

Waste to Energy: an appropriate solution for inclusive green growth and climate mitigation

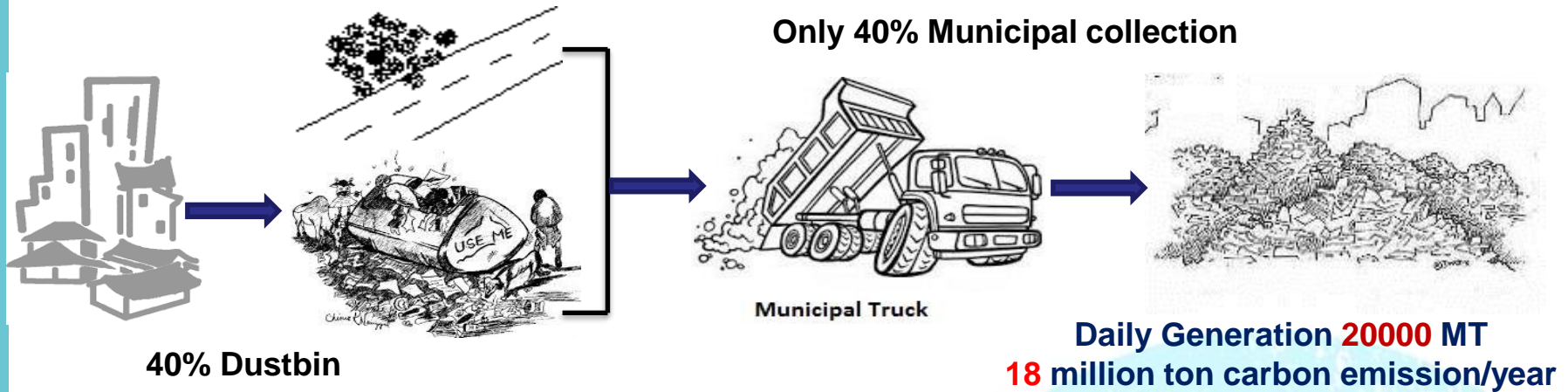
Uttam Kumar Saha

Strategic Lead: Urban & Energy

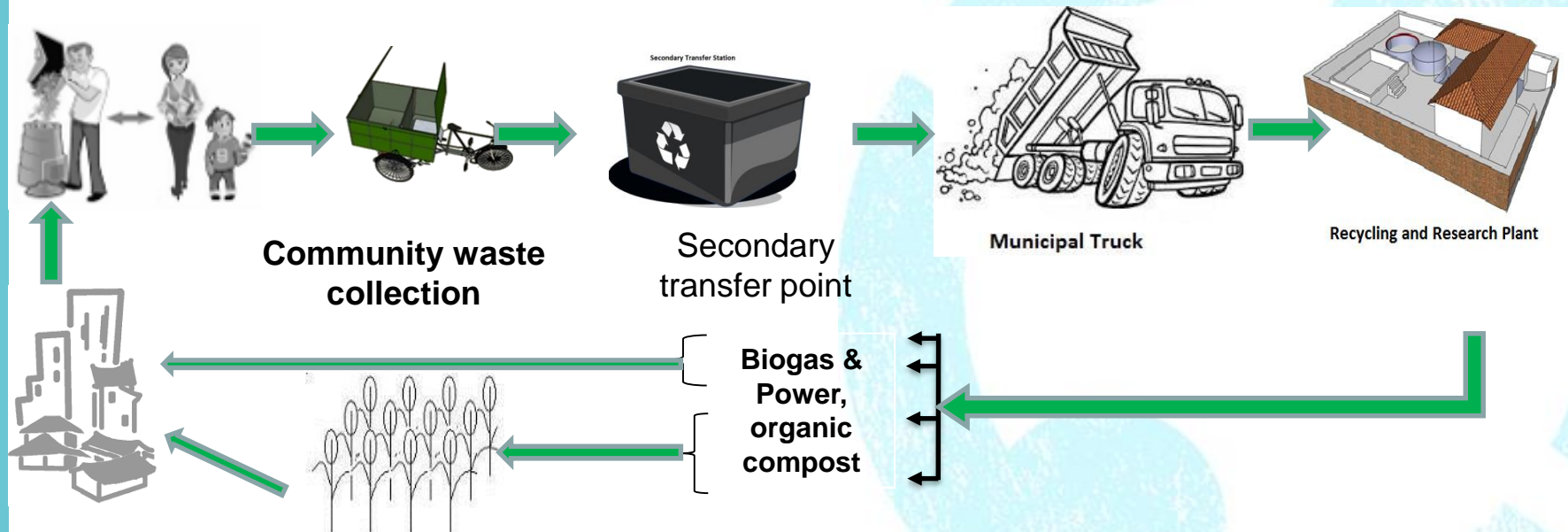
Practical Action

❖ Municipal Waste Management: Current practice

60% Roadways



❖ Our approach - ISMW - Integrated Sustainable Waste Management System



Approach

Stakeholders:

Local Authorities
NGOs/CBOs
Service Users
Private informal sector
Donor Agencies

Generation & Separation

Collection

Transfer & Transport

Treatment & Disposal

Reduction

Reuse

Recycle

Recovery

Process

Time

Aspects

Technical
Environmental/Health
Financial/ Economic
Socio-Cultural
Institutional
Policy/Legal/ Political

Integrated Sustainable Waste Management

Policies

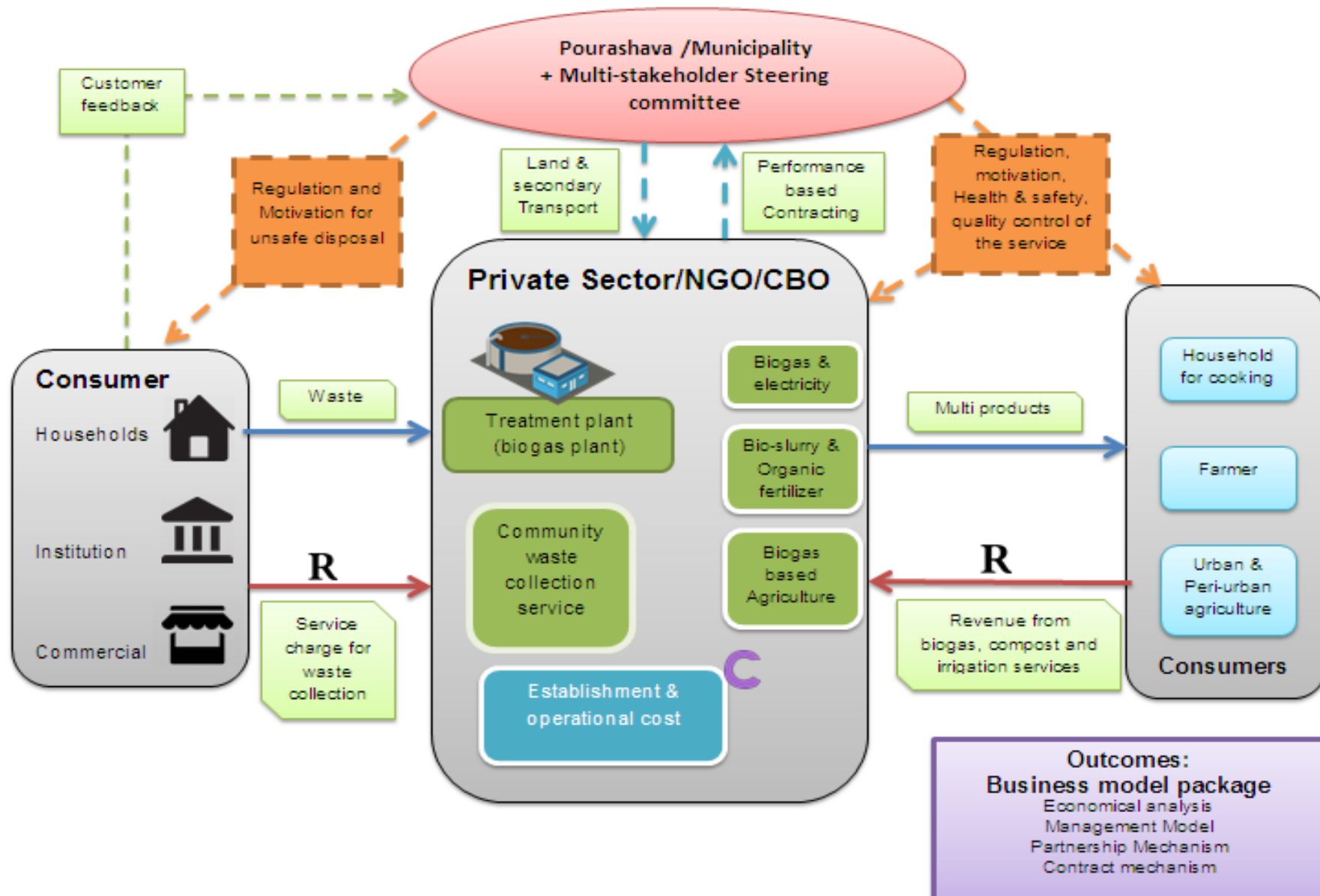
- ☐ **3R (reduce, reuse, recycle) strategy 2010 by DoE**
- ☐ **INDC - 5% reduction in carbon emission by 2030**
- ☐ **Waste: Composting and landfill gas capture and power generation**
- ☐ **National Power Sector Master Plan – waste to energy prioritised**
- ☐ **National Guideline on Biogas to Power (on going initiative)**
- ☐ **National Organic Agriculture policy 2016**
- ☐ **National Agriculture Policy 2018**
- ☐ **Green Financing and PPP policies**

Technologies

- ☐ Dry Fermentation
- ☐ Co-digestion
- ☐ Complete mix
- ☐ Plug Flow



Public and Private Partnership (PPP) led Inclusive Business Model



Value of WASTE: learning from demonstrations



1 TON WASTE



**5
NEW JOBS**

**1.1
CUBIC METER**

landfill area
saved



produce 0.25 tons
of good quality
compost



reduce 0.5 tons
of green house
gas emissions



produce 40-80
cubic meter of
biogas



environmental
benefit to
2000-3000
people

Challenges & Way Forward

- ☐ Community awareness and participation in segregation of wastes
- ☐ Lack of private sector engagement
- ☐ Lack of Standardization
- ☐ Lack of operational model of multi-stakeholder engagement
- ☐ Development of National Action Plan with milestones for operationalize the 3R strategy
- ☐ Development of Appropriate Business Model
- ☐ Knowledge and learning exchanges
- ☐ Linkage with climate financing

Thank you

