

EcoBuild Global

Global Waste-to-Resource Agenda

HI TECH BUILD | International Project Concept



KBGI | GLOBAL INITIATIVES

GLOBAL IMPACT • 2.1 billion tonnes of municipal waste (2020) • 3.8 billion projected by 2050

Source: UNEP / ISWA, Global Waste Management Outlook 2024 | Projection, not project-specific impact

Four pathways from waste to value

Segregated feedstocks are directed to the technologies best suited to recover useful materials and energy.



Waste to Oil

Selected plastics can undergo controlled thermal processing to recover oils and chemical feedstocks.



Waste to Fuel

Suitable recovered products may be upgraded into industrial fuels, subject to specifications.



Waste to Energy

Organic waste and residual streams can support biogas, heat, or electricity generation.



Waste to Materials

Recovered plastics, minerals and aggregates can become blocks, pavers or panels.

A scalable global development agenda

Cleaner cities, responsible resource recovery and stronger local economies.

01 Restore the environment

Reduce unmanaged dumping and open burning through organized collection and processing.

02 Build local industries

Support manufacturing of recovered materials and equipment-service supply chains.

03 Improve energy resilience

Explore locally appropriate fuels, heat and power from eligible waste streams.

04 Strengthen communities

Link waste infrastructure with sanitation, employment and affordable construction.

From pilot facilities to regional networks

A phased approach with local feasibility, regulatory approvals and performance validation.

1

ASSESS

Map waste volumes, composition, collection coverage, markets and environmental constraints.

2

DESIGN

Choose sorting, recycling, conversion and pollution-control systems for each location.

3

PILOT

Commission demonstration facilities, verify outputs and build the local workforce.

4

SCALE

Replicate bankable facilities through municipality and public-private partnerships.

Measurable outcomes. Investable infrastructure.

A global platform focused on responsible deployment and verified project performance.

Environmental

Tonnes diverted, avoided disposal impacts and emissions performance.

Economic

Local jobs, recovered-product sales and durable operating models.

Social

Sanitation access, safer waste handling and community improvements.

Governance

Permits, product quality, transparent reporting and financial controls.

NEXT STEP

Commission country-level feasibility and identify pilot-city partners.