MANAGING RESOURCES: Opportunities for the Future
Reduce, reuse, and recycle for sustainable developments.

Minimize use of manufactured materials.
Basic Approach

WASTE is wasted if you waste it, otherwise it is a resource.

Recycle. Recycle as is.

Recycle without additional processing, (i.e., without adding any cost to it).
Saving of Resources by Recycling (per ton):

- Paper – 17 Grown trees, 26,000 Lts. water, and 4,100 kw of electricity;
- Plastics – Petroleum, natural gas, 40,000 Lts, water, and 5,040 kw of electricity;
- Aluminum – 4 tons of bauxite and 91,200 Lts. of water;
- Glass - 1.2 tons of silica sand, 50% less water, and 2,400 kw of electricity.
Time for Degradation in Landfills at ambient condition (years):

- Periodicals – one;
- Paint cans – 13;
- Plastic bags – 100;
- Steel cans – 100; Aluminum cans – 200 to 500;
- Plastic bottles – 450; and,
- Glass – more than one million.
Spaceship Earth – La Bella Terra: Global Warming?

Center for By-Products Utilization
Thank you very much for your interest.