

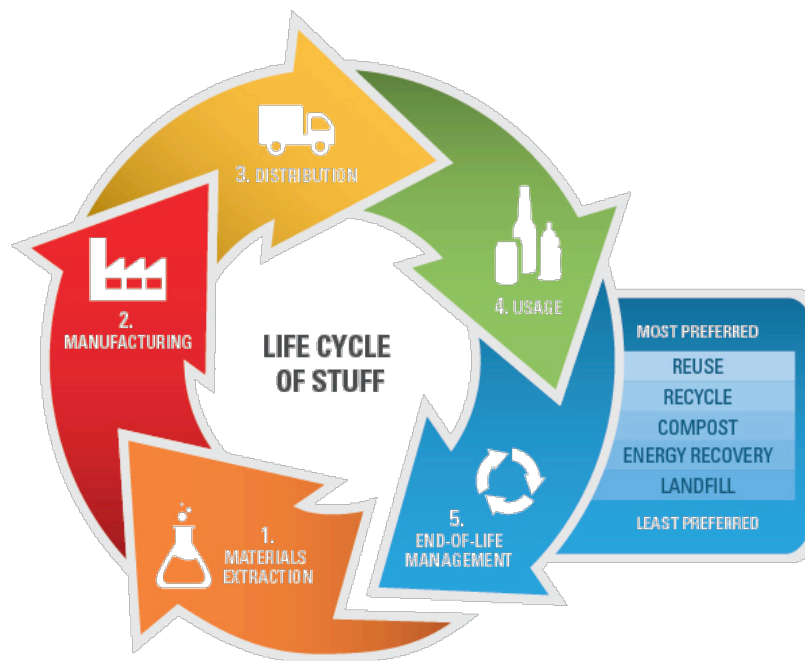


Sustainable Materials Management

**Mathy Stanislaus, Assistant Administrator
US EPA, Office of Solid Waste and Emergency Response
National Recycling Coalition SMM Summit
May 12, 2015**

CHANGING HOW WE THINK ABOUT OUR RESOURCES FOR A BETTER TOMORROW

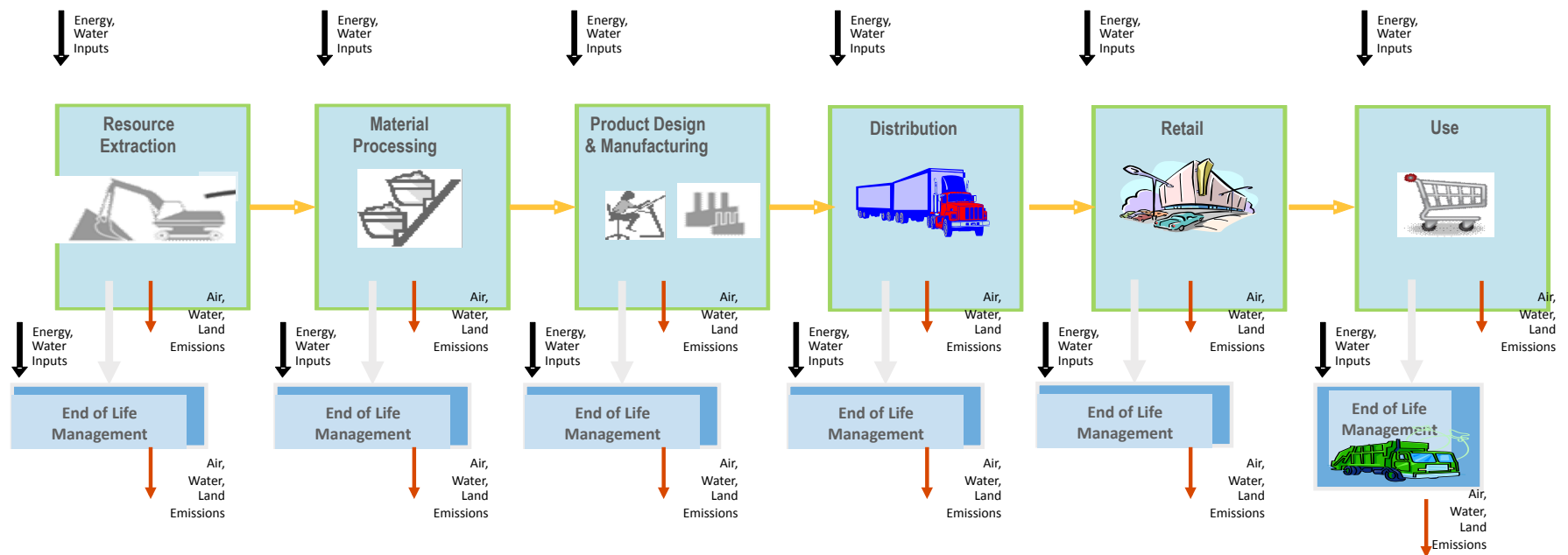
What is Sustainable Materials Management?



“An approach to serving human needs by using/reusing resources productively and sustainably throughout their life cycles, generally minimizing the amount of materials involved and all associated environmental impacts.”

The Road Ahead, pg iii

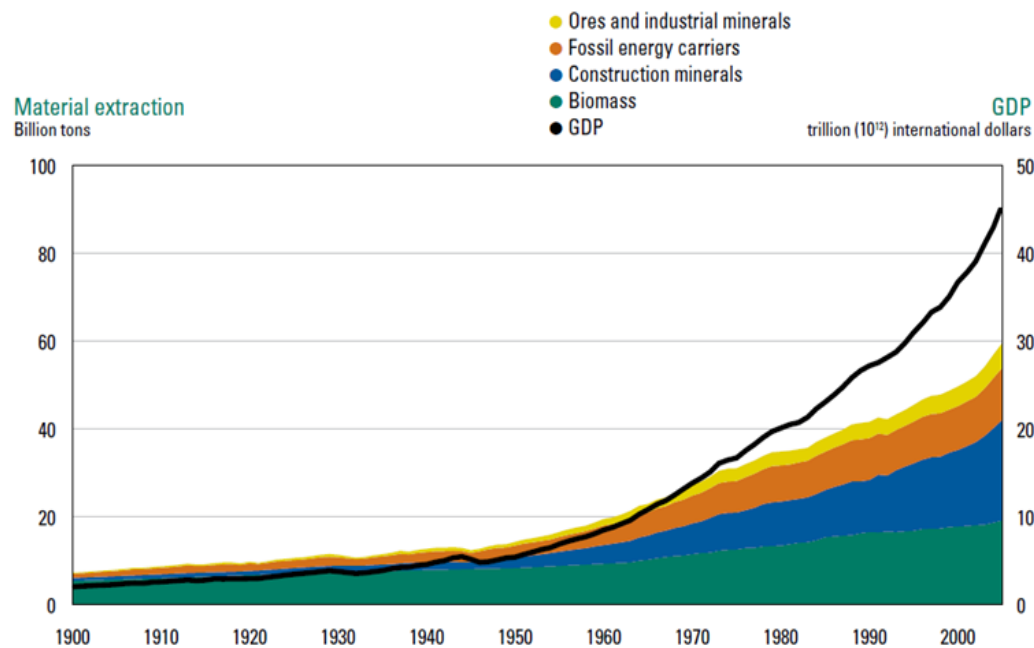
What is SMM: Material/Product Life Cycle



- Hidden flows account for up to 75% of the total materials, but are not accounted for in the gross domestic product.

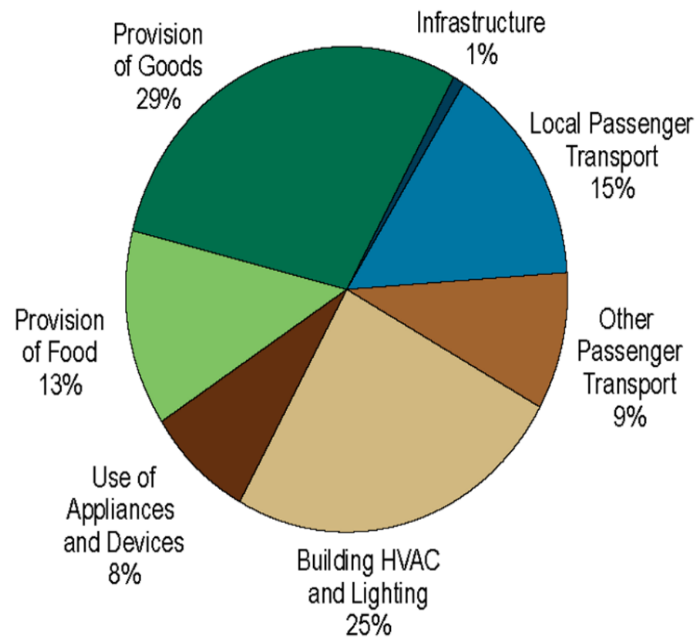
Why SMM? Present Material Use-GDP Decoupling Insufficient

Figure 2. Global material extraction in billion tons, 1900–2005



Source: Krausmann *et al.*, 2009

Why SMM?



U.S. Greenhouse Gas Emissions

(Source: Opportunities to Reduce Greenhouse Gas Emissions through Materials and Land Management Practices 2009)

- **SMM offers new opportunities to address climate change:**
 - Materials Management is represented by the *Provision of Goods* and *Provision of Food*.
 - Accounting for 42% of U.S. GHG emissions.

SMM and Recycling



- We have domestic capacity to process 2 billion pounds of soda bottles, yet currently we only collect 1.4 billion/annually. And there is growing demand for more recycled plastic.
- The aluminum industry is eager for more aluminum cans – Yet in the U.S. we bury nearly half of our cans in landfills, which by the way are valued at over \$1 billion.
- Glass recycling capacity exceeds supply by 65%.
- Paper recycling is available to 87% of Americans.

SMM and Recycling

U.S. Recycling and Reuse Industry:

- Consists of 56,000 establishments that employ > 1.1 million people
- Generates an annual payroll of nearly \$37 billion
- Generates a gross of over \$236 billion in annual revenues (U.S. Recycling Economics Information Study 2001)

Southeast Recycling Development Council (SERDC):

- In Tennessee, local governments pay \$42 million annually to bury commodities with a raw value of \$180 million.
- Alabamians pay \$25 million to bury \$193 million worth of materials.
- The southeast region of the US could have 21,500 more private sector jobs if those states recycled 10% more material.

What is EPA doing?

- Measurement
- Convening
- Analysis
- Regulatory Action
- Work in Targeted Sustainable Materials Management Focus Areas

Working With Industry

Recent conversations with U.S. industry representatives indicate EPA can do more to help:

- Better define terms like recycling, recovery, disposal, and diversion, so all can understand and align more closely on our definitions and measures of success
- Convene and educate stakeholders across all parts of the materials use and recovery process, to facilitate true life cycle based approaches
- Open more communication channels and increase transparency in reporting so secondary materials markets and the businesses they spawn can be more efficient
 - Specific focus on measurement systems including the enhancement of existing data and development of new data such as those for measuring the circular economy

In Summary:

Sustainable Materials Management (SMM) provides significant opportunities to:

- Reduce the 42% of U.S. GHG emissions attributable to Materials Management
- Target work where environmental impacts are the greatest
- Contribute to US efforts toward UN Sustainable Development Goals (SDG)
- Build strong communities and economies
- Provide national and international leadership
- Demonstrate measurable results