



UNITED NATIONS
INDUSTRIAL DEVELOPMENT ORGANIZATION



UNIDO の 環境問題への取組み プロジェクト事例のご紹介



2022年3月17日



Directorate of Environment and Energy (EAE) work

- **Facilitate industrial development which is:**
 - environmentally sustainable
 - resource efficient, in terms of energy, water and materials
 - decoupling economic growth from pollution and resource use
- **Contribute measurably to the mitigation of climate change:**
 - Decarbonization of industry
 - Circular economy
 - Montreal Protocol implementation
- **Reduce pollution and environmental footprint along the value chain**
 - extraction, processing, manufacturing and byproducts.





Thematic Priorities



Energy to facilitate zero-carbon growth

- Normative role
- Renewable energy, energy grids
- Energy efficiency
- Framework for energy infrastructure



Circular Economy

- Normative role
- Agro-ecology
- Resource and energy efficiency
- Renewable energy
- Food preservation
- New business models: Green design, extending product lifetime, recycling, secondary markets



Decarbonization of Industry

- Normative role
- Renewable energy
- Energy efficiency
- Process innovation
- Emissions from sources other than fuel



Ecosystem based adaptation for industry

- Normative role
- Sustainable access to water
- Sustainable access to nature-based resources

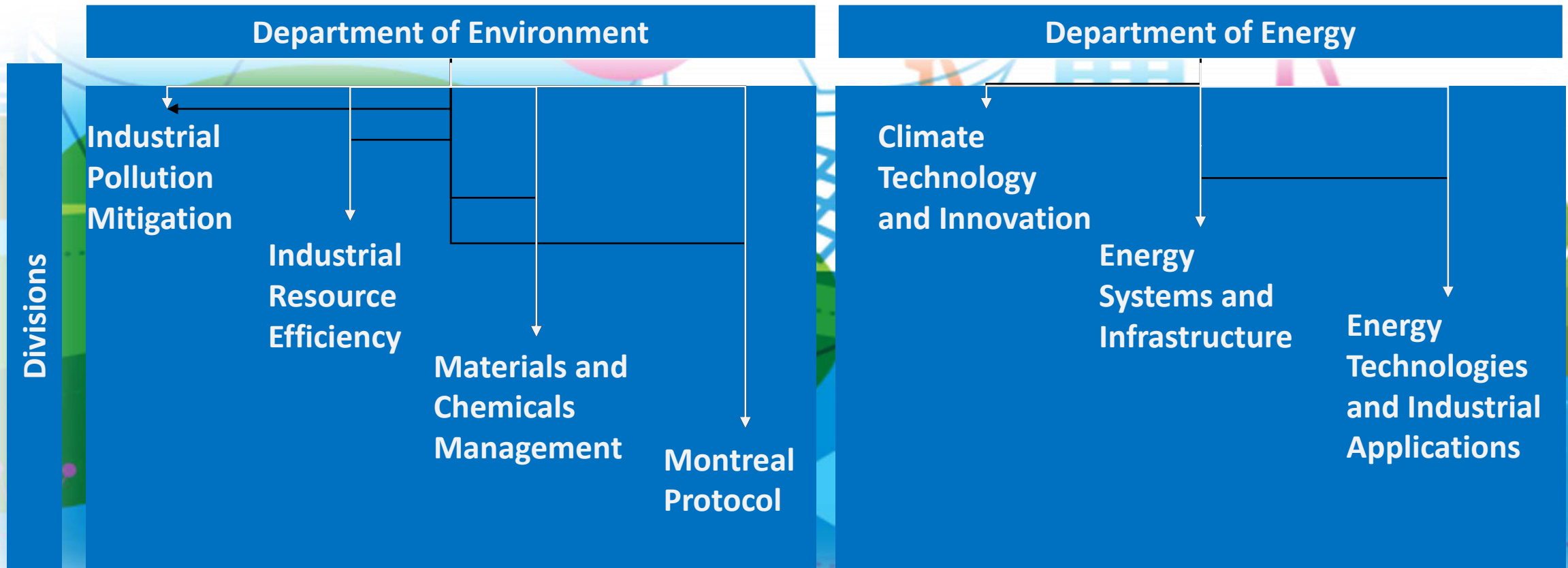


Reducing non-energy GHG emissions

- Normative role
- Ozone depleting substances
- Process emissions
- Other



EAE Directorate structure:





UNIDO approach:

Component 1

Policy advisory and support

- Setting up enabling environment through policy and regulations, economic incentives, etc.
- Capacity development of officials

Governments

- National Governments
- Local Governments
- Implementing agencies/ institutes

Component 2

Awareness development Capacity development

- For stakeholders, including industry, consumers, governments, etc. through outreach activities, seminars, trainings, etc.

Intermediary organizations

- Industry associations
- Academic institutions
- NGOs, etc

Component 3

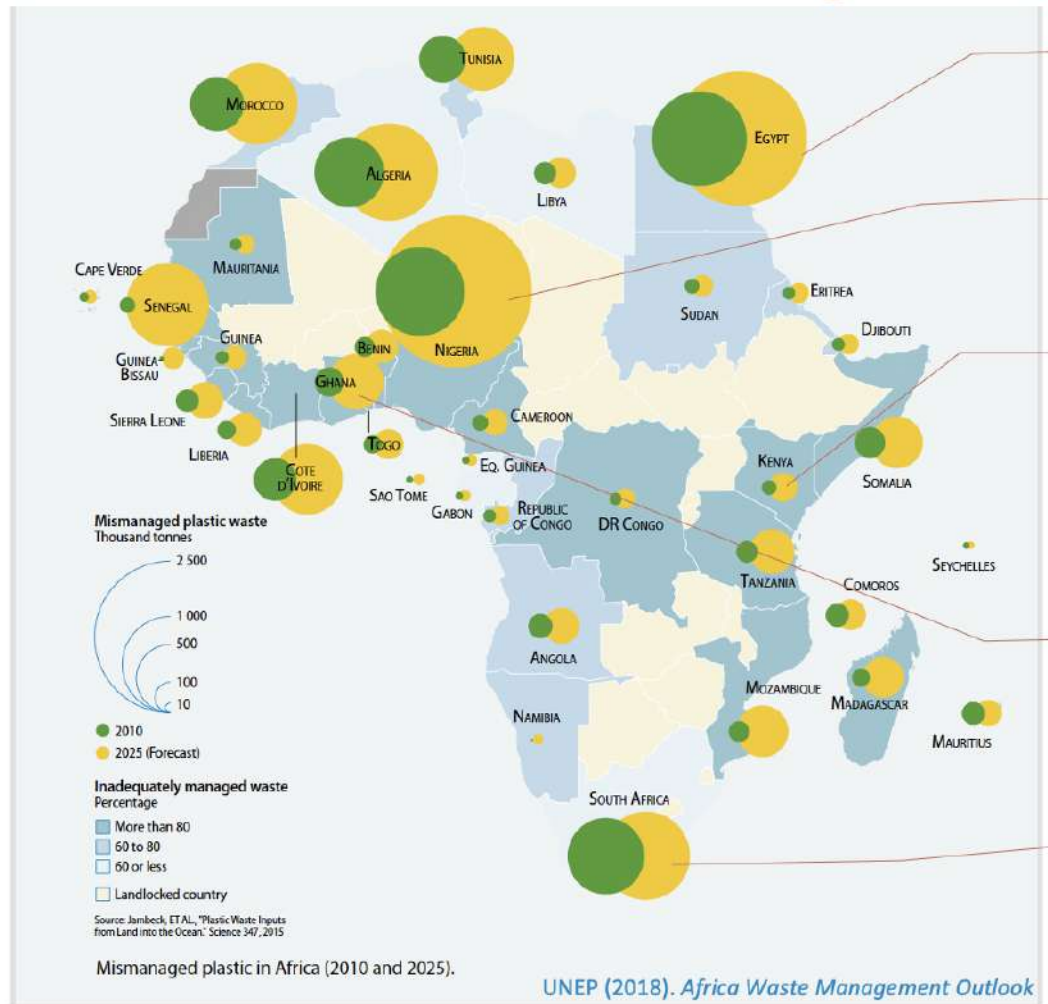
Support for private sectors

- Trainings
- Technical assistance
- Technology demonstration for showcasing benefits

Private sectors/ companies

- Major industry players
- SMEs
- Business development support services

Case: Promoting plastic circular economy



Egypt, Nigeria and Kenya: (2020-2021)

- Plastic value chain study under the project of "study on available sustainable alternative materials to plastics, and innovative packaging and recycling technologies that meet market needs in Africa to reduce plastics leakages to the environment"



Egypt, Nigeria (and Kenya?): (2022-)

- promoting circular economy and resource efficiency practices for plastic value chains



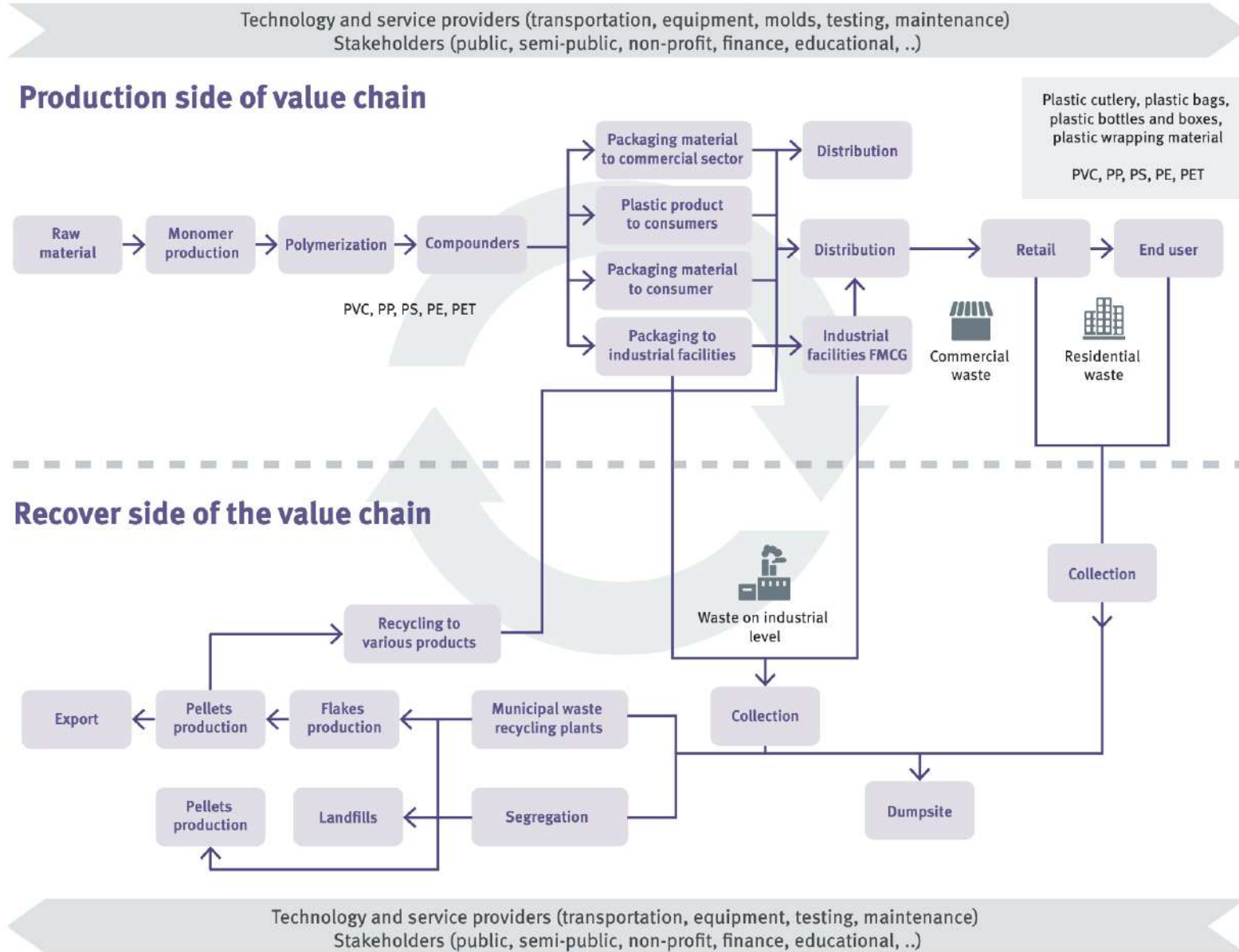
Ghana:

- Establishing a circular economy framework for the plastics sector



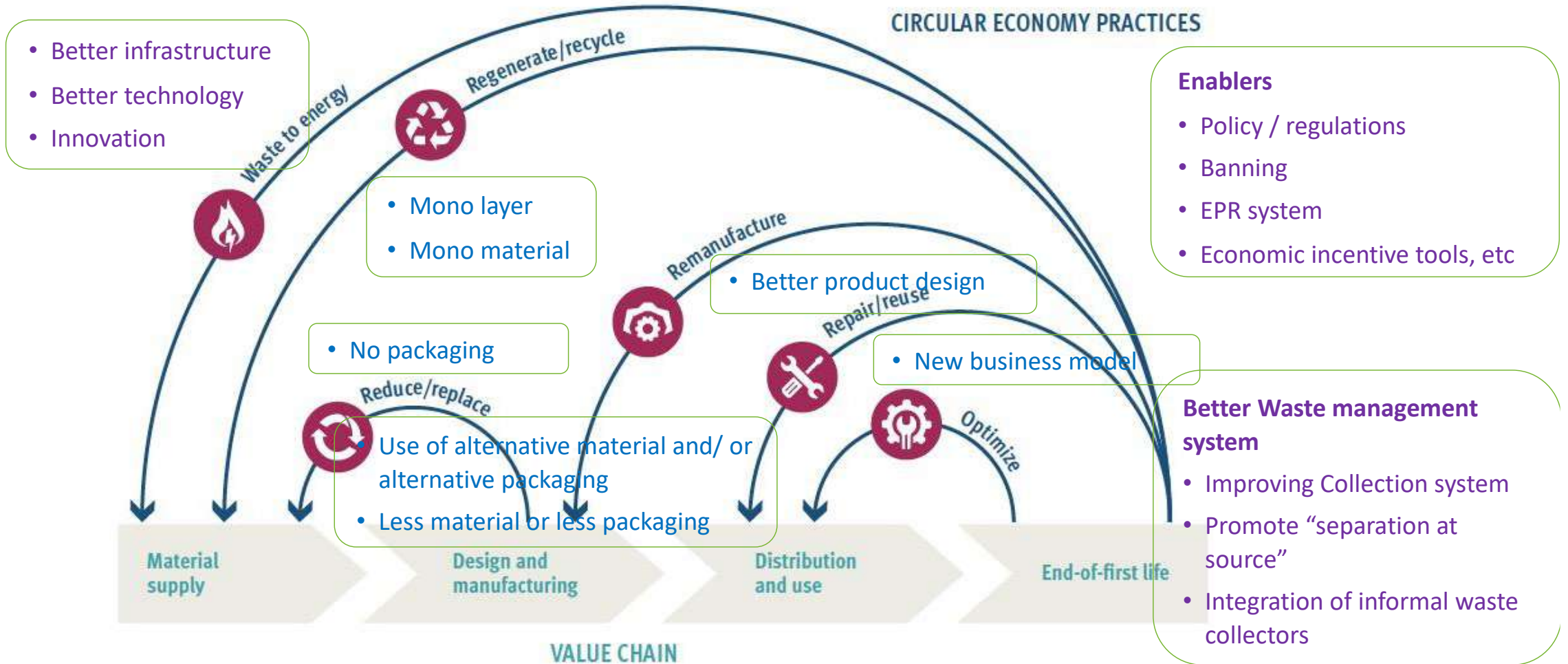
South Africa: (2019-2022)

- Development of Action Plan to support sustainable transition to alternative material
- Strengthening recycle capacity through integration of waste reclaimers





CE practices on single-use plastics





Expected technology from Japan

- 代替素材製造技術

素材

機械

知見



Reinforcement
fiber (cellulose)

×



Biodegradable
resin



Pulp composites
(pellets)



Grocery bags from
paper waste



Disposable plates &
bowls from bagasse



Disposable plates
from wheat straw



Expected technology from Japan

・ パッケージング技術

成型技術

印刷技術

デザインカ



Reducing flap 9mm

4.9% reduced weight

Reducing flap 4mm



Thick plastic board 6.4g

Thinner soft plastic film 0.7g

90% plastic reduced
(5.7g less per item)

24.6g plastic reduced per item
(43% less weight)



A hollow makes it easier to hold the bottle

Surrounding channels make it hold stronger vertical shape





Expected technology from Japan

• リサイクル技術

- 知見
- ビジネスモデル
- 機械

回収

デジタル
ソリューション

分別

洗浄

圧縮

メカニカル
リサイクル

ケミカル
リサイクル

バイオロジカル
リサイクル





UNIDO HQ & UNIDO ITPO Tokyo

UNIDO Environment Dept.

- Identifying the technological needs in Africa or project countries

UNIDO ITPO Tokyo

- Identifying the technology providers in Japan

UNIDO ITPO Tokyo's

STePP

Sustainable Technology Promotion Platform