

- Student worksheet for case study -

Dole Sunshine Company turns banana waste into fibers of purpose with Musa Fabric: Natural fiber from banana pseudo-stem



Generic green skills

Cognitive competencies:

- Environmental awareness and a willingness to learn about sustainable development
- Ability to make judgments based on both evidence and sustainability values

Interpersonal competencies:

- Communication and negotiation skills to discuss conflicting interests in complex contexts
- Marketing skills to promote greener products and services
- Consulting skills to advise consumers about green solutions and encourage the use of green technologies



Learning objective

You will be able to:

1. Understand the green technologies used to upcycle banana waste to textiles.
2. Identify which sustainability issues can be addressed by turning banana waste into fiber.
3. Analyze what you can do/want to do and the challenges involved in supporting partnerships for upcycling banana waste.
4. Discuss the proposed challenges based on the different values stakeholders hold and benefits that may facilitate the cooperation.



Format

Small group work



Resources needed

A3 paper, student worksheet, pens, colored pencils, case study



Time required

1.5 hours



Assessment

You will be assessed based on:

The group discussion and the role-play activity. The assessment is based on the clarity of your arguments; your analysis of what you can do/want to do and the challenges involved in supporting partnerships for upcycling banana waste.

Before the class:

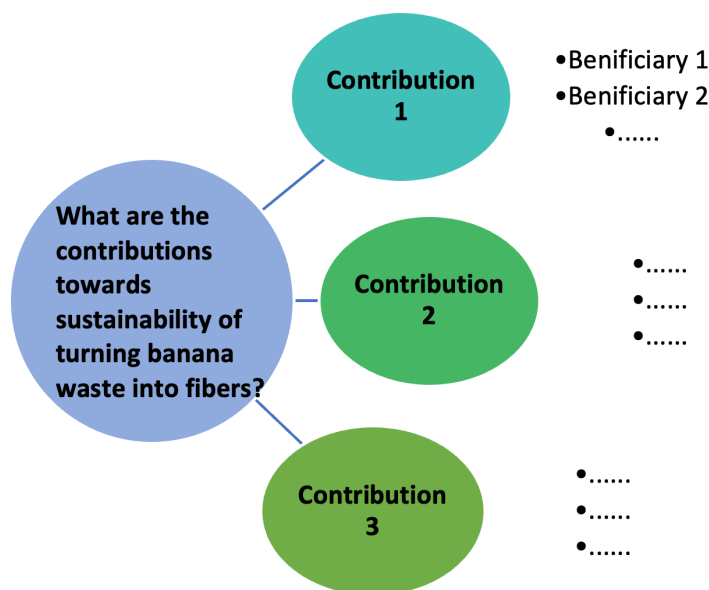
1. Read the case study “Dole Sunshine Company turns banana waste into fibers of purpose with Musa Fabric: Natural fiber from banana pseudo-stem”, and identify the green technologies used to upcycle banana waste to textiles.
2. Search online about the partnership between Dole Sunshine Company (DSC) and the social enterprise Musa Fabric that aims to turn banana waste into fibers of purpose, and think about its contribution towards sustainability. For example, what sustainability issues can be addressed by turning banana waste into fibers and identify who the beneficiaries are under the principle of “shared value for all stakeholders” (as explained in the case study). You should prepare at least two identified contributions to share in class.



During the class:

1. Group sharing

- a. Share your ideas about the pre-class question: What are the contributions towards sustainability of turning banana waste into fiber?
- b. Use a mind map to summarize your group findings. The mind map should clearly illustrate contributions to sustainability and the beneficiaries relevant to these contributions.



- c. Share your group discussion in class based on the mind map.

2. Group discussion: explore the use of banana fiber

Based on the examples of using banana fiber in the different fields introduced in the case study, or in your research online, choose one industry sector (e.g. manufacturing) or a specific company (e.g. a local paper company and supplier) to discuss:

- a. Which sustainability issues can be addressed through the partnership between Dole Sunshine Company (DSC) and the specific industry sector/company in upcycling banana waste?
- b. Who are the potential stakeholders in the partnership?
- c. What is “the shared value of all stakeholders” (see the case study for an explanation of this) in the partnership?

3. Role play and simulation: promote the use of banana fiber

- a. Each member of your group needs to decide on a role, based on the stakeholders identified in the partnership (e.g. the head of a paper company, the department head of DSC, customers, the officer in the environment department, the volunteers at ENGO [Environmental Non-governmental Organization]).
- b. Based on “the shared value of all stakeholders” and your choice of role, think about what you can do/want to do to support the partnership between DSC and the specific industry sector/company to upcycle banana waste. Explain what you can do/want to do and the challenges you may face to the relevant stakeholders (some other roles in your group) and discuss how to address them cooperatively.

For example, if you are the head of a paper company, you might to use banana fiber to produce paper. The challenges you face might be: 1) the technology of turning banana waste into fiber for paper production; 2) increased costs; 3) the recycling of banana waste; and 4) the promotion of “greener paper”. To address the challenges cooperatively, the officer in the environment department could help to promote the “greener paper”, the department head of DSC could organize training for the technology and the volunteers in ENGO could help recycle the banana waste.



Reference:

Dole Sunshine Company turns banana waste into fibres of purpose with Musa Fabric. (2022). Retrieved from <https://www.eco-business.com/press-releases/dole-sunshine-company-turns-banana-waste-into-fibres-of-purpose-with-musa-fabric-2/>