?
- Local contexts and adapted seeds systems
- Best practices, alternatives and policies that support farmers seed systems
- The need to protect and value areas in the world where crop wild relatives are present
- The role of Native and Indigenous peoples and traditional ways of farming and seed saving
- Value of evolutionary services provided by traditional agriculture
- Roles small scale farmers have in relation to food security
- Systems to reach local farmers for their needs of seeds
- funding/support for social movements working on seeds/ag biodiversity
- Research on varieties according to local practices (for example the associations of crops)
- protection of traditional knowledge on PGRFA; Role of community seedbanks
- Encourage farmers for conservation local biodiversity
- How to enhance support to diversified farming practices both in developed and in developing countries?
- Popularizing local seed systems.
- Funding local seed systems.
- Defining/designing open seed source models
- Can open source seed offer a way to protect seed commons against ongoing exclusive appropriation (through patents)
- Dynamics of the processes that generate resilient seed systems
- Defining/designing systems-based approaches to breeding aiming at both ecological and societal resilience
- Understanding level of variation that you need in each trait for a crop in order to address some needs, you may require varieties that present certain level of variation within the same trait. Key issue: How much variation is necessary? Strategically picking varieties that complement each other, while allowing for redundancy so farmers have choices
- Promotion of food systems of indigenous peoples
- Protecting resilient seed systems and associated traditional knowledge
- What financial flows such as crop insurance, on-farm loans, and technical service provisions (ie how to deal with xyz blight) are necessary to enable growth and expansion of resilient community seeds systems now and in the future (taking into account climate scenarios)
- Policies and strategies to promote resilient seed systems - to assist with national advocacy efforts in order to gain government support for farmer-managed seed systems
- Examples of successful initiatives in promoting resilient seed systems across the world
- Farmers' roles in resilient seed systems - to explore farmers' roles and protect/promote these including in participatory plant breeding
- the importance of the cultural dimension of agricultural biodiversity; how can we use development of resilient seed systems to strengthen cultural restoration project and vice versa.
- How can farmers best be supported to continue as stewards of seed diversity (and its global benefits)
- OSSS - Present a likely compromise in commercial seed sector
- Building capacity of local gene banks and supporting their conservation efforts in light of the global challenges such as climate change, and food and nutrition security, the national gene banks and local germplasm repositories are crucial players in maintaining and enhancing agricultural biodiversity by making these PGR accessible to breeders and other users. However, most gene banks in third world countries have very limited financial support from their government. Providing the gene banks with adequate operational funds will enable them to efficiently implement their mandate of conserving and managing PGRFA and enhance utilization from both public and private breeding sectors.
- Sharing of initiatives that effectively support Farmer managed seed systems from programs to policies to activism
- What is the role of local food systems on strengthening the local seed systems
- What can donors do to support increased resilience? At what scale
- Maintaining and enhancing agricultural biodiversity. A highly diverse germplasm is needed to continuously develop resilient varieties with improved nutrition, high yield, and adaptable to a rapidly changing climate. Breeding institutions are continuously in search of new sources of high impact traits (e.g., disease resistance, tolerance to abiotic stress, etc.) which are usually present in primitive material, landraces and crop wild relatives. The effective preservation of these germplasm is crucial for present and future breeding programs
- What maximises the functional contributions of diversity and its contributions to resilience
- Biocultural diversity and the traditional knowledge, practices and innovations embedded in it
- How to move from successful community or landscape scales to national effectiveness
- Agroecology and integrated systems/landscape approaches
- Seed literacy/mentorship and education networks (we need to grow the next generation of seed stewards)
- Local communities at the heart of agroecological innovation. Discuss and raise awareness on the role of innovators of local and indigenous farming communities in the development of the diversity of seed varieties and of seed systems, which are key for resilient seed system to exist
- Examples of healthy seed systems around the world -- I do not have examples currently to contribute but hope that others do
- Best Practices in promoting resilient seed systems
- Global alternative to patenting seeds

**SCIENCE AND RESEARCH FOR RESILIENT SEED SYSTEMS**
- How to get reliable and up-to-date data and information on seed systems around the globe, about regulations, their implementation and impact on the users of the formal and informal seed systems
- Phytosanitary measures because this is the biggest seed trade barriers
- Assessing resilience of seed systems - what does it entail?
- Methodology to foster RSS/defining a common methodology will facilitate the promotion and sharing experiences in RSS advances
- Options for seed quality assurance for small holder farmers
- How to support ongoing development of Agroecology at farm level with scientific research
- creating regional/global networks of on-farm conservation/researchers
- How to document farmer varieties, improve their access and ensure they stay in the hands of farmers (no exclusive ownership). How to make use of digital platforms
- How to create alliances to enhance the participation of the seed networks and farmers’ organisation in the formal research
- Using science to make a case for resilient seed systems
- documentation of varieties - this is useful for conservation and prevention of bio-piracy
- How to finance collaborative work between farmers and researchers
- Rethinking research and development in agriculture in general
- Research needs
- Evidence gathering and documentation of good examples on the ground

SEEDS AND AGROECOLOGICAL FOOD SYSTEMS
- Best ways to support agroecology small enterprises and markets
- Agroecology and resilient seed systems - to better appreciate and understand the links in order to heighten advocacy efforts for both agroecology and resilient farmer-managed seed systems
- How seed issues are embedded in Agroecology
- Regenerative economics to fund community seed initiatives
- How to transition to agroecology
- Encouraging diversity and educating consumers
- How can we better identify robust and resilient seed systems for agricultural biodiversity and enable funding flows or support self-sustaining markets?
- Defining aspects of social justice with respect to seed systems.
- How to get consumers involved in all this so that they are genuinely involved and have a say.
- Market based challenges around resilient seed systems
- Food sovereignty and seed sovereignty
- Links between RSS and agrobiodiversity and interconnected issues in the future of food (i.e. thriving food economies; diet and nutrition; climate, conservation and biodiversity, etc.)
- Wellbeing and nutrition and their linkages to biodiversity and culture. (Comment: We chose the above topics as we believe they together hold important solutions – or in the case of seed laws could represent barriers - towards more sustainable seed systems. However, key would be to not view or discuss these as isolated topics, but to ensure to link them together through a systems perspective within the overall framing of seed systems governance. Right to land, right to use and collectively manage genetic resources, right to knowledge and other rights need to be acknowledged to enable in situ conservation and endogenous development. Gene banks/community seeds banks, participatory plant breeding etc. are important existing methods, but for them to be effective there needs to be an enabling governance system where rights to resources, knowledge and territories are acknowledged.)

OTHER
- What is understood by the term "resilient seed systems". It is key that we get an understanding of the different perspectives represented at the meeting since this term is not self-explanatory and might have very subjective meanings to each and every participant.
- Socioeconomic risks of GM adoption in developing countries
- After 20 years of social movements on seeds, where are we now? What have we achieved? Where have we failed and how do we move forward?
- Orphan crops
- Are there areas where the Big-4 agribusinesses can support democratic control and management in seed systems?
- Financing of the system
- Formal mechanisms to learn from each other
- Transformation processes - how do we move from here to more resilient seed systems
- How to fund the work done by seed networks in the collective management of cultivated biodiversity
- Capacity building on seed system development
- How to involve the government in a sustainable way to improve seed interventions
- Genetic engineering present real threats to agrobiodiversity
- What to do in the face of genetic engineering and more recently developed technologies
- Governments support only (or mostly) the agro-industry instead of family farmers, agrobiodiversity and agroecology
- How to move forward in the relationship with the large seed companies? Do we ignore them? Can we be partners?
- Collaborations to scale out resilient seed systems
- Seed access - seed systems should allow all farmers access seeds
- Protection of seed resources from patenting
- Common advocacies on Seed system
- Strategy for documenting and sharing these ideas
- How do we improve seed system interventions?
- How to support the farmers and processors to promote the use of OPV
- Role women farmers in resilient seed systems
- How to develop high level training activities for farmers and seed networks in collective biodiversity management
- Corporations fail to see the threats to life on earth their policies are creating. Answering the needs of the planet and the population will mean they loose profits. What is their place in the global agenda then?
- Level the playing field- what is required to be done at the global, national and regional levels to bring about equity in seed systems?
- Women's Rights and resilient seed systems
- How can we support knowledge exchange and capacity building across the field?
- How do we strengthen the seed movement?
- How far have we mainstreamed gender and social inclusion?
- International trade vs local supply
- Changing the narrative

RESILIENT SEED SYSTEM INITIATIVES
The following initiatives were identified by convening participants as critical for engaging about resilient seed systems.

BILATERAL INITIATIVES
- 2030 Agenda and UN Sustainable Development Goals
- Platform for Agrobiodiversity Research
- Bioversity International (including CCAFS)
- Committee on Food Security, particularly the coalescing power of the Civil Society Mechanism that brings together hundreds of people from around the world
- CGIAR
- Convention on Biological Diversity
- The Crop Trust
- Efforts at Sui Generis Seed and PVP laws
- The FAO Commission on Genetic Resources for Food and Agriculture
- FAO in its work recognizing the role small-scale farming
- FAO Scaling up Agroecology
- ITPGRFA Expert Group on Farmers’ Rights
- IPBES
- International Treaty on Plant Genetic Resources for Food and Agriculture
- International Union for the Protection of Plant Varieties (UPOV) UN Declaration on Rights of Peasants and other people working in rural areas
- Research Program on Roots, tubers and bananas of the CGIAR
- Seeds for Needs by Bioversity International
- Seeds and Plant Genetic Resources, Plant Production and Protection Division
- TRIPS, UPOV and other intellectual property rights regimes
- TEEBAgriFOOD
- Various UN Human Rights Declarations on peasant rights, rights of women
- World Intellectual Property Organization (WIPO)

GLOBAL INITIATIVES
- Farmer Research Networks for seed production, variety development and sharing
- GEF, range of supported agrobiodiversity projects
- Hivos Open Source Seed Systems
- Integrated Seed Sector Development by Wageningen Centre for Development Innovation in various countries
- Kokopelli Seed Foundation
- McKnight CCRP
- The Nyeleni/Food sovereignty and agroecology social movements; and the networks they have created globally
- Organic Food System Program
- Oxfam Novib and partners: Sowing Diversity=Harvesting Security
- seedsystems.org
- Slowfood Ark of Taste
- Sustainable Food System Program
- La Via Campesina

REGIONAL INITIATIVES
- 3AO - Alliance for Agroecology in West Africa launched in Dakar in 2018
- AFSA
- AGRA
- African Union
- Bauta Seed Initiative in Canada
- Beacons of Hope examples of the work around the world
- Bhutan and Vanuatu's 100% organic national agricultural policies (and many more on state and regional levels)
- COMESA in East Africa
- Diversity, the Academy of Sciences, the Academy of agricultural sciences, Tajik Agrarian University, the Committee for Environmental Protection
- ECOWAS in West Africa
- Economic Cooperation Organization of Central Asia
- Emerging policies in mexico under new administration
- www.farmlandgrab.org/
- GIAHS, Satoyama, and large systems
- Indigenous Seedkeepers Network
- Integrated Seed System Development in Africa
- Integrated Seed System Development in Ethiopia
- LIVESEED project (EU project with a multi-actor approach involving 17 countries and 35 partners, running from 2017-2022)
- MASIPAG (Philippines)
- Ministry of Agriculture, National Center for Genetic Resources, the Conservation Center for Biological
- Navdanya
- NESFAS and the Indigenous partnership on agrobiodiversity
- Open Seed Source Initiative (J. Kloppenburg a.o.)
- Organic Seed Alliance
- Participatory Plant Breeding project in South West China
- Peoples' movements - rural women farmers cooperatives in west Africa
- Searice initiatives in South Asia
- Seed Savers Exchange
- State level policies in Meghalaya, India in favor of Indigenous food systems
- Svalbard and its current and potential links with in-situ research and practice sites like the Potato Park in Peru
- USC Canada's Seeds of Survival Program
- Zero Budget Natural Farming in Andhra Pradesh, India

OPPORTUNITIES FOR ENGAGEMENT
- Alternative organic/agroecological farmers
- Creation of national, subcontinental and world gene banks
- The community of practice that is supporting in-situ conservation, farmer-led research, and farmer-to-farmer learning, knowledge sharing, exchange and networking, in countries and around the world
- Community seed banking
- A consortium of donors supporting farmer-managed seed systems
- The design of seed legislation serving the needs of smallholder farmers and commercial seed business
- Develop and adopt a special program in countries for the formation and development of agrobiodiversity conservation seed production at the community level with the involvement of specialists and experts, experienced farmers, scientists–agrarians
- Disseminate the information about seed system
- Ecologist movement
- Environmental protection
- Evolutionary plant breeding
- Ex-situ conservation initiatives, including national seed/gene banks
- Farmer managed natural regeneration
- Financial mechanism to support community seed management systems, including capacity development
- Generate/ built trust/ make dialogue to gain support for the seed system
- Global agreement to reform or change all policies that restrict farmers access to seed diversity
- Global peer-to-peer learning institutions and seed exchanges
- Governments need to develop and implement support programs to create favorable conditions for strengthening the conservation of agrobiodiversity of community-based seed systems in the country.
- Healthy food
- Identify potential allies including political personnel that will be invited for the meeting to Generate support for the seed supply system
- Indigenous Peoples networks for food and agriculture
- Initiatives of local markets (farmers' markets, small bio shops, etc.)
- Legally binding instrument that mandates states to protect agricultural biodiversity and support farmers' Legislative changes and amendments as the establishment of knowledge-based seed systems based on community experience.
- Lobby for simplification of the Geographical Indication or other 'Agroecological Branding' tools to create 'premium price' for biodiversity-based products in market
- Local capacity to store and preserve seed quality
- Local promotion and dissemination system to reach all farmers in the villages
- Local seed businesses
- The movement to establish local governance mechanism such as Food Policy Councils
- Participatory plant breeding
- Permaculture and other approaches that emphasise diversity
- Production of quality seeds of preferred varieties (local and research)
- Promotion of community seed banks
- Regular coverage of local farmers – seed growers’ activities through the mass media, as well as preparation and presentation of series of transmissions on importance of preservation of variety of community base seeds system for the food security and human health can greatly improve the situation in the region.
- Research of varieties adapted to different systems of agriculture (simple, associations,
- Responsible consumers movement
- Seed management systems
- Seed Networks
- Stronger lobby and advocacy for greater linkage between on-farm management and ex-situ conservation of agrobiodiversity
- Support local initiatives to utilize as a model for the seed system
- Virtual information platform (like virtual seed bank) regarding crops, varieties and associated traditional knowledge, making accessible to organizations/institutions/change agents involved in local seed systems and agrobiodiversity management.
RESILIENT SEED SYSTEM STAKEHOLDERS
The following stakeholders were identified by convening participants as critical to engage on related
to resilient seed systems.

UN AGENCIES
- Development agencies (USAID, DFID, etc.)
- Farmers, all types of farmers from small to big
- ITPGRFA Governing Body
- Indigenous Peoples
- Indigenous and small holder farming communities who are not organized into a federation
- Local communities and small-scale farmers organisations
- Platforms and arenas promoting dialogs (Platform for Agrobiodiversity Research, FAO)
- Smallholder farmers including women and youth

NATIONAL GOVERNMENT
- Agriculture Ministry (or other ITPGRFA focal point), Departments
- Commission on Higher Education to promote plant breeding and PGR programs
- Department of Agriculture implementing national and international policies on PGRFA
- Environment and Health Ministries
- Ministries of Agriculture

REGIONAL AND NATIONAL GENE BANKS
- Agricultural extension agents/workers/ development workers
- Commercial seed companies
- Crop research institutes/academia in global South
- Development workers
- Extension agents
- Formal and 'informal' researchers, particularly those using participatory methodologies
- Knowledge Holders (Traditional, Academic, or Other) of specific systems
- Plant breeders and genetic resource specialists
- Plant breeders / seed industry (private)
- Regulators of seed quality and information sharing
- Skillful seed technician to produce quality seed

NGOs
- CSOs
- NGOs defending farmers' rights and agroecology

PRIVATE SECTOR
- Agribusinesses
- Agro input dealers and their organizations
- Processing food industry and supermarkets
- Private companies
- Retailers
- Small business/enterprise working to advance markets for biodiverse, fair, ecological products
- Traders of grain (product and inputs)
CONSUMERS
- Food consumer's associations/Consumers
- General Public (as demand for specific kinds of foods/products grow it pressures providers to respond/adapt)
- Mainstream consumers

FUNDERS
- Funders in redirecting investment towards strengthening resilient seed systems
- Private philanthropists

Media was also identified.

RESOURCES
Below is a compiled list of useful resources identified by convening participants.

REPORTS & PUBLICATIONS
African Center of Biodiversity. 2018. Participatory Plant Breeding and Smallholder Farms.


Chaves Posada, J. 2015. Farmers' Rights Related to Plant Genetic Resources for Food and Agriculture in Malawi.


Coomes, O.T. et al. 2015. Farmer seed networks make a limited contribution to agriculture? Four common misconceptions.


WEBSITES, CAMPAIGNS & RESOURCES


Alpa: a voz de la tierra: www.allpachaski.com

East-West Seed: https://www.eastwestseed.com/


The Native Seed Pod: https://www.nativeseedpod.org

The Seed and Knowledge Initiative: http://earthlorefoundation.org/seed/the-seed-and-knowledge-initiative-ski/

Seed Sovereignty: https://www.seedsovereignty.info/our-resources/

USC Canada websites and campaigns: https://www.usc-canada.org/, seedsecurity.ca, seedmap.org, www.communityseednetwork.org
VIDEOS
Community Seed Bank in Nepal: https://www.youtube.com/watch?v=lWRNQD7Ysro

Seeds access documentary 2018: https://m.youtube.com/watch?v=DFvqoTaJEM

Smallholder farmer autonomy over seed production: https://www.youtube.com/watch?v=yeW6K8RrshQ&t=2s

Value of Household and Community Seed Banks: https://www.youtube.com/watch?v=vOP-BDVUz-o&t=7s

INFOGRAPHICS, PDF’S & PHOTOS
https://www.dropbox.com/sh/zgugerng6cqu4pg/AAC1SHS-9VoY9D6oUGdg8qMea?dl=0

RESOURCES OF NOTE
Harare Food Fest booklets (x 3): Coffee table style booklets that highlight the role of agricultural biodiversity and farmer seed systems.