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Policy pointers

Initiatives need to provide economic incentives for sustainable and inclusive ventures. Tax breaks would encourage more sustainable and pro-poor charcoal and woodfuel initiatives to emerge and make it easier to enforce legislation to ensure sustainable woodland management.

Regulations on production and commercialisation must be clear and transparent, consider and include actors in informal sectors and have limited transaction costs.

Better cooperation and dialogue across sectors, and working with public officials at all levels, will help raise the profile of initiatives to make charcoal and woodfuel more sustainable and inclusive.

Improved access to information will raise actors' awareness of the current state of regulations, making it harder for officials to extract bribes.

Informality and market governance in wood and charcoal value chains

Two billion people rely on wood and charcoal for their daily energy needs. But supply chains are often environmentally unsustainable, and poor actors rarely capture enough value from trade in these products. This briefing discusses two innovative cases in the governance of biomass markets, which enhance the inclusion of informal actors. The first shows how Nepal's long history of effective forestry governance has helped rural communities thrive in producing briquettes for urban markets; the second examines efforts to regulate Kenya's charcoal trade in an inclusive way. Both cases identify wider lessons for improving biomass market sustainability that address issues of equity, inclusion and environmental sustainability.

More than two million people in the developing world rely on wood as a source of energy every day. Getting energy from wood is labour intensive, providing employment opportunities throughout the supply chain, from collection to sales. It can also be environmentally sustainable when sourced from well-managed forests and burnt efficiently.

Most trade in charcoal and woodfuel is informal. While this means poor people can enter the trade and use it to support their livelihoods, it also means they are often subjected to pressure to bribe the authorities to transport charcoal. Charcoal production can also have negative environmental impacts when poor management contributes to the degradation of forests.¹

In the worst cases, informality can create a self-reinforcing cycle — people attempting to manage woodlands sustainably for woodfuel and charcoal struggle to compete with those who are

extracting resources informally and not paying management costs. This discourages people from managing forests sustainably. There is a real need to design and implement mechanisms that promote and incentivise environmentally sustainable charcoal production while recognising the need to be inclusive of the large numbers of informal producers and traders employed by the sector. In this briefing we look at two attempts — from Nepal and Kenya — to promote the sustainable and more formalised harnessing of biomass,² which provide interesting lessons for the wider biomass sector.

Creating briquette value chains in Nepal

Charcoal briquettes are made from biowaste (often charcoal or wood) and can be used for heating and cooking in residential, commercial and industrial sectors. Because they are made

Mechanisms are needed that will inclusively improve the sustainability of the charcoal sector

from residues, they have the potential to be sustainable forms of energy. They have slightly different properties to normal charcoal, however, and are only ever likely to complement, rather than substitute it.³ In particular, briquettes tend to burn more slowly, making them attractive for use

in household heating and tourist and restaurant sectors.

In Nepal, efforts to bolster trade in charcoal briquettes have evolved from a long history of community control and

access over forest resources. A series of measures have supported this since the 1980s.⁴ For example, the 1993 Forest Act gave Community Forest User Groups (CFUGs) the authority to take key management decisions over forest resources.⁵ CFUGs prepare their own constitution, which they submit to their local District Forest Office to get a certificate of registration. They develop their own operational plans to use the resources, and detail social arrangements, responsibility and rights within their group.

While these processes are challenging, they have empowered communities to access and manage their own resources, creating viable enterprises. As a result, in 2006, 1.6 million households were controlling a quarter of the country's forests. This provided a solid platform upon which to establish a briquette-producing enterprise, retaining value at the producer end of the supply chain. Mechanisms that offer economic incentives to make sustainably sourced forest products more competitive have also encouraged the development of viable community-run formal enterprises. For example, the 1995 Value Added Tax Act, the 2001 Income Tax Act and the 2013/14 Financial Act have all included exemptions for marketing charcoal-related and other forestry products. Such measures have created an environment where communities have access to forests and are able to establish viable enterprises from them.

In 2007, the Asia Network for Sustainable Agriculture and Bioresources (ANSAB) decided to support briquette production in rural Nepal, connecting producers to urban markets. Similar initiatives had been attempted previously, but proved unsustainable due to the high cost of briquettes compared with charcoal. ANSAB formed briquette factories in the communities, and set up five community enterprises linked to CFUGs. Once briquette production was established, it became clear that the traders who bought locally to sell elsewhere were offering a

low price. So ANSAB established a company, Himalayan Naturals, to act as an intermediary between the briquette producers and urban consumers in Kathmandu.

Himalayan Naturals is owned by private sector investors and the community members themselves. The company identified a viable market opportunity selling briquettes to Kathmandu's middle and upper classes and staged demonstrations in kiosks to build awareness of the usefulness of briquettes among biomass and liquid petroleum gas consumers. At the time of writing, Himalayan Naturals has succeeded in creating a viable market in briquettes. Between 2009 and 2013, its sales increased from 117,000 units a year to 600,000. There are currently 102 women and 93 men working in briquette production, and 2,100 CFUG members have benefited indirectly from the income earned from this trade.

The success of ANSAB and Himalayan Naturals is set against a backdrop of greater community forestry control and tax incentives that encourage sustainable, formalised community enterprises. It demonstrates a successful approach to improving biomass markets by engaging in a wider and longer-term effort to establish effective mechanisms to govern forests.

The challenges of improving governance in Kenya's informal charcoal sector

Problems relating to the charcoal trade in developing countries are often a result of complex, and inappropriate, systems of governance. In the past, many governments tried to ban the trade outright, only to drive it further underground. In recent decades, however, a growing number of sub-Saharan African countries have introduced new mechanisms to govern the trade.⁶ We will examine the impacts of new regulations in Kenya and whether these encourage sustainable production among mainly informal producers.

In 2009, the government mandated the Kenya Forest Service to grant licenses to groups, known as Charcoal Producer Associations (CPAs), allowing them to legally produce sustainable charcoal. It has also made some efforts to provide for community participation in managing forest resources through Community Forest Associations, legally recognised in The Forest Act of 2005.

Observers of the Kenyan charcoal sector have argued that 'the necessary policies and legislations for biomass energy development are in place.'⁷ However, to date many of the changes

to policy have not been made fully operational. There are often delays in handing out licenses, frustrating CPAs' attempts to legalise their businesses.⁸ Authorities have failed to clamp down on illegal trade, and in some cases continue to demand bribes from legal producers. According to Miyuki Liyama and Mary Njenga of ICRAF, this stems partly from the historical legacy of charcoal bans. Many traders remain unaware that their activities are now legal or potentially legal.⁹

The authorities themselves are also often uncertain of the rules, and do not know when traders are genuinely infringing on them. Such poor enforcement means that illegally produced, unsustainable charcoal continues to be far more attractive than potentially sustainable, formal ventures.

There is also a lack of clarity over which institutions are responsible for particular areas of policy, leading to overlaps and a lack of harmonisation.⁹ Potential entrepreneurs are often afraid to enquire about rules and regulations because doing so invites unwanted inspections and restricts their activities.¹⁰

NGO-produced booklets explaining the rules can help to raise awareness among traders and public officials, but these do not always reach the people who need them the most. Many traders are illiterate. This lack of access to information, along with the high transactional costs to screen applications for licenses, are both barriers to better practice.

Although traders continue to produce charcoal unsustainably, there are important signs of progress. CPAs have been established; the concept of sustainable and legal charcoal production and trade has been introduced into policy discourse; and there is a nascent legal framework to formalise the trade in the future. Some county governments have enthusiastically pushed charcoal reforms and even begun collecting tax from recently legalised charcoal traders.¹¹ Further devolution of responsibilities to these governments could speed up the process of issuing licenses. Recent reforms aim to increase community rights to establish forest ventures, and government agencies and some NGOs are encouraging the use of fuel-efficient kilns to increase the sector's environmental sustainability.

The challenges Kenya faces in governing the charcoal trade are not unique. In many cases across sub-Saharan Africa, informal rules continue to govern the way markets operate, long after reforms have been made.⁶ This does not mean the reforms are wrong. In many cases,

there will be a time lag between the formal implementation of new regulations and their adoption by stakeholders. Practices can be highly engrained, and require not only institutional but also cultural change. In the foreseeable future, therefore, the challenge will be to look towards models that combine elements of formality and informality while progressively eradicating the most negative aspects of the charcoal trade.

Improved sustainability and inclusiveness going forward

ANSAB has been reasonably successful in targeting niche markets, linking community producers to high-end urban markets and taking advantage of a long-term process of increasing community control of forests and tax breaks that encourage cooperative forest enterprises. Meanwhile in Kenya, there has been progress towards an enabling environment that encourages sustainable charcoal production and trade, but a combination of high transaction costs, entrenched governance problems and a lack of awareness of regulatory changes means that change is uneven.

Both case studies offer policymakers and development professionals insights for designing and implementing mechanisms that will inclusively improve the sector's sustainability.

Improved economic incentives. Evidence from Nepal shows that tax breaks can encourage the development of enterprises controlled by poor producers, which in turn can help level the costs with cheaper unsustainable biomass supply chains and incentivise professionalisation, commercialisation and formality. In Kenya, we saw that reducing transaction costs increases the likelihood of producers and traders applying for permits and complying with norms.

Clear and transparent regulation.

Regulations need to explicitly include groups in the informal economy and should have sufficient clarity to be understood and implemented. Regulations need to be accompanied by political will to tackle the power-hold of vested interests because simply improving the formal regulations, as happened in Kenya, is not enough to bring about a wholesale improvement in governance of the charcoal trade.

Better cooperation and dialogue. Cooperation across sectors is essential for market governance. In Kenya, different institutions have overlapping responsibilities, which leads to institutional confusion. Government support is also paramount for any successful biomass initiative and to improve biomass markets.⁶

Improved information access. Actors need to be aware of changes in regulations so they can comply with them. This may take time in contexts where actors are accustomed to certain rules. There needs to be a sustained effort to reach out to groups in the informal economy and public officials alike.

Much remains to be done to make biomass markets more sustainable and pro-poor. While there is evidence that locally controlled, commercially oriented ventures can form part of a sustainable and transparent energy sector, key obstacles often prevent this from happening in reality.¹² Isolated policy changes are unlikely to make much impact unless they are part of a broader package of structural change.¹³

The success and failure of market governance mechanisms is highly political, and is therefore likely to require more than just formal changes to rules and regulations. Sustained and inclusive progress requires transformative change reaching beyond legal frameworks into cultural domains, altering peoples' perceptions of what is 'the norm' and establishing new moral frameworks to guide market activities.

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Notes

¹ Iiyama, M et al. (2014) Opportunities and challenges of landscape approaches for sustainable charcoal production and use. In Minang, PA et al. (eds) *Climate smart landscapes: multifunctionality in practice*. World Agroforestry Centre 112–127. / ² Biomass refers to plant matter that can be converted into fuel such as charcoal or briquettes. / ³ Energy and Environment Partnership (2012) *Analysing briquette markets in Tanzania, Kenya and Uganda*. / ⁴ Dahal, GR and Chapagain, A (2008) *Community forestry in Nepal: decentralised forest governance*. In: Colfer, CJP et al. (eds) *Lessons from forest decentralization: money, justice and the quest for good governance in Asia-Pacific*. Earthscan, London 67–81 / ⁵ Ojha, H et al. (2009) *Community forestry in Nepal: a policy innovation for local livelihoods*. International Food Policy Research Institute (IFPRI) / ⁶ Schure, J et al. (2013) *Formalisation of charcoal value chains and livelihood outcomes and livelihood in Central- and West Africa*. *Energy for Sustainable Development*, 17(2) 95–105. / ⁷ Mugo, F and Gathui, T (2010) *Biomass energy use in Kenya. A background paper prepared for the International Institute for Environment and Development (IIED) for an international ESPA workshop on biomass energy, 19-21 October 2010, Parliament House Hotel, Edinburgh*. Practical Action, Nairobi, Kenya. / ⁸ Iiyama, M et al. (2014) *Achieving sustainable charcoal in Kenya*. Stockholm Environment Institute and World Agroforestry Centre / ⁹ Personal communication with Mary Njenga and Miyuki Iiyama from ICRAF / ¹⁰ Personal communication with Matthew Owen from Chardust, Nairobi. / ¹¹ Personal communication with Hannah Wanjiru, of SEI International. / ¹² ESMAP (2012) *Commercial woodfuel production: experience from three locally controlled wood production models*. / ¹³ NL Agency (2010) *Making charcoal production in Sub-Saharan Africa sustainable*.



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