

### **Circular Economy Dimensions**



**Circular Strategies** 



Innovation



Enablers

switchasia



Funded by the European Union

## **GRANT PROJECTS** CONTRIBUTING TO THE CIRCULAR ECONOMY





## **CIRCULAR ECONOMY**

The increase in resource consumption is leading to a rapidly accelerating crisis situation - growing pollution, loss of biodiversity and ecosystems, and climate change. To decouple growth in well-being from environmental degradation and resource overconsumption, a shift from linear (extract-make-use-throw away) to circular (extract-make-use-reuse/ recycle/remake/recover) models of development is urgently needed.

The circular economy (CE) offers a framework in which the value of materials, parts, and products remains for as long as possible within the production and consumption system.

CE is a system driven by interconnected strategies and innovations (Figure). It is to be achieved through Circular Strategies that correspond to the goals of sustainable consumption and production. This means relying on renewable and/or less harmful materials ('resource switch'), striving for perpetual use and re-use of materials, products and their components within production and consumption systems ('circularity of resources'), as well as minimising waste generation through better design and efficiency of production and use ('resource efficiency'). Achieving circular strategies depends on Innovations in materials, technologies, and business and consumption models (including consumption by private consumers, and public and business organisations). All CE strategies and innovations must be taken into consideration during the different steps in Life Cycle Stages - from selection of materials along with product or service design to distribution, use and end-of-life management. Finally, the acceptance and implementation ('uptake') of CE will require **Enablers** – appropriate public policies, functional markets, and education and capacity development.

In the context of this brochure, the SWITCH-Asia Grants are portrayed as contributors to different elements of the CE from practicing CE strategies and innovations along the supply chain to contributions into critical enablers. Presenting the Grants in the CE ecosystem will open up perspectives for further engagement between them and additional critical partners in the ongoing movement towards circular transformation.

## **CIRCULAR ECONOMY DIMENSIONS**\*



Resource Circularity

Resource Switch

Resource Efficiency



- Lifecycle Stages
- Production & Distribution
- Use
- End of Life

- **Enablers**
- Education & Behavioural Change
- Public Policy
- Markets

\* Adapted from Van Berkel, R. 2021. 'Building a Circular Manufacturing Economy', presentation at CII GreenCo 2021 Summit, 7 October 2021. https://greenco.in/grncosummit/

- Products, Materials
  - & Technologies
- Business Models
  - Consumption Patterns / Lifestyle



- Materials
- Desian



#### eECHO: Towards Energy Efficiency in Agri-Food Cold Chain Logistic in China

Enhances the resource-efficiency and sustainability of the Agri-food Cold Chain Logistic in Tibet, Jingjinji & Shandong by providing MSMEs with mechanisms to reduce energy use and GHG emissions of logistic services, while ensuring food quality and safety, and reducing food wastage.

Innovation

Products, Materials &

Technologies



Inkoa





Production & Distribution

Enablers

- Education & Behavioural Change
- Public Policy





**Circular Strategies** 

Resource Efficiency

#### SAFE – Supporting Scheme for MSMEs by Building Sustainable Agricultural Fresh Food Production and Logistics in China

Promotes eco-efficient agricultural production among farmers, improved processing and packaging, and better food safety through verification systems, guidelines, and standards, as well as efficient and innovative logistics.







- Products, Materials & Technologies
- Business Models



- Materials
- Production & Distribution



 Education & Behavioural Change

- Public Policy
- Markets







# Low Carbon Rice – Reducing Climate Impact of Rice Production in Indonesia

Reduces the climate impacts of rice through the adoption of sustainable rice cultivation practices. Increases access to finance to SMEs, enabling access to loan and credit programmes and new business models for sale of rice by-products and carbon credits.







 Products, Materials & Technologies

Innovation

Production & Distribution

Lifecycle Stages



Preferred by Nature





SuPER WE Coffee - Sustainable Production and Ethic Responsible & Women Empowered Coffee value chains in Lao PDR

Improves the economic profitability, efficiency and sustainability of intensified coffee production by smallholder farmers. Supports MSMEs in reducing the environmental impact of their industrial production by adoption less polluting and more resource-efficient circular approaches.



Innovation



Resource Switch

- Products, Materials & Technologies
- Production & Distribution



 Education & Behavioural Change
Markets







Production & Distribution

Behavioural ChangePublic Policy

Education &

Enablers

Markets





#### Switching On the Green Economy (SOGE)

Supports Mongolian agri-food and beverage MSMEs and retailers in adopting circular economy practices through market-based eco-labelling systems, tailored technical assistance, behaviour change and access to green finance.





Resource Switch

- Products, Materials & Technologies
- Production & Distribution



SCAN ME

Education & Behavioural ChangeMarkets





O MYANMAR

#### NGA-Myanmar – Nurturing Green Aquaculture in Myanmar

Supports aquaculture MSMEs to adopt more resource-efficient and greener production practices, reducing environmental degradation in Myanmar's aquaculture industry, while ensuring improved economic returns in the value chain.







- Resource Efficiency
- Products, Materials & Technologies



Production & Distribution





 Education & Behavioural Change

MERCY CORPS

Markets





MS-SETB – Mindoro Strait Sustainable and **Equitable Tuna for Bankability Project** 

Increases capacity to conduct resource-efficient fishing and aguaculture operations in Occidental Mindoro. Reduces post-harvest losses and equips target groups to achieve green trade certification standards and compliance with international standards for yellow fin tuna.







- Products. Materials & Technologies
- Production & Distribution Use

Lifecycle Stages

- Education &
- Behavioural Change Markets

**Enablers** 





### VIETNAM

#### **Biomass Gasification Technology - Sustainable Energy Solution for Agri-Food Processing and Waste** Management in Rural Areas of Vietnam



Promotes sustainable production and sustainable energy consumption among agri-food processing micro and small enterprises (agri-MSEs) in Vietnam and contributes to waste management by scaling up the deployment of environmentally friendly and low-cost Volumetric Continuous Biomass Gasification (VCBG) technology. Increases availability of mechanical and biomass supply services and access to finance for agri-MSEs to deploy VCBG consistently.





- Resource Efficiency
- Resource Switch

Innovation



- End of Life
- & Technologies
- Business Models

Products. Materials







- Education & **Behavioural Change**
- Public Policy









PHILIPPINES

VIETNAM

#### Circular Economy Cocoa: From Bean to Bar

Promotes the development and adoption of less polluting and more resourceefficient and circular products, processes and services by MSMEs in the cocoa industry, allowing their integration into global greener value and supply chains.



- Resource Switch
- - Business Models



- Production & Distribution
- Design



SCAN ME

Education & Behavioural Change Markets





CHINA

#### Transitions to circular economy practices in textile and apparel MSMEs along the lifecycle in Huzhou and Shaoxing

Promotes improved sustainable management, resource efficiency and adoption of circular economy principles by the local textile and fashion industry in the cities of Huzhou and Shaoxing, facilitating China's textile and fashion industry's transition towards a circular economy by 2025.



Resource Circularity

Resource Efficiency



Innovation

Products. Materials

& Technologies

Business Models



Production & Distribution

Design

End of Life

- Enablers
  - Education & Behavioural Change
  - Markets





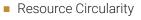
INDIA

#### Promoting circularity in the Tamil Nadu leather clusters for solid waste management

Promotes circular market-based models for processing solid waste generated from leather tanning and finishing practices in the Tamil Nadu leather clusters. Enables the reduction of amount of solid waste that ends up in the open spaces/landfills. Improves the public health situation for workers and people living near leather clusters in Tamil Nadu and enhances international competitiveness and market access of leather export from Tamil Nadu.







- Resource Efficiency
- Products. Materials & Technologies
- Production & Distribution

Lifecycle Stages



Solidaridad



Education & **Behavioural Change** 











#### Switching to Green & Fair Fashion: Advancing sustainable production and consumption in cotton & textile value chains

Promotes adoption and mainstreaming of sustainable production systems in India's cotton textiles sector by creating an enabling framework, supporting green business development and improving access to green finance.







Lifecycle Stages



Education &

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SCAN ME

**Behavioural Change** 







Resource Circularity

Resource Switch

#### Capacity building to the Mongolian vegetable tanned yak leather cluster on bio-leather and bioleather products

Supports the Vegetable Tanned Yak Leather Cluster in reducing the environmental impact of production. Improves resource efficiency and encourages adoption of circular economy practices, enabling its members' integration into global greener value and supply chains.



- Resource Efficiency
- Resource Switch

- Products, Materials & Technologies
- Innovation
- Materials
- Production & Distribution

**Lifecycle Stages** 

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Enablers

**Behavioural Change** 

Education &

Markets







- Products, Materials
  - & Technologies
- Design



FAIRTRADE



#### **RurEnergy: Promoting sustainable residential** energy consumption in rural China

Promotes the adoption of cost-effective energy retrofitting solutions for rural households, integrating thermal performance improvement and sustainable renewable heating and cooking. Promotes energy efficient behaviour change among rural households in the provinces of Henan and Gansu.





- Resource Efficiency
- Resource Switch

Innovation Products, Materials

& Technologies

- Lifecycle Stages
- Materials Use





Education & **Behavioural Change** Public Policy



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#### MONGOLIA

#### Switch-off Air Pollution in Mongolia's Cities

Improves air quality and reduces GHG emissions in urban Mongolia through the scaling-up of conducive and inclusive access to finance and energy efficient solutions in the housing sector.



Markets

SCAN ME







#### **BUILDING Energy Efficiency in Nepal (BEEN)**

Promotes climate-responsive building designs, the use of energy efficient space heating and cooling technologies as well as renewable energies and resource efficient building materials.





Unit of Energy Efficient Buildings







#### **PROTOPRINT – Promoting Socio-economic Transformation by Empowering Informal Waste Pickers** for Production of 3D Printing Filaments in Pune

Improves the lives of marginalised waste pickers in Pune, India by creating replicable business models through re-skilling and access to innovative technology. Creates a city-wide network of micro-enterprises with the goal to process collected suitable plastic waste into 3D printing filaments, high valueadded marketable products.





- Resource Circularity
- Products, Materials
  - & Technologies



End of Life





Enablers

Behavioural Change

**ACTED** 

Education &

Markets







#### PLASTICS: Promoting Long-term Approaches for a Sustainable, Transformative and Inclusive Circular **Economy in Sri Lanka**

Facilitates sustainable and innovative plastic minimisation and management in Sri Lanka by integrating SMEs in greener value and supply chains (V/SC), thereby contributing to economic prosperity and environmental sustainability.



Resource Circularity









Public Policy









- Products, Materials & Technologies
- Design Production & Distribution



# **3R4UB** - The **3**Rs for a sustainable use of natural resources in Ulaanbaatar

Supports SMEs and MSMEs in adopting and financing SCP practices from demonstration to practical replication of sustainable urban landscape and waste management. Follows an innovative design for a Smarter Consumption Plan through knowledge-sharing and co-design approaches, involving a wide range of stakeholders and the wider community towards innovative and competitive solutions for Ulaanbaatar's environmental issues.



Resource Circularity

Innovation



End of Life



 Education & Behavioural Change

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