

・研究課題名 = Establishment of assessment model and projection and assessment of resource/environmental efficiency for technological systems forward a sound material cycle society

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・要旨 (200 語以内) = We first the near future vision of a sound material cycle society for each recyclable resource based on structural analyses on social and technological factors which could affect generation and material cycles of the recyclable resources. We next set two scenarios such as a technology-oriented and a lifestyle-oriented one in terms of social change in the future as well as technological response forwarding a sound material cycle society. In the each scenario, we designed a numerical material flow model including various material cycle processes. We also collect data to project the generation amount for each recyclable resource. We piled up input-output data of material, energy and cost in the related technological processes. Based on the data we estimated resource recycling potential, amounts of resource consumption, landfill disposal and GHG emission in the future scenario.

As a result, we identified reduction effects in the environmental load brought from countermeasure response associated with the material cycle technology.

・キーワード (5 語以内) = Material Flow Analysis, Recyclable Resource, Resource Efficiency, Environmental Efficiency, Future Projection