

From ashes to assets

Dr. Muhammad Zeshan | 02nd Dec 2024

As winter approaches, a familiar haze settles over Pakistan's countryside – the toxic aftermath of crop residue burning. Our farmers aren't burning their agricultural waste by choice; they simply can't afford better alternatives. But what if I told you that this environmental crisis is actually a billion-rupee opportunity waiting to be unlocked?



As winter approaches, a familiar haze settles over Pakistan's countryside – the toxic aftermath of crop residue burning. Our farmers aren't burning their agricultural waste by choice; they simply can't afford better alternatives. But what if I told you that this environmental crisis is actually a billion-rupee opportunity waiting to be unlocked?

Pakistan's rural economy is sitting on an untapped goldmine of agricultural waste. Those rice husks we burn? They could become eco-friendly packaging. The buffalo dung that litters our villages? It's renewable energy waiting to happen. The real question isn't whether these resources have value — it's how we mobilise the capital to transform waste into wealth.

Traditional microfinance isn't enough for this transformation. We need 'bio-microfinance' — specialised financial products that recognise agricultural waste as legitimate collateral. Imagine a farmer securing a loan for a biogas plant not just with land titles, but with guaranteed waste streams from their livestock. Your buffalo herd becomes more than a source of milk; it's your ticket to the green energy revolution.

The concept of 'Community Bio-Banks' is already gaining traction where villages collectively pool their agricultural waste rights, creating leverage for better financing terms. It's like a traditional village cooperative evolved for the circular economy age. When ten farmers approach a bank individually, they're small fry. When a hundred farmers pool their waste resources through a bio-bank, they become an attractive investment opportunity.

Pakistan's Islamic banking sector is perfectly positioned to lead this transformation. Green Sukuk bonds, already successful in Malaysia and Indonesia, could channel billions into rural bioeconomy projects. These Shariah-compliant instruments resonate with our religious values while advancing environmental stewardship. Several Pakistani Islamic banks are already exploring waste-to-wealth financing products.

The key to unlocking large-scale investment lies in blended finance. Government guarantees can de-risk early investments, while international green funds provide capital, and carbon credits offer additional revenue streams. This financial architecture makes rural

bioeconomy projects attractive even to traditionally conservative investors.

The smoke rising from our fields isn't just a sign of waste – it is a signal of opportunity. Let's stop burning our future and start investing in it

Our rural youth are ready for this revolution. With smartphone penetration exceeding 64 per cent in rural areas, specialised digital platforms could help farmers track their waste-to-energy earnings, access carbon credits, and secure financing — all from their mobile devices. Several telecom companies are already piloting bioeconomy payment integration into their mobile money platforms.

The 'Pay-As-You-Save' model could be a game-changer. Farmers get biogas plants or waste processing equipment installed with minimal upfront costs, paying through their energy savings or additional income. This approach has already proven successful in solar energy adoption – why not extend it to biogas and waste processing?

Here's what many miss: every tonne of agricultural waste we process instead of burning generates carbon credits. These credits can be presold to help finance projects, essentially providing double revenue – once from the end product, and again from emissions reduction. Several international carbon credit aggregators are already exploring partnerships with Pakistani agricultural cooperatives.

To scale this opportunity, we need smart policy support:

- 1. Government backing for pioneer projects to build market confidence
- 2. Tax incentives for rural bioeconomy investments
- 3. Streamlined carbon credit certification for small-scale projects
- 4. Technical support to develop bankable project proposals

Every field burning crop waste represents lost energy potential. Every dung heap left to rot is a missed renewable fuel opportunity. Every agricultural waste stream we ignore is revenue we're leaving on the table.

Pakistan's rural bioeconomy isn't a charitable environmental project – it is a compelling business opportunity. We have the waste resources, an eager workforce, and growing market demand. Smart financing can transform our rural areas from waste producers to bioeconomy pioneers.

The technology exists. The market exists. The need certainly exists. All we need is financial innovation to make it happen. In tomorrow's economy, the smart money isn't just on green, it's on rural green. The question is: are you ready to bank on Pakistan's bioeconomy revolution?

The smoke rising from our fields isn't just a sign of waste — it is a signal of opportunity. Let's stop burning our future and start investing in it.

The writer is head of research group, Trade, Industry & Productivity (TIP) at the Pakistan Institute of Development Economics (PIDE), Islamabad.

Newspaper Link