AGROECOLOGY CONFERENCE & EXHIBITION ON COMMUNITY SEED SYSTEMS

CONFERENCE PROCEEDINGS

24 – 25 April 2024
Bangi Avenue Convention Center, Selangor

Forum Kedaulatan Makanan Malaysia (FKMM)
Malaysian Food Sovereignty Forum

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List of Acronyms

Acronyms	English
ABS	Access and Benefit Sharing
AEF	Agroecology Fund
AFSA	Australian Food Sovereignty Alliance
APBREBES	Association for Plant Breeding for the Benefit of Society
CAP	Consumers' Association of Penang
CBD	UN Convention on Biological Diversity
CBO	Community-based organisation
CEDAW	Convention on the Elimination of All Forms of Discrimination Against Women
CoSS	Community seed systems
CREATE	Consumer Research Education Awareness Training and Empowerment
CSO	Civil Society Organisation
CSRI	Community Seed Reserve Initiative
DSI	Digital Sequence Information
ECOSWED	Eco Setiu Wetland Ecotourism Discovery Initiative PLT
FAO	Food and Agriculture Organization of the United Nations
FEDCOT	Federation of Consumer Organisation India
FKMM	Malaysia Food Security and Sovereignty Forum
FMSS	Farmer Managed Seed Systems
GDI	Climate Emergency Coalition of Malaysia
GMO	Genetically Modified Organism
GRASS	Pertubuhan Alam Sekitar Sejahtera Malaysia
ICESCR	International Covenant on Economic, Social and Cultural Rights

Acronyms	English
IRBK	Community Seed Reserve Initiative, Malaysia
IP	Intellectual property
ITPGRFA	International Treaty on Plant Genetic Resources for Food and Agriculture
JEDI	Network for Ecology and Climate
KAMY	Klima Action Malaysia
MAT	Mutually Agreed Terms
NCDs	Non-communicable diseases
NFAM	Natural Farming Association Malaysia
NGO	Non-governmental organisation
PBR	Plant Breeder's Rights
PeSAWAH	Pertubuhan Persaudaraan Pesawah Malaysia
PeTA	Selangor Agro Transformation Plan (PeTA)
PGC	Penang Green Council
PIC	Prior Informed Consent
PNVP	New Plant Variety Protection
PVP	Plant Variety Protection
RUWFAG	Rural Women Farmers Association of Ghana
SAM	Friends of the Earth, Malaysia
SSN	Seed Savers Network
SRI-Mas	Malaysian Agroecology Society for Sustainable Resource Intensification

Acronyms	English
TWN	Third World Network
UKM	National University of Malaysia
UNDROP	UN Declaration on the Rights of Peasants and Other People Working in Rural Areas
UNDRIP	UN Declaration on the Rights of Indigenous Peoples
USPTO	US Patent and Trademark Office
UPOV	Protection of New Varieties of Plants (French: Union internationale pour la protection des obtentions vegetales)
WAS	We Are The Solution
WTO/ TRIPS	World Trade Organization/Trade- Related Aspects of Intellectual Property Rights

EXECUTIVE SUMMARY

The Agroecology Conference and Exhibition on Community Seed Systems 2024 (AECoSS24) was held on 24th and 25th of April 2024 at Bangi Avenue Convention Centre, Selangor, Malaysia. This conference successfully gathered around 150-200 participants including seed guardians and warriors, researchers, indigenous communities, small scale farmers, urban farmers, gardeners, NGOs, CBOs, CSOs, activists and exhibitors around Malaysia and other continents.

The conference was organized by 14 NGOs namely the **Malaysian Food Sovereignty Forum (FKMM), Third World Network (TWN), Consumers' Association of Penang (CAP), SRI-Mas, IDRIS Association, Pertubuhan Persaudaraan Pesawah Malaysia (PeSAWAH), Sahabat Alam Malaysia (SAM), GRASS Malaysia, Min House Camp, Natural Farming Association Malaysia (NFAM), MIM, Diribumi, Klima Action Malaysia (KAMY) and Pertubuhan Jaringan Ekologi dan Iklim (JEDI)**. AECoSS24 was **supported by Agroecology Fund (AEF), SAVE Rivers (Malaysia) and the Agroecology and Sustainability of Agricultural Systems (Austria).** Panels and participants from Australia, Kenya, Thailand, Zambia, Vietnam, Ghana, Tanzania, Philippines, Indonesia, India, Myanmar, South Africa, China and Malaysia gave their insights and research findings from their countries to raise awareness and new paradigm on various topics.

The aim of AECoSS24 is to bring together community representatives and guardians of biodiversity working on seed conservation initiatives based on agroecological approaches. The main objective of the conference is to promote Community Seed Systems (CoSS) through the lens of Agroecology (AE). Other than that, this conference provided space to share and showcase successful and best practices in CoSS around the world and Malaysia. Through this conference, participants were able to network besides recognising and empowering communities, seed savers, indigenous peoples and women as the guardians of biodiversity. Sharing experiences and stories were very important to raise awareness on the value and importance of seed saving, exchanging and sharing practices in agroecology-based food systems. Most importantly the conference was able to raise awareness on threats and challenges in agroecology-based seed-saving initiatives and offered recommendations to address these issues.

The exhibition featuring four thematic categories were held concurrently with the Conference. The first theme is Culture and Ritual where insights were given on the social and human connections to seed heritage and wisdom, values of heirloom seed cultures, rituals, folklores and stories behind seeds. The second theme is Seed Guardian/Warrior/Saver Corner where seed guardians and savers get to meet-and-greet, while sharing and exchanging their seeds. The third theme is Agroecology-based Knowledge and Technology that showcased inventions, innovations, and

technology from agroecology-based CoSS. The final theme, Future-Nurture-Nature showcased the vital role of future generations, youth and children as seed guardians of the future. A total of 22 exhibition booths comprise of showcases by NGOs, CSOs, CBOs, residential organizations, farming and indigenous communities, seed guardians, permaculture practitioners and urban farmers. The local and international exhibitors displayed various items from a variety of seeds, saplings, banana chips, fertilizers, fresh and dried produce to natural baskets, yoyo toy from seeds, plannable papers and urban farming education materials. The wide range of materials and items demonstrated the diversity and richness of what a community seed system can be.

Community Seed Systems (CoSS) is a crucial embodiment of Agroecology for advancing just transition towards thriving and resilient food systems. These practices recognise the roles of farmers, indigenous women and communities in safeguarding local biodiversity through local wisdom and cultural heritage with spaces for co-creation.

While traditional conference proceedings often adhere to a formal academic structure, complete with comprehensive papers and abstracts, this publication aims to bridge the gap between academia and the broader community. **By adopting a creative writing style, we hope to make the proceedings more accessible and engaging to a wider audience, including members of the public.** Despite the shift in style, the content remains informative and thought-provoking, offering in-depth discussions on relevant topics. This unique approach seeks to foster a deeper understanding and appreciation of the conference's themes among both academic and non-academic communities.

Conference delegations from local and international organizations

DAY 1: 24 APRIL 2024, WEDNESDAY

1. Welcoming Remarks
Nurfitri Amir Muhammad,
AECoSS24 Organizing Chair

Nurfitri Amir Muhammad, head coordinator of the Malaysian Food Sovereignty Forum delivered the welcoming remarks

The conference started with a speech by Mr. Nurfitri Amir Muhammad, AECoSS24 Organizing Chair, welcoming all distinguished speakers and participants. Mr. Nurfitri explained the purpose of the conference, which is to strengthen the network of communities, practitioners, farmers, gardeners, and champions of seed saving in safeguarding traditional knowledge and practices on ecological agrobiodiversity. The main aim is to strengthen local production, consumption, marketing of organically grown food and, the wellness of the people, provide income for farmers not only during crisis but as a mainstream alternative to a sustainable and reliable earth-friendly food production system. He mentioned that this conference has gathered participants from 16 different countries and expresses his hope that they could share their experiences, knowledge as well as perspectives in the duration of the conference. Amir pointed out that the participants are considered guardians of the seeds or seeds savers of the past and custodians of the future. Seed warriors consist of individuals or groups who collectively make up Inisitatif Rizab Benih Komuniti (IRBK). The conference converges international participants, panel and the guardian of seeds from 16 different countries to make connection and networking, to learn, re-learn and unlearn from each other.

Mr. Nurfitri believes that their role is crucial in preserving, protecting, and promoting seed diversity which is not only a service to the community but most

importantly a gift to the world for future generations to come. He then underlines two main key words in this conference which are agroecology and seed. Agroecology is a practice that uses ecological concepts and principles to design a manageable food system based on knowledge as well as environmentally friendly, socially responsible, innovative, and skilled labour agriculture production. It seeks an approach to transform and address complex issues such as climate issues, environmental degradation, poor nutrients, and corporate concentration. For seeds, seed saving is considered an integral component to ensure agriculture resilience and food security. He added that by saving seeds, various plants can continue to exist even when environmental condition changes. The seed is an important input for sustainable agriculture thus the effects of other inputs depend on the quality of seeds.

Therefore, seeds should be preserved from private ownership and the use of any technology that goes against the thirteen principles of agroecology. Mr. Nurfitri emphasized that the conference is a platform for all participants to learn about each other's challenges and success stories along with collaborating to achieve a common long-term goal which is promoting agroecology as well as community seeds. Awareness and interventions by seed communities at regional and continental scale can reduce the negative impacts of unsustainable food systems with alternatives that focus more on system-wide approaches. Lastly, Mr. Nurfitri hoped that the conference encourages everyone to share their stories and showcase their work to inspire seed communities and beyond in transitioning towards more resilient, equitable and earth-friendly food production system and solutions.

2. Welcoming Speech
YB Tuan Ir. Izham Bin Hashim,
Selangor State Exco for Agriculture and Food Security

YB Izham's started his speech by sending out his gratitude and welcoming all the participants to the conference. He hoped that the conference could bridge the community closer by sharing each other's information, knowledge and to improve future cooperations and enhance understanding in facing current challenges as well as opportunities. In this occasion, Mr. Izham promotes the state of Selangor as a beacon of modernity and progress in Malaysia. He added that Selangor is renowned for its dynamic urban centres, bustling industries, and vibrant culture but it is also a significant contributor to the agricultural sector. He also pins out that Selangor is the most modern state in Malaysia and maintains a deep root connection with agriculture heritage. Selangor is currently underlining the importance of modern agriculture practices to enhance productivity, sustainability, and profitability in the agricultural sector from high end greenhouse to agro tourism ventures.

YB Tuan Ir. Izham bin Hashim, Selangor State Exco for Agriculture and Food Security, conveyed the welcoming speech via a video message

Mr. Izham also mentioned the Selangor Agro Transformation Plan (PeTA) that serves as a blueprint for modernization farming method while promoting environmental stewardship. PeTA, he said, encapsulates the core objectives and strategies of Selangor agro transformations plan. Firstly, PeTA emphasizes the cultivation of high-value crops and livestock to maximize returns for the farmers and enhance the economic viability of Selangor's agricultural sector. Secondly, PeTA promotes modern,

environmentally friendly and sustainable technology by leveraging technology such as renewable energy and eco-friendly inputs. Thirdly, PeTA recognizes the importance of a robust, complete and integrated food supply chain to ensure food safety quality to minimize food loss, increase food safety, and improve market access for agricultural products as well as the development of components that that made up the food supply chain especially seeds and livestock. Fourthly, PeTA appraises a strong emphasis on nurturing agropreneurs and entrepreneurs within the agricultural sector who possess the skills and knowledge in value creation and business growth. Fifthly, PeTA recognizes the potential of agrotourism as a mean to diversify income stream, promote rural development and showcase agriculture heritage and attractions of Selangor. By developing agrotourism destinations PeTA aims to attract tourists, educate visitors about agriculture, and generate additional revenue for farmers and rural communities. He concluded his speech by highlighting the principles of PeTA in shaping Selangor's agriculture future towards sustainability, prosperity, and resilience.

3. Opening Ceremony

Akademi Bakat School (ABS), Malaysia & Inisiatif Rezab Benih Komuniti (Community Seed Reserve Initiative) Video Montage

The next session was two performances by students from the Akademi Bakat School. The first performance, Silat, was performed by students aged 7- to 18-year-old. Silat is the collective term for a class of indigenous martial arts from the Nusantara that surrounds the geocultural areas of Southeast Asia. The audience was immersed in the actions and movements of the performers. The second performance was a poem recitation by two students which was carried out in two languages English and Malay with the title, “Nature Forest”. The poem recital was executed gracefully by both of them that left the audience in awe.

The official video montage of the Community Seed Reserve Initiative Malaysia (IRBK) was screened to share and publicize local seed protection and conservation efforts. The goal of the initiative is to identify, gather, and conduct inventory of seed collections by seeds savers across Malaysia. The initiative also documents their life stories and struggles in their efforts to preserve the inheritance rights of the farmers. Currently, it aims to inventory 4000 plants and gather 200 seed guardians from all over Malaysia this year.

Students from Akademi Bakat performed the opening ceremony

4. Program Overview

Dr. Anni Mitin, Technical Committee AECoSS24

Dr Anni Mitin briefed the program overview to the participants.

At the start of her speech, Dr Anni Mitin expressed her excitement and gratitude to all participants for the unexpected turnout of a huge number of participants to gather at the conference consisting of seed warriors, individuals, communities, NGOs, and others. She stated that one of the purposes of conducting the conference was to bring together seed communities as well as raising awareness on issues facing the community. Dr. Anni outlined that the event was dedicated to serve as a forum for both the guest speakers and participants to indulge themselves in exchanging their knowledge and experiences. She explained that the program was designed to have agroecology and community seeds system components because sometimes when we solely focus on just agroecology, we tend to not know how the community seed system works. Therefore, it is important to know how both components integrate with each other.

Dr. Anni hopes that with this event, participants will have a better understanding of the importance of community whether urban farmers, indigenous people community, residential groups, gardeners and other communities. Before she ended her speech, each program session was explained briefly by Dr. Anni. Lastly, she wished all the participants a fruitful conference and emphasized the impact of this event.

Some activities amongst seed savers and participants on Day 1 of the conference – sharing information and exchanging knowledge and seeds.







5. Special Address 1
Angela Cordeiro,
Agroecology Fund, Brazil

Angela Cordeiro, co-director of Agroecology Fund, delivered the Special Address via video message

The first special address was delivered by Angela Cordeiro, one of the two co-directors of Agroecology Fund, ie, one of the co-sponsors of this conference. Through a recorded video message Ms. Cordeiro expressed her heartfelt warmth towards all participants of the conference and looked forward to the outcome of the program. She briefly presented on the background of the Agroecology Fund (AEF). It was established in 2011 to amplify agroecological solutions through three overlapping niches (1) Pool and grant funds (2) Influence and collaborate and (3) Provide a learning platform. Its main mission is to provide funding to help transform food systems around the globe based on agroecology approach with a combined total of $20 million through 370 grants in 88 countries.

The Agroecology Fund has helped many initiatives from various countries for instance the Indigenous Seed Rematriation in the USA, Free Seeds Network (*Red Semillas Libres*) in Colombia, Agency of Development Initiatives (ADI) in Kyrgyzstan, and more. Ms. Cordero reiterated that community seed systems are the foundation of food sovereignty, and it is one of the main areas of intervention that most Agroecology Fund partners are working with. She concluded by congratulating the Malaysian Food Sovereignty Forum (FKMM) for organizing this conference as well as the speakers, NGOs, and participants in protecting the community seed systems which is the very foundation of food sovereignty.

6. Special Address 2
Pierre Ferrand,
Food and Agriculture Organization of the United Nations (FAO), Rome

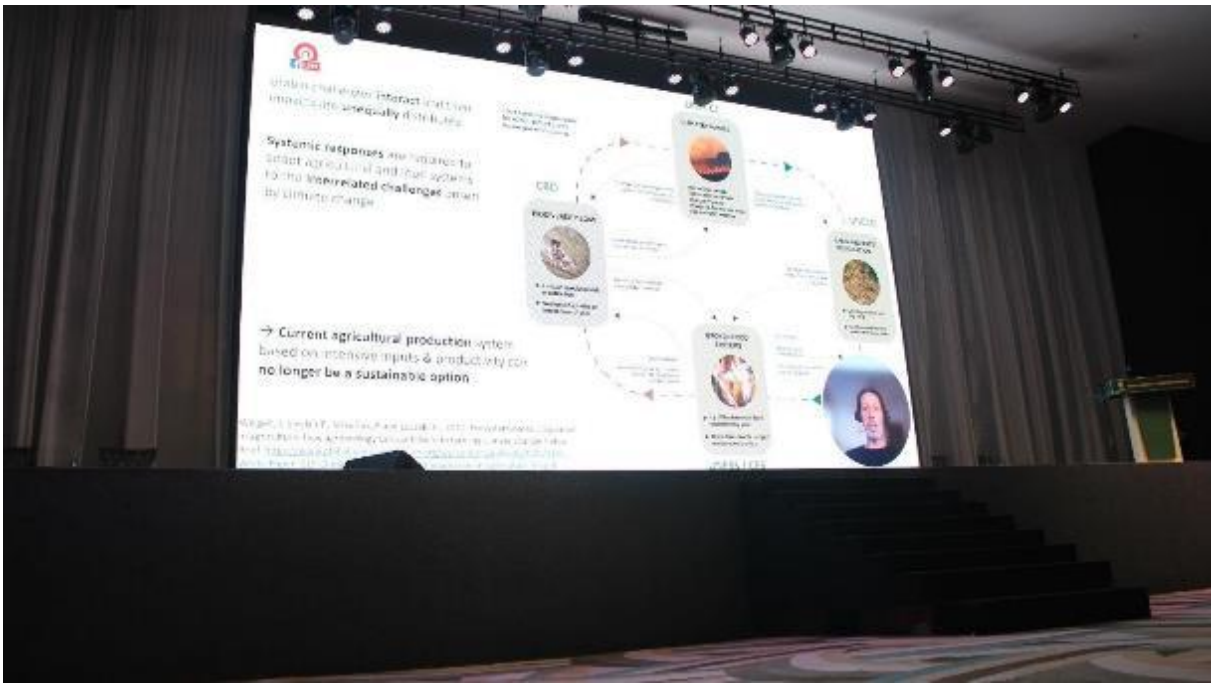
Pierre Ferrand of the Food and Agriculture Organization of the United Nations (FAO), delivered the second Special Address

The second special address was a video presentation on the topic of Agroecology, Seed Conservation, and Sustainable Food Systems by Mr. Pierre Ferrand, who is the Agricultural Officer (Agroecology and Ecosystem Services) at FAO. The current situation that we are facing is that the agrifood systems is calling for a paradigm shift. The global crisis of climate change, biodiversity loss, broken food system, and land and water degradation results in synergistic threats and challenges that must be addressed interactively. The food system agenda and food summit highlight three main points:

1. Global challenges interact and their impacts are unequally distributed.
2. Systemic responses are required to adapt agricultural and food systems to the interrelated challenges posed by climate change.
3. The current agricultural production system can no longer be a sustainable option.

He stated that the current food systems are not sustainable due to the production of greenhouse gas emissions, biodiversity loss, pollution, climate change, malnutrition, and social inequity. Thus, to tackle these issues, agroecology could be a transformative pathway towards sustainable food systems in the future. Agroecology addresses different objectives simultaneously as a means to achieve a diversified agroecological farming and the transition could start from different pathways such as subsistence agriculture, restoration of degraded land, and industrial agriculture.

The agroecology transformations are based on the ten elements of agroecology and thirteen principles of the High-Level Panel of Experts of the Food Security Committee. Specifically in FAO, agroecology is a holistic way to operationalize the new FAO Strategic Framework and promote the transition to sustainable agriculture and food systems. It supports production, environment, nutrition, life, and integrates them to achieve a sustainable agrifood system. Mr. Pierre stressed the concept of agroecology as an overarching umbrella under which many different approaches can exist as long as they are moving towards a sustainable and inclusive food system. He then pointed out that one of the tasks FAO is focusing on is generating evidence and strengthening the credibility of agroecology and one of the key tools to help develop agroecology is using Tool for Agroecology Performance Evaluation (TAPE). This will provide global and harmonized evidence on the multi-dimensional performance of agroecological systems particularly in supporting agroecological transition, developing capacities, informing policy makers and development institutions. He mentions that TAPE has been implemented in more than ten thousand farms in 54 countries and translated into 26 different languages. TAPE relies on two internationally recognized frameworks as a basis which are the ten elements of agroecology and performance indicators reflecting the contribution of agroecology to the SDGs as a means to engage policymakers.



Pierre Ferrand of the Food and Agriculture Organization of the United Nations (FAO), Rome, delivered the second Special Address

Mr. Ferrand also mentioned the importance of fostering policy dialogue and advocacy, specifically the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA). The first objective of this treaty is the conservation and

sustainable use of plant genetic resources for food and agriculture. Second, the fair and equitable sharing of benefits derived from their use in harmony with the Convention on Biological Diversity for sustainable agriculture and food security. There is one policy, that Mr. Pierre highlighted is Article 9 on Farmers' Rights which includes 5 main rights which are:

1. Protection of traditional knowledge.
2. Equitable participation in sharing benefits.
3. Participation in making decisions.
4. To save, use, exchange, and sell farm-saved seed/propagating material.
5. Recognition of the enormous contribution.

He emphasized the importance of knowing Farmers' rights such as promoting and sustaining the role of farmers as custodians of biodiversity as well as promoting food sovereignty, culture, and culture diversity. Among the tools available for promoting the realization of farmers' rights are the inventory of national measures, best practices and lessons learned. Finally, he mentioned a few resources for the participants to dive deeper on agroecology such as the Agroecology Knowledge Hub and Community of Practices on Family Farming and Agroecology. He concluded his presentation by wishing all the participants a successful conference.

7. Plenary Session 1
Chee Yoke Ling, Third World Network
Impact of International Laws on Community Seed Systems: CBD, FAO Seed Treaty and WTO/TRIPS

Chee Yoke Ling, director of Third World Network delivered the first plenary session.

The plenary session started with a presentation by Ms. Chee Yoke Ling. Ms. Chee reminded the participants about the importance of understanding the right policies and laws that would affect communities' day to day activities. At the beginning of the presentation, she said in most countries there would be two common national laws affecting seeds and farmers. First, the law for seed verification/registration for "quality" control" before planting or marketing is allowed which means that for those countries applying this policy, the seeds need to be approved by the government. The second law is regarding new plant variety protection which grants plant breeders rights in the form of intellectual property for the formal commercial seed sector. She added, that if the government joins different international agreements, then it will have legal commitments and obligations whether it is having a good or bad impact. Therefore, based on these laws particularly at the international level, not all farmers will be protected. It will mostly benefit the well-established companies. Community seed systems and farmers' rights are usually not recognized or are included in a limited way.

In the next part, Ms. Chee briefly explained the main international laws or agreements that have been joined by the government. There are several laws which include:

1. Convention on Biological Diversity (CBD)
   There are three main goals (1) Conserving biological diversity (2) Using biodiversity sustainably (3) Fairly and equitably sharing the benefits of

utilizing genetic resources. A total of 193 countries have joined the agreement.

2. Nagoya Protocol on Access and Benefit Sharing
   This agreement establishes a framework that helps researchers access genetic resources for biotechnology research, development, and other activities, in return for a fair share of any benefits from their use. It shall not restrict the customary use and exchange of genetic resources within and amongst indigenous and local communities. The Nagoya Protocol has been joined by 137 countries worldwide.

3. International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA)
   The objectives of the International Treaty on Plant Genetic Resources for Food and Agriculture are the conservation and sustainable use of all plant genetic resources for food and agriculture and the fair and equitable sharing of the benefits arising out of their use, in harmony with the Convention on Biological Diversity, for sustainable agriculture and food security.

4. World Trade Organization/Trade-Related Aspects of Intellectual Property Rights (WTO/TRIPS)
   The most comprehensive multilateral agreement on intellectual property (IP). It plays a central role in facilitating trade in knowledge and creativity, in resolving trade disputes over IP, and in assuring WTO members the latitude to achieve their domestic policy objectives. It frames the IP system in terms of innovation, technology transfer and public welfare. The Agreement is a legal recognition of the significance of links between IP and trade and the need for a balanced IP system.

5. UN Declaration on the Rights of Peasants and Other People Working in Rural Areas (UNDROP)
   The purpose UNDROP is to save, use, exchange, and sell farm-saved seeds. Peasants have the right to own their seeds and traditional knowledge. Countries implementing this rule should take appropriate measures to support the peasant seed systems as well as take into account the rights, needs, and realities of peasants and other people working in rural areas.

6. UN Declaration on the Rights of Indigenous Peoples (UNDRIP)
   UNDRIP establishes a universal framework of minimum standards for the survival, dignity and well-being of the Indigenous peoples of the world and it elaborates on existing human rights standards and fundamental freedoms as they apply to Indigenous peoples.

7. Plant Variety Protection (PVP)
   The objective of the Act is to provide for the protection of the rights of breeders of new plant varieties, and the recognition and protection of contribution made by farmers, local communities and indigenous people towards the creation of new plant varieties; to encourage investment in and development of the breeding of new plant varieties in both public and private sectors; and to provide for related matters. Several countries in Asia have opted for *sui generis* laws for example Malaysia, India, Philippines, and Thailand.

Ms. Chee mentioned a law that made her quite concerned because it's threatening farmers' rights and community seed systems. The law is called the International Union for the Protection of New Plant Varieties (UPOV). She views this law as a very monopolistic intellectual property agreement since it does not support and protect the communities. This system is primarily for the benefit of formal seed breeders and the private sector, especially seed companies. She also stresses that farmers cannot exchange or sell seeds from farm-saved seeds harvested from planting of protected seeds of Plant Breeder's Rights (PBR) holders. Moreover, the farmers' right to save and re-use seeds on their own farms from planting of protected seeds is very limited.

The other thing that makes this law troublesome is that it is also a threat to state sovereignty. She stated that if a country wants to join UPOV, the law of that country must fulfil the requirements given and if it could meet the requirements then the country's law must be changed. Hence, the UPOV Secretariat has more power to define and decide on a plant variety protection law than an elected national parliament. This shows that UPOV agreement is too rigid compared to other international agreements such as CBD, Nagoya Protocol, WTO, and FAO Seed Treaty. This is strengthened by a study conducted in 2014, the human rights impact caused by UPOV could limit farmers' capacity to access seeds and limit the sale of seeds. It also weakens the government's capacity to comply with other treaties. She later on added, the restriction on seed management could lead to a loss of biodiversity and harm the livelihoods of small-scale farmers.

Besides that, Ms. Chee said, the *sui generis* PVP system adopted outside of the UPOV convention could provide a better balance of rights and obligations relating to the Nagoya Protocol, Plant Treaty, and PVP. Finally, and above all considering everything, there are several things we must do says Ms. Chee:

1. All rights and obligations need to be properly incorporated into national laws.
2. Policies and laws related to plant varieties should not undermine other priorities.

3. Need to ensure conservation and sustainable use of biological resources, fair and equitable benefit sharing with farmers and protection of farmers rights.
4. Policy coherence to ensure that implementation is based on national needs and priorities which include farmers and community seed systems

SESSION 1

CO-CREATION OF KNOWLEDGE, PARTICIPATION, FAIRNESS, CONNECTIVITY, AND COMMUNITY VALUES IN COMMUNITY SEED SYSTEM (CoSS)

Moderator: Dr. Nurul Salmi Abdul Latip (JEDI)

Evidence 1: Strengthening Farmers' Rights in Community Seed Reserve Initiative

Nurfitri Amir Muhammad, FKMM, Malaysia

Mr. Nurfitri Amir Muhammad from FKMM, Malaysia, began by expressing gratitude and offering greetings. He outlined the initiatives undertaken in the Community Seed Reserve Initiative (IRBK – Inisiatif Rizab Benih Komuniti) and how they contribute to strengthening farmers' rights. Mr. Nurfitri emphasized the critical importance of farmers' rights to seeds in agricultural practices and biodiversity conservation. He noted that these rights are recognized and safeguarded by various international agreements and declarations, including the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA), the Convention on Biological Diversity (CBD) and its Nagoya Protocol, the United Nations Declaration on the Rights of Peasants and Other People Working in Rural Areas (UNDROP), the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP), and the Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW). These agreements underscored the significance of ensuring farmers' rights to seeds as a crucial aspect of sustainable agriculture and equitable access to genetic resources.

Through the IRBK initiatives, efforts are made to uphold and protect these rights, thereby empowering farmers and promoting biodiversity conservation in Malaysia.

Further in his presentation, Mr. Nurfitri elaborated on the key aspects of farmers' rights to seed, encompassing vital principles essential for the sustainability and equity of agricultural practices and seed systems. Firstly, he underscored the imperative for farmers to be cognizant of their rights to protect traditional knowledge associated with seeds and farming practices. Mr. Nurfitri emphasized the necessity of safeguarding this knowledge through various means, highlighting the risk of unauthorized use or theft. He stressed that farmers must assert their rights to ensure their traditional knowledge is only exploited with proper acknowledgement and compensation.

Secondly, Mr. Nurfitri emphasized the principle of equitable sharing, asserting that entities wishing to utilize farmers' genetic resources or traditional knowledge must provide fair compensation and access. He emphasized the significance of ensuring farmers receive benefits for their contributions to seed systems and agricultural practices. Thirdly, he highlighted the critical importance of farmers' participation in

decision-making processes related to crop genetic resources and associated knowledge. Mr. Nurfitri lamented the lack of adequate representation for farmers in high-level discussions, despite their pivotal role in seed systems. He advocated for farmers to have a voice in such decisions, as they directly impact their future and livelihoods.

Lastly, Mr. Nurfitri emphasized the fundamental right of farmers to save, use, exchange, and sell farm-saved seeds and propagating material. He cited instances from Malaysia where laws restrict farmers from saving certain seeds, such as rice seeds, infringing upon their rights. He stressed the necessity of recognizing and upholding farmers' rights to freely save, use, exchange, and sell seeds, as it is crucial for their autonomy and livelihoods.

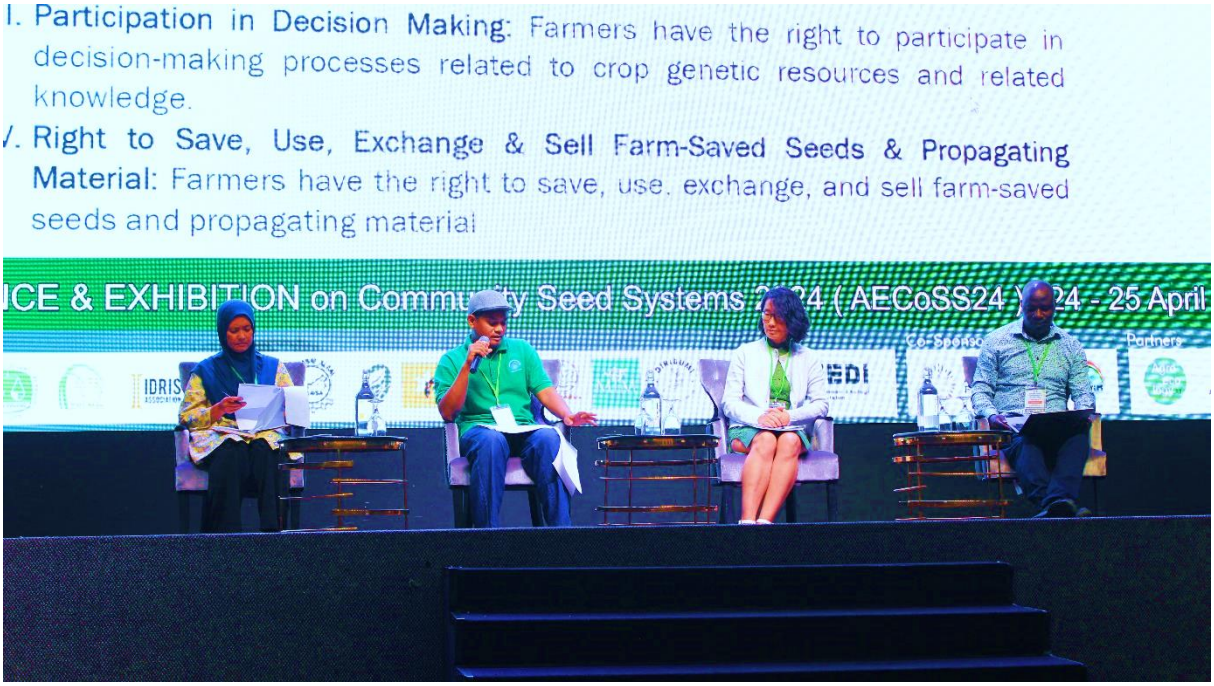
Continuing, he delved into the concept of a Seed System, providing clarity on its definition and components. He explained that a seed system refers to the network of stakeholders engaged in providing, managing, replacing, and distributing the seeds of a specific crop within a defined area. Drawing parallels with a supply chain, Mr. Nurfitri emphasized how seeds move from producers to farmers. He highlighted the existence of two main types of seed systems: (1) the formal seed system and (2) the informal seed system. In the formal seed system, these components are regulated by the public sector, with government standards setting the framework. Conversely, in the informal seed system, farmers themselves take charge of managing these components. Mr. Nurfitri emphasized the crucial role of farmers within the seed system, underscoring their responsibility in managing and preserving seed diversity.

Expanding on the distinction between formal and informal seed systems as outlined by Mr. Nurfitri, it becomes evident that each system operates under different dynamics and regulatory frameworks. In the formal seed system, uniformity is paramount, with seeds being supplied and distributed in a standardized manner. Certified seeds, often the only ones eligible for subsidies, are tightly regulated and controlled by the public sector, governed by laws such as the Plant Variety Protection (PVP) law and seed law. These seeds are predominantly utilized in commercial agriculture, where strict regulations and quality control mechanisms are enforced.

However, Mr. Nurfitri highlighted some drawbacks of the formal system, noting that the reliance on certified seeds can limit farmers' choices and perpetuate a cycle of dependency.

Conversely, the informal seed system operates on principles of trust and local knowledge. Seeds within this system are not uniform or certified but are instead locally adapted and predominantly used in local and small-scale farming. This system is governed by local customs, traditions, and practices, where buyers must trust the

seller's knowledge and reputation before purchasing seeds. Unlike the formal system, the informal seed system allows for bi-directional seed flow, enabling farmers to save and exchange seeds with friends and family members. However, Mr. Nurfitri highlighted challenges within this system, including legal restrictions that limit farmers' ability to share seeds freely.



Session 1, moderated by Dr. Nurul Salmi, presented evidence with regards to topics on Strengthening Farmers' Rights in Community Seed System

Mr. Nurfitri also discussed the impact of proposed amendments to existing laws, such as the New Plant Variety Protection (PNVP) law and the Seed Quality Bill, on community seed systems. These laws, if enacted without careful consideration, could impose stringent regulations that hinder the informal seed system's operation. For example, the Seed Quality Bill may require individual farmers to obtain licenses, potentially restricting their ability to save and exchange seeds. Moreover, the proposed amendments to the PNVP law could lead to disputes over ownership and intellectual property rights, further complicating the landscape for community seed systems.

In essence, Mr. Nurfitri's insights shed light on the complexities of formal and informal seed systems, highlighting the need for a balanced approach that recognizes the importance of local knowledge and farmer autonomy while ensuring quality and regulatory compliance. These considerations are crucial for fostering sustainable agricultural practices and safeguarding farmers' rights within seed system.

Community's Seed System/Farmer's Seed System (IRBK)

Mr. Nurfitri also emphasized the critical role of farmers' seed systems as a formalisation of informal seed systems, underscoring their significance in ensuring household seed security and promoting crop diversity. Despite their importance, these systems have not received adequate attention from government and development agencies in seed security endeavours. During consultations, farmers expressed their concerns about the lack of recognition and support for their seed-saving practices. Mr. Nurfitri recounted discussions with government officials concerning the necessity to formalise and document community seed systems, prompted by the government's persistent inquiries about available data. Reflecting on similar challenges in Indonesia's seed system, Mr. Nurfitri noted the absence of a database documenting seed-saving activities, and the number of seeds and plants involved. This dialogue ultimately culminated in the establishment of the Community Seed Reserve Initiative (IRBK) in Malaysia.

The IRBK stands as a pivotal effort to formalise and document the seed-saving practices within Malaysia's communities, thereby ensuring their recognition and safeguarding. By meticulously maintaining an inventory of the diverse plant species collected, the initiative aims to preserve and enhance agrobiodiversity, a cornerstone of sustainable agriculture. Through the IRBK, farmers are empowered to collaborate in seed-sharing endeavours, fostering the conservation of traditional knowledge and advocating for legislative measures that uphold common seed rights. Functioning as a vital seed reserve, the IRBK not only secures seeds for future generations but also champions sustainable agricultural practices that prioritise community empowerment and environmental stewardship.

The full recognition of the Community Seed System by the government is pivotal in bolstering FKMM's advocacy efforts for farmers' rights and anti-GMO campaigns. Integral to the IRBK's mission is the promotion of awareness and advocacy initiatives supporting farmers' rights and opposing GMO cultivation. Strengthening the community seed system entails empowering agricultural rights, ensuring equitable access to seeds, and safeguarding common ownership against exploitation for personal or commercial gains. Additionally, the IRBK aims to foster a culture of agrobiodiversity conservation among farmers and gardening enthusiasts, emphasising the importance of preserving heritage and local seeds. Through initiatives promoting seed sharing and exchange, the IRBK seeks to cultivate a spirit of collaboration and mutual support within farming communities.

Furthermore, the IRBK aims to raise awareness about legislation and agreements that impact common seed rights, thereby empowering farmers to navigate legal frameworks effectively. By providing education and advocacy on seed-related

legislation, the initiative endeavours to empower farmers to assert their rights and protect their seed heritage. In essence, the objectives and mission of the IRBK encapsulate a comprehensive approach to strengthening agricultural resilience, conserving biodiversity, and promoting equitable access to seeds within Malaysia's farming communities.

Seed Guardians

The IRBK's Seed Guardians embody a diverse array of backgrounds united in the mission of conserving agrobiodiversity and agricultural biodiversity. Despite facing challenges in recruiting seed guardians, with progress being slow even after nearly two years, the initiative has made significant strides. Through extensive discussions and farmer engagements over the past year, the IRBK has successfully enlisted 90 seed guardians across 14 states, comprising 59 individuals and 31 organisations. These guardians are dispersed across 23 urban areas and 67 rural or suburban regions, reflecting a broad geographical representation.

Central to the Seed Guardians' role is the collection and dissemination of stories, which are shared on the internet to raise awareness and facilitate seed searches. The initiative's website serves as a platform where individuals can explore various categories of plants and connect with collectors specialising in specific crops. For instance, there are nine categories of banana plants listed on the website, each with its unique varieties documented in the database. This comprehensive database enables individuals to access a wealth of information and seek guidance from website administrators regarding seed availability. Furthermore, the website features a list of seed guardians and their respective collections, facilitating interactions and exchanges within the informal seed system.

The informal seed system cultivated by the Seed Guardians underscored its importance as a vital component of the broader community seed system. Mr. Nurfitri Amir advocates for reframing the term "informal" to "community seed system," reflecting its significance and legitimacy within agricultural practices. By embracing this terminology, the IRBK seeks to elevate the status of community-based seed conservation efforts and foster greater recognition and support from stakeholders. Ultimately, the Seed Guardians play a pivotal role in preserving agricultural heritage, facilitating seed exchanges, and nurturing a culture of collaboration and knowledge sharing within Malaysia's farming communities.

Evidence 2: Challenges in Realizing Equitable and Fair Benefit Sharing in Community Plant Breeding

Karina Yong, Third World Network, Malaysia

Ms. Karina Yong in her presentation emphasized that seeds were the lifeblood of agriculture, capable of sustaining families, supporting farmers, and nurturing life itself. Drawing attention to global agricultural statistics from 2017, Ms. Yong highlighted the pivotal role of peasants as the primary or sole food providers to over 70% of the world's population, achieved with less than 25% of the world's agricultural resources. In stark contrast, the Industrial Food Chain, despite consuming at least 75% of global agricultural resources, provided food to less than 30% of the world's people, with 50% of its production dedicated to livestock feed. This discrepancy illustrated the imbalance between peasant farmers, who were stewards of seeds and the land, and industrial agriculture. Despite their crucial role, farmers' rights to their seeds were continually threatened and denied, particularly through biopiracy. Ms. Yong's session delved into these pressing issues and explored frameworks designed to safeguard farmers' rights through protocols for access and benefit sharing concerning plant usage, seed breeding, genetic resources, and traditional knowledge. It highlighted the urgent need to protect farmers' rights as stewards of seeds and champions of food security amidst the challenges posed by industrial agriculture.

Ms. Yong shared that Community seed systems serve as the backbone of seed access for small-scale farmers, offering seeds at affordable prices and with flexible payment options. These systems play a crucial role in ensuring that farmers can easily obtain, exchange, and utilise seeds that possess important traits suited to local agroecological conditions. The diversity of seeds available within community seed systems allows farmers to select varieties that respond well to their specific environmental and agricultural needs, thereby enhancing resilience in the face of changing conditions. However, this freedom and diversity are increasingly under threat. It's imperative to recognize the significance of community seed systems in providing accessible and resilient seed options for small farmers, whether they are urban producers or rural growers. According to Ms. Yong, by acknowledging the importance of these systems, people can work towards preserving and strengthening them to ensure continued support for small-scale agriculture and food security.

Ms. Yong continued her presentation, delving into the concentration of the seed market and its implications. She highlighted how the global seed market had increasingly become concentrated in the hands of a few major producers. In 1985, Pioneer was the largest seed company, holding a 4% share in the market with a turnover of 785 million. At that time, the top 9 companies collectively held a market share of 12.5%, indicating a more diversified market landscape. However, over 30 years, there has been a significant shift. By 2012, the top 9 companies controlled a staggering 62% of the market share, reflecting a consolidation trend driven by

intellectual property regimes and corporate mergers. She underscored the dominance of the four largest companies in 2012: Monsanto, Dupont Pioneer, Syngenta, and Limagrain. However, she noted that the landscape had since evolved, with Monsanto being acquired by Bayer, Dupont Pioneer merging with Dow to form Corteva Agriscience, and Syngenta being acquired by ChemChina. This concentration of power within a handful of corporations raised concerns about market control, pricing strategies, and the impact on farmers' access to seeds. Ms. Yong emphasised the need for regulatory scrutiny and policies that promoted competition and safeguarded farmers' rights in the face of increasing consolidation within the seed industry.

Ms. Yong then elaborated on the correlation between seed sales and petrochemical companies. She displayed data illustrating that in 2020, the top 4 companies in the seed market - Bayer, Corteva, ChemChina, and BASF - collectively controlled over 50% of the global seed market. Notably, these same companies were also the largest pesticide sellers. This overlap highlights the significant presence of petrochemical companies in the seed industry. Ms. Yong also raised critical questions about whether these companies prioritise sustainable agriculture, given their dual focus on seed sales and pesticide production. Ms. Yong emphasised the inherent conflict of interest, noting that the companies dominating the seed market are also incentivized to promote pesticide use. She questioned whether these companies would develop seeds tailored for sustainable agriculture, given their vested interests in pesticide sales. The intertwining of seed breeding with pesticide production raises concerns about the type of seeds being developed and their compatibility with sustainable agricultural practices. This linkage underscored the need for careful consideration and scrutiny regarding the development and distribution of seeds by pesticide companies. Ms. Yong's insights highlighted the importance of promoting independent research and breeding efforts that prioritise sustainability and environmental stewardship, rather than solely focusing on maximising profits from pesticide sales.

Ms. Yong continued her presentation by referencing Philip H. Howard’s study from 2015, titled "Intellectual Property and Consolidation in the Seed Industry." She highlighted the findings of the study, which revealed that intellectual property protections on seeds had increased dramatically in recent decades. Concurrently, the seed industry has undergone rapid consolidation, with larger companies dominating the market. These trends had significant implications, including a steep rise in prices for commodity seeds and a reduction in farmers' ability to save seeds. By leveraging intellectual property regimes such as patents, large corporations had effectively monopolised the seed market. This consolidation had profound effects on farmers, limiting their options and increasing their dependence on commercial seed sources. The study underscored the need for regulatory measures to address the growing concentration of power in the seed industry and to protect farmers' rights to save and exchange seeds. In essence, Ms. Yong's presentation highlighted the detrimental

impact of intellectual property laws and consolidation on seed diversity, farmer autonomy, and agricultural resilience. It underscored the urgency of implementing policies that promote fair competition, safeguard farmers' rights, and ensure access to diverse and affordable seed varieties.

Biopiracy: Rights Denied Extracting Royalty Payments Unauthorized Access

Ms. Yong continued her presentation, shedding light on the issue of biopiracy and the denial of rights associated with unauthorised access and extraction of genetic resources. She emphasised that biopiracy occurs when companies acquire genetic resources, such as seeds and plants, without obtaining consent from the communities that have traditionally used and conserved these resources for food, medicine, and other purposes. These genetic resources serve as the fundamental "raw materials" for new biotechnologies, which corporations often seek to patent for commercial gain. Patenting these genetic resources grants the patent holder monopoly rights for 20 years, during which they have exclusive control over the commercial use, distribution, and sale of the patented products or processes. This practice effectively excludes others from utilising these resources without the patent owner's consent, stifling innovation and restricting access to vital genetic resources. Besides, Ms. Yong highlighted the critical distinction between biopiracy and patenting, underscoring the ethical and legal implications associated with the unauthorised exploitation of genetic resources. She emphasised the importance of upholding principles of fairness, equity, and respect for traditional knowledge in the utilisation and commercialization of genetic resources. By addressing the root causes of biopiracy and promoting responsible stewardship of biodiversity, policymakers and stakeholders can work towards a more sustainable and equitable future for all.

Ms. Yong also continued to discuss famous examples of biopiracy, highlighting specific instances where corporations or individuals obtained patents for traditional knowledge or genetic resources without the consent of the originating communities or countries. One such example is the patent granted to an American company for the use of a pesticide extract from the neem tree. Another instance involved two scientists at the University of Mississippi being granted a patent for the use of turmeric to treat flesh wounds, which was successfully challenged by an Indian research organisation. Additionally, the US Patent and Trademark Office (USPTO) granted a patent on Basmati rice lines and grains to an American company, further illustrating the exploitation of traditional agricultural resources through biopiracy.

Digital Sequence Information & Data Governance

Ms. Yong proceeded with her presentation, delving into the complexities surrounding Digital Sequence Information (DSI) and data governance in the context of genetic resources. She explained how digital technology and bioinformatics enable

researchers, academia, and industries to access genetic resources simply by utilising genetic sequence information stored digitally in databases. However, she highlighted a significant issue: the lack of oversight and accountability in the sharing of DSI from different countries. Ms. Yong pointed out that some databases, sponsored by various entities including developed country governments, corporate organisations, and philanthropic groups, freely share DSI without verifying whether it has been uploaded by national laws or international agreements such as the Convention on Biological Diversity (CBD) and the Nagoya Protocol. This lack of verification enables companies to obtain monopolies over this information for profit in industries such as biotechnology or medicine.

The use of DSI for commercial gain exacerbated the problem of biopiracy, as it allows companies to exploit genetic resources without fair and equitable benefit-sharing agreements. Ms. Yong emphasised the need for regulations to ensure that permission is granted for the use of DSI, with agreements in place between providers and users regarding benefit sharing and other considerations. She further highlighted that the lack of tracking mechanisms for DSI allows ventures with commercial interests to profit from shared resources without adequately sharing benefits. This loophole enables them to bypass obligations for fair and equitable benefit sharing that would otherwise be required during the physical transfer of genetic resources across borders.

On Access and Benefit Sharing to Combat Biopiracy

Ms. Yong continued her presentation by discussing Access and Benefit Sharing (ABS) measures aimed at combating biopiracy and protecting the ownership of communities over their genetic resources. She explained that Article 15 of the Convention on Biological Diversity (CBD) and the Nagoya Protocol provide a framework for governing access to genetic resources and the sharing of benefits resulting from their use. These measures include Prior Informed Consent (PIC) and Mutually Agreed Terms (MAT), which require permission from the national competent authority of the provider country before accessing genetic resources, and agreements between providers and users on conditions of access, use, and benefit sharing.

Ms. Yong emphasised the importance of implementing the provisions of the Convention on Biological Diversity (CBD) and Nagoya Protocol in the national laws of signatory states to ensure effective protection against biopiracy. She highlighted Malaysia's efforts in this regard through the enactment of the Access to Biological Resources and Benefit Sharing Act 2017. She stressed that communities must have a voice in decisions regarding laws, policies, and practices related to genetic resources to ensure that farmers' rights are respected, protected, and enforced. In addressing measures to prevent biopiracy, Ms. Yong reiterated the significance of Article 15 of the CBD and Nagoya Protocol and emphasised the need for streamlined

legal frameworks to avoid bureaucratic complexities. She underscored the importance of active community participation in shaping laws and policies to safeguard national interests and protect against exploitation.

On What States Must Do

Ms. Yong continued her presentation by elaborating on the actions that states must take to uphold farmers' rights and ensure equitable participation in decision-making processes related to seed systems. She referenced Michael Fakhri, the UN Special Rapporteur on the Right to Food, who emphasised the importance of basing national seed systems on international agreements such as the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA), as well as human rights laws like the International Covenant on Economic, Social and Cultural Rights (ICESCR), Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW), United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP), and United Nations Declaration on the Rights of Peasants and Other People Working in Rural Areas (UNDROP).

Ms. Yong then outlined the key responsibilities of states, including fulfilling farmers' and indigenous peoples' rights to save, use, exchange, and sell farm-saved seeds freely as fundamental rights, ensuring equitable participation in benefit-sharing systems, and respecting their right to participate in decision-making processes related to various aspects of seed governance. This includes involvement in designing mechanisms to uphold farmers' rights. To actualize these rights, Ms. Yong stressed the importance of education and awareness-raising among communities to empower them to advocate for their rights effectively. Additionally, she highlighted the necessity for the national implementation of international instruments related to food, genetic resources, biodiversity, and human rights obligations. Moreover, she emphasised the need for government support, including funding and technical expertise, to facilitate farmer initiatives, community seed banks, cultivation of traditional or rare varieties, marketing assistance, and the promotion of traditional agricultural techniques associated with indigenous crops.

Taking Stock of the Journey; Challenges and Success

Ms. Yong continued the presentation by delving into the challenges that obstruct the realisation of farmers' rights and the safeguarding of genetic resources. These hurdles are multifaceted, encompassing factors such as the lack of knowledge among local communities, the intricate web of political, legal, and bureaucratic complexities, inadequacies in national implementation capacities, and the financial burden of operational procedures. Each of these challenges presents a formidable barrier to the protection of farmers' rights and the equitable sharing of benefits derived

from genetic resources.

To surmount these obstacles, Ms. Yong underscored the imperative of enhancing awareness and capacity within communities regarding issues about farmers' rights. Empowering local communities with knowledge and understanding can bolster their ability to advocate for their rights effectively. Additionally, she stressed the importance of implementing international laws safeguarding farmers' rights and genetic resources at the domestic level. This entails translating the provisions of international agreements, such as the Convention on Biological Diversity and the Nagoya Protocol, into actionable policies and legislations within individual countries. Furthermore, Ms. Yong emphasised the critical role of government support in bolstering farmer initiatives. By providing financial assistance, technical expertise, and other forms of support, governments can facilitate the establishment of community seed banks, promote the cultivation of traditional crop varieties, and foster sustainable agricultural practices.

Furthermore, Ms. Yong highlighted several successful initiatives from around the world that serve as exemplars in the realm of farmers' rights and genetic resource conservation. These include the implementation of the Access to Biological Resources and Benefit Sharing Act in Malaysia, the collaborative LitSara project between the Sarawak Biodiversity Centre and indigenous communities, the seed bank policy initiated by the government of Paraíba, Brazil, and the innovative TheruBeedi Seed Bank and Producer Group in India. These success stories underscored the potential for positive change when stakeholders collaborate and prioritise the protection of farmers' rights and genetic diversity. In conclusion, Ms. Yong reiterated the need for concerted action to safeguard farmers' rights and genetic resources. She emphasised that these efforts represent a form of resistance against the encroachment of human rights and the exploitation of natural resources. By empowering communities, strengthening legal frameworks, and enhancing governmental support, societies can create an environment conducive to the preservation of farmers' rights and the sustainable management of genetic resources.

Evidence 3: Women Empowerment and Communities' Seed Systems for Improved Seed Access with Agroecology

Mr. Daniel Njoroge Wanjama, Seed Savers Network, Kenya

Mr. Daniel N. Wanjama first shared his passion for seeds in Kenya and the essential role of farmers' organisations, which are rooted in the farmers themselves, was evident. He emphasised that the sharing of seeds is crucial for survival in farming communities. He then provided an overview of the Seed Savers Network (SSN), highlighting its profile and activities. SSN is a national grassroots network comprising approximately 3,900 registered farmer groups with over 405,000 household members throughout Kenya. Additionally, SSN operates 74 community seed banks across various regions of the country. Established in 2009, SSN is a civil society organization registered under the Societies Act (Cap 108). The mission of SSN is to conserve agrobiodiversity by strengthening community seed systems, thereby enhancing seed access and promoting food sovereignty. Their vision is to emerge as a leading advocate for diverse seed access among farming communities in Kenya. Through their initiatives, SSN aims to empower farmers and contribute to the sustainable management of agrobiodiversity.

Mr. Wanjama elaborated on the reasons behind the existence of the Seed Savers Network, emphasising the pressing issues they aim to address. One of the primary concerns is seed loss, which denies farmers their rights and undermines seed sovereignty laws. To combat this, SSN actively engages in consultations and draws upon traditional practices to protect seeds and uphold constitutional rights, despite facing contradictions in the legal framework. The organisation also recognizes the inherent value of seeds and the urgent need to ensure their accessibility to farmers. Mr. Wanjama highlighted the discrepancy in the seed market, where only a select few varieties are commercially available, neglecting the diverse seed needs of farmers. Through studies conducted, SSN has quantified the extent of seed loss, particularly among communities reliant on traditional seeds. In his village, this loss is palpable, further underscoring the necessity of making seeds accessible to farmers, regardless of economic constraints. The high prices of commercial seeds hinder access, prompting SSN to advocate for equitable seed distribution practices. Mr. Wanjama then continued by elaborating on the comprehensive implementation strategies employed by the Seed Savers Network (SSN) to tackle various challenges associated with seed conservation and access in Kenya. He emphasised the paramount importance of raising awareness and advocating for policies that prioritise seed sovereignty and incorporate gender-sensitive approaches. Through multifaceted initiatives such as agroecology and agroforestry, SSN aimed not only to conserve agrobiodiversity but also to empower farmers, with a particular focus on women, as custodians of traditional seed varieties and as promoters of family nutrition.

Highlighting the significance of seed festivals that had been done in Kenya, Mr. Wanjama explained how these community-driven events served as crucial platforms for farmers to showcase their seeds, exchange knowledge, and strengthen social bonds. With over 40 community seed festivals organised during each planting season, SSN facilitated community participation and strengthened local seed systems. Moreover, he discussed the innovative concept of community seed banking, emphasizing the collaborative efforts of farmers in preserving seeds through creative and sustainable methods adapted to local contexts. Drawing on the rich tapestry of traditional knowledge, Mr. Daniel underscored the importance of indigenous practices in seed conservation. Techniques such as Tithonia sap, dry cow dung ash, and sun drying were shared among farmers to enhance seed viability, resilience, and adaptability to local agroecological conditions. Furthermore, SSN actively promoted credit access for women in agriculture, enabling them to save money collectively, access markets for their products, and contribute to household income generation. In addressing post-harvest challenges in his country, SSN developed tailored strategies for dehydrating vegetables and conserving local fruits, thereby extending their shelf life and enhancing their marketability. Leveraging online platforms and mobile technology, the organisation aimed to amplify the reach and impact of its initiatives, promoting the consumption of indigenous fruits and encouraging tree planting initiatives. Through these comprehensive and community-driven approaches, SSN sought to strengthen community resilience, enhance food security, and promote sustainable agricultural practices across Kenya, ultimately contributing to the well-being and prosperity of farming communities.

Continuing his presentation, Mr. Wanjama proudly highlighted one of the notable achievements of the Seed Savers Network: the establishment of Seed Savers Nursery and conservation efforts. He also shared how the organisation had been invited to participate in tree-planting initiatives across various regions in Kenya. Over the past four years, a staggering total of 509,990 trees, including indigenous, nitrogen-fixing, and local fruit trees, have been planted in the Rift Valley, Western, Central, Eastern, and Nyanza regions of Kenya. Among the tree species emphasised in their recent efforts were Avocado (*Persea americana*), Guava (*Psidium guajava*), Loquats (*Eriobotrya japonica*), Mulberries (*Morus spp*.), Calliandra (Calliandra spp.), Leucaena (Leucaena leucocephala), Sesbania (*Sesbania spp*.), Grevillea (*Grevillea spp*.), Nandi Flame (*Spathodea campanulata*), and *Marhamia lutea*. These concerted conservation efforts underscored SSN's commitment to biodiversity preservation and environmental sustainability, contributing to the ecological health and resilience of Kenya's diverse landscapes.

Mr. Wanjama then continued to delve into the realm of advocacy and awareness creation, highlighting various initiatives undertaken by the Seed Savers Network. He emphasised that 15 farmers had courageously filed a petition against the

government, advocating for the rights of smallholder farmers and indigenous communities. Additionally, he mentioned the significant milestone achieved through the development of the Nakuru County agroecology policy, which aimed to promote sustainable agricultural practices and biodiversity conservation. Moreover, Mr. Daniel underscored the importance of farmers actively engaging in public participation processes to ensure their voices were heard in policy formulation. He also noted the network's involvement in plant treaty negotiations, further amplifying the advocacy efforts on behalf of farmers. To enhance awareness and amplify their message, SSN conducted citizen journalism training, enabling farmers to share their stories and concerns effectively. Furthermore, they utilised various media platforms, including radio, print media, and mainstream media, to disseminate information and engage with a wider audience, thereby fostering a culture of informed decision-making and collective action within farming communities.

Challenges and Lessons Learnt

Before ending, Mr. Wanjama continued by shedding light on the challenges and lessons learned from their endeavours. He expressed the limitations faced, such as insufficient resources for constructing seed banks, coupled with unfavourable seed laws that hindered their efforts. Additionally, he lamented the issue of biopiracy targeting farmers' varieties and highlighted the bottlenecks in supporting farmers to operate seed enterprises effectively. Climate change posed a significant challenge, compounded by limited technical support for community seed banks. Despite these challenges, Mr. Wanjama emphasized several key lessons learned: the critical importance of seed access in Kenya, the central role of farmers' managed seed systems in the supply chain, and the empowerment potential of seed saving for women. He underscored the pivotal role of seed saving as a driver of agroecology and stressed the significance of traditional knowledge in this process. Moreover, he highlighted the foundation of seed and crop diversity for climate resilience and lamented the loss of local varieties in Kenyan communities. Mr. Wanjama wrapped up his presentation with a note of gratitude, thanking the audience for their attention and expressing his desire to learn from their experiences.

Some of the exhibition boots with their displays and products

SESSION 2: RECYCLING, INPUT REDUCTION, ECONOMIC DIVERSIFICATION IN CoSS

Moderator: Theivanai Amarthalingam, Sahabat Alam Malaysia (SAM)

Evidence 4: Economic Values of Seed Conservation and Sharing Through Community-Linked Green Hospitality.

Prof. (Adj.) Anthony Wong Kim Hooi, Frangipani Langkawi, Malaysia

Prof. (Adj.) Anthony Wong runs a community-linked eco-friendly, Frangipani Resort in Langkawi, Malaysia

This session was presented by Latifah Zaidi, Environmental Manager at Frangipani Resort, Langkawi on behalf of Prof. Anthony Wong. Ms Latifah started of the session by giving some background to the hotel. Frangipani was established 17 years ago and presently it is well-known as a green hotel that inculcate green practices in its daily activities. It took very seriously food security issues and the 17 SDGs to tackle the issues from the smallest roots. One of its aims is to be a role model in the hospitality industry and demonstrate how each one of us can participate in going natural and contribute to the environment. The hotel's objectives are educating people on organic farming, to provide people with agricultural science skills, to create awareness in healthy eating, to research and implement organic farming and its related activities, to apply the concept of "less input, more output" and to prove that organic farming can be sources of stable income.

The hotel has an Environment Department unit that looks after all green practices. Staff of the department consist of four science or environmental degree/diploma graduates. This team was trained in the field of "Farming with Science" and "Educational courses" to ensure that "Green Tourism" is implemented correctly throughout the hotel and not for branding per se. This in line with Green Hospitality which is sustainable practices and eco-friendly initiatives in hotels and restaurants.

Frangipani practices food sourcing and consumption with a direct supply chain between producers and consumers, promoting and supporting local agriculture.

Ms Latifah then went on to describe Frangipani's natural farm in Langkawi, starting with its layout. The 1-acre farm is comprised of nursery, seed bank, vegetable farm, papaya beds, SRI paddy field, chicken coop, rabbit house, black soldier fly feeding centre and love house, stingless bee nest, solar dehydrator, and constructed wetlands where all grey water discharged into and undergo treatment. All of these individual components feed each other and forms a zero-waste integrated system. This system is a showcase of how an industry can be earth friendly and sustainable, ie, truly embracing green tourism, while profitable at the same time. The concept of farm-to-table is widely practiced at Fragipani where vegetables, fruits, herbs, and flowers used are all organically produced from its own farm. Frangipani is a family resort that organizes daily activities related to sustainability and farming, thus making it the very popular with guests. They have many retuning guests that enjoy getting their children involved in the activities.

At the farm, fresh, good quality vegetables are sent to the kitchen while very mature, dried ones are sent to the seed bank. At the restaurants guests have options where they can request organic foods. The farm produce 20-30% of the food in the restaurants but they continue to get very high demand for organic options. Another interesting practice is organic edible landscape where the land surrounding the hotel is optimized to produce food to supply to the kitchen. However, due to the hotel being in the vicinity of a beach, the soil is very sandy and salty, and not suitable for planting food plants. From a lot learning, consultation, experimenting, they finally acquired the formula of how to plant on sandy soil. The team has identified plants that can withstand the local environmental conditions and planted the landscape with them. For example, *ulam raja*, and mulberry grow well in this type of soil and environment, and so they are planted in large numbers. The team promote these a lot to their guests so much so that they have become synonym with the hotel.

Ms Latifah shared another green effort by Frangipani which is the seed bank intiative. This was established to preserve genes needed by the farm to improve crop yield and produce resilient seeds, as well safeguarding genetic material of plants species for future generations. They save seeds for two reasons, ie, to ensure the own continuous supply of organic seeds for their farm, and also to share them with others. The hotel also shares their seeds, cuttings and plants with the community or guests who are interested in farming. For example, they share 20 frangipani cuttings with the Kuah Police HQ ECO Marine Langkawi, flower cuttings with Geng Bersih Kampung and 100 moringa seeds distributed to participants of an aquaculture course from Jitra and many others.

For Frangipani hotel, with constant production, keeping and sharing of seeds,

they hope to produce more healthier and nutritious food, especially for the next generation. The advantage is the costs will reduce greatly as there is no branding fees included. Holding strongly to his motto, “Wealth must be spread, and knowledge shared”, Prof Anthony Wong’s dream is for Frangipani to become the greenest hotel and be an exemplary place to learning organic farming and giving back to mother nature.

Ms Latifah Zaidi presented the session on behalf of Prof Anthony Wong.

Evidence 5: Seed Saving, Sharing and Exchanging for a Self-Reliant and Sustainable Life

Jon Jandai, Pun Pun Center for Self-Reliance, Thailand

Jon Jandai shared his personal journey and insights on the crucial role of seeds in sustaining diverse and healthy diets. He recounted growing up in a community where his family and neighbours engaged deeply with a variety of plants, growing over 100 types of vegetables and multiple rice varieties annually. However, over the years, he witnessed a stark decline in agricultural variety. From thousands of rice types, only about 200 remain in Thailand today, alongside a drastic reduction in vegetable varieties available in markets.

Mr. Jandai expressed concerns about the rapid loss of food diversity and the increasing monopolization of seeds by large corporations, which he believes has led to a nutritionally impoverished diet reliant on a few staple products. This shift, he argued, not only impacts physical health but also strips communities of their cultural heritage and autonomy over food sources. The COVID-19 pandemic highlighted these vulnerabilities, with many people struggling to access food due to their reliance on commercially controlled supply chains.

In response to these challenges, Mr. Jandai founded the Pun Pun Centre for Self-Reliance in Thailand, an initiative dedicated to seed saving and knowledge sharing. The centre collects a wide array of seeds, offering them for free to anyone interested in cultivating them, aiming to revive and sustain agricultural diversity. Initially met with scepticism, the initiative gained traction through education and community engagement. Over time, the centre has grown into a vibrant community where people learn not only about agriculture but also about building homes, cooking, and living sustainably.

Celebrating over two decades of operation, the Pun Pun centre has become a hub for learning and living more in harmony with nature. It has saved over 2,000 varieties of food plants and established a broad network for training and sharing agricultural practices across Thailand. Mr. Jandai emphasized that seed saving is more than a practice – it is a movement towards freedom, resilience, and reclaiming a lost connection to the land. By returning to these roots, he believes communities can build a more sustainable and fulfilling future, preserving these precious resources for generations to come.

Jon Jandai from Pun Pun Center for Self-Reliance share his personal journey and insights on the crucial role of seeds in sustaining diverse and healthy diets

FORUM 1: STRENGTH, CHALLENGES, OPPORTUNITIES AND THREATS OF AGROECOLOGICAL PRACTICES IN CoSS

Moderator: Dr Anni Mitin, SRI-Mas
Panelists:

1) *Dr Nguyen Thanh Tam, Mekong Delta Development Institute, Vietnam*
2) *Anita Sutha, We Are the Solution (WAS) and Rural Women Farmers Association of Ghana (RUWFAG), Ghana*
3) *Li Guanqi, Farmers Seed Network China, China*
4) *Pessa Issa Kussaga, PELUM Association, Tanzania*

Panelist 1:
Dr. Nguyen Thanh Tam, Mekong Delta Development Institute, Vietnam

Dr. Nguyen Thanh Tam from the Mekong Delta Development Institute in Vietnam presented a comprehensive overview of the shifts in Vietnam's agricultural practices, with a focus on key commodities such as rice, fruits, shrimp, and catfish. Dr. Nguyen detailed the evolution from traditional rice cultivation to a diversified approach that includes fruit and shrimp due to varying soil and water ecologies. This transition has been marked by the gradual movement from an informal seed system, heavily reliant on local varieties and farmer knowledge, to a more formal seed system characterized by significant milestones such as the establishment of the Long Dinh Experiment Centre in 1966 and the entry of private companies in the 2000s.

Dr. Nguyen highlighted several strengths within the Vietnamese context, including the growing awareness among farmers about the impact of climate change on agriculture, particularly rice production. This awareness has spurred an increase in on-farm agricultural research capabilities and significant advancements in plant breeding to address climate-related challenges. Additionally, there has been substantial capacity building for local partners and farmers through participatory rice breeding, technical studies, and support for farmers' group networks.

Despite these strengths, Dr. Nguyen outlined several challenges, including the loss of genetic resources, a weak financial system supporting seed development, political issues related to seed ownership and intellectual property, and an increase in the use of agrochemicals which has led to declining soil fertility and rising input costs. The market-oriented production approach has also resulted in reduced diversity in crop production.

On the opportunities front, Dr. Nguyen mentioned that government policies supporting the formal seed system, coupled with the high demand for seeds, provide a conducive environment for growth. The vision for 2050 aims for safety, prosperity, and sustainability, emphasizing nature-based and ecosystem-based development.

This approach sees environmental risks as opportunities for developing a resilient agricultural sector.

However, the threats of pests, diseases, and climate change persist, presenting ongoing risks to agricultural stability. Dr. Nguyen suggested focusing on enhancing agricultural diversity on farms, improving incomes of farming communities, and strengthening local institutions to support on-farm plant genetic resources as future focal points.

In conclusion, Dr. Nguyen strongly advocates for community seed system to ensure rights to farmers and indigenous people on their seeds. He emphasized that despite facing challenges like climate change, Vietnamese farmers are knowledgeable and adaptable, using available resources to adjust their practices. The Seed Club Network plays a crucial role in securing seed sources for the community and improving the informal seed supply is vital for achieving seed and food security at the community level. Dr. Nguyen advocated for integrated solutions including good farming practices, appropriate farming systems, and strong market linkages to enhance the livelihoods of rice farmers.

Panelist 2:
Anita Sutha, We Are the Solution (WAS) and Rural Women Farmers Association of Ghana (RUWFAG), Ghana

Ms. Anita Sutha, representing "We are The Solution" (WAS) and the Rural Women Farmers Association of Ghana (RUWFAG), presented on the "Strengths, Challenges, Opportunities, and Threats of Agroecological Practices". She provided an insightful overview of how these organizations are working to promote agroecology among rural women and farmers in Ghana.

WAS and RUWFAG focus on promoting and valuing good, traditional farming practices and knowledge that have sustained generations. These organizations see the strengths of agroecology primarily in its ability to enhance biodiversity, which creates healthier, more resilient ecosystems for crops. Additionally, these practices contribute to improved soil health through techniques like crop rotation and the use of organic fertilizers, while integrated pest management helps maintain ecological balance.

However, Ms. Sutha highlighted several challenges facing the adoption of agroecological practices. The transition period can be lengthy and difficult for smallholder farmers, especially in achieving necessary certifications. There is also a significant need for more education and training to implement these practices effectively. Resource constraints are another major hurdle, as limited access to necessary materials and technologies can hinder adoption. Moreover, there is often a

fear among smallholder farmers and rural women of experiencing low yields during the transition to new farming methods.

Despite these challenges, Ms. Sutha pointed out several opportunities that agroecology presents. These include the potential for increased food security and health benefits due to the use of fewer chemicals and more sustainable farming methods. Policy shifts towards more sustainable agriculture could further enhance these benefits. Additionally, the availability of raw materials for organic farming presents significant opportunities for growth in this sector.

Ms. Sutha also discussed ongoing activities by WAS and RUWFAG to support the livelihood of rural women and farmers. These include the establishment of an Agroecology Training Platform and an Agroecology Demonstration Guest House, the fencing of a 43-acre farm, the installation of a mechanized borehole, and the development of a dry season farming operation. Capacity-building activities are also a major focus, with support provided to rural women in food processing, packaging, and indigenous seed development, alongside training on agroecology and various livelihood activities. Advocacy for women's rights is another critical area of their work.

In conclusion, while agroecological practices face significant challenges in their implementation, the strengths and opportunities they offer can significantly improve the livelihoods and resilience of rural communities. WAS and RUWFAG are at the forefront of promoting these practices in Ghana, actively working to overcome barriers and capitalize on the potential benefits of seed saving, and agroecology for rural women and smallholder farmers.

Panelist 3:
Li Guanqi. Farmers Seed Network, China

Guanqi Li from the Farmers' Seed Network of China focused the talk on sustainable agricultural practices through the enhancement of farmers' seed systems under an in-situ conservation strategy. The Farmers' Seed Network of China has been instrumental in pioneering efforts to preserve agricultural biodiversity through in-situ conservation strategies. This method focuses primarily on the conservation of genetic resources in their natural habitats by empowering local farmers to manage their seed systems effectively. Since its inception in 2013, the organization has made significant strides in establishing community seed banks across various regions. These banks serve not just as repositories for local seed varieties, but also as educational hubs where farmers can learn about seed selection, preservation, and management techniques. Such initiatives are crucial in regions where agricultural practices are deeply intertwined with the cultural and ecological fabric of the community, ensuring that traditional knowledge persists alongside modern agricultural practices.

Another vital aspect of the Farmers' Seed Network's approach is its work on repatriating seeds from global gene banks. This process involves returning seeds originally from certain localities back to their geographical and cultural contexts, where they can be cultivated and adapted to current environmental conditions. By collaborating with plant breeders, the network facilitates the breeding of these repatriated seeds to enhance their resilience and productivity in their native ecosystems. This collaborative effort not only helps in recultivating lost or endangered varieties but also in tailoring crops to better withstand local pests, diseases, and climatic changes. It is a forward-thinking approach that not only conserves biodiversity but also enhances food security and supports sustainable agricultural practices.

Looking to the future, the Farmers' Seed Network faces the challenge of advocating for more inclusive and farmer-centric policies within national biodiversity frameworks. Current conservation strategies often prioritize *ex-situ* conservation - preserving genetic material in controlled environments like seed banks and botanical gardens. While valuable, these methods can detach the genetic resources from their ecological and cultural contexts. The network argues for a balanced approach where *in-situ* strategies are given equal emphasis, ensuring that farmers remain at the forefront of biodiversity conservation efforts. By enhancing farmers' rights and participation, the network aims to foster policies that not only preserve but also dynamically evolve agricultural biodiversity in harmony with local farming communities. These efforts are essential for developing resilient agri-food systems that can adapt to the challenges posed by global changes

Panelist 4: Pessa Issa Kussaga. PELUM Association, Tanzania

Pessa Issa Kussaga from the PELUM Association in Tanzania presented a comprehensive overview of the role of Farmer Managed Seed Systems (FMSS) in enhancing food and nutrition security in Tanzania. PELUM Tanzania, an NGO with 43 member organizations, targets member organizations while directly benefiting small-scale farmers. The focus of the association is to promote sustainable ecological agriculture through capacity building. The seed sector in Tanzania is categorized into three major systems: formal, semi-formal, and informal. The informal system, predominantly comprising farmer-saved seeds, serves as the backbone for the majority of the country's food producers.

In his presentation, Mr. Kussaga highlighted the significant contribution of FMSS to food production in Tanzania. Impressively, more than 76% of the cultivated areas are planted with seeds saved by farmers themselves, illustrating the crucial role of FMSS in the nation's agricultural framework. Despite the dominance of farmer-saved seeds, the formal seed system, including certified seeds, accounts for about 20% of the cultivation, with a minor percentage dedicated to improved seeds. This structure has enabled Tanzania to maintain a food surplus, showcasing the

effectiveness of integrating traditional seed management practices with modern agricultural techniques.

The legal framework governing the seed sector in Tanzania primarily focuses on formal systems, often overlooking the informal systems that underpin much of the country's agricultural production. This gap presents significant challenges as it fails to recognize the legitimacy and efficacy of FMSS, thereby limiting potential support and development within this sector. Advocacy efforts by PELUM and other stakeholders aim to bridge this legal oversight by pushing for more inclusive policies that acknowledge and support all seed systems.

Achievements in promoting FMSS have been notable. The establishment of a National Seed Working Group, as a coalition of NGOs, and the collaboration with government institutions have been pivotal. These efforts have facilitated the collection and storage of 144 types of seeds and vegetative parts at the National Plant Genetic Resource Centre. Additionally, community seed banks have grown in number to 40, further strengthening the infrastructure supporting FMSS. These banks not only preserve seed diversity but also serve as knowledge centres for best practices in seed storage and cultivation.

Forum 1, moderated by Dr. Anni-Mitin, discussed topics related to Strengths, Challenges, Opportunities and Threats of Agroecological Practices in Community Seed System

DAY 2: 25 APRIL 2024, WEDNESDAY

Plenary Session 3
Dr. Tammi Jonas, Australian Food Sovereignty Alliance.
Raising Rare Breeds and Seeds: Opportunities and Challenges Towards an Agroecological Transition

Dr Tammi Jonas from Australian Food Sovereignty Alliance delivered the third plenary session

Dr. Jonas expresses her gratitude towards the Malaysian Food Sovereignty Forum for inviting her to participate in this important opportunity for horizontal knowledge sharing about community seed systems and biodiversity in agroecology. She also thanked Jane, Anni, and all the organizers for their work to bring us together to be better custodians of biodiversity and heal land and communities. She briefly pointed out the worst consequences of capitalist industrial agriculture before turning to agroecological solutions that put Indigenous Peoples and peasants at the centre of conserving and promoting biodiversity.

1. Agricultural Biodiversity: Land, life & livelihoods

Biodiversity for food and agriculture includes all the wild and domesticated plants and animals that provide food, feed, fuel, and fibre. It also includes the myriad of organisms that support food production through ecosystem services - such as insects, bats, birds, mangroves, corals, seagrasses, earthworms, soil-dwelling fungi, and bacteria that keep soils fertile, pollinate plants, purify water and air, keep fish and trees healthy, and fight crop and livestock pests and diseases.

In 2019 the FAO's first global assessment of biodiversity for food and agriculture found that 'many key components of biodiversity for food and agriculture at genetic, species, and ecosystem levels are in decline.' Agricultural biodiversity is

disappearing rapidly, as industrial agriculture, forestry, and fisheries systems use homogeneous, proprietary seeds, trees, breeds, and aquatic species, scientifically bred and genetically modified to include limited traits, which are useful to industry, but not to nature. They are grown in simplified agroecosystems heavily contaminated with biocides and other agrochemicals.

She stated that here in Malaysia, the rise of oil palm plantations in the past 50 years has devastated ecosystems, including the human and more-than-human lives reliant on the formerly highly biodiverse rainforests endemic to the region. Traditional foodways have been severely disrupted or lost, and entire communities forced off their lands.

2. Monocultures kill

Dr. Jonas reflected that along with as many as 200 other species, both orangutans and rafflesias are endangered largely due to deforestation for the planting of oil palm plantations. And yet industry and governments try to tell us that palm oil is important, that it is the most efficient of seed oils, requiring less land than olive or sunflower oil, and therefore 'critical' to food production, cosmetics, and soap, amongst other products. Never mind that oil palm is grown in some of the most biodiverse carbon sinks on the planet, and like soy production in the Amazon, these crops are not grown to 'feed the world', but rather to feed the profits of multinational corporations who then sell us ever-growing volumes of meat and ultra-processed food.

She stressed that we are being sold a lie, and one that is killing us slowly. Having devastated ecosystems to produce palm oil, most is then ultra-processed and inserted into unhealthy foods at the non-communicable diseases (NCDs). Rates of NCDs are skyrocketing especially amongst low-income socioeconomic groups, and Indigenous and peasant communities as land grabbing destroys access to traditional foods, which are replaced with non-nutritious calories in the form of ultra-processed food.

3. Metabolic rift

She added that the system behind these devastations is capitalism, which is driven by an insatiable desire for profit-making. This desire demands constant increases in production, and the selling of products based on exchange values that are divorced from both the value of their use and from the real costs of production (including social and ecological costs). Capitalistic agriculture produces the metabolic rift, which means the unsustainable relation of capital to the soil based on the systematic disruption of the nutrient cycle through the separation of food production and food consumption. Nutrients are extracted from the countryside only to become an effluent problem in cities.

In contrast, in pre-capitalist societies including many still existing local

communities in the Majority World production was and is conducted for the sake of satisfying concrete needs, and so the aim of production is to use values tied to the fulfilment of finite wants. Thus, agroecology advocates and manifests a post-capitalist future where everyone's needs are met without exploiting people or mistreating animals, and without destroying biodiversity or exceeding planetary boundaries.

4. Hegemony

So often people find it easier to imagine the end of the world than the end of capitalism, because of something an Italian philosopher Antonio Gramsci called 'hegemony'. The hegemony of colonial capitalism is so invisibly totalizing, it renders most of us 'unable to see beyond our cognitive, moral and practical horizons'. Let me give you some examples. When people ask whether the agroecology of peasants and Indigenous Peoples can 'feed the world', the answer is that it already does. 70% of the world's food is produced by smallholders using just 30% of the world's agricultural land. Compare that with industrial production systems, which use 70% of the land to produce just 30% of our food.

She explained in Australia, people see vast monocultures of grain and believe that this is what we need to eat. Most Australian grain is in fact exported, and more than half is eaten by non-human animals or converted to biofuels, and much of the rest is destined to become modified starches in ultra-processed foods. Australia is not feeding the world; it does not even manage to feed all Australians (with as much as 15% of the population experiencing food insecurity in the past year). Instead, it allowed those in control to sell the water and soil in the form of commodities to middle-class societies overseas, to the detriment of smallholders and local communities on all sides of all seas.

In Australia, 26% of our agricultural water is used to grow cotton, and they export 99% of it for the profit of about 1500 cotton farms that is, 26% of Australian agricultural water is stolen for the profits of 0.006% of the Australian population. That is not normal. None of this should be normal, but it is the hegemonic colonial capitalist system.

5. Climate change, pandemics and plagues

She later explained the production of a constantly narrowing range of species and breeds of animals and plants in industrial agriculture systems is leading to greater risks to food security and public health. For example, the virus H5N1 a highly pathogenic avian flu is currently affecting every region of the world except Australia, leading to mass cullings of genetically homogenous commercial poultry flocks and the forcing of free-range poultry indoors, and now infecting dairy herds of cattle and found in their milk in the US. Governments must take serious and systemic action to discourage and eventually prohibit intensive animal production. In horticulture, monocultures are equally unstable and dangerous. The constant attack of weeds,

diseases, and plagues on industrial farms are nothing more than efforts from nature to resettle the organisms needed for a functional community of plants and animals. The global governance community is aware that we have created serious problems with industrial agriculture, and Target 13 of the Kunming Montreal Global Biodiversity Framework asserts the importance of biodiversity-friendly practices including agroecology for sustainable and resilient food and agriculture systems.

6. What can we do about it?

Dr. Jonas drew our attention to how we can all be active in our optimism, ie, there is a necessity to turn to Indigenous and peasant knowledge and ways of living in harmony with nature. As a small-scale farmer, a food sovereignty activist, and a scholar, she offered her unique insights into the ways that farmers are embracing Indigenous knowledge, the barriers they face, and what researchers and policymakers can do to support an agroecological transition as part of a broader set of strategies for climate adaptation, preservation of biodiversity, resilient local communities and better public health.

7. Agroecology

Indigenous Peoples and peasants have known for many thousands of years that humans are just one part of an ecosystem and that when we take more than the system can give, it falls out of balance and degrades to the detriment of many if not all parts of the whole, including the human residents. She highlighted that agroecology favours strategies that mimic and work in harmony with natural systems are flexible and can be adjusted and re-evaluated over time. They aim to diversify production and take control of processing on farms, which creates resilience, enabling farms to adapt to climate change and economic challenges.

In these complex and diverse agroecosystems, all the individual parts support and sustain each other to prevent the outbreaks of pests and diseases common in monoculture systems. In practice, this means incorporating a diverse range of livestock, grains, and plants in ways that minimize external inputs by re-using waste on the farm, spreading out the risk of relying on just one crop, while conserving water and looking after the soil. She added that agroecology also fundamentally relies on collective autonomy on horizontal knowledge sharing, democratic participation, and working together in the struggle against corporate food systems and neoliberal states.

8. Soil biodiversity

Dr. Jonas reiterated that agroecology nurtures life, including in the soil. A teaspoon of healthy soil supports more lives than there are humans on the planet. In contrast, industrial agriculture breaks this important cycle of soil health by repeated tillage, the planting of single species, and spraying with biocides that kill all the good life just described, as well as by trying to mimic the mineralization that occurs naturally in healthy soils by applying chemical fertilizers to lifeless soil.

9. Seed biodiversity

She pointed out that indigenous peoples and peasants continue to be the world's best stewards for seeds, maintaining locally adapted varieties along with the traditional knowledge of how to cultivate and store them for thousands of years. At the species level, a little over 6,000 plants have been cultivated for food throughout history. Of these, fewer than 200 still have significant production levels globally according to the FAO, with only nine accounting for over 66% (sugar cane, maize, rice, wheat, potatoes, soybeans, oil-palm fruit, sugar beet, and cassava) (FAO 2017). At the level of seeds, the world has lost 75% of diversity among food crops since the 1900s. That lack of diversity presents a severe risk to the security of global food systems. Without seed diversity, it is difficult for plants to adapt to pests, diseases, and changing climate conditions a particular concern as the world warms.

10. Breed biodiversity

Another important aspect stated by Dr. Jonas is that for millennia, animals have been an essential part of healthy agricultural systems and indeed all ecosystems on earth. They transform plant biomass into animal biomass, which eventually is cycled back to plants in the form of nutrient-rich waste and once-living organic matter. When managed responsibly, livestock improve soil health and contribute to carbon sequestration, help control erosion by improving the quality of vegetative cover and promote the conservation of agrobiodiversity. The world's livestock production is based on about 40 animal species, with only a handful providing most of the meat, milk and eggs. Of the 7,745 local breeds of livestock reported globally, 26 percent are at risk of extinction.

She stressed that industrial agriculture has constantly narrowed the number of species and breeds of animals, with devastating consequences such as pandemics, as discussed earlier. The quest for higher productivity has led to breeding for yield over health and resilience, and intensive models that separate breeding from growing animals have destroyed the immunogenetic firebreak built through raising animals in the environments in which they are bred, where they can acquire immunity from their mothers as they would in the wild.

11. Jonai Farms and Tumpinyeri Growers towards a beacon for agroecology

Dr. Jonas brought the audience's focus to her farm, where she raises heritage breed of Large Black pigs and Dairy Shorthorn cattle on pasture. She started a butcher's shop on the farm where she works with her youngest son and husband Stuart and occasional volunteer residents to break down their pig and cattle carcasses into a range of fresh cuts, smoked meats, sausages, and charcuterie. They are a community-supported agriculture farm so nearly all their meat goes to 80 households who are members of the farm. They commit to a minimum of one year in a solidarity economy, sharing the risks as well as the delicious rewards of their work.

Surplus trim from the butcher's shop is composted in a rotating composting drum and transformed into rich compost for the market gardens of Tumpinyeri Growers, who now live and run their own business on the farm in a rent-free land-sharing arrangement. As a community, they have all committed to relational values. They value relationships over transactions and reflect on their relationships with the land to help guide their responsibilities with each other, other farmers and suppliers, and the communities they feed. They embrace all kinds of value whether it is social, ecological, cultural, or economic where all parties reciprocate commensurate with need, capacity, and care.

She highlighted that the land benefits from a greater number and from the integration of a net fertility producer (Jonai) with net fertility consumers (Tumpinyeri), ensuring surplus nutrient never becomes 'waste' in a well-functioning ecosystem. Where capitalist agriculture produces the metabolic rift, agroecology instead mends the rift, and produces healthy soils and farmers to grow delicious and nutritious food to feed to local communities.

12. Co-creation and sharing of knowledge

For the policymakers, Dr. Jonas presented a key message from agroecology as a means to promote and conserve biodiversity, ie, to put Indigenous Peoples and peasants at the centre of decision-making processes. As for academics, the same applies. Let small scale food producers be our guide in what research and support they need. In all likelihood, it is not technical support needed, it is political and economic transformation.

To the NGOs, she reminded that agroecology demands solidarity that puts indigenous peoples and peasants first and works to amplify their voices. For the indigenous peoples and small-scale farmers, her advice is to keep doing what they are doing, work together, and loudly, to advocate for a just and sustainable future for all.

13. Principles of emancipatory agroecology

Biodiversity is critical to future survival. La Via Campesina urges us to ask four questions: Who produces the food? For whom? How? What do they do with the surplus? More recently, critical agrarian scholars Omar Felipe Giraldo and Peter Rosset have consolidated thirty years of agroecology research to lay out 7 principles of emancipatory agroecologies. They underscore the political, technical, economic, organizational, methodological, pedagogical and philosophical principles embedded in emancipatory agroecologies principles that are counter-hegemonic, deeply democratic, and have the potential to end the injustices of colonial capitalism, and combat its consequences: climate change, biodiversity loss, pollution, poverty, and the epidemics of under- and over-nutrition.

She concluded her speech by saying thank you to all the participants and committee for bringing communities together over these two days to globalize the struggle and the hope.

Dr. Tammy Jonas delivered the third plenary session.

SESSION 3: BIODIVERSITY, SOIL HEALTH, PLANT HEALTH AND ANIMAL HEALTH

Moderator: Karina Yong. Third World Network
How CoSS promotes biodiversity, soil health, plant health and animal health
Evidence 7: Enriching Agrobiodiversity through Community Seed Breeding
Eliseo Jr. Del Rosario Ruzol, MASIPAG, Phillipines

The session, jointly presented by Eliseo Jr. Del Rosario Ruzol and Lauro Guilaran Diego, highlighted the efforts of MASIPAG to address the negative impacts of the Green Revolution by fostering agrobiodiversity and farmer empowerment through sustainable and participatory agricultural practices.

MASIPAG stands as a beacon of self-reliance and resistance against industrial agriculture's monolithic practices. Formed as a partnership among farmers, scientists, and NGOs, it champions a decentralized approach, ensuring that governance and decision-making processes remain largely in the hands of the farmers themselves. This structure has enabled over 30,000 farmers across more than 60 provinces to collect and breed over 2,000 rice varieties, crucial for food security and ecological resilience.

Central to MASIPAG's strategy is the establishment of trial farms, which serve as experimental grounds for farmers to test and select crop varieties best suited to their local environments. This hands-on experience is vital for maintaining a diverse seed bank and equips farmers with the tools needed for informed decision-making about crop management. These farms do not just function as sites for agricultural experimentation but also as community hubs where knowledge, resources, and labour are shared, enhancing community cohesion and collective action.

In rejecting the commercialization and patenting of seeds, MASIPAG underscores the sacredness of seeds and promotes their free exchange among farmers, which has been crucial in preserving seed sovereignty and biodiversity. This practice is complemented by a network of back-up farms that maintain and regenerate a vast repository of rice varieties, ensuring their availability for future generations.

The outcomes of such initiatives are profound. MASIPAG has successfully developed varieties that are resilient to diverse environmental stresses such as drought, saltwater, and heavy rainfall. By doing so, they have not only increased agricultural resilience but also improved local ecosystems, food security, and farmer livelihoods.

Economic benefits are equally notable, with farmers reporting significantly higher incomes due to reduced input costs and increased crop productivity. Societally, the empowerment of local communities, particularly women, who often assume leadership roles, marks a significant step towards more equitable rural development.

Karina Yong of Third World Network, moderated Session 3 on Biodiversity, Soil Health, Plant Health and Animal Health

In conclusion, the efforts of MASIPAG vividly illustrate the potential of farmer-led agroecology to transform agricultural systems. By prioritizing community seed breeding and sustainable practices, MASIPAG is not only challenging the corporate dominance over agriculture but also paving the way for a future where farmers enjoy genuine autonomy and security in their livelihoods. This model serves as a vital blueprint for fostering resilience, sustainability, and fairness in food systems globally.

Evidence 8: Farmers' Adoption of Microbial Technology in Seed Treatment for Soil and Plant Health

Dr. Febri Doni, SRI-Mas, Malaysia

Dr. Febri Doni of SRI-Mas Malaysia highlighted the transformative role of microbial technologies in agriculture. Representing the SRI-Mas Society, Dr. Doni discussed how seeds, as the foundation of nearly 90% of the world's food crops, are vital for food security, with their potential maximized through microbial interventions.

Dr. Doni outlined the significant challenges faced in agriculture, such as seedborne pathogens in various crops like wheat, cabbage, cucurbits, and rice, which can lead to substantial yield losses. To combat these issues and improve seed vigour and viability, he advocated for the application of microbial agents—bacteria and fungi introduced into environments to enhance biological control or plant growth. These agents play a critical role in decomposition, nutrient cycling, disease suppression, and phytohormone production.

Focusing specifically on the methods of microbial application, Dr. Doni explained several techniques including direct soil inoculation, seed soaking, biopriming, and root dipping. These methods help in early plant growth stages by enhancing fitness, reducing input costs, and promoting sustainable agricultural practices.

A specific case highlighted was the biopriming of rice seeds with *Trichoderma sp*., showing that treated seeds exhibited improved germination rates, growth, and gene expression patterns compared to untreated controls. This example underscored the effectiveness of microbial treatments in enhancing plant resilience and yield.

Dr. Doni also shared insights into the global adoption of microbial seed technology, with particular emphasis on India, where farmer groups are well-trained and actively use microbial seed treatments. He discussed the scale-up and commercialization processes, from lab-scale to pilot plants, illustrating the progression with examples from SRI-Mas workshops that demonstrate simple, low-cost techniques for microbial inoculation.

In conclusion, Dr. Doni emphasized the importance of farmer education through workshops and field schools to further the adoption of microbial seed treatments. He called for continued research and development to refine microbial formulations and advocated for creating supportive policy frameworks to incentivize the adoption of these innovative technologies. This approach, he suggested, is pivotal in moving towards more resilient and sustainable agricultural systems.

Evidence 9: GMO Threats on CoSS and Agroecology

Kusnan, Serikat Petani Indonesia, Indonesia

Mr. Kusnan from Serikat Petani Indonesia (Indonesian Farmers Union) provided an in-depth analysis of the challenges faced by Indonesian agriculture due to the influence and expansion of genetically modified organisms (GMOs) in seed markets. He discussed the historical context and current state of seed sovereignty in Indonesia, highlighting the drastic reduction in the diversity of native seed (nuftah) since the 1960s and the dominance of the seed market by transnational companies.

Mr. Kusnan outlined several legislative barriers that hinder peasant seed breeders, including laws from 1992 that restrict peasants from engaging in plant breeding and collecting germplasm. More recent legal changes, such as the UU Cipta Kerja, further threaten peasant sovereignty by facilitating the use of commercially produced seeds over domestically produced ones. Such legislation not only limits farmers' rights but also their traditional practices in seed preservation and biodiversity.

The session also addressed the controversial nature of GMO seeds, which, while engineered for traits like increased yield and disease resistance, raise concerns about potential unintended ecological impacts, such as mutations and biodiversity loss. Kusnan emphasized that such outcomes are contrary to the principles of agroecological systems, which aim to enhance the health of the agroecosystem holistically.

Mr. Kusnan then discussed the direct threats posed by GMOs, including contamination of local genetic resources, ecosystem damage, increased pest and disease resistance, health risks to humans, and an economic dependency that impoverishes farmers. These issues underscore the need for preserving local seed varieties and maintaining ecological and economic independence from large agrochemical corporations.

In response to these challenges, Mr. Kusnan highlighted the efforts by Serikat Petani Indonesia to educate and train farmers in seed preservation techniques such as crossing and breeding, as well as organizing seed exhibitions and distributions to promote food sovereignty. These initiatives are part of broader strategies to empower farmers and ensure they retain control over their seeds and agricultural practices.

Concluding the session, Mr. Kusnan called for a re-evaluation of agricultural and seed policies to better support farmer-led agroecology and seed sovereignty, emphasizing the need for systemic change to counteract the pressures of neoliberal agricultural policies and GMO dominance in the market. This approach aims to protect and empower local farmers, ensuring their ability to sustainably manage their resources and livelihoods.

FORUM 2: IMPORTANCE OF CoSS IN SUSTAINABLE FOOD SYSTEMS

Moderator: Dr Carmelita Nidea Cervantes, Carmel Agri-Learning Farm, Phillipines
Panelists:

1) *Prof. Dr. Pitchai Duraisingam. Consumer Research Education Awareness Training and Empowerment (CREATE), India*
2) *Pangiran Salutan, Borneo Highland Seed Initiative, Malaysia*
3) *San Wai. Metta Development Foundation, Myanmar*

Panelist 1: Prof. Dr. Pitchai Duraisingam. Consumer Research Education Awareness Training and Empowerment (CREATE), India

Prof. Dr. Pitchai Duraisingam, from the Consumer Research Education Awareness Training and Empowerment (CREATE) organization in India, provided an extensive overview of the organization's evolution and its impactful work in promoting organic food consumption and sustainable agriculture.

CREATE began as a movement driven by consumer activism from 1990 to 2000, focusing on the critical issues of food adulteration and pesticide poisoning. The growing need to provide safe, organic food to consumers and protect the interests of farmers led to the foundation of the organization. Influenced by prominent figures like Nammalvar Ayya and Nel Jayaraman, and catalyzed by challenges faced at FEDCOT where Jayaraman was appointed as the agriculture director, the organization sought to address broader consumer issues comprehensively.

Prof. Dr. Pitchai shared the vision of CREATE, which is to bridge the gap between consumers and farmers by ensuring an equitable distribution of resources and opportunities. This includes empowering individuals with the necessary skills and knowledge to achieve self-reliance and ensure the consumption and cultivation of poison-free, safe, and nutritious food.

The main objectives of CREATE are to enhance environmental awareness, foster economic activities, promote social harmony in rural villages, and secure people's rights ranging from consumer to human rights. The organization's efforts are concentrated in 10 districts of Tamil Nadu, impacting 2,500 to 3,000 farmers, including women, farmer groups, consumer groups, rural youth, and researchers.

Prof. Dr. Pitchai shared a significant initiative led by CREATE which is the "Save Our Rice" campaign. This movement focuses on achieving food sovereignty, sustaining local livelihoods, and ensuring ecological sustainability. The campaign also aims to conserve the rice ecosystem, maintain rice culture and diversity, and prevent the introduction of GMOs and toxic substances into rice cultivation. This initiative was partly a response to threats such as the loss of land, deprivation of water resources,

poor pricing for rice, the irreversible loss of germplasm, and threats to intellectual property rights over rice.

CREATE has organized numerous activities to promote its objectives, including farmer field schools, community seed banks, and the establishment of a Seed Savers Network in Tamil Nadu. These efforts are complemented by outreach programs like seed and food festivals, organic rice meals, and training workshops on organic seed production. Another critical focus is on reducing the economic burden on both farmers and consumers by addressing the profit disparities caused by middlemen

According to Prof. Dr. Pitchai CREATE has a number of achievements it can be proud of. Several of them included to have successfully activated district-level campaigns, established community seed banks, and developed trade networks that help in maintaining a network of 195,000 farmers. It also conserves 200 indigenous varieties of paddy seeds and has established rice diversity blocks and rice resource centres to educate and engage the community further.

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Panelist 2: Pangiran Salutan, Borneo Highland Seed Initiative, Malaysia

Pangiran Salutan from the Borneo Highland Seed Initiative provided an insightful discussion on the unique cultural and ecological context of the Lundayeh people, one of the many ethnic groups in Borneo, who are spread across national borders. Living at the intersection of Indonesia and Malaysia, specifically between the boundaries of Sabah and Sarawak, the Lundayeh community experiences a unique blend of cultures and challenges due to their transboundary existence, which is recognized only by national laws and not by the natural continuity of their lands.

During his presentation, Mr. Pangiran delved into the importance of seeds to his community, categorizing them into livestock, necessary plants, and food plants. This categorization underscores the integral role that seeds play in sustaining the community’s way of life, both culturally and nutritionally.

Mr. Pangiran also introduced the "Nginul Tibuu," a seed community initiative that aims to preserve and promote the use of indigenous seeds among his people.

This effort is crucial in maintaining biodiversity and traditional knowledge, which are threatened by modern agricultural practices and changing lifestyles.

He shared some of the challenges faced by his community, particularly the shifts in career and lifestyle that draw younger generations away from traditional farming practices. The Borneo Pa’sia Initiative, spearheaded by Mr. Pangiran, is a response to these challenges. After spending twenty years away from his homeland, Pangiran returned with a renewed commitment to nature and community. He reached

out to his community, promoting a message that emphasizes the importance of staying connected to and supporting nature.

Dr. Carmelita Nidea Cervantes moderated Session 3 on the Importance of CoSS in Sustainable Food Systems

Mr. Pangiran concluded with a hopeful note, expressing his desire for governments to recognize and support the voices of indigenous communities like his. He advocates for opportunities for these communities to represent themselves and their interests in national discussions, ensuring that they have a say in decisions that affect their lands, cultures, and traditions. This representation is crucial for the sustainability of their unique way of life and the conservation of their rich natural resources.

Panelist 3: San Wai. Metta Development Foundation, Myanmar

San Wai, the National Programme Coordinator for the Metta Development Foundation in Myanmar, gave a detailed presentation about the agricultural challenges and the work of her organization in promoting sustainable development. She divided her presentation into three parts: an overview of Myanmar's agricultural context, the role of Metta Development Foundation, and the achievements of the organization.

Myanmar's economy relies heavily on agriculture, involving the production of rice, cereals, vegetables, fruits, and fisheries. Despite this reliance, agricultural

productivity is relatively low compared to neighbouring countries. Smallholder farmers, who make up 95% of the agricultural sector, traditionally used mixed crop production and natural seed sources. Recent shifts toward monoculture driven by government reforms have increased reliance on chemical fertilizers and pesticides. This shift has also led to greater mechanization, which is replacing traditional farm labour and driving young farmers to migrate in search of other opportunities. As a result, communities are not only losing their cattle and grazing land but are also watching their local seed varieties disappear as they become consumers for large agricultural companies.

According to Ms. San Wai, Metta was established in response to over four decades of internal conflicts in Myanmar that devastated communities through displacement and loss of life, property, and livelihood. The ceasefire agreements with most armed ethnic groups marked a new era, allowing Metta to reach out to these conflict-affected communities to help them develop into stable, self-reliant societies.

Metta has initiated several projects aimed at improving the lives of farmers and securing food security for small and marginal landholders. These include the Farmer Field School under the LIFT Myanmar Nargis Rehabilitation Programme 2010 and Sustainable Rural Development by Farmer Field Schools in Southern Shan. These projects focus on empowering farmers, ensuring agricultural knowledge and resources are preserved and passed from one generation to the next, thereby enhancing food security and sovereignty.

Ms. San Wai highlighted the importance of promoting farmer-saved seeds and sustainable farming practices to ensure the viability of future food systems. She pointed out the significant challenges posed by current unsustainable agricultural practices, including environmental degradation, labour shortages, and the impact of climate change. She stressed the urgent need to stop the exploitation of land, labour, and environmental resources, arguing that these are critical for building a sustainable agrarian future in Myanmar and beyond. Her talk made it clear that creating a self-sufficient, empowered farming community is vital to addressing the broader socio-economic challenges facing Myanmar and other agricultural societies in Asia.

GUARDIANS OF BIODIVERSITY: THEIR STORIES

Nazrul Azam bin Man - The 3Qs Farm

Mr. Nazrul Azam established 3Q's Garden with his family especially his three boys named Qayyum, Qhalief and Qaayed. He started growing vegetables since young, around seven or eight years old, in his parents' home compound. In 2006, with the assistance from Jabatan Pertanian, he acquired a farm of approximately 5.4 hectare in size. He is a self-taught farmer, learning organic farming techniques, mostly from India and the Philippines. He converts market waste into pest control and fertilisers. Mr. Nazrul uses natural approaches of using beneficial insects for crops and companion planting to prevent pests. During peak season, his farm could supply vegetables to Penang and Ipoh. They used to often take their vegetables to the community market in Juru, Penang. Interestingly, they have never put prices on their produce, but instead let customers pay according to their ability. He humbly said, "We let people to take just enough for their family and pay sincerely."

In January 2020, he survived a stroke that left him partially paralysed, and wheelchair bound. This unfortunate incident led to an abrupt stop to all his farming efforts due to his disability. Gradually, he started all over again with a much smaller scale home farm with the help of his three sons. To honour their tremendous efforts and full commitment in running the little farm, he named it "3Q's farm" after them. Apart from vegetables for their own consumption, he plants many medicinal herbs for his own health treatment such as those for high blood pressure. When asked why he farms, the youngest son said, he loves it because he can provide safe and healthy food for his family especially his father.

Naqib Iskandar - Eat, Shoots and Roots

Eat, Shoots and Roots (ESR) is an enterprise to reconnect urbanites with nature by empowering them with the skills & tools to grow food. Naqib Iskandar thinks urbanised people are the "sickest" because of their lack of nature. ESR's goals are to bring urban communities closer to nature through gardening with local *ulam* or vegetables. This is because native *ulam* or vegetables are much easier to obtain, plant and consume based on our different needs. ESR promotes native herbs through their eye-catching product designs and graphics on their t-shirts. To support seed initiatives, they collect, keep, save and sell rare and hard-to-find local seeds.

If you buy seeds online, many will be sourced from China and other countries. For Naqib, native seeds grow better and are easier to manage, germinate and propagate compared to commercial seeds. He applauded all farmers, especially from Sabah and Sarawak and others for their excellent job on keeping native seeds. It is not an easy course but as a collective, especially young people, we can do the impossible together.

Ayaka Fujii - A Little Wild

Representing A Little Wild Farm (ALW), Ayaka Fujii explains the farm's practice of syntropic, regenerative agroforest based in Kota Tinggi, Johor. Ayaka explains that ALW applies several regenerative methods of farming that focuses on syntropic agroforestry. Syntropic is a type of farming that promotes complexity and biodiversity of life. According to Ayaka, Ayaka explains that ALW is the first commercial scale Syntropic Agroforestry farm, which grows, produce and sells fresh, quality food from a dynamic food forest system.

ALW is made up of 15 acres of a young forest that started with a 5 acre mother plot, which was experimental. By now there are over 150 species in the plot and has become a living nursery and seed bank. Some seeds have to be planted immediately while others can be kept, thus understanding of seed ecophysiology is crucial. The initial mother plot is presently syntropic and diverse and could be promoted for seed sharing in the future. One of ALW's goals is to create a very diverse forest system while growing food for their community. They hope to make syntropic agroforestry commercially viable and sustaining for smallholders and for big players in the industry to reconsider their way of farming. Hence, ALW's vision is to change the landscape of the food system in Malaysia and regionally.

ALW is a former oil palm plantation in transition to becoming a forest, ie, the land has always known how to be a forest. Their approach is to intervene by way of observation, understanding the patterns in nature, land's memory and its dream of becoming a forest. The ethos of ALW is that "Every land's dream is to become a forest" and that every person wants to belong and be in togetherness in a community. As the forest grows more complex, it is hoped that the community grows more complex too. All these are reflected in their farm activities, especially in their seed and seedlings collection efforts. ALW has two nurseries, one is operational while the other is volunteer run, where both support each other and build friendships and relationships. They source their nurseries' species such as, Shores, dipterocarp seeds and seedlings from OA communities in Pahang, friends, forest house, FRIM, eco warriors. ALW would like to be reflected as the wider ecosystem and in the future known as a hub for exchange and deepening of the rich knowledge of tropical ecosystem that different people have. Lastly, she invited everyone to visit ALW and ended her sharing with an invite to their Syntropic Agroforestry workshop happening in mid-May.

Akata Yang - Green U Hub

Akata Yang is an urban farm operator (UFO) who plants edible flowers with more than 7,000 varieties presently. His focus with his farm is not only producing edible flower, but more importantly edible flower education He uses his farm to connect with other people and to connect them to nature using hands-on activities. On his farm, visitor can see, smell, touch and taste all his flowers. Some school invites him to teach them on paddy planting using his creative approaches on farming. He believes in educating the public on the local names of the seeds and not to just learn the seeds by their scientific names. Same seeds can have different names but most importantly, we should keep the native name. Akata also shares successfully germinated seeds with his friends so that they are also planted by others, thus, expanding the seed bank of a particular species.

Ching Chi Ron - Kampung in the City

Ching Chi Ron's journey started when her mum passed away from cancer. She then went on a healing journey on what is the answer to health. She realised that our current way of life in the city is no longer healthy nor sustainable and does not support us or our society. Hence, she went on a journey to explore sustainable communities around the world and learn how to build one. She went to the US, with the Earthship community who is fully sustainable. The community grow their own food, harvest their own energy, manage their sewage. The community lives in the high desert where it is rather difficult to grow things with extreme weather, it gets very cold in the nights and very hot during the day. There she learnt living skills, such as building homes using recycled materials, plumbing, electricity, etc.

On returning to Malaysia, she wanted to grow her own food and the opportunity came with COVID when she embarked fully into it. Chi Ron acquired a large piece of no-man's land near her home in Seri Kembangan, Selangor, with very poor degraded soil. She went on to research deeply on ways to building soil, referring to many experienced soil teachers, farmers and gardeners. She got really passionate in building and regenerating soil knowing how important it is in bringing back the biodiversity in the soil and plants, especially in the city where much of the soil is degraded. She collects different species of plants, growing fruit trees, adopt unwanted plants, keep *kelulut* bees, rear chicken and experiment with cows. The cow dung is a natural compost and rehabilitator of our soil that has close relationship with the land and humans. Chi Ron wanted to learn how to create as sustainable food system and to bring back nutrient density foods. She is also learning about medicinal herbs that are good not just for human but for her livestock too, eg the use of neem, turmeric, beetle-nut which are natural remedies to diseases - what is good for the animals is also good for us.

For Chi Ron, it is a personal journey and growth, that progress together with the garden she is building. She hopes to build a live-in community as the way of living in the city is not sustainable in the long term. She believes that we have to prepare ahead for difficult times when foreign labour will no longer be available to toil the soil. She urged everyone especially young people, to come together to live harmoniously growing in their own food, whilst bringing back biodiversity, and health to our bodies and mother earth.

Gideon Lim - Regenerative Agriculture Malaysia

Gideon started farming as small home gardener which grew tremendously and ran out of space at home had to look for land to continue. Many of the land he encountered in urban Malaysia have been destroyed, ie, hard, dead and scarce. Since then, it has become his personal mission to restore, regenerate and heal the soils starting with his own 1-acre farm in Serdang, Selangor. The land is made up of dead, yellow, hard clay dry, construction soil. Embracing his passion for gardening, he decided to proceed with the mission at a larger scale at his farm. Using resources from mainstream agriculture, he applied various types of chemical-based methods but failed to revive the soils.

After three years of mistakes, he reverted to more natural methods where he started producing and using home-made quality compost on his land. This gradually resulted in soils that improved with time – they became darker, fluffier, more porous and more biologically active. For example, there are hundreds of earthworms in a square foot which indicated its good health. He observed organisms and wildlife started to return to the soil. Then, he decided to stop tilling the soil altogether, using cover crops as natural tilling method instead. The no-till technique allows the soil to conserve more organisms and earthworms making it healthier. Another initiative Gideon started was keeping, saving and trading native seeds especially heirloom ones, as opposed to buying commercial ones which are sprayed with fungicide, which are anti-microbial. His farm is well-known for its red corn or ruby corn seed, which gained him the reputation as the corn man. He is a firm believer that healthy soil will give healthy plants, and healthy plants will give healthy people. He ended his sharing by expressing thanks to the conference that gave him the opportunity to learn new information and network with many like-minded individuals.

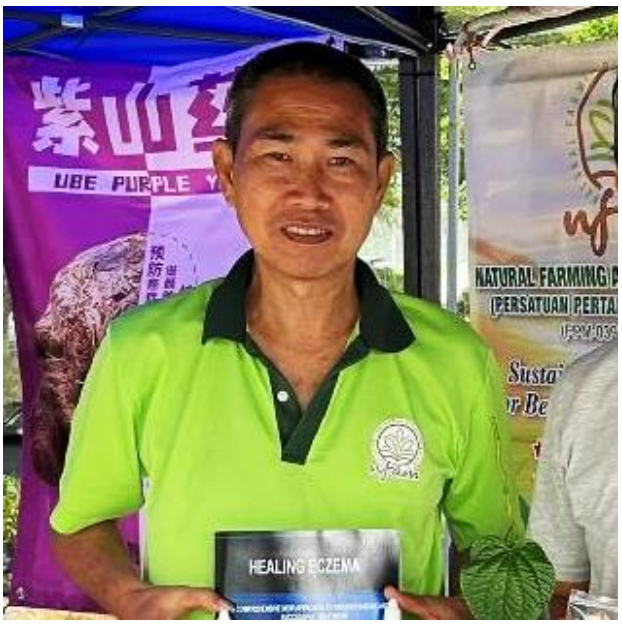
Sara Ayuni - Kebun Komuniti Masjid al-Rasyidin

Sara Ayuni is a home gardener, home maker and a mother of four. Starting with her home garden, Taman Sara just a few years ago, she has now evolved to establishing a community garden in Nibong Tebal, Penang. The garden, called the Kebun Komuniti Masjid al-Rasyidin, was set up in November 2023 and run by ten women who share the same residential area with Sara. The garden is located on a small piece of land which belongs to the local mosque. The garden obtained their initial seeds from the Consumer Association of Penang (CAP) and Seed Festival 2023 to kick start vegetable planting activities. In terms of operation, the ladies work on a daily, weekly and monthly rotational basis to a schedule of pruning, watering, weeding, fertilising, pest control, and other chores. Their first harvest was in January 2024, consisting of *kangkong* and *bendi*.

The initial collection was for members only but due to plentiful harvest, they decided to sell the excess fresh produce to other residents using WhatsApp. Due to the visible location of the garden in the mosque area, pensioners on morning walks or after classes, would stop by for chats, or to collect some curry leaves. There is also monthly workshop conducted by expert farmer, such as Mr. Nazrul from 3Qs farm on

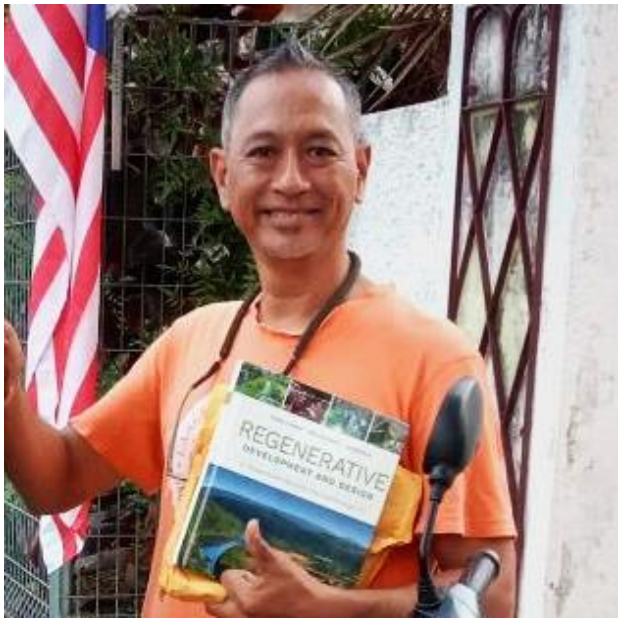
compost making, organic fertiliser, pest control. In fact, Mr. Nazrul has become their resource person and assisted them numerous times. Other workshops include those on increasing the shelf life of their produce longer by means of fermenting, pickling and dehydrating. A workshop on use of social media was also conducted, ie, using Tik Tok and Shopee to set up their own shops and sell their produce. Sara invited everyone to browse their team's social media on Tik Tok, Facebook page, both for Kebun Komuniti Masjid al-Rasyidin, and her own at Dang Kebun. Their latest program was just before Hari Raya where they learnt to produce 30kg of frozen ketupat for the members to share.

Five months of community farming made Sara realised that all the women who kept returning and committing to the community garden are not driven by money or free vegetables but the main factors are longing of support system, connectivity, social relationship and bonding. To the ladies the Kebun has become a place of sisterhood, discovery, comfort and healing, and that is what matters most.



Tan Boon Hong (Natural Farming Association Malaysia)

Tan Boon Hong shared techniques on low-cost maintenance and technology using rainwater harvesting for vegetable planting or agriculture. Malaysia has a rainfall pattern that shows monthly rainfall which should be sufficient for the planting such that daily watering is not necessary. Mr. Tan experimented water storing under the planting bed to observe if plants can access the water by themselves. The water storage can provide water supply to plants from a period of two weeks up to a month in between rainfall intervals. He carried out the project with a group of 10 *orang asli* using a small piece of land. Water was provided only during the initial planting in October and no watering was done until January. In four months, they could get good production of long beans without any watering done to the plants throughout the planting period up to its harvest.



Abdul Razak Aziz (SEEDS Malaysia)

Abdul Razak shared his experience encountered a group of indigenous community called “Cipta Gelar’ during his trip to Java, Indonesia. This community of 2500 people in three villages, lives in the mountains and have 400 years history of how they manage their staple food which is rice. The community keeps 67 heirloom species of rice within their circles. Each family has their own heirloom species which it is an honour for each member of the family to use for planting and pass down the next generation.

At the village, Razak and his friends were served with very delicious rice, and shockingly the rice has been harvested and kept for five years already. Throughout the village, *jelapang padi*, were very noticeable. These are traditional storage huts where harvested paddy is kept. Each hut can keep approximately three thousand *puchong* (tied rice bundle). Each household normally owns 5-6 huts. The community has a rule where each family that plants rice must have enough to last them for a minimum of 3 years. The average amount each family has is a 30-year rice stock. The oldest rice kept by this community is about 50 years old and still good to consume. The community adheres to strict traditional rituals from planting rice to harvesting, storage, and cooking to ensure that it lasts longer. The community is very self-sufficient in rice production and Malaysians have much to learn from them, especially in their methods and technology of sustainable rice production.

Seed guardians from various locations throughout Malaysia shared their stories and experiences

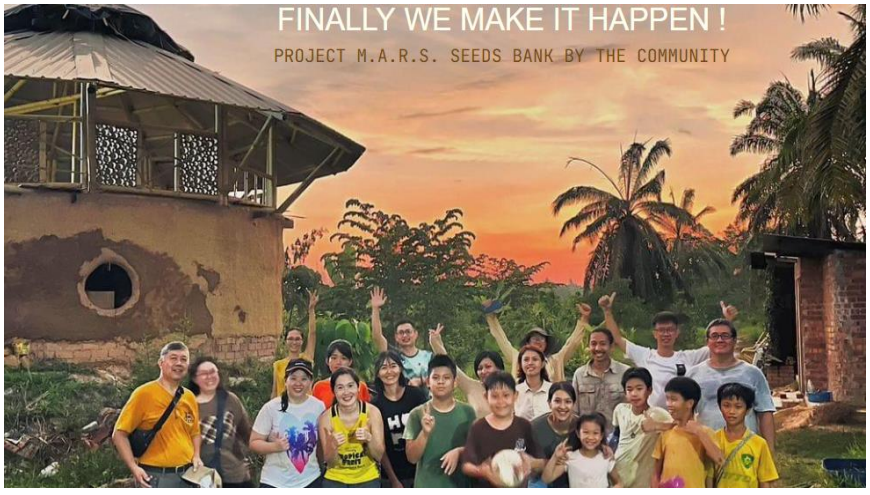
SEED SYSTEM SHOWCASES

1. Seed Selection and Treatment Techniques

a) Chee Hoyyee - Project M.A.R.S (Mitigation, Adaptation, and Resilient Space)

Chee Hoyyee was a typical city girl, going to university and working full time when she realised that the lifestyle she leads was stressing her. Her journey started when she encountered with three important persons who changed her life's directions. The first person was her husband, Pop, whom she met in Buriram, Thailand. Her husband became a rice farmer since he was just three years old, helping his grandmother harvest crops, rice and other kinds of food. It struck her that their whole life was about self-sufficiency which she lacks. Secondly, she met an auntie who lives in a jungle in little hut. She asked the auntie where to get/buy vegetable and water as she had no clue – these are essential things we should know where to get from. The auntie's self-sufficient life in the jungle made her re-think her own life. The third person she encountered many years ago was Jon Jandai, whom she learnt a lot from through his sharing of food and seeds. Jon Jandai inspired her and became her teacher as he led his life by example through his actions.

Through him was the first time she heard about seeds and seed bank. From the conference and her own experience and knowledge of many years learning about seeds, she truly believes that seeds represent love, happiness and freedom which she feels very strongly about now. After many years of learning from Jon Jandai, experts from many places and various resources, Hoyyee felt that there is a need to start a seed bank in Malaysia. She and her team kicked off Project MARS and started construction on the seed bank. The seed bank is a building made of mud brick, straw, and sand in the first level, while bamboo made up the second level. Its construction came together with the help of volunteers comprising of kids as young as 5 years old to a senior who is 73 years old. Although none of the volunteers has any experience or skill, the building is almost 70% complete, made possible by a community effort. Community is the real power when everyone come together to learn, and have a common objective, commitment and faith.



Project MARS started with an idea as a response to climate change. Hoyyee is concerned about the security of food, shelter, water for her loved ones, family and future generations, especially when there is so much environmental destruction going on that can affect natural resources. She was inspired by the food forest generated from syntropic agroforestry that A Little Wild farm has established in Johor in their 138 acres of land. Hoyyee and Pop managed to regenerate the soil at their 1.8 acres farm and started a food forest with the help and dedication of the volunteer community. Project M.A.R.S stands for Mitigation, Adaptation, and Resilient Space. Hoyyee explained that the trees planted on the land is climate action which is an action for mitigation. Adaptation means we have to learn to adapt to new environment, new way of living, ie, we have to relearn. The plants too have to relearn because the climate will not be like before or what it was used to. Plants struggle more now to survive with the changes that are occurring. Thus, we have to help train the seeds by planting them in different conditions, to teach it to behave and adapt to new conditions in the land. Then, the mature seeds will be collected and kept in the seed bank. Most importantly, the seeds will be taken and planted in other locations that have similar conditions like Malaysia. One technique that the project implement is to plant biodiversity vs monoculture farming, as it is one way to minimise disease. At present, the farm has managed to collect 20 species of banana seeds after doing the adaptation process to minimise disease.

Hoyyee shared that it is important to get support from the government. Recently, due to their efforts, the state government via Penang Green Council (PGC), organised tree planting program at the farm and discussed with her team to look at ways PGC can contribute especially in terms of food security and in giving assistance to building the seed bank together.

b) Dr. Nurul Shamsiah Mohd Suhaimi - SRI-Mas

Dr. Nurul Shamsiah showcased a technique of biopriming rice seeds with *Trichoderma sp*. that can improve germination rates, growth, and gene expression. She started with first demonstrating the selection of viable seeds using traditional method using water, seeds, egg and salt. When the egg floats, the seeds that fall to the bottom indicate viable seeds. Next step, was to use the *Trichoderma* suspension to treat the seeds. *Trichoderma* was cultured on plates, and transferred into a potato dextrose broth and allowed to grow for seven days. Then, the best seeds were submerged in the suspension for 24 hours. This is the simplest method for biopriming seeds, but there are many others, for example adding adhesive to glue the *Trichoderma* to the seeds. In this demonstration, *Trichoderma* suspension has been proven to improve and strengthen roots of rice plants and reduce severity of diseases on its seeds.

2. Planting Materials: Breeding and Propagation Techniques

a) Tan Hong Boon – Natural Farming Association Malaysia

Tan Boon Hong demonstrated the natural propagation of curry leaf plant. Traditionally, the plant is propagated via stem cutting using soil and allow it to root for several months before it can be planted. This process can be tedious especially at commercial scale, where one would need a large quantity of cuttings. In addition, the increasing cost of labour can be an obstacle. Thus, the cuttings technique is much preferred as it gives higher germination rate and yield. Curry leaves high commercial value for use in food and medicine. Currently, the market demand is very high that commercial users complained there is not enough supply for them to source from for their commercial food processing. Thus, the present market price for it is high, ie, at RM15/kg. The curry plant is very similar to *Tongkat Ali* in terms of its characteristic and behavious, and the leaf structure and root system, and that it like a shade-loving plants environment they are the same. Live in combination with other plants around it to give it a cool environment. Curry leaf plant propagate themselves in naturally via seeds, air layering and root suckers. Mr. Tan observed that

although mature curry plants flower and bear cluster of seeds it is usually unreliable due to low viability and death of young seedlings under natural conditions. Air layering is when the bark around the stem of an existing tree is cut and wrapped with a potting mix to root the stem. This will root in 2-3 months when it is cut off and transplanted to nursery pots. The root sucker propagation is a natural process where the root extends far and wide and have nodules that baby plants spring forth. How many seedlings can we get in a root sucker clump? One clump can give 50-100 seedlings. Near a mother curry leaf plant (for example, 10 x 10 feet), up to 500 seedlings can be produced. If one seedling is at a commercial value of RM10, it can be a very good source of income to any farmer (to-be).

b) The 3Q's Farm

The 3Qs farm comprise of siblings named Qayyum, Qhalief and Qaayed. They showcased three methods of planting for papaya, *kangkong* and saacha inchi seeds. A general rule of seeding is to place the pointy part of the seed into the soil first as this is where rooting will occur first. The first method shown was direct seeding of papaya seeds into the soil placed in a container. After seeding, ensure that sufficient water is sprayed to moisten the soil. The second method is indirect seeding where the seeds were first germinated using tissue paper placed in a container. Kangkong seeds are placed on the moistened layers and allow to take root. The last method demonstrated is on a Sacha inch seeds. Since it has a hard seed cover, it must be soaked in water first until it roots. Then, rooted seeds can be transplanted on the ground.

3. Seed Storage and Conservation

a) Wan Noriah Wan Ramli – Min House Camp (MHC)

Min House Camp is a hub for agrotourism and a registered centre for disabled people in Kelantan. MHC actively collects, keeps and saves seeds together with the local community. Wan Noriah accompanied her session with a corporate video of MHC followed by one that played on the methods of seed storage and conservation practiced at MHC. The following is the procedure as shown in the video:

1) Collect seeds from the farm
2) Dry the seeds well under the sun to repel insects / pests before storage
3) In rainy season, smoke the seeds to dry them further before storage
4) Hang securely to properly dry the seeds
5) Separate good from bad seeds
6) Store seeds in clear glass jars
7) Store seeds in cool, dark and dry environment
8) Label seeds accurately with scientific & local names and date collected
9) Traditional way to bottle seeds is to layer the bottle with firstly seeds, followed by Kekabu / Kapok cotton, then some ash, cap it.
10) Do not store seeds too long. Best to exchange seeds with the community
11) What to do with expired seeds? - Turn into crafts or souvenir and traditional games - seed skin can be turned into container or holder
12) Turn seed waste into compost and return it to the garden

To end the session, Wan Noriah played a video that demonstrated how *Beluru* seeds can be used to make traditional toy, ie, yoyos for children. A number of children from the audience excitedly showed how the yoyo is used to the conference participants.

b) Saraswathi Devi Odian and Theiban Gunasekaran – Consumers Association of Penang (CAP)

Over the years, CAP realised that saving and conserving seeds are meaningless unless they are also shared. Seeds cannot be kept forever; they are best planted after which new seeds can be acquired and this is how seeds can be saved. At first, they did these activities at only a small scale. However, this changed when they started an event called Seed Sharing Community in the last 7 years and still going strong due to its significance. During this event, the amount of seeds CAP shares is at average, 15 varieties to the public every year. The public is encouraged to bring as many seeds, seedlings, saplings, etc, to be shared amongst each other and the crowd that came. CAP also record the names and details of participants after which groups were form for networking and seed sharing amongst each other.

Seed should always be collected from healthy plants and at its third or fourth level of fruiting. This is because in the first couple of fruiting, germination ability of the plant is not very powerful. Plants which seeds will be collected from should be marked. There are two ways of seed collection – the first is to let the fruit mature, turn yellow and dry on the plant, such as, *bendi*, *petola*, long beans, brinjal, loofah, snake gourd, bitter gourd, and even leafy vegetables. When Fruits are collected when ripened, where they are then cut, clean, and dried in a shady area, later packed and kept. Cut the fruit at least 2 inches from the lower portion to get to the good seeds. If you want the seeds to last longer, put them in air-tight containers. For *bendi* especially, cut the tip and cover it with a tissue before keeping. Another method is to dry the seeds properly in the shade, at room temperature and well aerated area. Seeds collected are cleaned in water, drained and dried thoroughly to prevent it from germinating before storage.

There are two traditional seed preservation techniques. Jerangau/sweet flag powder (from roots) (buy from shop). Take some neem or mango sticks or sweet flag leaves, burn them, and collect the ash. Put two teaspoon of the ash in a glass bottle, one teaspoon of sweet flag powder, then, then all the seeds, for example *bendi* which normally have 80 seeds per fruit. Finally, shake the bottle well to mix them up. Seeds can be preserved as seed balls too. In the old days, people use mud from the river for

the seeds, but now this can be customised by using top soil. Mix top soil with some water until its consistency reach that it does not break. Ensure that water is added gradually so as to not soak the soil as this will cause the seeds to germinate. Put in the seeds and roll the mixture into balls.

The longer you keep the seeds, it will be in sleeping mode. Thus, when they are going to be sowed, they must be “woken up” by leaving them outside for three days followed by soaking and then the sowing process. Old seeds must be soak it in three days then they can start germination. If the seeds have been kept longer then they have to be treated for longer period before sowing can be done. Since the knowledge of seed collection and saving is not widespread amongst the public, CAP has come up with the booklet “Seed Saving Guide” that has more details of the processes explained above.

4. Community Seed Systems

a) Carolyn Lau – Free Tree Society

Free Tree Society (FTS) is an NGO that has been operating for abou 11-12 years. FTS educates by giving workshops and runs many programs for environmental stewards. They give away free trees to any groups who participated with them. Programs are conducted for urbanites and corporates and include workshops on recycling, composting, rainwater harvesting, biodiversity in the garden, propagating plants and seed sharing from the garden. They conduct tree planting workshops at Taman Tugu to plant native trees. They also teach kids to collect seeds, and plant them while telling stories and they can take anything from the workshop home. Volunteers come on regular basis to help the carry out various activities at the nursery and Taman Tugu. Carolyn encouraged everyone to visit their social media and website to get more information on FTS’s activities, and programs.

She also shared a new project spearheaded by Malaysian Nature Society called RUGS or Rangkaian Urban Garden Space that aims to build vegetation

corridors from the interior to coastal areas of Peninsular and invited everyone to participate especially those with farms in Klang valley.

b) Farid Izzeady Amir – Inisiatif Rizab Benih Kommuniti (IRBK)

IRBK is a coalition of NGOs and CSOs and enterprise that promotes seed saving, sharing and selling amongst the community. Presently, this initiative has succeeded to gather 90 seeds savers in Malaysia including in Borneo. Izzeady started with introducing IRBK via a video message, followed by its website, www.benihkomuniti.com. All Wira Benih or Seed guardians/savers are featured in IRBK's social media and website. One can browse the database, where all seeds that have been inventoried, documented and made available to the public. Seeds are recorded in their local names as well as scientific names. Izzeady went through the website to describe how visitors can use especially in looking for seed sources. They welcomed volunteers to key in data in the database and informed that the names of the seed owners are not displayed publicly as IRBK reserves this as data privacy. If anyone is interested in getting a particular seed, they can contact IRBK, and IRBK will connect them to the seed owner. In addition, the website has a collection of publications, articles, and past and upcoming events and activities conducted by IRBK.

5. Seed Research and Extension

a) Roselin Das, Moms Village Asia Sdn. Bhd.

Moms Village is an eco-centric effort that makes plannable papers, where they embed seeds into recycled papers for gifting and branding. Essentially, Moms Village create customized ecofriendly products for events and business promotions made of

recycled paper that aims to reduce paper waste. The seed paper grows int wildflowers, hers or vegetables.

The story of Moms Village is that originally, they assisted women in abusive relationships and provide them with activities where they can self-sustain themselves. Moms Village's aim is to help women regain their self-worth and power through financial independence. Their method to dealing with the domestic violence issue is via three pillars, ie, advocacy in raising awareness of domestic violence, empowerment using Magic Seeds to earn income with Moms Village, and provide cross-subsidized training workshops for the women, and lastly, community building.

Moms Village collect used paper from various sources, for example offices, companies and kindergarten, after which all these are shredded and processed. This is followed by drying and creating paper, finally turning them into marketing materials. Moms Village's concept is to change the way gifts are presented, especially for events, such as weddings or corporate events. Instead of using conventional stationeries or gifts mainly made from plastic, they provided alternatives of using eco-products made of papers, bamboo, wood. Other than these, they are linked to ladies homepreneurs who make organic soaps, candles, cookies and other eco-friendly home-made items. Moms Village can customize different items and package them into gifts to customers. Then, they went on to demonstrate how seed papers and creative, multiple-shaped seed bombs are made.

b) Abdul Razak Abdul Aziz – SEEDS Malaysia

Abdul Razak presented a session on Food Forest - Our own backyard gene banks. As a founder of SEEDS, that does numerous tree planting projects, he has planted 30 acre of farming spaces turning them into food forest. Located in Klang Selangor, SEEDS promotes tree planting initiative and have carried out projects in many parts of Malaysia. Abdul Razak put forth the concept of agroforestry in creating food forests, which is the intentional integration of trees and shrubs into crop and animal farming systems to create environmental, economic, and social benefits. He encourages planting food that we prefer to eat rather than duplicate what others do. He creates his own food forest using a diverse planting of edible plants that attempts to mimic a natural forest ecosystems and patterns found in nature. The benefits of food forest is that after one year of taking care and planting trees, one can get many types of food, fruits, seeds, and at the same time protect soil and prevent soil erosion.

SEEDs is also involved in number of reforestation projects for example, the Orang Asli community of Kampung Cunex, Perak where they planted 400 hardwood merbau trees. Another project was with Universiti Tunku Abdul Rahman (UTAR) in Perak, where they managed to document the whole process of planting including the growth that occur in 18 months.

6. Paddy Seed Quality Check

Abdul Rashid Yob – PeSAWAH

Rice is the staple food for Malaysians where our country requires 2.8 thousand metric tonne per year worth to be sufficient. 80% of rice seeds are controlled by the Ministry of Agriculture where these seeds are considered as safe to use. Malaysia has approximately 240,000 farmers including Sabah and Sarawak. MARDI and DOA have

obligations to monitor 12 companies which provide seeds to the farmers. Only these 12 companies have been given permission by the authorities to distribute seeds.

There have four categories of seeds. First, MARDI gives seeds directly to the farmers. Secondly, basic seeds provided by MARDI. Thirdly, registered seeds and the last one is common seeds. According to Abdul Rashid, there is two processes to determine the quality of seeds. The germination process is very important before farmers sow these seeds in their land. If the germination is less than 80%, the seeds cannot be sold or marketed. Most of the farmers do not conduct this test because they trust that the government will distribute the best quality seeds to them. In fact, if the seeds are not of good quality, farmers have the right to return as the seeds have been subsidised. This will ensure that farmer do not encounter losses. Only good quality seeds will produce good quality rice. Every sack of rice seeds should have a certification stamp, and farmers can return them if companies were found to disregard this and other information on the sack.

CLOSING CEREMONY

The AECoSS24 concluded with a vibrant closing ceremony that celebrated the exchange of knowledge and experiences on community seed systems. The event commenced with a heartwarming photo session featuring all panelists and farmer representatives from various countries gathered on the main stage. This collective portrait served as a visual testament to the collaborative spirit and shared commitment to agroecology that united the conference participants.

Adding to the festive atmosphere, a symbolic seed-sharing ceremony was conducted between representatives from Peninsular Malaysia and Borneo. This ritualistic exchange of seeds underscored the importance of preserving and diversifying local seed varieties, fostering genetic resilience, and promoting food sovereignty. The act of sharing seeds symbolized the interconnectedness of communities and the power of collaboration in safeguarding agricultural heritage.

As the AECoSS24 ended, it was evident that the conference had left a lasting impression on all attendees. The event served as a catalyst for renewed enthusiasm and a renewed commitment to agroecological practices. Participants were inspired to return to their respective communities armed with fresh insights, knowledge, and a strengthened network of like-minded individuals. It is hoped that the seeds of collaboration sown during the conference would continue to nurture and grow, leading to the widespread adoption of agroecological approaches and a more sustainable and equitable food system for all.

Closing Ceremony that celebrated the exchange of knowledge and experiences on community seed systems

GALLERY







Reconnecting, networking, and building friendships

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