## Conservation of Biodiversity

### Ballast Water Measures in Ocean-Going Transportation

Our ocean-going tankers have undertaken various activities in accordance with the Ballast Water Management Convention (International Convention for the Control and Management of Ships' Ballast Water and Sediments), which came into effect on September 8, 2017, and guidelines of the IMO (International Maritime Organization) to prevent the ecosystem destruction induced by foreign species. Ballast water is water (seawater) used as weight for ship stabilization. The convention mandates the installation of ballast treatment systems within a certain timeframe. In line with this rule, tankers (VLCC) managed by Idemitsu Tanker are being installed with said systems. As of January 31, 2020, we finished installing electrolytic or filter/disinfectant treatment systems on APOLLO DREAM and APOLLO ENERGY.

To prevent disturbance of local ecosystem at ports of call, we use ballast water treatment systems to eliminate the harmful aquatic life and pathogens in ballast water. Or during transit our ocean-going tankers replace the seawater they take in as ballast water when leaving port with water from the open ocean, which has little impact on local ecosystems.

## Land Use Change

### Concept of Land Use Change

Soil, along with air and water, is an important element in considering the global environment. In recent years, along with world population growth, areas that used to be green belts have been developed and converted to agricultural land at an accelerated rate. The United Nations has pointed out the importance of initiatives related to Land Use, Land-Use Change and Forestry (LULUCF). These land-use changes will result in the loss of $CO_2$ sinks and have serious adverse effects from the perspective of climate change. In addition, nutrient-rich topsoil, which had been protected from wind and rain by forests, was lost due to deforestation, leading to desertification.

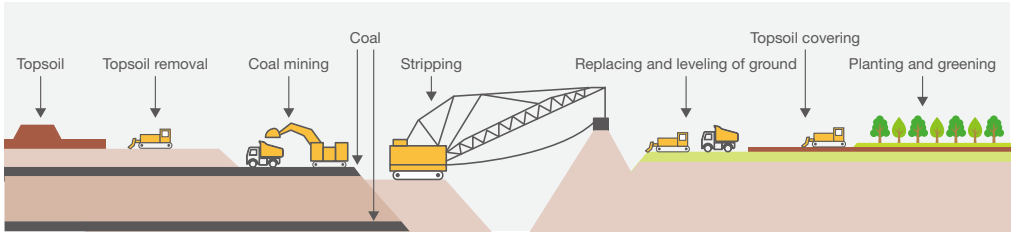
Idemitsu Group is actively engaged in projects to minimize the environmental impact of changes in land use.

### Examples of Specific Initiatives

#### Rehabilitation of Coal Mines in Australia

We are engaged in coal mining business in Australia. At a mining site where mining has been completed, we are rehabilitating the mining site by replacing stockpiled topsoil and plants to restore its original and natural state. In addition, we have acquired around 11,000 ha of land surrounding our mines, and protects plants and animals to maintain biodiversity. These measures have minimized the impact of the land use associated with the coal mining project on the surrounding environment.

■ Rehabilitation of the mining site




* Prepared by Idemitsu based on data provided by Japan Coal Energy Center

■ State of rehabilitation