CONCEP NOTE


BANK INDONESIA
BANK SENTRAL REPUBLIK INDONESIA
Asia-Pacific Rural and Agricultural Credit Association (APRACA)
Regional Policy Forum
on
The Strategic Role of Agricultural Finance in Advancing the Circular Economy
and
78th Executive Committee Meeting
26 - 28 May 2025
Bali, Indonesia
Hosted by: Bank Indonesia (BI)
Co-host: Asia-Pacific Rural and Agricultural Credit Association (APRACA)

CONCEP NOTE

APRACA Regional Policy Forum [1]

The Strategic Role of Agricultural Finance in Advancing the Circular Economy

Date: 26 May 2025; Venue: Courtyard Marriott Hotel, Bali, Indonesia

1.Background

While the term "circular economy" is relatively new in Asian context, the principles of this economic model has long been embedded in traditional agricultural practices in many countries of this region. Recently, these economic models have experienced significant growth due to the emphasis on resource utilization and reduction of the impact in agriculture due to the climate change. The circular economy principle addresses the "take-make-waste" approach through regenerating natural systems. The closed loop concept is central to the circular economy, increasing a continuous flow of technical and biological materials in the value circle, keeping products, components and materials at their highest utility and value, while reducing waste to a minimum. Circular economy is a resource-efficient economy based on three fundamental principles: (a) zero-waste and pollution design, (b) keeping materials and products in use for as long as possible, and (c) regenerating natural ecosystems. This model ensures that waste, by-products, and waste products from one stage become inputs for subsequent production processes.

The countries in the Asia-Pacific region are slowly introducing the circular economy in their mainstream development paradigm. One of the learning examples of adopting circular economy is the Bio-Circular-Green Economy (BCG) model of Thailand which was introduced by the Thai Government as a strategy for the national development and post-pandemic recovery. The thai version of the BCG model places emphasis on applying science, technology and innovation to turn Thailand's comparative advantage in biological and cultural diversity into competitive advantage, focusing on four strategic sectors, namely 1) agriculture and food, 2) wellness and medicine, 3) energy, materials and biochemicals, and 4) tourism and creative economy.

The agriculture based circular economy has already gained importance in research and development with special reference to incubation and startups. The startup company HyveGeo[2] with operations in Cambridge, England, and in Abu Dhabi, is one of the latest startups which is

[1] The Regional Policy Forum is being organized in collaboration with the International Cooperative Banking Association (ICBA) to commemorate the year 2025 as the UN International year of Cooperatives.
[2] CNN posted on 30 March 2025. Available at https://edition.cnn.com/2025/03/30/business/hyvegeo-green-desert-microalgae-charcoal-spc/index.html

exploring the pathways to turn the desert green while using agricultural waste and algae. The company is developing a fertile mixture designed to boost plant growth for tree planting projects and food production, reviving desert and other non-arable land. The co-benefit of using algae, is that it can remove climate-warming carbon dioxide from the atmosphere in the process. The main ingredient for HyveGeo's product is biochar, a carbon-rich, charcoal-like material made by burning organic materials in a low-oxygen environment in a process known as pyrolysis. HyveGeo is sourcing its organic material from local date palm farms and other agricultural waste and processing it at a pilot site in Abu Dhabi. As per the report, as of date, the site has produced 200 tons of biochar, diverting 800 tons of waste from landfill.

2.Main features of Circular Economy in Agriculture

In the context of agriculture, Circular Economy philosophy exhibits certain defining features:

(a) Champions efficiency by adhering to zero waste and pollution design. Agricultural economic models are devised to optimize the utilization of natural resources by continuously circulating and employing all raw materials, by-products, and waste products. Specific models that exemplify this principle include the use of biofertilizers in production, harnessing renewable energy sources, and adopting ecosystem-based approaches. Hence, the essence of circular agriculture lies in implementing production operations with a focus on waste reduction and pollution prevention.

(b) Strives to maximize the usage of natural resources by promoting the reuse of by-products, waste materials, and resources. Enhancing resource efficiency is a cornerstone of circular agriculture models. Circular agriculture is dedicated to optimizing the efficient utilization of natural resources. Characteristics of circular agriculture aimed at resource efficiency include combining mixed agriculture such as integrating crop cultivation and animal husbandry.

(c) Support in regenerating natural ecosystems through the preservation and enhancement of resources and the balanced management of renewable resource flows. For example, reusing wastewater can enhance irrigation capacity, minimize pollution, and replenish aquifers. Therefore, when managed effectively, wastewater becomes a valuable resource that bolsters food security, nutrition, and livelihoods.

All the above three features cut across biological and technical processes and are applicable in all circular models. Nevertheless, in the food system the principle of replacing pollution and waste would translate into looking at agricultural input on the biological cycle choosing to replace chemical pesticides by organic, replacing monocultures, by polycultures, taking advantage of symbioses of plants as pest control.

3. Institutional approach to the financing circular economy

Financing of agricultural sector is hindered by various factors. These factors are intertwined and, in many cases, caused by each other. It was proved that a stand-alone enterprise cannot be successful if it is not part of a complete, well- coordinated entire value chain, starting from purchasing materials and raw materials, to selling products, providing services and offering after-sales services, collecting waste, processing, recycling and continuing the post-production cycle. The commodities which are following this process are poised to increase the value of the commodity and creates new opportunities for sustainable financing.

a) An indirect way of financing small and medium-sized farmers and their cooperatives is the participation of large wholesalers and industrial sectors together with farmers united in business clusters, which guarantees stability to credit organizations when issuing loans.
b) A cluster approach to financing circular business models in agriculture can be used to develop a group lending strategy. This strategy being followed by the banks in many of the Asian countries includes various parties involved in the system – from primary suppliers to final product distributors and participants in the subsequent recycling cycle. The basic idea of the strategy is that the entire cycle of business activities should be studied first, problems or inefficient links that are useless for cluster activities should be identified, and then, the feasibility of financing joint cluster activities should be determined.
c) A circular-cluster approach to loans will help to create a system of credit guarantees for the transactions between the financial institutions and the actors in agricultural circular economy. As the guarantee schemes are multi-stakeholder initiatives, it directly or indirectly involve clusters (upstream and downstream) as stakeholders in the decision-making and management process. For example, to reduce the risk of credit repayment by farmers, conditions should be designed so that farmers use not only crops, but also partnerships with vendors, established contracts, inventory, linkages with large enterprises, and the goodwill of third parties as a means of securing credit. The introduction of a credit risk system focused on partnership relations will strengthen the competitiveness of farmers and enable the formation of a risk transfer mechanism. State support for guaranteed schemes is necessary because it ensures equality and protects the interests of farmers to develop their activities and increase efficiency.
d) Targeted cooperation within circular business clusters, with the participation of the state and international donors, will give farmers the opportunity to participate in the process of increasing of value add. Financial structures such as solidarity credit groups and cooperatives will reduce both transaction costs and risks associated with lending to small farmers. They need institutional support to attract private investors[3].

[3] Ferrando A., Lekpek S. (2018) Access to finance and innovative activity of EU firms: a cluster analysis, European Investment Bank, Working paper, 2018/02, January 2018. Available at https://www.eib.org/attachments/efs/economics_working_paper_2018_02_en.pdf

e) The introduction of another financial mechanism - the revolving loan fund (a source of money from which loans are issued for small business development projects) would help the entities and cooperatives engage in circular business. In this case, after the payment of the loan, the loan fund becomes available to other companies and thus, the money is transferred from one person or company to another. Initially, the fund is created with capital that is not subject to return. In such a case, the participation of donors is necessary.

4. Rationale of the theme

Adopting circular economy practices in agriculture will require a global systems-level approach comprising a range of actors spanning the public and private sector actors. Furthermore, it needs to be taken at the design stage of the transformation process and be implemented at scale. In the implementation of the agricultural circular economy, there are specific barriers that may be common characteristic for of all countries within the region that are starting to introduce the principles of circulation. Such barriers are (a) insufficient implementation of circular economy regulations in agricultural activities, (b) lack of information about circular economy and available technologies, (c) ineffective recycling policies for agricultural produces/wastes, (d) absence of environmental management system at the micro level, (e) rationalization of the costs for implementation of green activities and (f) limited research and development opportunities due to shortage of professional staff, etc.[4]. It is known that the better organized farmers are, united in cooperatives and associations, the more opportunities they must establish partnership relations with financial organizations and large industrial groups for enhanced price realization[5]. This value chain integration to promote circular economy need large investments and efficient financing facilities to support achieve the long-term goals. However, the current agricultural finance system is skewed towards small farmers resulting an unintended consequence of not so supportive to establish circular ecosystem. The financial institutions and the cooperatives are poised to play extremely important role in supporting the circular economy models.

5. Objectives

The overarching objective of the APRACA Regional Policy Forum (RPF) on the *role of agriculture finance to circular economy* is to promote an economic model within the agricultural sector

[4] Erhan Ada, Muhittin Sagnak, Ruhan Askin Uzel, İrem Balcioglu (2022) Analysis of barriers to circularity for agricultural cooperatives in the digitalization era, *International Journal of Productivity and Performance Management*, 71(3), February 2022, DOI: 10.1108/IJPPM-12-2020-0689, Available at https://www.researchgate.net/publication/352284158_Analysis_of_barriers_to_circularity_for_agricultural_cooperatives_in_the_digitalization_era

[5] Allimadi A., Ge H., Yang W. (2021) The circular economy, cooperatives and the social and solidarity economy, UN, 2 August 2021, Available at https://www.un.org/development/desa/cooperatives/2021/08/02/the-circular- economy-cooperatives-and-the-social-and-solidarity-economy/

where agricultural production and other actors in downstream adheres to maintain and support the closed-loop cycle which follows three main features of Circular Economy.

6. Speakers

The speakers for this Regional Policy Forum are the leaders from the financial institutions, representative from national/international agencies promoting and supporting circular economy models and the academics supporting knowledge dissemination. They will discuss their experiences on the current challenges and successes in scaling up financial services for implementing circular economy in sustainable development of agriculture and rural enterprises including Agri-SMEs.

7. Registration

To join the event, all participants need to complete the registration, visiting the below link https://tally.so/r/3jvAOx ***OR*** **Scan the QR code for Registration as below.** Upon completion of registration, APRACA Secretariat and Bank Indonesia (BI) will send the invitation letter to join the event and support for required visa processing documents.

78th EXCOM & APRACA
Regional Policy Forum

8. Programme

The Regional Policy Forum has been divided into 2 technical sessions:

- **Technical *Session* 1:** Policies that trigger provisioning agriculture finance to support developing Circular Economy models.
- **Technical Session 2:** Role of financial institutions in extending agriculture finance to circular promote Circular Economy models.

A detailed programme is attached as Annexure