



Final Report

Workshop

Mainstreaming Circular Economy in the Entire Value Chain of Food and Beverage Sector

Submitted by: Maria Dian Nurani

Implementation

The workshop was held on August 24 – 25, 2023 at Swiss-Belhotel, Bogor, West Java, Indonesia at 08.30 am – 5 pm. The workshop was attended by:

Table 1. Number of participants

Date	Session	Number of participants (Including resource persons)	
		Offline	Online
24 August 2023	Morning	51	97
	Afternoon		50
25 August 2023	Morning	54	63
	Afternoon		50

Table 2. List of Resource Persons and Topics

No.	Resource person	Topic	Attendance
Day 1			
1.	Angus Mackay, Director of Division for Planet – UNITAR	Opening remark	Recorded
2.	Henriette Faergemann, First Counsellor for Environment, Climate Action, and Digital – EU Delegation to Indonesia and Brunei Darussalam	Opening remark	Recorded
3.	Dr. Aretha Aprilia, Head of Environment Unit – UNDP Indonesia	Opening remark	Join online
4.	Dr. Medrilzam, Director of Environment – BAPPENAS	Keynote Speech	Recorded
5.	Asri Hadiyanti Giastuti, Direktorat of Environment – BAPPENAS	Circular Economy Roadmap and Action Plan in Indonesia	Join offline
6.	Yosi Hidayat – UNDP/Kirei	Circular Economy Assessment in Palm Oil Industry by UN-PAGE Indonesia	Join online
7.	Lailly Prihatiningtyas – ILO	Circular Economy Impact for Jobs in the F&B Industry: Jobs Transformation & Skills Needs, by UN-PAGE Indonesia	Join offline



No.	Resource person	Topic	Attendance
Day 1			
8.	Andriati Cahyaningsih, Center for Green Industry Industri Hijau, Ministry of Industry	Circular Economy Practices from Industry in Indonesia	Join online
9.	Dr. Sri Asih Rohmani, Agricultural Instrument Standardization Agency, Ministry of Agriculture	Building Regenerative Agriculture for Circular Economy in Indonesia	Join online
10.	Syaifullah, Director of Industrial Management, Ministry of Tourism and Creative Economy	Food Waste Prevention and Management in Hotel, Restaurant, and Cafe	Join offline
11.	Ujang Solihin Sidik, Head of Sub Directorate of Producer Governance, Directorate of Waste Reduction, Ministry of Environment and Forestry	Transforming food by-products at city level	Join online
Day 2			
12.	Jarot Indarto, Director of Food and Agriculture – BAPPENAS	Keynote Speech	Join offline
13.	Arief Fatullah, Senior Manager – Great Giant Foods	Circular Economy in Food and Beverage Supply Chain Producing circular food and beverage	Join offline
14.	Helga Angelina, CEO – Burgreens	Designing and marketing circular food products	Join offline
15.	Eva Bachtiar, CEO – Garda Pangan	Reducing waste in food supply chain	Join offline
16.	Ribut Purwanti, GAPMMI (Association of Indonesian Food and Beverage Producers)	Establishing a Circular Business Ecosystem in Food and Beverages Supply Chain	Join online
17.	Tulus Abadi, Chairman – YLKI (Indonesian Consumers Institute Foundation)	Consumer Rights and Power	Join offline
18.	Any Sulistyowati, Academic – Universitas Indonesia	Bringing raw food materials closer to consumers	Join online
19.	Adithiyasanti Sofia (Dithi), Communication Manager – GIDKP (Indonesian Plastic Bag Diet Movement)	Providing Circular Consumerism Opportunity	Join online
20.	Karyanto Wibowo, Sustainability Director DANONE Indonesia	Sustainable Diet	Join online

The online participants were reached out through e-flyer, as follows:



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Figure 1. e-flyer and Public Announcement



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WORKSHOP EKONOMI SIRKULAR

MAINSTREAMING CIRCULAR ECONOMY IN THE ENTIRE VALUE CHAIN OF FOOD & BEVERAGE SECTOR

24-25 AGUSTUS 2023

Registrasi melalui bit.ly/WorkshopCE-FnB

24 AGUSTUS 2023

SESI 1 | 10.00 - 11.00 WIB **Moving toward Circularity**

SESI 2 | 13.30 - 14.30 WIB **Circular Economy Policies in Indonesia**

25 AGUSTUS 2023

SESI 1 | 09.15 - 10.15 WIB **Circular Economy in Food and Beverage Supply Chain**

SESI 2 | 13.30 - 14.30 WIB **Mainstreaming Circular Economy for Food and Beverages Sector in Indonesia**

Low Carbon Development Indonesia lcdi-indonesia.id



#Friends of Development, the Ministry of National Development Planning/Bappenas together with the United Nations Partnership for Action on Green Economy (UN-PAGE) through UNDP and UNITAR will hold a series of Circular Economy Workshops with the theme "Mainstreaming Circular Economy in the Entire Value Chain of Food and Beverages Sector".

This workshop will also present circular economy experts and practitioners and will discuss various topics related to the implementation of the circular economy in the food and beverage sector which will be held on:

📅 Day/Date: Thursday-Friday, August 24-25, 2023

🔗 Zoom link for the entire series of workshops: <https://bit.ly/WorkshopCE-FnB>

We look forward to #FriendsofDevelopment's participation in supporting the circular economy agenda in Indonesia!



Talkshows

There were 4 (four) sessions of talk shows, moderated by Adhitya Yusuf (UNDP) and Maria Dian Nurani, the Team Leader of Experts team who is assisting BAPPENAS in developing the Road Map and National Action Plan for a Circular Economy in five sectors, including the Food Sector.

Talkshow 1 – Moving Toward Circularity

1. **Asri Hadiyanti Giastuti** from **BAPPENAS** explained that to mainstream the circular economy, Bappenas has several agendas, namely the preparation of a Circular Economy Road Map and Action Plan, the creation of a circular economy platform, and a pilot project. There are three policy directions taken by the government, namely 1) reducing the use of resources and materials, 2) extending the usability of products and materials, 3) recycling and utilizing production and consumption waste.
2. **Yosi Hidayat** from **UNDP/Kirei**, described the process of selecting palm oil as a commodity studied by UN-PAGE Indonesia regarding life cycle assessment and waste CO2 reduction along the value chain, as well as the results and recommendations.

The recommendations given include the use of palm oil waste into fertilizer, improvement of more advanced and more optimal technology (cultivation techniques), utilization, use of methane capture, watering techniques (advanced watering systems), development of palm oil packaging, use of used cooking oil into biodiesel

3. **Lailly Prihatiningtyas** from **ILO**, shared the results of an ILO study regarding the potential for green jobs and the skills needed to support a circular economy in the palm oil industry. The findings: 1) the application of circular economy has an impact from upstream to downstream, especially in the palm oil sub-sector. In the upstream there are still many players so that the forms of worker contracts vary. The CPO sub-sector generated the greatest absorption of workers. On the downstream, it is controlled only by large companies (dominantly permanent employees) with high skills and certification.

4. Questions and answers

1. Does the focus on food only focus on the Palm Oil sub-sector? Or will it be further developed in the Food and Beverage sector?

Answer: CPO is only an example that can be replicated to other commodities

2. Of the many recommendations that have been submitted, in your opinion, what are the low hanging fruit strategies that are most feasible to implement in the short term to increase resource efficiency and circularity in the FnB sector?

Answer: For the Palm Oil Industry subsector, the short term recommendation is to improve by-products and also use the results of very large palm oil plantations for biodiesel, which is the most feasible

3. Interesting regarding shifting jobs towards green jobs that support a circular economy 1) can this pattern or framework in the palm oil industry be adopted by



other sectors? 2) how to make it easy for people to recognize that these are green jobs or not. Will there be a certain certification for these types of green jobs?

Answer: Yes, by identifying the circular strategy and its environmental impacts, who are the actors, whether the work is feasible or not. From a decent work perspective, you can see which actor will do it. As long as these two things are met, it can be done in any sector.

Green jobs is defined as jobs that has a positive impact on the environment. No policy and competence standards yet in Indonesia.

Talkshow 2 – Circular Economy Policies in Indonesia

1. **Syaifullah the Director of Industrial Management, Ministry of Tourism and Creative Economy** stated that in relation to tourism and climate change: post-consumer waste including hotels, travel and tourism contributes 8-11% of GHG

There are several government policies regarding sustainable tourism, in the form of laws, the National Tourism Development Master Plan, green hotel standards, and ministerial regulations regarding plastic waste management in tourist destinations. The government has also carried out digital transformation to reduce food loss and waste by conducting public campaigns.

2. **Haris Syahbuddin represented Mrs. Sri Asih Rohmani, Secretary of the Agricultural Instrument Standardization Agency, Ministry of Agriculture** stated that contribution of the agricultural sector to GDP tends to increase, with the challenges of population growth, urbanization, climate change, natural disasters, price uncertainty, global food instability, inflation and financial vulnerability, and pandemics.

To overcome this, the Ministry of Agriculture is increasing production capacity, diversifying local food, strengthening national logistics systems, strengthening bilateral and multilateral cooperation, as well as regenerative agriculture (holistic farming system, improving water and air quality, enhancing ecosystems, producing nutrient-rich food, carbon storage to anticipate climate change).

3. **Ujang Solihin, Directorate of Waste Management, Ministry of Environment and Forestry** explained the picture of the condition of food loss and waste in Indonesia which needs to be handled using an inverted triangle approach, namely increasing the greatest efforts in limiting waste generation, avoiding and reducing the amount of waste generated.

Challenges of transforming food waste to a circular economy on a city scale: large/business scale, limited government/local government funding, collection & storage systems, profit vs liability, feed stock stability, market and offtaker guarantees, BtoG scheme, vs BtoC vs BtoB

4. **Questions and answers**

In the nearest future, are there targets or strategies in each Ministries and Institutions to manage food loss and waste and what support is being provided regarding these efforts?

Answer: The Ministry of Tourism and Creative Economy collaborates with hotel and restaurant associations and other stakeholders to manage food waste. The main obstacle



is the policy of the hotel itself to maintain food quality; The Ministry of Agriculture seeks to implement the concept of CE and regenerative agriculture in food crop cultivation, in each supply chain, so that excess waste becomes value chain input. Synergy is needed regarding the development of agricultural infrastructure and technology, especially with the Ministry of PUPR in water/irrigation infrastructure; The Ministry of Environment and Forestry created a big program - Zero Waste, Zero Emission and encouraged the home composting movement.

Talkshow 3 – Circular Economy in Food and Beverage Supply Chain

- 1. Arief Fatullah, Senior Manager Great Giant Foods (GGF)** explained that GGF has implements circular economic principles and becomes a business fundamental in producing, among others, pineapple and dairy (milk, cheese, meat and other processed) products, compost, biogas, plastic waste management, black soldier flies (BSF), and bioplastics. GGF focuses on: 1) Regenerative agriculture, namely ensuring the sustainability of water, land and other factors, 2) Climate resilience, and 3) Business circularity;

GGF already has a target of zero food loss, developing food and energy estate, & waste to energy, for *Rejuve* products, GGF implements 'bring back your empty bottle', using 100% PET, and waste and community development.
- 2. Helga Angelina, CEO Burgreens** described Burgreens as a restaurant founded on health and sustainable meals innovation. It now has 10 outlets and 200 employees, domestic sales and exports to 6 countries. This year, it has a target to become carbon neutral. Burgreens impact business models: less waste operations, direct sourcing from farmers, low waste cooking methods, healthy & planet-friendly meals, empowering women (60% of the workforce are women), zero waste catering innovation, low emissions through organic waste composting, reusable packaging, and plant-based food. This becomes material for ESG for investors and is published for campaigns to consumers. They also conducted LCA in collaboration with universities.

Challenges: (1) 40% of consumers care about and support green businesses, but only 4% actually buy (because the price is more expensive). For small startups, COGS is still high. (2) Funding for green products is very difficult, investors are still dominated by foreigners. Recommendations for the national roadmap: government grant / investment, tax incentives, marketing & business development support, market education, FnB training.
- 3. Eva Bachtiar, CEO Garda Pangan** explained that Garda Pangan is a food bank movement that aims to be a coordinating center for surplus/excess and potentially wasted food, with big goals: FLW eradication & hunger relief.

Business Program: food rescue from food business, food rescue from events, gleaning on farm, food waste awareness campaign, food waste policy advocacy, gleaning on farm (collecting ugly products and then making new products), organic waste treatment with BSF.

Garda Pangan issued a policy brief on reducing food waste in Indonesia to encourage legal protection policies for food donors and food recovery organizations, tax incentives for food donations; and conducted socialization of liability protection policies nationally to all



relevant stakeholders. If liability protection is implemented, it will increase the potential for surplus food that can be saved and reduce the amount of food waste produced

4. **Ribut Purwanti, GAPMMI** believed that to encourage members to immediately adopt sustainability principles including circular economy, umbrella regulations are needed that can integrate current regulations/policies such as puzzles and understand key drivers for circularity (material, climate, consumer, compliance). Business actors need to understand the value chain from production, packaging and waste management, and create a roadmap for implementing circular economy, working together with all partners throughout the value chain according to the scale of their respective businesses. The financial sector needs to accelerate green investment to increase innovation and implementation

5. Questions and answers

There were inputs from BPOM participant to GGF to prioritize food safety and nutritional quality; to Burgreens to pay attention to sustainability in shitake and food labeling; to Garda Pangan that 'expired date' is more appropriate for the drug industry, not food, and that BPOM will conduct a study regarding 'used before' and 'best before' labeling.

Talkshow 4 – Mainstreaming Circular Economy in Food and Beverage in Indonesia

1. **Tulus Abadi, Chairman of the YLK Daily Management** explained that the most important thing is the right to food safety and security, our food security is still fragile, as is food sovereignty (still far away). YLKI encourages this by analyzing several aspects of the health impact on consumers.
Challenges: consumer literacy is still low because the labels are less informative; Consumers are not yet critical and empowered, in consuming goods/services they are still predominantly price sensitive. Environmental issues have not received enough attention from consumers. Sustainable consumption and production must align.
2. **Any Sulistyowati, form Universitas Indonesia** introduced Community Supported Agriculture (CSA) as an effort to reduce the socio-ecological crisis in the food sector in implementing a circular economy, with the principle of connecting farmers with members in the local area in a mutually beneficial relationship.
Benefits: restoring agricultural ecosystems, improving the quality of life of farmers, providing healthy food for members, and improving relationships between farmers, consumers and nature.
She suggested that the government provide urban young people with access to urban land, increase awareness of urban food consumers to support regenerative local food production, and improve the management of the food system to make it closer, more efficient and professional in the use of resources.
3. **Adithiyasanti Sofia, Communication Manager of Indonesian Plastic Bag Diet Movement (GIDKP)** shared their program to encourage people to be wiser in using plastic bags. One of the programs is the Jakarta Reuse Movement to create an ecosystem that supports the



reuse lifestyle in Jakarta, involving the government, culinary entrepreneurs, courier entrepreneurs and consumers. In this program consumers can order food via courier using reusable packaging. After use, the packaging is sent by courier to an organization that washes and redistributes the clean packaging for use by culinary entrepreneurs.

GIDKP encouraged the government to facilitate the strengthening of the reuse business ecosystem so that it can be replicated elsewhere.

4. **Karyanto Wibowo, Sustainability Director DANONE Indonesia** explained the platform for increasing consumer awareness regarding the circular economy for food called Sustainable Diet. This program is a collaboration with UNITAR. Everyone can take this online training for free.

Apart from that, he also explained that the DANONE Impact Journey as a company action plan to make an impact through 3 pillars, namely health through food, preserving and producing nature, and society development. DANONE encourages water circularity in the production system: rainwater harvesting, water efficiency in production, reuse of water for general purposes, and reuse of process waste water

Several other DANONE programs: supporting waste management infrastructure, building the first PET bottle recycling plant in Indonesia. AQUA is a pioneer in bottle packaging using up to 25% recycled material.

6. Questions and answers

1. How does YLKI protect public health in terms of food safety and are there any regulations governing it?

Answer: Minister of Health Regulation 20/2015 already exists to control blood sugar and fat in food. To control consumption patterns in terms of food products. In developed countries, there is traffic light food labelling, if red is dangerous. This needs to be adopted in Indonesia.

MBDK survey in 5 cities. Consumers' ability to read labels is only 20-30%. Either people's literacy is lacking, or the labels are less informative.

2. Danone has innovated by creating an education platform on Sustainable Diet, is it used for other Danone programs?

Answer: The platform was developed in 2019, so it is mandatory learning for Danone employees (+/- 100 thousand employees). This training is the most comprehensive because it encourages local feed, how to read labeling, sustainable packaging.

3. For GIDKP: Is it costly to provide such business model for reusable packaging for online food?

Answer: Yes, it is costly. That is the challenge. We focus for mature customers. Need to replicate to reduce cost.

4. For Universitas Indonesia: is there any other CSA communities in other cities?

Answer: There are similar communities that aware on having closer food sources.



Group Discussion

There were 4 (four) sessions of discussion, facilitated by Wahyudi David, the Food Expert team member who is assisting BAPPENAS in developing the Road Map and National Action Plan for a Circular Economy in the Food Sector.

Participants were divided into two large groups for discussion and brainstorming. The result of discussions are as follow:

Group Discussion 1 – Circular Economy Definition, Policy Direction, and Governance Strategy

1. Participants brainstormed about (potential) R0-R10 in food sector, and come up with 6 ideas of R0 (refuse), 8 ideas of R1 (rethink), 7 ideas of R2 (reduce), 2 ideas of R3 (reuse), 5 ideas of R4 (repair), 2 ideas of R5 (refurbish), 3 ideas of R6 (remanufacture), 10 ideas of R7 (repurpose), 7 ideas of R8 (recycle), and 5 ideas of R9 (recover)
2. Participants' input on definition of circular economy: to add "waste minimization"
3. Participants' input on existing policies included 20 additional regulations and national standards.
4. Participants' input on governance: by establishing and enforcing regulations and by building a zero waste factory (fisheries), involving relevant ministries.

Group Discussion 2 – Circular Economy Action Plan, Indicators, Incentives and Disincentives

Based on the previous discussion on R0-R9 ideas, participants brainstormed and come up with several action plan for each principle, along with the timelines (short-, medium-, or long-term), respective indicators of achievement, and incentives or disincentives necessary to drive the actions. They did not find any action for the principles of R4 (repair), R5 (refurbish), and R6 (remanufacture).

Group Discussion 3 – Circular Economy Monitoring and Evaluation Strategy, dan Data Management

Based on the previous discussion participants brainstormed and come up with ideas on monitoring and evaluation strategy, among others, conducting regular audit on standards, providing data hotspot; collaboration with hotel, restaurant and café; involving farmers group, local and national governments to monitor and evaluate the achievement, survey and test; digital monitoring and evaluations.

For data management, participants suggested to conduct data digitalization, to report local data through local Agriculture Agency to data center at Ministry of Agriculture, and to enforce for data entry.



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Group Discussion 4 – Circular Economy Stakeholder Roles and Actions, Funding Strategy and Communication Strategy

Based on the previous discussion participants identified relevant stakeholders, i.e. Ministries, private sector, contractor, local government, standardization body, academicians, NGOs, research institutions, market, etc.

Some funding strategy identified during the discussion were carbon market, foreign grants, philanthropy, loan, joint research, CSR, low interest loans, and public private partnership.

Communication strategy identified during the discussion were social media communication, engaging influencer, religious and cultural community figures, technical assistance, collaboration with association, academics, and public campaign.

Conclusion

1. The workshop was implemented very well in term of number of resources persons and participants engaged, as well as the topics of talk shows delivered, and discussions conducted.
2. The material presented by the speakers in the talk show provided quite good inspiration as a trigger for group discussions.
3. The results of the group discussions still need to be further analyzed and validated by the team developing the circular economy roadmap and action plan.



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