



Rethinking Agri-food Systems through Circular Economy and Resource Efficiency: Barriers, Innovations and Learnings

Date: Wednesday 8th June 2022
Time: 14.00 - 16:45 hours (ICT)
Platform: BigMarker

BACKGROUND

Leveraging the importance and opportunity for circular economy in the agri-food system, SWITCH-Asia SCP Facility together with key partners hosted the Webinar: “Rethinking Agri-food Systems through Circular Economy and Resource Efficiency: Barriers, Innovations and Learnings”, which brought together stakeholders and practitioners across the agri-food value chain, SWITCH-Asia grant projects, development and financial organisations, and political actors to reflect on barriers, innovations, experiences, and learning encountered on the pathway to render the agri-food sector more circular and resource efficient. The outcome of the webinar demonstrated eye-opening theory and practical cases on how circular economy can be embedded in the agri-food sector. A wide range of SWITCH-Asia grant projects are making significant impacts in seven different countries throughout the region—Lao PDR, Vietnam, China, Mongolia, India, Uzbekistan, and Tajikistan—covering subsectors such as coffee, cacao, poultry, bamboo, organic food farming, food and beverage, and cold chain logistics. All three circular strategies—

resource circularity, resource efficiency, and resource switch—are covered in the various lifecycle stages of agri-food, however most potential lies within the primary and secondary production, distribution, and consumption stages. Many innovations to support the strategies include green and profitable business models, technical solutions, innovative products, return and reuse schemes, industrial symbiosis, Sustainable Integrated Farming Systems (SISF), and green purchasing platform. Most notable for the strategy supports are the enablers, which include sustainable investments, green value chain, skill development and capacity building, partnership, certification and standards, public policy, public awareness, and shifting consumption behaviours. In applying circularity in the agri-food sector, other extraordinary sustainability measures—gender equity, share resources, human rights to good food, sustainable procurement, and traceability—also arises, making the sector not only circular, but sustainable as a whole.

WELCOME REMARKS

Zinaida FADEEVA, Team Leader at SWITCH-Asia SCP Facility, opened the webinar by welcoming participants; introducing SWITCH-Asia SCP Facility and the webinar partners; giving an overview on the importance of circular economy; and outlined the structure and definition of circular economy dimensions. The resource increase and resource consumption are leading to rapidly accelerating crisis situation related to pollution, loss of biodiversity and ecosystems, and climate change. To decouple growth and well-being from environmental degradation and resource overconsumption, the current linear models must be transformed to circular models of development. The circular economy offers a framework in which the value of materials and the value of products remains for as long as possible within

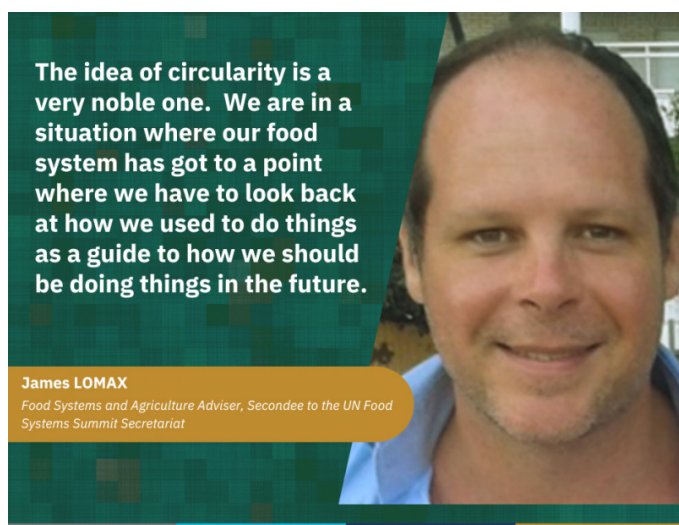
the production and consumption system. Circular Economy is a system driven by interconnected strategies and innovations. Circular economy dimensions exist to guide this transformation. The dimensions include: circular strategies, innovation, life cycle stages, and enablers. To achieve circular economy, we need to apply the circular strategies, which corresponds to the goals of sustainable consumption and production. Resource switch strategy aims at utilizing renewable and less harmful materials. Resource circularity strategy promotes the use and reuse of materials, products, and their components within production and the consumption system. Resource efficiency strategy minimizes waste generation, through better design, efficiency of production, efficiency of use, and efficiency of consumption.

Achieving these circular strategies during the different stages along the lifecycle depends on innovations, nature in materials, acknowledges in business and consumption models, and designs of a product and service to distribution, use, and end of life management. Finally, the uptake of circular economy strategies requires enablers. Enablers include appropriate policies, markets, functional education system, and capacity building. This is the circular economy, which both public and private organisations need to function to create a difference.

Mr. Miroslav BOŽIĆ, the EU Representative at the EU Directorate-General for International Partnerships, delivered a welcome speech by highlighting the EU policy frameworks, such as the EU Green Deal, the EU Circular Economy Action Plans, and the EU Farm to Fork Strategy. The topic of this webinar, circular economy and resource efficiency in the agri-food system, is at the heart of the mentioned policy frameworks. Launched in December 2019, the EU Green Deal, is a growth strategy, where the EU member states are committed to climate-neutral by 2050, and economic growth is decoupled by resource use. The EU

SESSION I: CATALYZING THE TRANSITION TOWARDS CIRCULAR ECONOMY AT SCALE IN THE AGRI-FOOD SYSTEM

Ms. Zinaida FADEEVA, Team Leader at SWITCH-Asia SCP Facility, moderated the panel discussion, and commenced the session by introducing the two panellists. The moderator asked two questions to the panellists simultaneously, which are: 1) from your experience and perspective of your organisations, what is the potential of circular economy? and 2) please highlight some of your current policies and practices, which were based on the circular economy principles.



Mr. James LOMAX; Food Systems and Agriculture Adviser at Biodiversity and Land Management Branch, Ecosystems Division, UNEP, and Seconded to the UN Food Systems Summit Secretariat; stressed the importance of circular economy in the agri-food sector.

Circularity is a very noble concept. The current situation, where the food system has gotten to a point where we must look back on how things were done, and as to how it should be done in the future. Circularity is crucial because the current food systems and economies have become linear; in comparison to only one to three generations ago, manufacturing and food systems were circular. Circularity in the food systems means how to ensure the most nutrients are made, wastes are used, and the

Circular Economy Action Plans detailed legislative and non-legislative measures and initiatives to facilitate the EU transition to circular economy by reconciling environmental, economic, and social dimensions of sustainability. It notices initiatives around the entire life cycle of the products, targets how products are designed, promotes circular economy processes, and encourages sustainable consumption; while ensuring waste is prevented and the resources used are kept in the economy for as long as possible. The European Farm to Fork Strategy tends to the Circular Economy Action Plan, and the Green Deal as it aims to reduce the environmental and climate footprint of the EU food system, strengthened in resilience, and ensure food security in the face of climate change and biodiversity loss; while leading a global sustainable food system transition and tapping into new opportunities. Circular economy is essential for reducing environmental and climate footprint. It is essential to make a global sustainable transition. It opens up to the new opportunities, and at the same time, circular economy has an essential role to play in creating more robust and resilience food systems.

production systems are fully utilized. Moreover, it means how to ensure no wastes, to create a healthy environment, to consume properly, and to ensure any overproduction be redistributed to those in need.



Mr. Uran CHEKIRBAYEV, Head of Department of Cluster Development at the Ministry of Agriculture of Kyrgyz Republic, shared the Kyrgyzstan's Green Economic Growth Program as part of its national plan. The Green Economic Growth Program 2019-2022 includes green energy, greener agriculture, low carbon transport, green industries, sustainable tourism, green cities, and waste management as the country's priorities. It's a unique opportunity to integrate the principles of circular economy approaches into national policies. As part of the program, the country recognizes that majority of its agriculture are degraded, eroded, and dropped in value. Therefore, it is important to incorporate agriculture policies in the national plan. Last year, the Ministry of Agriculture introduced the cluster development program promoting sustainability through green economic, social, and environmental development. The current focus of the program is on national food security and food safety.

SESSION II: CIRCULAR ECONOMY STRATEGIES IN THE AGRI-FOOD SECTOR

Ms. Cosima STAHR, Key Expert, South Asia at SWITCH-Asia SCP Facility, moderated the panel discussion, and commenced the session by introducing the four panellists. The moderator asked two questions to the panellists simultaneously, which are: 1) in which life cycle stages of your project were you able to implement circular strategies for either resource circularity, resource efficiency, or resource switch? and 2) what are the most critical factors for the transition of your project towards a circular economy and further upscaling?

Women in Lao PDR can play a critical role in greening coffee value chains by adopting resource-efficient, gender-inclusive and climate change resilient production practices.

Phaivanh CHANGNAKHAM
Program Director, Care International Lao PDR



Ms. Phaivanh CHANGNAKHAM, Program Director at Care International Lao PDR, elaborated the grant project, *SuPER WE Coffee - Sustainable Production and Ethic Responsible & Women Empowered Coffee Value Chains in Lao PDR*. The project operates from now until February 2026 and will commence when the MOU the Laos government is signed. The project actions promote the adoption of more resource efficient processes by coffee producers to improve micro, small, and medium enterprises (MSMEs) during the production lifecycle. It aims to engage with the appropriate value chains, recognizing climate change and global supply chains to reward the farmers for implementing resource efficient processes, while ensuring gender equality. The project identifies existing processing mechanisms and market opportunities; technical feasibility for the communities and producers; and training need and other support required by the coffee farmers to access the green value chain. The main factors, which need to be addressed are: sustainable investment in agricultural and manufacturing processes, the lack of information and skills on the good agricultural practices, management, processing services, market demands, and standard control; and financial literacy challenge.

Circular economy is a new concept in Vietnam. Cocoa provides a reproducible model for uptake of circular economy in the Vietnamese agri-food sector and in agri-food policies.

TUAN Nguyen
Project Manager, Helvetas Vietnam



Mr. TUAN Nguyen, Project Manager at Helvetas Vietnam, detailed the grant project, *Circular Economy Cocoa: From Bean to Bar in Vietnam*. The project was approved by the EU in April and will take off once received the local government's approval, operating for the duration of four years. The project supports the cacao sector to move closer to circular economy as part of the pilot case. The cacao sector is the most feasible sector with higher possibility of success. Then, the model can be replicated in other agri-food sectors in Vietnam. The cacao sector are missing drivers, motivations, and incentives to transform the traditional productions to circular economy productions, as people in Vietnam are more focused on the economic value, rather than the environmental values. The project plan is to introduce good business models of the circular economy to the cacao sector in Vietnam. A business model, which is profitable and supported by innovative technical solutions. The project was designed to have three outcomes by intervening at the farming level, the processing level, and the policy level. Changing the current the farming practice and looking at the potential of unconventional products of the cacao crop at the farming level; implementing energy efficiency and waste management at the processing level; and inviting the government to implement circular economy policies and to promote the concepts to the general public at the policy level.

Sharing resources such as technical equipment, harvesting machines, and waste treatment facilities brings plenty of opportunities to small and medium sized enterprises.

Valeriya ORLOVA
Project Manager, Regional Environmental Centre for Central Asia (CAREC)



Ms. Valeriya ORLOVA, Project Manager at CAREC, shared the grant project, *REAP - Resource Efficiency in Agri-Food Production and Processing in Kazakhstan, Uzbekistan, Tajikistan*. The REAP project is operated in its third year and is located in Tajikistan and Uzbekistan. The majority of the project's circular economy opportunities lie in the production and distribution lifecycle of agri-food. The entire production phase is covered by working with greenhouses and poultry farms. Packaging is also a focus by working with MSMEs through returnable packaging solutions. Other priorities in the overall process improvement in the production include energy, water, and raw material efficiency. Storages and warehouses are worked on for the distribution phase. The project also focusses on shared resources, by sharing common utilities, services, resource recovery, industrial symbiosis, and composting. In the process of implementing industrial symbiosis, one's wastes can be another's resources. The one critical point to achieve is the required high level of cooperation across MSMEs in the region, by moving pass competition, and more towards openness and collaboration.

Agricultural production depends on the circular economy. We call it integrated farming, one in which farmers, food entrepreneurs, processors, consumers all work in an integrated manner.

Anshuman DAS

Program Manager, Bhoomi Ka, Welthungerhilfe India



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Mr. Anshuman DAS, Program Manager at Deutsche Welthungerhilfe e.V., described the grant project, *Bhoomi Ka - Promoting Sustainable Consumption and Production Systems for Safe and Organic Foods in India*. The project works simultaneously on the entire lifecycle of food: production, market, and consumption; working with the smallholder farmers to improve their productivity; and linking them to the markets. The entire production system depends on the circular economy, with a system called, Sustainable Integrated Farming Systems (SISF), where the output of one component is used as input in another. The system promotes holistic farm productivity, where resources cycling is imperative. The surplus products are then collected through farmer producer cooperative, who delivers to the market. Young entrepreneurs are also important linkages in the market, as the project develops restaurants offering food from ecological and indigenous food products. On the consumer side, the project aims to change consumption behaviours; by documenting old recipes, hold recipe competitions, and organize farmer-producer introductions. Capacity building of all players in the entire food lifecycles, including farmers, food entrepreneurs, processor, aggregators, and consumers, are also crucial. Lastly, organic products are not only for the high society, but middle-class and slum dwellers also have the right to good food.

SESSION III: SHOWCASE OF CIRCULAR BUSINESS MODELS AND TECHNOLOGIES IN THE AGRI-FOOD SECTOR

Ms. Cosima STAHR, Key Expert, South Asia at SWITCH-Asia SCP Facility, moderated the panel discussion, and commenced the session by introducing the four panellists. The moderator asked two questions to the panellists simultaneously, which are: 1) what innovative business model you implement in your project/business to facilitate the development of circular economy? and 2) how can other stakeholders in the agri-food sector implement and benefit from these models?

An eco business model for resource efficiency requires a focused action plan, financing, and a strong commitment towards the adoption of low carbon practices and certification.

Amaia URIARTE

Project Manager, Towards Energy Efficiency in Agri-Food Cold Chain logistic in China



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Ms. Amaia URIARTE, Project Manager at INKOA, illustrated the grant project, *eECHO - Towards Energy Efficiency in Agri-Food Cold Chain Logistic in China*. The project started in March and aims at reducing energy consumption and greenhouse gas emissions of the agri-foods cold chain logistics in three different regions of China. The project works both with the logistics service providers and agri-food MSMEs, which have in-house logistics. The project proposal a business model for energy efficiency, where MSMEs have access to different tools to increase the environmental performance of the logistic operations. The model can be described in three different building blocks. The first enables MSMEs to measure and understand the energy consumption and

carbon footprint of operations through international recognized standards calculator and a toolkit for energy efficiency for fleet management, fleet configuration, logistic optimization, and efficient driving. The second offers access to finance, through capacity building for public authorities and financial institutions on resource efficiency in the logistics sector and provide technical assistance to MSMEs to develop business proposals. Finally, the third is certification to demonstrate the commitment to the adoption of low carbon practices. This will help MSMEs to increase the market penetration in greener value chain.

Bamboo can be stronger than steel and can last up to 50 to 100 years. The choice of your materials is key to sustainability.

Tamal SARKAR

Executive Director, MSME Foundation



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Mr. Tamal SARKAR, Senior Advisor at MSME Foundation, presented the grant project, *Promote Bamboo MSME Clusters for Sustainable Development in India*. Circularity should be promoted as a function of businesses. Therefore, the circularity model which the project promotes enhances returns, whether as wages or profits. However, the challenges lie in financing, markets, competitions, and quality control. The project has a very strong partners. Financing partners' presence and their knowledge contributes to promote financing. Similarly, skill development partners supported in skill and capacity development. MSME

foundation has the knowledge of promoting markets. All these three things helped in strategizing and moving towards the target numbers and the objectives of the project. Involvement of local organisations is also important to carry on the project after the funded duration has ended. In fact, the project actually identified the local partners right at the very beginning and worked with them in a very formative way. Policy framework is another important aspect, and a major buyer in the country is the public sector or the government. Therefore, the project also promotes sustainable purchasing or sustainable procurement in various organisations.



Our project will play a strong role in Mongolia's transition towards a low-carbon, resource-efficient and circular agri food sector through finance innovation, transparent eco-labelling standards, capacity building and behaviour change strategies.

Lkhagvasuren (Lucky) GALBADRAKH
Senior Programme Manager, Switching on the Green Economy, People in Need Mongolia

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Ms. Lkhagvasuren (Lucky) GALBADRAKH, Senior Program Manager at People in Need Mongolia, introduced the grant project, *SOGE - Switching on the Green Economy: Supporting Agri-food and Beverage MSMEs and Retailers in Adopting Circular Economy Practices in Mongolia*. The project was launched last week and to be implemented for the next 48 months. The project is focused on Mongolian local businesses in agri-food and beverage, with four different partners and additional stakeholders. The main objective of the project is to establish green purchase digital system platform, linked with incentive procedure for producers and consumers. The main concern in the sector is the trust and traceability, and the project develops transparency platform, where people can trace the entire lifecycle of a product they are purchasing in the food and beverage sector. Together with this platform, the project also implements eco labels in the digital platform to enhance social accountability for consumers and producers. Circularity auditors will be working closely together with the MSMEs and business associations by providing tailored assistance. Green financing mechanism is another most important part of the

SESSION IV: THE ENABLERS FOR CIRCULAR ECONOMY AND RESOURCES EFFICIENCY IN THE AGRI-FOOD SYSTEM

Ms. Cosima STAHR, Key Expert, South Asia at SWITCH-Asia SCP Facility, moderated the panel discussion, and commenced the session by introducing the three panellists. The moderator asked three questions to the panellists simultaneously, which are: 1) in context of your project/activities, which enablers are particularly significant for facilitating circularity of resources? 2) does your project/activity have a chance to contribute to strengthening of these enablers of circular economy of the agri-food sector? How? and 3) is it possible to accelerate your contribution to these areas? How can it be done sector-wide?

project. This site will be developed in different standards, so successful producers, MSMEs, retailers have financial access to sustainable production. Public awareness would be also implemented to influence the social behaviours.



We have greatly learned from partnership building and sharing risks. We must work together if we want a broader outreach and multiply impact for sustainable food systems.

HOA Duong Piyaka
Strategic Partnerships Senior Advisor, East-West Seed

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Ms. Hoa Doung PIYAKA, Strategic Partnerships Senior Advisor at East-West Seed, talked about the four points of the company's business model, which are related to circular economy. The first point is the knowledge transfer training smallholder farmers in emerging markets, by identifying highly motivated local farmers and intensively weekly training them to set up practical field demonstrations, through two to three crop cycles to ensure knowledge engrained. Some of the techniques that we train fall under climate smart techniques, pest and disease management, improved irrigation, optimized crop rotation and intercropping. The second point is on data and digital solutions, by collecting data on farmer yields, investment, costs, and income. A mobile application is used, anonymized, and make data an open source. Future plans include better predictability, integrate weather forecasting, and improve production planning to further minimize post-harvest loss. The third point is on women and youth, by addressing gender concerns through recruiting women to become key farmers and community leaders. Globally, 40% women's participation are targeted. Home gardens is an entry point to learn sustainable production to produce vegetables year-round.

The last point is on partnerships, catalysing long-term market development strategic partnerships to make a longer-lasting impacts in facilitating market linkages, accessing to finance, and nutritional awareness.

We need to turn net zero ambitions into transition finance to improve both natural capital and enable a just transition.

Jeremy PREPSCIUS

Managing Director, PwC, Asia Pacific Sustainable Supply Chain



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Mr. Jeremy PREPSCIUS, Managing Director for Asia Pacific Sustainable Supply Chain at PwC, hypothesize a thesis, based on technologies seen in the agriculture supply chains and smallholder engagement. We all know we need climate actions, global supply chains targeting net zero, and to be aligned with the 1.5-degree pathway. The residual emissions could be addressed via carbon compensation projects. The challenge to see is the opportunities to mobilize private capital into high quality offset projects. As small-scale farmers are the vast majority of the world's farms, and are disproportionately experiencing the effects of climate change, there are insufficient investments in these farmers. The opportunity and the need are to turn net zero ambitions into transition finance, to both improve natural capital and to enable a just transition. In the global value chains, the EU is looking at the concrete offensive sustainability framework around food production and marketing systems, by using trade policy to encourage similar uptake and trading partners to encourage increasingly sustainable farming practices. This sets the stage in which the global value chains will operate.

It's important that capital is allocated to those projects that create most impact, by engaging with farmers and moving to regenerative practices.

Matthew MC GARVEY

Chief Investment Officer, Pacific Rim Investment and Management



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Mr. Matthew MC GARVEY, Pacific Rim Investment and Management, spoke on behalf of Xylem Capital, an impact investment fund launched in 2017 with the help of the Ford Foundation and the Rockefeller Brothers Fund. The company

focuses primarily on the Greater Mekong Regions: Vietnam, Laos, Cambodia, and Thailand, by driving capital into the projects that are the most deserving and can have the highest impact in terms of converting the most land, have the most impact for most farmers, forestry, and agroforestry space; to move from conventional to regenerative. Community outreach programs such as webinars, technical assistance, and community gatherings are organized throughout the Greater Mekong region. The company also looks at different types of investments, such as accelerations for natural capital, founder supports for innovation, investment opportunities, and increasing investment projects, or investment platforms into those projects. The key point is how to create an investment vehicle that's going to adopt or come together to allows us to create bridges for those large capital into nature, when nature works for the usual period of 12 years, but the typically private equity has 5 to 7-year horizons?

Circular economy delivers Zero Waste commitments by orchestrating intelligent solutions that empower our customers to eliminate waste, use simpler materials and build a regenerative business model.

Jack WANG

Advisor Agribusiness SAP



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Mr. Jack WANG, Director for Industries and Value Engineering – Agribusiness at SAP, gave a brief introduction of SAP Business. SAP is a global software company, based out of Germany, which is the number one provider of enterprise resource planning software (SAP ERP). The company have solutions in supply chain in human resources, procurement, customer experience, and data. A lot of work are done in sustainability in the agri-food space, with the aim to help the world runs better and improve people's lives. Sustainability has increasingly become one of its top priorities with the believe that technology is one critical enabler. The entire sustainability strategy focuses on zero emissions with climate action, zero waste with circular economy, and zero inequality with social responsibility. The chasing zero initiative delivers zero waste commitment by orchestrating intelligent solutions that empower customers to eliminate waste, safer materials, and build a regenerative business model. The company have been working with many of consumer products companies cover sourcing, offering a solution covering sourcing management, which empowers the smallholders to connect directly with the brand purchasing agri-food commodities. Lastly, it has been working closely with industry leaders, NGOs, regulators, and partners over the last few years on a project known as Plastic Cloud to tackle packaging problems at scale with intelligent technologies.

CLOSING REMARKS

Ms. Cosima STAHR, Key Expert, South Asia at SWITCH-Asia SCP Facility, closed the webinar by concluding that we are all active in the problems, as a result from a linear understanding and limitless growth understanding of the world's finite resources. We really need to think around a systemic perspective and a systemic understanding of where the shifts in the system need to be. What came up quite a lot in the webinar is that there's a need for learning and partnerships across sectors. Regeneration as a concept also needs to be put at the centre for the circular economy to take hold and to make sense in a system shift, for the competition with linear models to fade away.



Rethinking Agri-food Systems through Circular Economy and Resource Efficiency: Barriers, Innovations and Learnings

8th June 2022 | 14:00-16:00 hours (Bangkok Time)

