



In order to protect Global Environment.  
Items which Earth Recycle Co., Ltd. is able to do as follows:

## Cope with the following subjects for Resources Recycling Smart City

Contributing to solving issues such as Growing plastic wastes, Global warming,  
Ocean plastic wastes, Resolving solid wastes during disasters.

### Wastes that are able to cope with



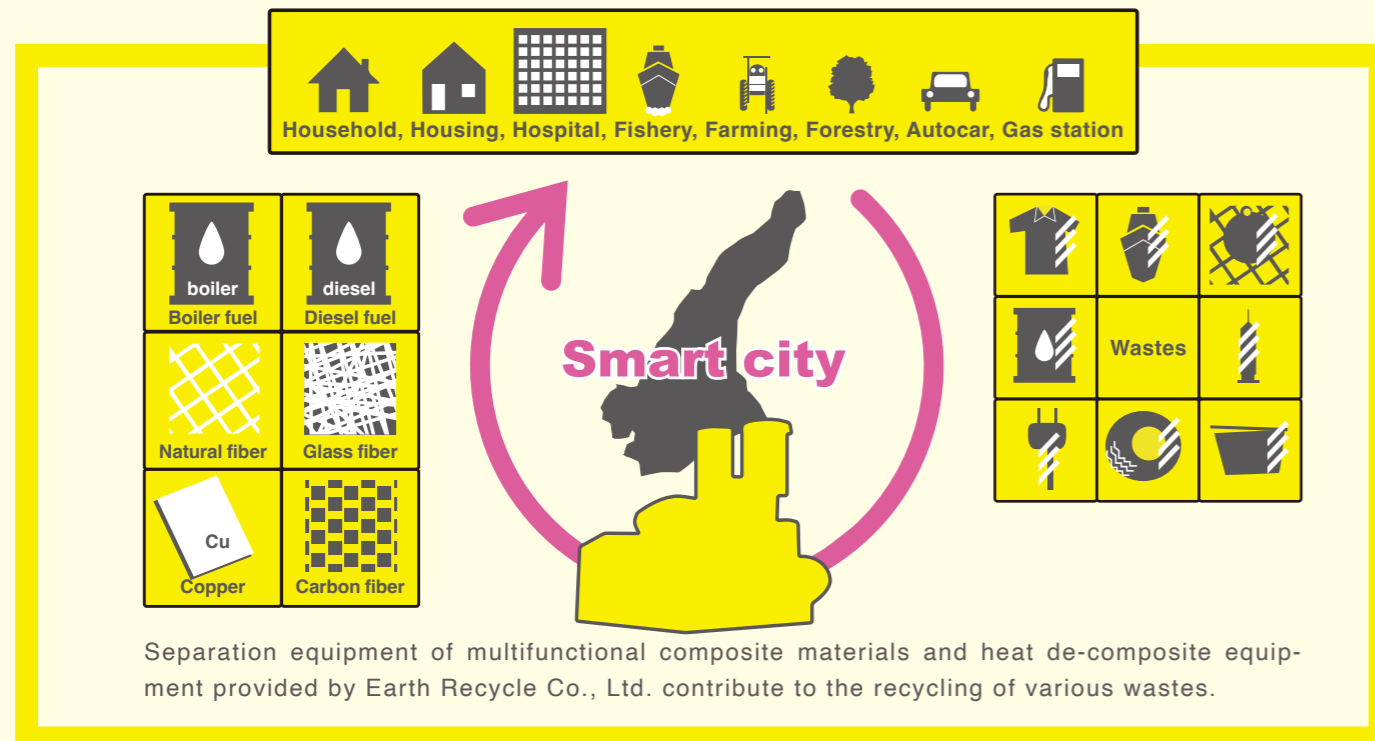
**Earth Recycle Co., Ltd.**

**EARTH RECYCLE**  
Earth Recycle Co., Ltd.  
<https://www.earthrecycle.net/>

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- **Laboratory**      Postal code 679-4156  
447-1 Sinden, Ibokami, Ibo-cho, Tatsuno City, Hyogo Prefecture, Japan  
TEL/FAX : 0791-67-8515
- **Established**      April 16, 1997
- **Business contents**      Developments, Engineering, Sales, Consulting and Testing for Various Recycle Facilities.
  - Facilities of Heat de-composition, Distillation and Solvent extraction of Waste plastics, Waste tires and Waste lubricant oil.
  - Separation equipment for Mixed waste plastics and Composite materials
  - Diesel oil production facility from Biomass materials such as Palm, Jatropha and Waste vegetable oil
  - Production facilities of Cellulose, Lignin and Bamboo vinegar from Biomass such as Bamboos and Cedars
  - Production of experiment equipment for industrial high school

# Smart City of recycling resources is built with the technologies of Earth Recycle Co., Ltd.

Smart City of recycling resources is widely built among the following fields

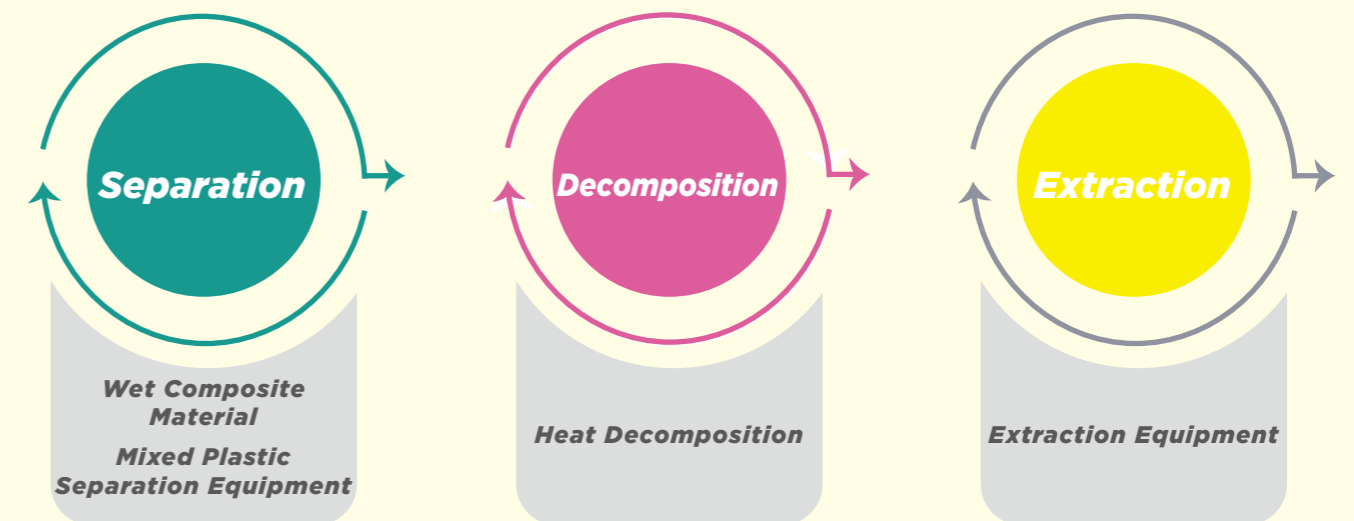


The following issues are greatly improved with newly technologies of Earth Recycle Co., Ltd.

- Global Warming
- Ocean Wastes
- Landfilling of Wastes
- Energy Problems
- Carbon Dioxide Emission
- Solid Wates during Disaster

The greatest features of wet separation system are possible to cope with wide range of wastes, and making a significant contribution to the establishment of original recycling society, saving resources, and global warming with good quality of the separated recycled products.

## < =====>>>>> Disposal Process <<<<<< =====>



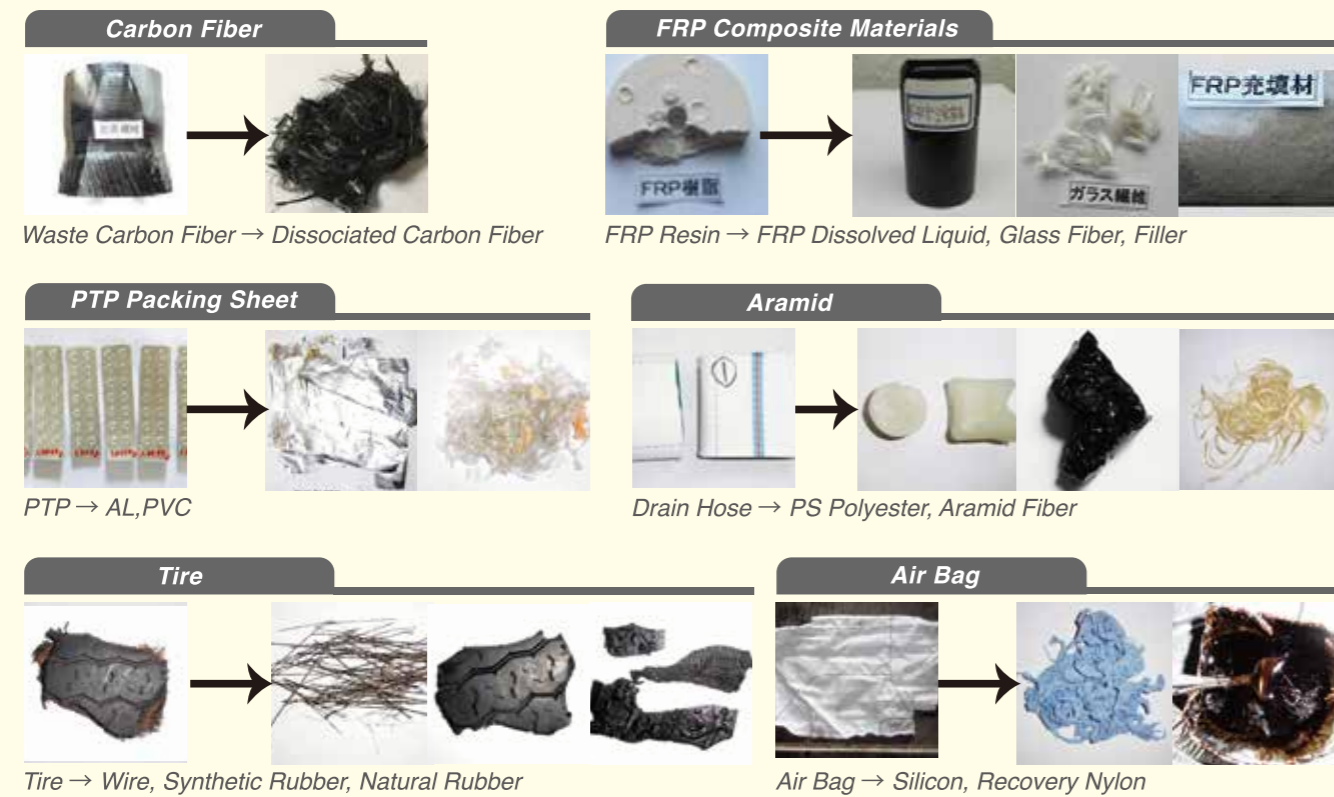
The combination of composite materials separating equipment and heat de-composition equipment reform smartly recycling in municipalities and general factories.





## Separable Materials

Composite materials separating equipment of Earth Recycle Co., Ltd. extracts efficiently recyclable resources from wastes. In the past, 100 wastes were confirmed to be recyclable by the wet separating system test. Separation, Heats de-composition, Solvent extraction tests are still available for a fee. Especially, Separation test equipment has been well maintained in 2020.



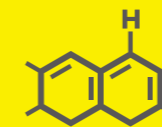
Wastes		Separate product		
Autocar	PP (including talc 15%) + Epidermis (PVC + PP Foam)	PVC	PP Foam + task	—
Autocar	PP + Epidermis (PVC + Urethane)	PP	PVC	—
Autocar	Autocar Window Frame (PVC + Metal)	PVC	Metal	—
Autocar	PP + Epidermis (Hide + Urethane)	PP	Epidermis	—
Electric Cable	Waste Electric Cable	Copper	Resin	Paper and Others
De -Chlorination PVC	Full Hard PVC	Desalinated PVC	—	—
Carpe	Carpet	PE	—	—
Cellular Phone	Waste Cellular phone	Resin	Metal	Crystalline Liquid and Others
PVC Composite	PVC Wall Paper	PVC Resin	Separation Paper	—
Clothing	Polyester 62% · Rayon33% · Cotton 5%	Rayon	Cotton	—
Aluminum Mixture	Aluminum · PET · PE	Aluminum	PE	—
Substrate	Waste Substrate	Metal and Nonferrous Metal	Parts · Resin	Glass Cloth
Cigarette	Cigarette Stump	Recovery Acetate	Solid (Paper · Leaf etc.)	—
Sunlight Panel	Sunlight Panel	Backing Sheet	Aluminum	Glass · Resin

## Friendly Environment, Based on Bio 100% Cellulose · Lignin · Bamboo Vinegar

Earth Recycle Co., Ltd. produces high quality Cellulose, Lignin and Bamboo Vinegar from plants(bamboos) with own process. Conversion of cellulose nanofiber is outsourced to cooperating company. Production of cellulose, lignin and bamboo vinegar based on Bio 100% are using earth's resources efficiently, which are friendly materials on environment. In the future, those have the potential to expand the range of applications in various fields.



※ Disposal of Cedar, bagasse and Citrus is possible to cope with the same process.



Local production for local consumption, Separation of disposal conditions with coarse crushing for decentralized processing are mild.



It is possible to separate cellulose from trees other than bamboo, citrus, bagasse.

Great the separate technologies of Earth Recycle Co., Ltd.



Separating and Recycling of Substrate, Crystalline liquid, IC chip, Building materials.



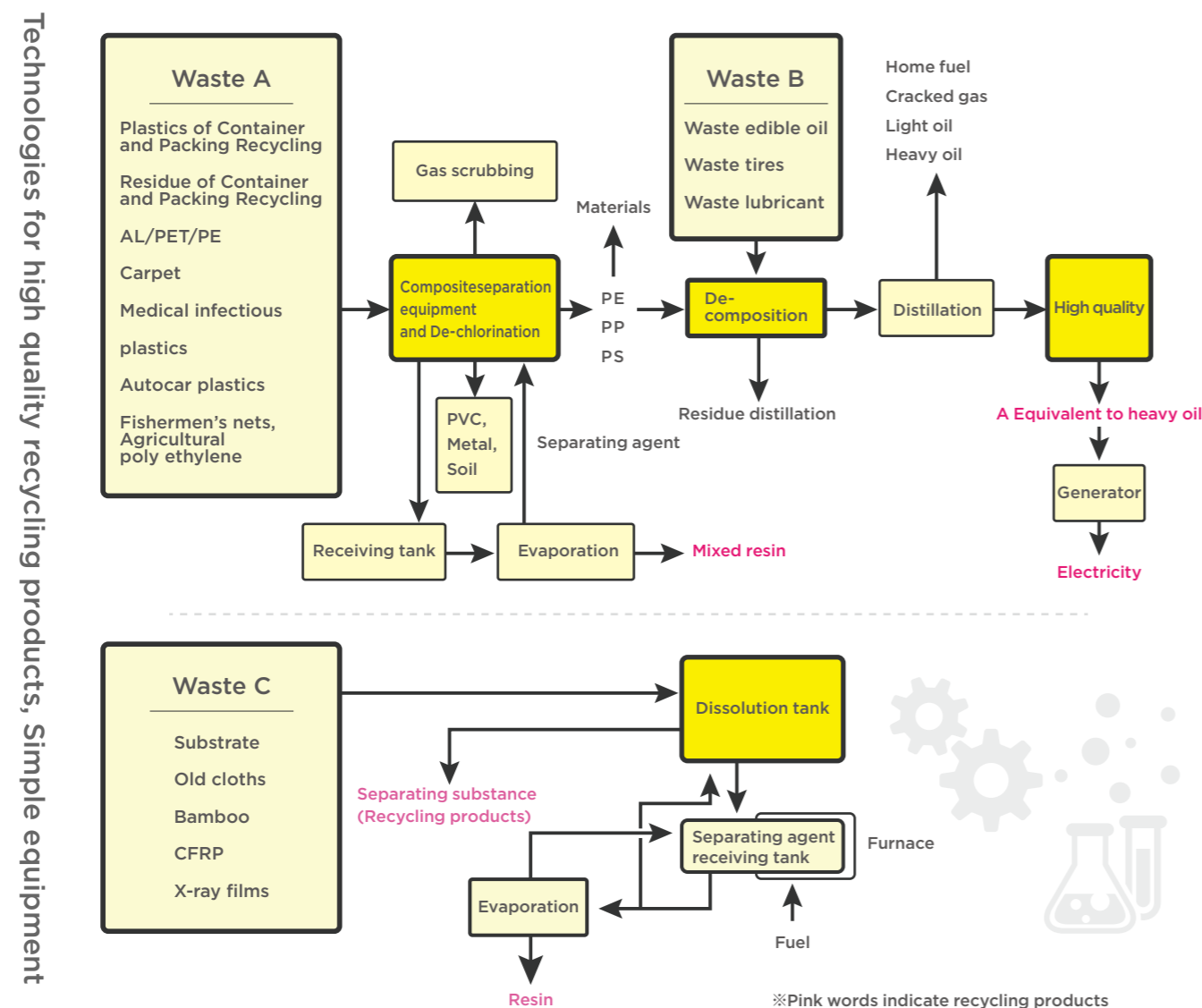
Recycling of Glass fiber that is instructed for land fill at present and Aramid fiber that is difficult to dispose the process.

## Heat De-composition and High quality de-composing oil

Proposed the facilities that can be scaled up is prepared with experienced heat de-composition technologies.

Before Heat de-composition		After Heat de-composition	
Waste plastics	Waste plastics + Garbage	→	Heat decomposing oil
Drifted wastes	Buoy + Foam stay roll	→	Heat decomposing oil
Fishermen's nets	Fishermen's nets	→	Fishermen's nets heat decomposing oil
Coal + α	Coal	→	Coal blend heat decomposing oil
Waste edible oil	Waste edible oil	→	Heat decomposing oil
Residues of Container and recycling packing	Residues of Containers and packing recycling	→	Heat decomposing oil
Medical wastes	Medical wastes	→	Heat decomposing oil
Jatropha	Jatropha	→	Bio fuel · Heat decomposing residues
Palm FFB	Palm FFB	→	Bio fuel · Activated carbon

## Disposal process



▲ Composite materials separation equipment (Photo: main part)



▲ Composite materials separation equipment (Photo: main part)



▲ Heat de-composition equipment for 300kg



▲ High quality heat de-composition oil equipment



▲ Waste plastics liquefaction equipment

\* Contact Earth Recycle Co., Ltd. for detail

## Other items for sale

Earth Recycle Co., Ltd. is selling online. See homepage for detail.

Extracted raw materials from domestic bamboo

Domestic Carbon fiber



- ① Cellulose nanofiber
- ② Lignin
- ③ Bamboo vinegar

- ④ Carbon fiber sheets
- ⑤ Carbon fiber chopped
- ⑥ Carbon fiber milled