



BEYOND THE SMOKE

The untapped potential of carbon markets for crop residue management

Hiz Jamali
Senior Climate Change Officer
Asian Development Bank

The views expressed in this presentation are the views of the author/s and do not necessarily reflect the views or policies of the Asian Development Bank, or its Board of Governors, or the governments they represent. ADB does not guarantee the accuracy of the data included in this presentation and accepts no responsibility for any consequence of their use. The countries listed in this presentation do not imply any view on ADB's part as to sovereignty or independent status or necessarily conform to ADB's terminology.





Voluntary Carbon Markets



Gold Standard®



CLIMATE
ACTION
RESERVE

puro •
earth





Selecting a methodology for VCM project



VM0042: Methodology for Improved Agriculture Land Management, v2.0



- Tillage
- Crop residue retention
- Avoidance of residue burning





Stop burning – Start earning?

Can we earn carbon credits for avoided residue burning?



Verra VM 0042

Not prohibited by law



Current adoption < 20%



ADB



Options to generate carbon credits

Avoided emissions

Carbon sequestration



On farm circular economy - 1

Can animals solve the (rice) residue problem for us?

- Poor digestibility
- Low crude protein
- High cellulose
- High hemicellulose
- High lignin
- High silica





On farm circular economy - 2

Is incorporating residue in soil a sustainable practice?

- Improved soil health

But

- Slow decomposition
- Up to 2 times higher GHG emissions when residue incorporated (Rosamanta/IRRI 2017)





Residue as a source of energy



GHG





Carbon market interventions

Tillage



Inefficient stoves



Fossil fuel energy



Firewood





Biochar – the stable carbon

- Made from biomass using low-oxygen combustion at 300-700 C
- Soil carbon sequestration
- Soil health improvement
- GHG mitigation
- Strong carbon market candidate





Way forward

- Identify activities for carbon market projects
- Technical, logistic, and economic feasibility
- Learn from previous carbon market projects
- Identify appropriate carbon markets for crop residue management

All solutions for sustainable residue management
rely on mechanization.



Thank you

Hiz Jamali: hjamali@adb.org

