

Agriculture and Forest Waste and Waste Management

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The logo for the Asian Development Bank (ADB), consisting of the letters 'ADB' in a white, serif font, centered within a dark blue square.

ADB

Agriculture and Forest Biomass

- Organic materials which are not directly used as foods or other products
- Residual stalks, straw, leaves, roots, husk, nut or seed shells, waste wood, aquaculture and animal husbandry waste



Available biomass

- Globally 140 billion metric tons of biomass
- Huge potential for these raw materials to be converted to energy
 - Displace fossil fuel, reduce emissions of greenhouse gases and provide renewable energy
 - Contributes to environmental pollution if left to decay
- Potential for large scale industry and community level activities
- Benefits to farmers and the environment

Current status

- Emerging trend on the utilization of biomass
- Biomass is still largely under utilized
 - Left to rot or openly burned in the fields
 - Lacking strong regulatory instruments
- Direct combustion of agricultural residue results in air pollution
 - risk to human and ecological health
- Biomass is a renewable resource that causes problems when not used



The challenge

- To convert biomass as a resource for energy and other productive uses.



Practices

- Biomass type
 - Forest deadwood and waste wood
 - Rice husk and straw
 - Animal waste
- Conversion technologies
- Secondary products
 - digestate



Challenges and constraints

- Competing power sources
 - When and where does it make sense to use alternative energy
- High investment costs
- Biomass availability
 - Seasonality and disperse
- Sustainability
- Socio-economic issues
- Institutional arrangements
- Knowledge and awareness
- Foreign direct investment
- Private sector involvement



What we can do:

- Promoting enhanced utilization of waste agricultural biomass by:
 - Raising awareness in developing countries;
 - Building capacity on assessment of waste agricultural biomass;
- Promoting industrial and commercial use of waste agricultural biomass by demonstrating appropriate technologies;
- Assisting national and/or local governments to develop a policy packages and facilitate partnerships.

In conclusion

