Sustainable Development

What is sustainable development?
Why is it important?
About Circular Innovation Training Program

Program Structure
Learning Method
Program Structure

03 modules

101 - Introduction to Circular Economy within the ASEAN/ Vietnam context

- Understand basic concepts of the Circular Economy (CE) and the need for a sustainable economy
- Analyze the various stakeholders within the CE ecosystem
- Initiate circular innovation ideas

102 - Application of Circular Economy within key sectors

- Analyze and compare different circular strategies in specific markets (ie., Vietnam and ASEAN)
- Network with real circular innovators in Vietnam
- Develop ideas from Module 101

103 - Designing Circular Economy solutions

- Identify customer segments.
- Build teams, develop and test prototypes
- Create an impact model
- Pitching the solution
Trainers should go through the introduction to the program and objectives of each module.

**Duration:** 05 minutes

**Key points:**
1. The program is about Entrepreneurship and Innovation in the Circular Economy (CE). Therefore, it focuses on developing innovative solutions in the CE rather than CE in general.
2. The objective of the program is to provide students with knowledge, tools and an entrepreneurship mindset and circular mindset.
3. Main topics of each module.
The program enables students to

- Learn through working on their own project
- Acquire theories and tools in entrepreneurship in CE
- Self-assess and learn from their mistakes
- Do, fail and redo
Trainers should read article about Action-based learning.

**Duration:** 05 minutes

**Key points:**

1. The program utilize **project-based learning**, enabling students to walk in the shoes of entrepreneurs based on theories and tools provided by the program.
2. Students are encouraged to **DO and FAIL and REDO**. The more they try, the more they learn.

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**References:**

2. [https://www.tandfonline.com/doi/abs/10.1080/0729436990180105](https://www.tandfonline.com/doi/abs/10.1080/0729436990180105)
1. Warm-up
2. Sustainable Development
3. Circular Economy (CE)
4. Transition towards CE in the world
5. Wrap-up
1. Warm-up
Get to know each other

Log in Padlet and answer the following:

1. Where are you? And how do you feel?
2. Look around, pick one object and note down the origin of that object
**Objective:** Understand the students’ feelings about the class and get to know each other before entering the class.

**Duration:** 05 minutes

- **PREPARATION:** Trainers need to create World map on Padlet or other tools and guide students to familiarize with the tool.

- **TRAINING TIME:**
  - **Question 1:** Trainers let students mark the position on the Padlet and invite 1-2 students with opposite feelings (if any) to share more. Through this, the trainers can understand the of students' expectation to prepare for the - The Tree of Expectations afterwards
  - **Questions 2:** Same as question 1
CONCLUSION: No matter where we come from, we are all connected to each other and to the world in some way. So every single action we take can have a big impact on the rest of the world.
What do you expect from this course?
Objective: This activity helps students reflect on the **expectations** they wish to achieve in this course, as well as the things they bring to contribute to the course. This activity is an opportunity to hear more about the **concerns and experiences of other students**. This activity also helps trainers find out what students want to achieve through the course. From there, it is possible to adjust the content to avoid expectation mismatch.

Duration: 05 minutes

- **PREPARATION**: Tree of expectation on Miro.com
TRAINING TIME: Trainers ask students to fill in each part of expectation tree
- Roots: Represent skills, attitudes, behaviors and relationships that we bring to the course. So what skills, knowledge and attitudes do you bring to the course? The Trainers ask the students to fill in the roots of the tree.
- Leaves: What do you want to achieve after the training course. So what do you expect to achieve after the course? The Trainers ask the students to fill in the leaves of the tree.
- Fruit: Things that are desired for the long term. The Lecturer asked the students to fill in their long-term wishes in the Fruit section of the tree.
- To achieve that, we need to agree on the rules to implement the course which will help guide nutrients from the roots to the leaves and fruits. The Trainers ask the students to fill in the rules that the students consider important to the course.

CONCLUSION: The class needs to agree on shared expectations and principles.
2. Sustainable development

What is sustainable development?
Why is it important?
1. What do you think sustainable development is?

2. What issues related to sustainable development is Vietnam facing (03 examples)?

Suggestions for discussion

- After discussing the above two questions, try to point out the similarities/differences between the group's views
Objective: Assess the **perception levels** of sustainable development and their ability to **observe existing problems** surrounding them. At the same time, encourage students to recognize the different points of view among group members so that they can learn from one another.

**Duration:** 20 minutes

- **PREPARATION:**
  - Give students 1 minute to write down the question
  - Allow 1-2 minutes for students to ask questions before group discussion
○ **Group discussion: 10 minutes**
  - The trainers randomly divide the class into groups of 03-05 people and invite them into the Breakout Room (for online course). The trainers send the questions back in the chat box to the groups and moves around the groups to observe if the students are on the right track and answer questions if needed. Instructor prompts students every 5 minutes to move on to the next question.
  - The teaching assistant takes pictures of the group members to group them for the following activity
● **TRAINING TIME:**
  ○ **Presentation: 10 minutes**
    ■ The trainers randomly choose groups to present their discussion to the class. Each group has 2-3 minutes to present (Trainers adjust presentation time according to the actual number of groups)
  ○ Trainers can extend the discussion by asking:
    ■ *Who will help solve the current social/environmental problem?*
    ■ *What role will you play in it? (Suggested answer: It is the students sitting here)*

● **CONCLUSION:** Lecturer should emphasize their role in sustainable development
What is sustainable development?

“Development that meets the needs of the present without compromising the ability of future generations to meet their needs”

(Brundlandt, 1987)
This section summarizes the theory for the question “What is sustainable development?” in the group discussion above. Trainers should spend time reading about the three dimensions of sustainable development in advance.

**Duration:** 05 minutes

**Key points:**

1. The most widely accepted definition of Sustainable Development is the one given in the Brundtland Commission (formerly World Commission on Environment and Development - WCEP) entitled Our Common Future, published in 1987.

2. In fact, the concept of sustainable development can be understood from three different dimensions - ecological, social and economic sustainability.
   a. **Ecological sustainability:** everything related to Earth's ecosystems including stability of climate systems, quality of air, soil, water, biodiversity (species and habitats), system services.
b. **Social sustainability**: justice, power, rights, individual needs, health.

c. **Economic sustainability**: two definitions:

i. *Definition 1*: Economic development without negative impacts on ecological and social sustainability. Ideally, a system that consumes natural resources slowly enough that future generations can also use today's resources.

ii. *Definition 2*: Financially sustainable - increased revenue, profitability and affordability of operating and investment costs.

2. The trainers ask the students “*What would be the disadvantage if only 2/3 of the aspects were balanced (intersection point between 2 circles) on the picture?*”

**CONCLUSION**: Trainers should emphasize that in order to achieve sustainable development, it is necessary to ensure sustainability in all three dimensions of economy, society and environment. For an innovative project in the circular economy, it is necessary to balance between business (how to make money) and creating social and environmental impacts.
Quiz
Work individually

1. Why do we need sustainable development?

2. Why should we care about sustainable development now?
Objective: Trainers understand the current status of students' understanding of Sustainable Development and its importance, from which they can delve into the content behind according to the students' understanding level accordingly.

Duration: 05 minutes

- **PREPARATION**: Trainers prepare questions on Menti.com or similar tool
- **TRAINING TIME**: Trainers should use the 05 Whys tool to clarify the meaning of students' questions
- **CONCLUSION**: Trainers lead to next slide
Why do we need to care?

Number of Earths/its resources needed if the world's population lived like the following countries

5.0
U.S.

4.3
Denmark

3.8
South Korea

2.9
Germany

2.6
UK

2.3
China

1.8
Brazil

1.1
Indonesia

Selected countries. Calculated based on 2021 Earth Overshoot Days/2017 data

Number of Earth needed if we live like today (Statista, 2017)

(J. Lokrantz/Azote adapted from Steffen et al. 2015.)
Trainers should learn about the 09 planetary boundaries and the current situation in 2022

**Duration**: 05 minutes

**Key points**:

1. Going back to the [03 circles](#), in the Environmental circle in particular, if we continue to develop in the current direction, we need more than 01 Earth to survive.
2. Regarding 09 planetary boundaries developed by researchers, by 2022, our Earth has exceeded 6 out of 9 boundaries to be able to recover to its original state.
CONCLUSION: Trainers should emphasize that if we do not develop in a more sustainable direction, we will gradually go to extinction. In order to do that, you need to act as soon as possible.

References:
3. Circular Economy (CE)

What is circular economy?
How does it relate to sustainable development?
Challenge your imagination

Work individually

If you apply CE approach to solve one of the problems discussed at the beginning of the lesson, how will your solution look like?
**Objective:** This activity helps students begin to form ideas to solve social and environmental problems. Brainstorming ideas enables students to prepare for their future project as the course progresses. The idea doesn't have to be fixed to the end of the program. This idea will be developed, adjusted, changed according to each content of the following courses such as Building Prototype Products, Business Models, etc.

**Duration:** 20 - 25 minutes

- **PREPARATION:** The trainer repeats the problem that the students discussed at the beginning of the lesson (**Group discussion**)
TRAINING TIME:

- **Group work:** 10 minutes
  - The trainers enable students to practice creativity first by asking students to prepare 1 sheet of paper + 1 pen to draw: Circle, triangle, line, wavy line, square, rhombus, flower.
  - Students return to the original group to discuss. Students can draw on paper and then take pictures to present / use Miro / other optional tools to draw their ideas. The more creative, the better!

- **Presentation:** 10 - 15 minutes
  - The trainers invite 2-3 groups to randomly present their ideas. Each group has 2 - 3 minutes/group to present their group work results.
  - The trainers ask for feedback on the student's drawings.
What is circular economy?
Duration: 05 minutes

- Trainers show students the above Video and summarizes their understanding of *What is Circular Economy?*
A circular economy is a production and consumption model such that the life cycle of existing products and materials is extended as much as possible.

(European Union, 2022)
In this part, trainers should spend time reading about linear and circular economic models. In addition, the trainers check some suggested examples below/other examples of business enterprises practicing Circular Economy.

**Duration:** 10 minutes

**Key points:** Difference between *Linear Economic Model and Circular Economy Model*

a. *The linear economic model* is based on the take-produce-consume-dispose model. This model relies on large quantities of cheap, accessible materials and energy. Part of this model is obsolete by encouraging the production of a limited-life product to encourage repurchase.
b. Unlike the linear economy model, the *circular economy* is a production and consumption model such that the life cycle of existing products and materials is extended as much as possible through sharing, repair and maintenance, recycle, reuse. In practice, the model is meant to keep waste to a minimum. At the end of the life cycle, the product and its materials are retained in the economy, used again and again efficiently, thereby adding value.
Trainers should expand the discussion by asking the question: “Where is the product of the following firm in the circular economy model?” Trainers learn about 3 businesses in advance to introduce **products/services** and **business models** during the lesson:

- PaPa's Dreamer: [https://papadreamer.com/](https://papadreamer.com/)
- Reform Plastic Vietnam: [https://reformplastic.com/](https://reformplastic.com/)
- Green Steps: [https://www.facebook.com/dauchanxanhvn/](https://www.facebook.com/dauchanxanhvn/)

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References:
2. [https://unctad.org/topic/trade-and-environment/circular-economy?fbclid=IwAR0HOe_v2_-mhvcFrg3RFpF-evl75a88FtMdsNZGE9vp9bLCeKD31JvZ7C4](https://unctad.org/topic/trade-and-environment/circular-economy?fbclid=IwAR0HOe_v2_-mhvcFrg3RFpF-evl75a88FtMdsNZGE9vp9bLCeKD31JvZ7C4)
3. [https://ellenmacarthurfoundation.org/circular-economy-diagram](https://ellenmacarthurfoundation.org/circular-economy-diagram)
4. [https://themesites.pbl.nl/o/circular-economy/](https://themesites.pbl.nl/o/circular-economy/)
Circular Economy
Upstream – Downstream Innovation

Prevent waste

Treat waste

Ellen MacArthur Foundation (source)
In this part, trainers should help students distinguish upstream and downstream innovation. Trainers should orient students towards upstream innovation. Trainers should spend time learning about upstream and downstream innovation.

**Duration:** 10 - 15 minutes

**Key points:**

1. **Upstream and downstream innovation:**
   a. *Upstream innovation*: Solve problems from product design stage.
      i. Examples: New packaging material development, product redesign, business model
   b. *Downstream innovation*: Solve the problem after the product is used for the first time.
      i. Examples: Collection, sorting, recycling.
2. Why is the current effort focused on the downstream?
   a. Easy to deploy
   b. Fast source of income
   c. Does not require complex technology and large investment costs.
   d. Human resources with skills, knowledge and tools to develop upstream innovation solutions are limited

**BUT**, with the rapidly increasing amount of waste, the downstream solution will not be enough to solve this problem. So we need upstream innovation to solve this problem more optimally.
3. Trainers ask students:
   a. *Is a business creating a new process to improve an existing production process considered to be operating under the Circular Economy model?*
   b. *If yes, is it upstream or downstream?* (Suggested answer: Depending on the level of improvement and improvement in whole or in part. If in the direction of reducing waste, the input material of one process is the output of another process, it can be considered following circular economy direction)

Reference:
1. Upstream Innovation Guide: [https://ellenmacarthurfoundation.org/upstream-innovation/overview](https://ellenmacarthurfoundation.org/upstream-innovation/overview)
Work individually

Find **upstream innovative enterprises** in Southeast Asia and/or Vietnam
Objective: Help students learn about current upstream innovation solutions to expand their thinking and new ways of doing things for the ideas behind.

Trainers should find innovative solutions in the mathematical economy in advance.

Duration: 05 minutes
Relationship between CE and sustainable development

Opportunities from CE

Guess the meaning of the following figures

-$630$ billion
-$40$ billion
-$380$ million
-$7.4$ million tons
In this part, trainers should compare with the *03 Dimensions of Sustainable Development* mentioned earlier and understand the *opportunities related to 03 aspects*.

**Duration:** 10 minutes

**Key points:**

1. **Economic opportunities:**
   a. It is estimated that in the medium-complexity product industry (phones, dishwashers) in Europe, the opportunity for annual material cost savings could be as high as $630 billion. With the consumer industry, this number can reach 700 billion USD globally.
   b. An estimated 380 million new job opportunities are created across industries, in SMEs, through increased innovation, entrepreneurship, and the new service-based economy.
2. **Environmental opportunities:**
   a. In Europe, the circular economy could reduce CO2 emissions by a quarter by 2030. In the UK, this figure is 7.4M tonnes of greenhouse gas emissions from organic waste treatment alone.
   b. Land degradation costs $40 billion a year, not counting other hidden costs. The regenerative principle of the circular economy can help restore nutrients, increase soil productivity, reduce waste in the food value chain, thereby increasing the use value of land.

3. Trainers may ask students about *opportunities Circular Economy bring for Society* (or turn this question into homework)
CONCLUSION: It can be seen that the CE brings many opportunities and benefits to the economy and the environment. Seizing this opportunity, especially the economic one, the innovative projects can access investment sources and large customer base. For individuals, there are many new job opportunities in industries that are transitioning to the knowledge-based economy.

References:
2. https://intelligence.weforum.org/topics/a1Gb0000000pTDMEA2/key-issues/a1Gb00000015QulEAE
4. Transition towards CE around the world

Government, Corporations, SMEs, Investors, Community (People)
Try to put yourself in the role of one of the following 5 groups in Vietnam, with the above understanding of the relationship between CE and sustainable economic development, what will you do to take advantage of these opportunities and overcome them? risks?

1. Government
2. Corporations
3. SMEs
4. Investors
5. Community (people)
Duration: 10 minutes

- **PREPARATION:**
  - The trainers divide the class into 5 groups corresponding to 05 components: Government - Corporations - SMEs - Investors - Community (people) and creates a Zoom room corresponding to each target group.
  - Trainers can prepare blank slides on Miro for each subject for students to fill in with ideas/discussions.
● **TRAINING TIME:** The trainers encourage students to put themselves in the role of the groups mentioned above to have a holistic view of the opportunities and risks of implementing a circular economy.

There are risks that the participants are not sure how to use, for example: The cost of implementing the knowledge economy is high, leading many businesses because they both want to be appreciated by the community and want to go through the eyes of the authorities. tactics like "greenwashing", then what will the government and the community, investors do?

Reference:
Transition towards CE

1. China's National Goals

The Chinese government sets a five-year target for a circular economy strategy from 2021, with the aim of finding an 'ecological civilization'. The country also introduced the Circular Economy Promotion Law in 2008.

2. Korea's Green Innovation

Green innovation - Circular economy and disruptive technology for agriculture 2020.

3. Vietnam in COP26 Climate Summit

Prime Minister Pham Minh Chinh on November 1, 2021 at the COP26 Climate Summit in Glasgow, Scotland will develop and implement measures to reduce greenhouse gas emissions, and coordinate with other countries to achieve net zero emissions by 2050.

4. Japan's National Goals

Japan aims to increase the size of the country's Circular Economy to 80 trillion yen by 2030.
Transition towards CE
Government (Cont.)

5. Indonesia’s National Goals

Implementing a circular economy focuses on five areas:
- Food & Beverage
- Textile
- Construction
- Wholesale and retail trade
- Electronics

Potential from transition towards CE for Indonesia

- **Increase GDP by 593-638 trillion IDR** by 2030
- Annual savings of nearly 9% of the budget, equivalent to 344 USD per year
- **Creates 4.4 million jobs**, 75% of which are for women
- **Reduce CO2 emissions by 126 million tons** by 2030
- **Reduce water use by 6.3 billion m³** by 2030
Duration: 10 minutes

1. When presenting the above examples, trainers should spend more time reading about the examples in order to understand the spirit of each country.
   a. China:
   b. Korea:
      https://www.oecd.org/korea/greengrowthinactionkorea.htm
   c. Japan:
      https://www.weforum.org/agenda/2022/11/is-regeneration-the-key-to-the-future-of-the-circular-economy/#:~:text=The%20Japanese%20government%20is%20committed,transition%20to%20a%20circular%20economy
   d. Indonesia:
      https://indonesiacef.id/en/
2. Governments of different countries will have different policies and breakthroughs. Some questions Lecturer can ask students
   a. Which country's policy impressed you the most? Why?
   b. Do you think the policy will facilitate / hinder the birth of start-up groups?
   c. What impact will the policies of countries have on attracting investment capital to those countries?
References:

4. https://www.circularonline.co.uk/features/the-circular-economy-who-is-leading-the-way/
Transition towards CE
Corporations

Nike

- Nike claims **71% of their shoes** is made with recycled materials from their own manufacturing process.
- In 2015, this brand recovered and reused **92% of the waste** from the production process.
- The circular economy helps Nike **double its business** and halve the impact.
Corporations

Transition towards CE

Collaboration among corporations

33 French corporations under the French Association of Private Enterprises (AFEP) make 100 commitments in an average of 6 years to promote the Circular Economy, of which:

a. 18% recycling;
b. 15% multi-stakeholder action;
c. 14% sustainable procurement;
d. 14% eco-design;
e. 14% responsible consumption;
f. 11% industrial and ecological territory;
g. 7% functional economy;
h. 7% increase the use time of the product

Cooperation between a large corporation and a venture building fund to form a startup in circular economy

- Enviu, a venture builder focuses on circular economy and sustainable solutions. Enviu works with corporations to solve their problems to form new projects/programs and/or new startups. Here are some examples:
  - Partnership between Enviu and a shipping group in the Netherlands to develop zero-waste shipping (THRUST)
  - **Reweave** Program with IKEA Foundation
  - Building a business with customers/partners who are large corporations:
    - Enviu's [Zero Waste Living Lab](#) in Indonesia
    - Evergreen Labs with their [Venture Lab](#) model brings together local innovators to experiment with corporate clients through the SUP Challenge
Duration: 05 minutes

Key points:
1. The trainers introduce students to the above 2 cases as examples or can be replaced with other examples (1 minute), from which to draw the tendency of corporations to also turn to CE in their production processes.
2. Impact of cooperation between corporations & startups
   a. Cooperation between corporations: As of 2019, 125 commitments have been made, of which 50% of the actions of corporations help solve all 03 challenges of CE including: better resource flow awareness, define qualitative/quantitative CE objectives and assess opportunities from CE.
a. **Cooperation between corporations and startups**: Partnerships between corporates and startups are very valuable in this field, as they can both benefit from the position of their partners. Corporates have financial stability and experience, while startups drive innovation. Companies like Honda, GM, Unilever, Dell, and Procter & Gamble have already recognized the business benefits of going circular. Reduced costs, improved reputation, and attracting talents are only some of them. Moreover, circular economy also opens doors to new markets and enables better product differentiation.
3. Trainers ask questions to students, **summarize the general trends of the group** on circular economy by asking some questions:
   
   a. *Are big corporations interested? Did you find any other examples in practice?*
   
   b. *If so, what advantages do they have? (Suggested answer: by consortiums of resources and processes available)*
   
   c. *If so, what challenges do they have? (Suggested answer: the challenge of the corporation when switching to circular economy can be that their system is cumbersome, the policy implementation takes a long time)*
   
   d. *What are the impacts of replicating the circular model in the corporation to consumers, communities, etc.?*
CONCLUSION: Trainers can gather students' opinions on observations and trends. At the same time, Lecturer encourages students to continue observing the introduced corporations and find new examples in practice.

References:
6. https://enviu.org/program/thrust/
Transition towards CE
SMEs

In Europe

- SMEs contribute **60-70% of industrial pollution**, especially in the manufacturing sector (OECD, 2018a and 2018b).

- This is an area that is **slow to change technology and faces the most difficulties** in transitioning to a circular economy, so it is slow and inefficient, and models are difficult to replicate.
SMEs need to move to CE to minimize their negative environmental impact as existing research and government reports estimate that SMEs have a high environmental impact.

**In Vietnam**
SMEs account for 96% of the total number of enterprises in Vietnam, which is believed to be the main force in accelerating the transformation of the country’s economy.

New start-ups are more likely to produce towards a knowledge-based economy than developed ones.

*Nguyễn Khôi Farm*
Zero-waste pig farming with a closed-loop farming process.
Duration: 05 minutes

Key points
1. In Vietnam, SMEs account for 96% of the total number of enterprises in Vietnam, which is believed to be the main force in accelerating the transformation of the country's economy. This is an area that is slow to change technology and faces the most difficulties in transitioning to a circular economy, so it is slow and inefficient, and models are difficult to replicate.

2. The trainers introduce to students the case of Nguyen Khoi farm, which is a pioneer farm in Vietnam in raising clean pigs that follow a circular economy model with closed-loop processes.

3. The Lecturer asks the students questions:
   a. Are SMEs interested? Did you find any other examples in practice?
   b. If so, what advantages do they have? (Suggested answer: because SMEs are small, the process can be changed more quickly)
c. If so, what challenges do they have? (Suggested answer: they lack knowledge, resources, and commitment due to lack of clear market pressure)

d. What are the impacts of replicating the model of a circular economy in SMEs to consumers, communities, etc.? (big or small)

**CONCLUSION:** Trainers can gather students' opinions on observations and trends. At the same time, students are encouraged to continue to observe the SMEs that have been introduced and find new examples in practice.

References:
4. [https://nguyenkhoifarm.com/phat-kien/](https://nguyenkhoifarm.com/phat-kien/)
According to a new report by investment advisory firm Phenix Capital, committed capital to circular economy impact funds around the world to be launched in 2021 hit a record **12.7 billion euros**, nearly four times the 2020 figure.
Duration: 05 minutes

1. The trainers ask students to look at the chart and ask the following questions:

2. Trainers can explain more:
   a. **Investment opportunities** can be very diverse, and the returns are attractive with opportunities in different sectors: building, mobility, food, fashion, packaging, and more.
   b. Given the **potential for economic growth**, these opportunities could help meet broader government goals, such as the Sustainable Development Goals (SDGs).
      i. **EXAMPLE:** Goal 12 “Responsible Consumption and Production” may be particularly relevant to investors looking to align themselves with the global sustainability goals. It highlights the importance of separating economic growth from environmental degradation, and essentially “doing more with less.”
3. The Lecturer can ask the following question:
   a. *If your startup works in the circular economy, which goal will you present to your investors as your main target?*

Reference:
Community (People)

Transition towards CE

European Week for Waste Reduction 2022

Recycling Community on Facebook

Community join hand with private companies in recycling mission
Duration: 05 minutes

Key points:

1. At the beginning, the trainer can discuss comparing the current products that people are using and the alternative circular products such as confectionery shells, mineral water bottles or examples that people use. Learn to give

2. Lecturer can introduce more to help students answer the following questions:
   a. What are communities around the world doing? What is Vietnam doing? Are these solutions radical?
      i. European Community: European Waste Reduction Week
      ii. Eco-friendly recycling community in Vietnam
      iii. Greenlife community collects waste and recycles
CONCLUSION: Focusing on reduction and recycling, individual efforts or a group of communities do not solve many of the problems associated with waste and pollution. Recycling or reuse can create new problems, while not solving the root cause of issues. These efforts also lack scalability and remain artisanal/handmade.

References:
Write down 03 takeaways from today’s lesson (05 minutes)
Assignments

1. Find **10 climate change problems in Asia** and answer
   a. What is the most prominent problem?
   b. To your observation, which problem are you facing similar to this prominent problem?

2. Find **5 climate change programs in Asia** (Program Name, Key Activities, Outcomes)

3. Select/Adjust the **problem you want to solve**

4. Map out **3 ideas for solving that problem** (if you don't have an idea/project yet)
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