



Creating Rice Varieties and Cultivation Technology Tailor-made for Kenya’s Environment

In Kenya, a pressing issue is boosting rice production, which is however suppressed by impediments such as drought and cold weather. By using cutting-edge Japanese technologies, such as DNA marker-assisted selection, the project developed a number of rice promising lines carrying useful genes to overcome stress conditions in Kenya. The project also verified the effect of improved cultivation technologies such as fertilization and water-management customized to Kenya’ cultivation environment.

Funded by JST and JICA as part of SATREPS  
(PI: Akira Yamauchi, Nagoya University)



Multi-purpose Biodegradable Plastic

While plastic has exceptional usability in our daily lives, serious environmental pollution is arising as a social issue due to its persistence for an extended period of time in the nature. For the purpose of ensuring environmentally friendly and workability, purification and production methods of biodegradable plastic from plant-derived materials have been developed using the microorganism fermentation technology.

Funded by JST, Development Creative Technology Seeds  
(PI: Yoshiharu Doi , Japan synchrotron Radiation Research Institute / DC: Kaneka Corporation)



For Rich Ocean in the Next 100 Years

In 2011, the Sanriku coast renowned for its oyster cultivation was devastated by the Great East Japan Earthquake. Mr. Kojima, who developed an iron device combining iron and carbon materials, applied his technology to re-cultivate oyster in collaboration with the Fisheries Cooperative of Yamada Town. His effort with local parties to verify a shape and materials of this iron device allowed re-cultivation of oysters. This iron device is environmentally friendly.



Oyster cultivated without (Left) and with (Right) iron devices

Funded by JST as part Community-based R&D Programs  
(PI: Akira Kojima, Maebashi General Technology Business College)

SUSTAINABLE DEVELOPMENT GOALS



Dyeing for Sustainable Fashion

The fashion industry, which is the world's second-largest water-consumption industry, accounts for 20% of global wastewater. Water pollution by chemical dyes, carcinogenicity, and a poor working environment has become social risks. A research group of JAIST and YPU designed functional natural dyes which are dyeable at room temperature within 15 sec with good fastness properties and comparable to chemical ones. This technology contributes to updating the “natural dyeing culture” to the "dyeing industry" suitable for SDGs.

Awarded to Japan Advanced Institute of Science and Technology and Yamanashi Prefectural University



Sustainable Towel Production

Smileearth Corporation is a towel maker in Izumisano City, Osaka. Izumisano City is the birthplace of Japanese towels and used to be burden with a river pollution caused by high reliance on chemicals in towel production by local towel industry. Smileearth Corporation developed a non-chemical boiling-off technology and realize sustainable and environmentally friendly towel production process.

Awarded to Smileearth Corporation



Injection Moldable Advanced Wood Plastic Composite for Reduction of Co<sup>2</sup> emissions

Composite materials of wood powder and plastic (wood plastic) have been manufactured but only in long bar-shape such as for wood deck. i-Compology Corporation manufactures wood plastic which can be injection molded. Their wood plastic is recyclable and Co<sup>2</sup> emissions are very low when finally being incinerated as waste.



Awarded to i-Compology Corporation