

# Informal and Green?

The forgotten voice in the transition to a green economy

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Discussion Paper

March 2014

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**Green Economy**

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*Keywords:*

Green Economy, Inclusivity, Informal Economy, Poverty, Enterprise

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## Acknowledgements

The author is grateful for the expert contributions of Juan Pablo Solis, Boniface Kiome, Harrie Oppenoorth and Willy Douma of Hivos. Particular thanks are due to Ethel del Pozo-Vergnes and Bill Vorley of IIED for tirelessly guiding the research and sharing their expertise throughout the drafting of this paper.

## Produced by IIED's Sustainable Markets Group and Hivos's Green Entrepreneurship programme

The Sustainable Markets Group drives IIED's efforts to ensure that markets contribute to positive social, environmental and economic outcomes. The group brings together IIED's work on market governance, business models, market failure, consumption, investment and the economics of climate change.

Hivos is a Dutch development organisation guided by humanist values. Together with local civil society organisations in around 26 developing countries, Hivos wants to contribute to a free, fair and sustainable world. A world in which all citizens – both women and men – have equal access to opportunities and resources for development and can participate actively and equally in decision-making processes that determine their lives, their society and their future. Quality, cooperation and innovation are core values in Hivos's business philosophy. Hivos is committed to poor and marginalised people in Africa, Asia and Latin America. A lasting improvement in these people's situation is the ultimate measure for the work and efforts of Hivos.

Published by IIED, March 2014

Benson *et al.* 2014. *Informal and Green? The forgotten voice in the transition to a green economy*. IIED Discussion Paper. IIED, London.

<http://pubs.iied.org/16566IIED>

ISBN 978-1-78431-006-6

Printed on recycled paper with vegetable-based inks.

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## Join the debate

As international organisations, governments and multilateral development banks embark on the project of 'inclusive green growth', IIED believes it critical and urgent that more robust and wide-ranging research is undertaken as to the relationship between 'greening' and informal economies.

We invite partners around the world to share their research and experiences on some of the key questions arising from this paper. First, under what circumstances do informal economies prove most damaging to the local environment? Equally, under what circumstances, policy-led or otherwise, are informal economies driving greater resource efficiency and protecting their natural resource base more effectively than their formal counterparts? Second, what impacts, both positive and negative, are major Green Economy policy instruments having on informal workers and economies? What are the links between environmental regulations and the size and structure of informal economies? What do experiences from the ground – successes and failures to 'green' and formalise informal markets – tell us about policy implementation gaps? How can 'top-down' policy instruments meet community-driven efforts that respond more directly to local needs?

IIED will continue the debate online at [www.iied.org](http://www.iied.org) or please do contact Emily Benson [Emily.benson@greeneconomycoalition.org](mailto:Emily.benson@greeneconomycoalition.org); Ethel Del Pozo-Vergnes [EthelDelPozoVergnes@iied.org](mailto:EthelDelPozoVergnes@iied.org) or Bill Vorley [bill.vorley@iied.org](mailto:bill.vorley@iied.org) with feedback, research or questions.

Finally, the Green Economy Coalition, of which IIED is a founding member, is now the largest multi-stakeholder alliance of organisations committed to accelerating the transition to green and fair economies, and is using its global network and connections to governments to track emerging issues and trends on the green economy transition. See [www.greeneconomycoalition.org](http://www.greeneconomycoalition.org) for more information.

‘Inclusive green growth’ is no longer just a buzz term. It is shaping donor priorities, influencing national development plans and attracting investment. Yet inclusive green growth policies commonly promoted by international institutions make little, if any, reference to informal economies – which are expanding in all parts of the world in response to changes in our formal economies, and which cater for the world’s poor. This paper aims to provoke discussion on two main questions: What does green economy mean in the context of informal markets where the world’s poorest and most vulnerable people produce and trade? And, does ‘greening’ necessitate formalisation, or can it happen through people’s own actions?

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# Summary

Prompted by Rio+20, the project of inclusive green growth is gaining political momentum across the international development community. The European Union, Denmark, the United Kingdom, Korea, Norway, Australia and others have all committed multi-year funding to promoting green growth; multilateral development banks including the World Bank, African Development Bank and Asian Development Bank have prioritised green growth projects; and national green economy plans are in place in Ethiopia, Cambodia, South Africa, Mexico, Kazakhstan, China, Vietnam, and the Caribbean region, to name but a few.

Inclusive green growth sets out to answer two pressing global imperatives of reducing poverty and protecting the environment. While definitions differ, the underlying logic of inclusive green growth promoted by institutions such as the World Bank and the OECD is that a more resource-efficient model of development will help the poorest by safeguarding the local environment, stabilising the climate and increasing their access to affordable and renewable energy, clean water sources, clean air and fertile soils (OECD 2012).

International organisations are keen to emphasise social inclusion and welfare as the aim and outcome of green growth. Yet, this paper finds that the emerging body of green economy literature makes few, if any, references to informal economies. From food sellers on the streets of Cairo and networks of waste workers in India, to artisanal miners in Peru and charcoal producers in Kenya, informal economies are where the majority of poor people trade, produce, live and work.

The informal economy comprises half to three-quarters of all non-agricultural employment in developing countries (ILO 2013). Even in countries that have experienced rapid economic growth such as India and South Africa, informal economies are increasing. Recent financial shocks – including the 2008 and Eurozone crises – have resulted in a sharp increase in informal economies in rich and poor and rapidly developing countries. Far from being a phase of under-development, informal economies respond to fluctuations in the formal economy and provide ‘cushions’ in times of recession and adjustment.

If the informal economy is largely unaccounted for in green economy modelling, policy approaches and analysis, then this raises critical questions: Do green economy policy approaches necessitate ‘formalisation’? Do informal economies always prove detrimental to the environment? How have the greening efforts led by governments, authorities or international institutions impacted informal markets in the past?

By reviewing the role of informal economies in different sectors like energy, agrifood, mining, housing and waste management, we see that much of our formal economy depends on informal networks, activities and relationships. For example, most modern national and global agrifood supply chains rely on informal transactions between producers and small-scale or even wholesale traders before becoming more formal later in the chain. As such, informality is interwoven into the fabric of our globalised economy.

Second, we find that informal activities operating beyond the reach of regulation or taxation are not necessarily more harmful to the environment than formal activities or sectors. For example, informal waste picking alliances have proved more, not less, efficient than state or privately run waste management schemes. We also find that informal economies can be more sensitive to environmental degradation and climate change and hence more proactive in finding solutions. For example, innovations in slum settlements have resulted in housing and basic services that are more resilient to climate change and environmental risks by improving drainage and developing innovative soil-compressed interlocking brick technologies for more weatherproof housing. Third, government or institutional attempts to ‘clean

up' polluting informal sectors, such as artisanal mining, energy delivery and informal housing, by demanding formalisation in the shape of licences, fees and laws, have often struggled to make the desired impact. For example, Kenya's attempt to ban the production of charcoal due to high forest loss in the 1990s meant that the trade was driven underground and deforestation rates continued to rise (Box 11). Similarly, few governments have succeeded in formalising artisanal mining activities due to weak government enforcement capacity and strong vested interests from those who benefit from controlling the trade.

By contrast, policy approaches that have worked closely with people in the informal sector, recognising their need for greater flexibility, including them in planning, governing and budgets, have brought about longer-term social and environmental benefits. Since 2000, the Kenyan government has adopted a new approach by working directly with informal networks and local enterprises in community-driven afforestation projects that produce sustainable charcoal.

This paper does not intend to romanticise informal economies. Informal work is often dirty and degrading, it can mean low and unreliable wages and can expose vulnerable people to abuse by powerful intermediaries. Equally, this paper does not intend to dismiss the global imperative to slow and reverse rates of environmental damage. But if international organisations and governments are committed to inclusive green growth then they need urgently to understand how and why people are excluded from formal economic activity. The risk is that by demanding formalisation via new regulations and standards whole swathes of poor people, particularly women and the low-skilled, will be excluded and further marginalised. As suggested in this paper, there are concrete examples and robust evidence of alternative routes for greening local economies involving light-touch approaches that recognise local conditions, capacities and social structures. If community-led approaches are understood, valued and supported, then informal economies can drive the transition to greener economies.

# Introduction

In the last five years the concept of the green economy and green growth have moved from the fringe of political discourse into mainstream policy discussions. Increasingly, international institutions, regional development banks, and governments in developed, developing and emergent countries have begun to prioritise resource efficiency, low-carbon development and natural resource management. As highlighted in the Rio+20 discussions (UNRISD 2011), however, green policy instruments that can shift financial flows towards investing in natural systems are not intrinsically pro-poor. As such, they have the potential to marginalise vulnerable people even further.

In response to the concerns voiced by low-income countries and civil society organisations (CSOs) during the Rio+20 negotiations, the notion of inclusive green growth has now entered the international development discourse. Inclusive green growth is a concept that seeks to tackle two global imperatives: (a) to raise the living standards of millions of people living in poverty, and (b) to slow the rate of global environmental degradation. Inclusive green growth is viewed as 'necessary, efficient and affordable' (World Bank 2012); it 'offers an optimistic, realistic alternative to countries looking for new sources of growth that make economic, environmental and social sense' (OECD 2013); and above all it will generate 'more jobs and better, healthier and more secure livelihoods for women and men' (World Bank 2012a).

Yet, in spite of the momentum, resources and political commitment that inclusive green growth is attracting, there is a startling lack of evidence as to how inclusive green growth can be achieved or who it includes.

Little is said about the millions of people who make their living from informal markets, where the majority of the world's poorest and most vulnerable produce and trade goods and services in many sectors like agriculture, mining, forestry, waste management or energy. The informal economy comprises half to three-quarters of all non-agricultural employment in developing countries (ILO 2013). Over the last few years, irrespective of growth in gross domestic product (GDP), informal markets have expanded, particularly in sub-Saharan Africa. After the 2008 economic downturn even highly

developed OECD countries have experienced a rise in informal sectors, markets and employment (OECD 2009), while former socialist countries such as Armenia and Cuba are seeing a surge of informal sectors as former civil servants seek work outside state institutions (Tverdohle 2012).

Historically, informal economies have been treated as relics of under-development (Green 2009). They have been characterised as 'shadow', 'grey', or 'black' markets because of their connections to tax evasion, unregulated enterprises and criminal activity. They have also been associated with environmental pollution and degradation as a result of expanding urban slums, and activities such as illegal logging and unregulated mineral extraction.

More recently, informality has been recast in a different light. While there are dangers and drawbacks to informal markets they also provide a vital source of livelihoods, income and opportunity for many of the world's poorest and most vulnerable people. Informal economies have also been shown to be more alert to increased resource scarcity and to climate change than formal markets, and in some cases more innovative in generating solutions than their formal counterparts (Tandon 2012). If this is the case then informal markets could power, rather than impede, the transition to greener economies.

This paper aims to provoke discussion on two main questions:

## **1. What does green economy mean in the context of informal markets where the majority of the world's poorest and most vulnerable people produce and trade?**

The first part of the paper from Chapters 1 to 4 aims to unpack the notion of inclusive green economies and green growth. The discussion is guided by a number of questions: Who does inclusive green growth include? How do green policies engage with the informal sector, if at all? Does greening necessitate formalisation? As the green economy to date has been framed as a 'top-down' agenda, so too this paper uses the analysis produced by large intergovernmental organisations, donors and regional development banks as its key body of evidence.

**2. Can greening happen through people's own actions and initiatives to improve their informal markets?** Chapter 4 comprises a series of illustrative short cases of different experiences where people – with or without the support of policy – have found ways of producing green, inclusive and productive outcomes. Short cases in a diversity of sectors like energy, agrifood, mining, housing and waste management show the magnitude of informal markets and their importance for millions of people around the world. These cases shed light on the possibility of looking at informal markets as part of the solution rather than the problem or obstacle to more inclusive green economies.

Finally Chapter 5 points to the need for further exploration to fill knowledge gaps but also to promising action paths, to better understand and improve informal markets and the conditions by which that can happen.

# The arrival of the green economy

Since Rio+20, the 'green economy' has risen up national and international political agendas. So, who is promoting the concept, what do they mean by it, and how are they operationalising it?



1



The concept of a 'green economy' re-emerged in the late 2000s amid the convergence of several interrelated global crises.<sup>1</sup> By 2008 world food prices had become increasingly volatile as a result of droughts in grain producing countries, bans on exports, capital market speculations, demand from emerging economies, diversion of grain to produce biofuels, and rising oil prices. At the same time the full force of the financial crisis was beginning to be felt by countries around the world. Inequality levels within and between countries were rising, with 80 per cent of the world population recording a rise in inequality over the previous two decades (UNDP 2005). Despite new evidence suggesting that global ecological limits were being breached (Rockström *et al.* 2009), governments failed to make any agreement on climate change at the 2009 United Nations Framework Convention on Climate Change (UNFCCC) negotiations.

Donors, international institutions and civil society organisations began to reach similar conclusions. First, the economic, social and environmental crises were interconnected and could not be dealt with separately. Second, governments were unlikely to commit to any significant policy change if it was going to hinder economic growth and international competitiveness. As such, a systemic change was necessary – one that tackled the macroeconomic conditions, and one that made the economic case for sustainable development.

Under Achim Steiner's leadership, the UN Environment Programme (UNEP) became the major champion of the green economy. For UNEP, greening the economy refers to the process of reconfiguring businesses and infrastructure to deliver better returns on natural, human and economic capital investments, while at the same time reducing greenhouse gas emissions, extracting and using fewer natural resources, creating less waste and reducing social disparities (UNEP 2011).

In their flagship green economy report *Towards a Green Economy: Pathways to Sustainable Development and Poverty Eradication* (2011), UNEP identifies 11 sectors which it considers to have potential for the transition to a green economy: agriculture, water, forests and fisheries, which are also called natural capital, and the sectors of renewable energies, manufacturing, waste, construction, transport, tourism and cities.

They argue that the 'ecologisation' of the economy does not need to hinder growth. Rather, it has potential as a new engine of growth, a net generator of decent and green jobs and a vital strategy to eliminate persistent poverty. The fundamental objective for the transition to a green economy is to allow economic growth and investment, increasing environmental quality and social inclusion.

## BOX 1: PLANETARY BOUNDARIES

Rockström and his colleagues identified nine planetary boundaries that together provide a 'safe operating space' required for humans:

- Climate change
- Stratospheric ozone layer
- Biodiversity
- Chemical dispersion
- Ocean acidification
- Freshwater consumption and global hydrological cycle
- Land system change
- Nitrogen and phosphorous inputs to biosphere and oceans
- Atmosphere and aerosol loading

Source: Rockström *et al.* 2009

Despite UNEP's insistence on the social objectives of a green economy approach, during the preparatory discussions for Rio+20, governments and civil society alliances such as the Green Economy Coalition<sup>2</sup> raised some major concerns with the concept (Benson and Greenfield 2012). Some CSOs argued that poor people would be penalised by a green economy approach due to additional green conditionalities on trade and development assistance reminiscent of the structural adjustment programmes of the 1980s. Others stressed that green economy approaches served only to open new markets in the interests of powerful private and multinational companies. Finally, many emphasised that the tools or instruments associated with a green economy including environmental standards, regulations and taxation would have the greatest exclusionary impact on small producers and the most vulnerable people.

## Inclusive green economies and green growth

The Rio+20 outcome text on green economy reflected CSO concerns. *The Future We Want* (UNGA 2012) calls for 'green, fair and inclusive economies' and stresses the role of multi-stakeholder involvement. It underscores the need for context-specific policy instruments to catalyse the transition and recognises the need to accommodate different 'approaches, visions, models and tools available in each country'. The text

## BOX 2: DEFINITIONS OF 'GREEN ECONOMY' AND 'GREEN GROWTH'

According to the OECD (2013) **green growth** is 'the fostering of growth and development while ensuring that natural assets continue to provide the environmental resources and services on which human well-being relies'.

UNEP (2011) defines **green growth** simply as 'resource-efficient, low-carbon, climate-resilient & socially-inclusive growth' and also uses the term interchangeably with **green economy**.

The World Bank (2012) has defined **green growth** as 'a strategy for promoting economic growth while adding an ecological quality to existing economic processes and creating additional jobs and income opportunities with a minimal environmental burden'.

The Global Green Growth Institute also takes a strategic view by stating that it is 'growth that leapfrogs the resource-intensive and environmentally unsustainable model of industrial development pioneered by advanced economies' ([www.gggi.org](http://www.gggi.org)).

The Green Economy Coalition, a global multi-stakeholder alliance working on green economy, defines **green economy** as a 'fair and resilient economy, which provides a better quality of life for all achieved within the ecological limits of one planet' ([www.greeneconomycoalition.org](http://www.greeneconomycoalition.org)).

also insists that a green economy must be founded on the principles of sustainable development, must respect national sovereignty and address 'inequalities and promote social inclusion, including social protection floors'.

International institutions have adopted similar language. According to the World Bank's major report on inclusive green growth 'what matters is welfare [or utility], not output' (World Bank 2012a). For the Bank, green policies contribute to welfare through direct environmental benefits, distributional effects and through increased resilience to shocks (including natural disasters and commodity price volatility). They too acknowledge that green policies will affect different social groups or regions differently – creating jobs in some areas and reducing them in others, so it will be important to implement 'complementary policies to compensate losers' (*ibid*). 'If compensatory financial transfers are possible at zero cost and labour markets are perfect, efficiency can be separated from equity. If such transfers are impossible or costly and labour markets are imperfect, it is necessary to pursue efficiency and equity simultaneously, which may require setting more modest goals' (World Bank 2012a citing Goulder and Parry 2008).

The OECD also couches green growth within a sustainable development framework but argues that it is narrower in scope and 'entails a clear and workable policy agenda for concrete, measurable progress at the interface of the economy and the environment'. For them, 'natural assets – including renewable and non-renewable resources and a stable climate – play a significant role in delivering production and welfare gains' (OECD 2013). The OECD adapt their own green

growth framework for developing countries to show that it will meet the needs of the poorest by increasing access to energy, water and transport services; alleviate poor health associated with environmental degradation; and introduce efficient technologies that can reduce costs and increase productivity' (OECD 2013).

Since Rio+20 in June 2012, the green economy agenda has moved from theory to practice. Governments are now producing national plans and regional strategies with the help of, often competing, intergovernmental 'advisory services'. UNEP's Green Economy Initiative (GEI) assists governments to reshape and refocus policies, investments and spending towards a range of sectors, such as clean technologies, renewable energies, water services, green transportation, waste management, green buildings and sustainable agriculture and forests. Similarly, the OECD is offering 'tailored green growth policies' for countries, north and south, founded largely on the experience gleaned from green policies in OECD countries. The Global Green Growth Institute (GGGI), originally established by South Korea and Denmark, and now an intergovernmental organisation supported by multi-year funding from the UK, Australia, Norway and the United Arab Emirates, is also advising the governments of Brazil, Ethiopia, Indonesia, Cambodia, China, India, Jordan, Mongolia, Peru and others on how to generate low carbon and resource-efficient economic growth. By contrast, civil society-led alliances such as the Green Economy Coalition are helping to convene national and regional dialogue processes to support a diversity of stakeholders develop context-specific transitions towards green economies.

# Informal economies: key to inclusive growth?

Informal economies present a governance dilemma for policy makers. On the one hand, informal economies are closely connected with poverty, human rights violations and environmental degradation. On the other, they provide jobs, markets, and services for poor people and can be more innovative, resilient and resource-efficient than their formal counterparts.



Today, informal markets provide the main source of income, services and products for the world's poorest people. If governments and international organisations are committed to inclusive green economies that improve the quality of life for poor and vulnerable people then transition plans will need to engage with informal economies, sectors and markets.

## Contribution and growth of informal economies

The post-World War II theoretical assumption that industrialisation and modernisation would create sufficient and well paid employment even in the developing world has not come to pass (Figure 1). Macro-economic growth has failed to reduce the size of informal economies where underlying causes of poverty, such as lack of access to education, health, and credit, have remained unchanged (Chambwera *et al.* 2011).

For example, India's GDP has grown by approximately 6.5 per cent every year over the last decade, which has made some impact on reducing poverty, but the informal economy remains high at nearly 90 per cent of the workforce (Government of India, 2012).

Even by the more narrow definitions of informal markets (see Box 3) there is ample evidence to show the contribution that they make to national economies. For example, in sub-Saharan Africa the informal sector contributes about 55 per cent of GDP and 80 per cent of the labour force (AfDB, 2013). The opportunities offered by informal markets are not restricted to the least developed countries. In a recent study of 44 low- and middle-income countries the ILO discovered that in 11 countries, informal employment represents at least two-thirds of non-agricultural employment; in more than 22 countries women outnumbered men in informal employment (ILO, 2011).

### BOX 3: DEFINING AND MEASURING INFORMAL ECONOMIES

Attempts to define, and hence measure, informal economies have come a long way. From the 1970s when the term 'informal sector' was first coined by Keith Hart (1972) to describe a type of employment that was viewed as falling outside of the modern industrial economy in developing countries; to Hernando de Soto's (1986) appreciation of the entrepreneurial spirit of informal sectors and insistence that national regulations were preventing economic development by forcing large parts of the economy into informality; to the late 1990s, when the informal sector was being recognised as comprising a significant share of employment and output, and came to be known as the 'informal economy'.

Today there is still no single common understanding of the informal economy and each school of thought has its limitations and advantages (Gërkhani 2004, Chen 2012, Andrews *et al.* 2011). More broadly, economic informality can be described by three concepts:

- *the informal sector*, which refers to production and employment in unregistered enterprises
- *informal employment*, which focuses on employment outside of the labour protection regulations of a given society, whether in formal or informal firms
- *the informal economy*, which covers all firms, workers, and activities that operate outside the legal regulatory framework of society, and the output that they generate (Meagher 2013).

The ILO's latest statistical update (2012) defines (a) the informal sector as an enterprise-based concept, and (b) informal employment as a job-based concept. This allows for a more accurate integration of informal employment in the formal sector and also formal employment in informal enterprises. However, they still tend to use their original understanding of informal economies as a standard definition: 'private unincorporated enterprises that are unregistered or small in terms of the number of employed persons. An enterprise is unincorporated if it is not constituted as a separate legal entity independently of its owner(s) and does not maintain a complete set of accounts. Units engaged in the production of goods or services exclusively for own final use by the household are excluded, as are enterprises engaged in agriculture, hunting, forestry and fishing. National statistical definitions of the informal sector vary to some extent; however, the countries, for which data are presented here, all use informal sector definitions in line with the international definition' (ILO 2012).

As the role and contribution of informal economies becomes clearer to organisations and governments, decision makers are expressing more interest in capturing and engaging with 'underground' economic activities. For example, the report of the committee on unorganised sector statistics of the Government of India (2012) acknowledges the urgent need to better assess this huge proportion of their economy for better policy design:

'The unorganised or informal sector constitutes a pivotal part of the Indian economy. More than 90 per cent of workforce [sic] and about 50 per cent of the national product are accounted for by the informal economy. A high proportion of socially and economically underprivileged sections of society are concentrated in the informal economic activities. The high levels of growth of the Indian economy during the past two decades is accompanied by increasing informalisation. There are indications of growing interlinkages between informal and formal economic activities. There has been new dynamism of the informal economy in terms of output, employment and earnings. Faster and inclusive growth needs special attention to informal economy. Sustaining high levels of growth are also intertwined with improving domestic demand of those engaged in informal economy, and addressing the needs of the sector in terms of credit, skills, technology, marketing and infrastructure'.

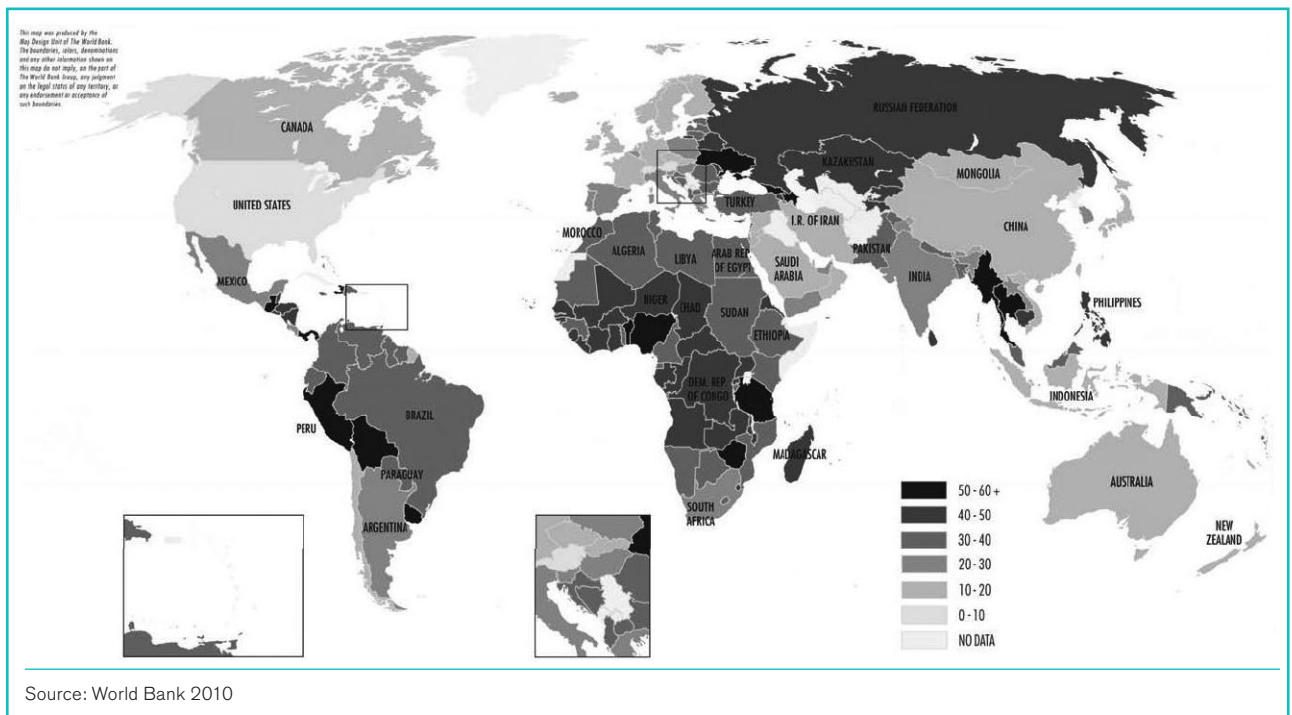
## Informal economies: obstacles or accelerators to a green economy?

### Links to poverty

Macro-economic statistics suggest a strong relationship between informality and poverty; 'in countries where informality is decreasing, the number of working poor is also decreasing and vice versa' (AfDB 2012). As the majority of poorer communities depend directly on natural resources to support their informal economic activities they are most directly affected by the impacts of climate change and environmental degradation, which exacerbates the poverty cycle (see Box 4). The OECD notes that 'growing informal employment might substantially increase poverty levels, making it impossible for many countries to achieve the Millennium Development Goals by 2015' (OECD 2009).

Institutions such as the ILO stress that the absence of rights and social protection sits at the heart of the poverty cycle. Informal operators lack secure income, employment benefits and social protection. Employers can take advantage of the absence of formal contracts by not complying with government standards, such as ensuring adequate working conditions and paying the minimum wage (Chambwera *et al.* 2011). Working conditions can be hazardous and demeaning. Poorer access to public infrastructure, rights and benefits can make informal operators more vulnerable to harassment and abuse.

Figure 1: World View of Informality





## BOX 4: ARTISANAL FISHING: POVERTY AND ENVIRONMENT LINKAGES

One of the many places where the value of artisanal fisheries is significant is the East African coast. The coastal area of eastern Africa, and especially that of Mozambique and Tanzania, benefits from the great current systems of the Indian Ocean, and is rich in marine life. The artisanal fisheries sub-sector of Tanzania and Mozambique supplies a significant proportion of the fish consumed locally – which accounts for almost 50 per cent of the population's animal protein intake. The sector involves several hundred thousands of poor men and women, for whom fishing and fish products are the principal sources of livelihood and income. However, many studies demonstrate that artisanal fishers in the region suffer from lack of infrastructure and lack of access to markets and credit. They are threatened by several anthropogenic impacts such as over-fishing, harmful fishing practices, coastal erosion, oil pollution, coral reef destruction, and competition with industrial fleets. This is further exacerbated by climate change which is causing significant and irreversible biological and physical changes in the region.

Source: *Sherman and Hempel 2009; Nicholls et al. 2007*

### Poor environmental record

Often outside the reach of environmental regulations and taxation, informal enterprises and markets are connected with higher pollution rates and greater environmental degradation. Hazardous waste sites, degradation of land, air and water quality, species loss and greenhouse emissions are all associated with different informal economy sectors, and in many cases are worse than those of their formal counterparts.

On the basis that informal sectors are often diffused and unorganised it is more expensive for local and national authorities to track and enforce environmental regulations so evasion is pervasive and pollution rates

are often high. For example, in Khayelitsha, one of the largest informal settlements in South Africa, the average particulate matter is estimated to be 70 per cent above those of Cape Town's central business district (Muchapondwa 2010). Similarly, a comparison of particulate emissions from informal brick kilns in Ciudad Juarez, Mexico, and two of the city's leading formal industry polluters, found that the informal kilns were producing significantly more particulates than the formal sector operations (Blackman *et al.* 2006). In many cases, the methods for natural resource extraction in the form of artisanal mining (Box 5) or timber logging have had long-lasting impacts on their surrounding environment.

## BOX 5: INFORMAL GOLD MINING IN PERU

Over the last decade the price of gold has increased 360 per cent. In response, informal gold mining has risen in developing countries, in many cases with grave environmental and health consequences including deforestation, acid mine drainage, and air and water pollution from arsenic, cyanide, and mercury contamination.

The Madre de Dios in Peru is a valuable headwater region for the Amazon River as an ecosystem for thousands of people along the river as well as the species that depend upon it. Since 2003, informal gold mining practices in the region have risen in line with international gold prices, as have imports of mercury into Peru, which is used in non-industrial mining techniques. Despite the known health risks, informal miners are directly exposed to liquid mercury as well as to its vapours during gold processing, which also releases mercury directly into the sediments, waterways and atmosphere. Mercury released to the atmosphere during the heating of the gold-amalgam settles and in some cases is then re-released through biomass burning, a common practice for clearing in settlement deforestation. It is estimated that since 1998 artisanal mining has accounted for 10–15 per cent of global gold production and is responsible for one-third (approximately 1000 t/y) of all mercury released into the environment.

Source: *Adapted from Swenson et al. (2011)*

## Informal economies: as resilient, dynamic and innovative?

On a more positive side, informal economies bring benefits for the poorest and most vulnerable people. They offer low-skilled and marginalised communities multiple and flexible opportunities to exit and enter markets at any time. For example, in South Asia, sub-Saharan Africa, Latin America and the Caribbean, and urban China, informal employment provides a greater source of non-agricultural employment for women than for men (ILO, 2002a), which is supporting greater economic empowerment for women.

Intimately linked to the dynamics of formal economies, informal markets can act as a 'buffer' or a 'cushion' in times of crisis (Colombo *et al.* 2013). During the Latin America economic crisis of the 1980s and the implementation of structural adjustment policies, employment in informal sectors grew (Tokman 1992). This was repeated in Asia in the 1990s when millions of people who lost formal positions tried to find jobs or create work in the informal economy (Lee 1998). Similarly, an additional 27 million people lost their jobs between 2007 and 2009 and the informal economy provided a critical safety net for the unemployed (ILO 2012c).

The informal economy also has its own way of organising capital and distributing surplus, which makes it a form of 'community economy' or a solidarity economy; 'it includes a sociocultural dynamic involving the production and transfer of cultural products such as foodstuffs and creative industries; this is often disregarded when solely economic and entrepreneurial models are used for analysis. Some groups have developed national and even regional networks based on culture and kinship and have succeeded through a series of economic and social organisational arrangements to control big shares of markets' (Kinyanjui, 2010). Where the majority of people have been excluded or marginalised on ethnic and class lines and where mistrust of state institutions has become embedded, informality is the expression of that exclusion (del Pozo-Vergnes 2013). The Aymara, the largest linguistic group in Bolivia, controls 90 per cent of the meat market in the city of La Paz and has expanded its influence through its informal trade agreements to the surrounding countries and is even innovating to commercialise imported goods from China (Tassi 2012).

## Drivers of resource efficiency and innovation?

While informal markets and settlements can be polluting they tend to have a smaller ecological footprint than their formal counterparts. The organisation Women in Informal Employment: Globalizing and Organizing (WIEGO) considers two dominant groups of urban informal workers – street traders and home-based workers – who in India, for example, represent 11 per cent and 18 per cent respectively of all urban workers (Chen and Raveendran, 2011). WIEGO surmises that street vendors, in comparison to their formal counterparts, are more likely to source their goods locally, use less packaging and generate less waste, are likely to reuse or recycle (e.g. wooden pallets are used as display tables and cardboard is collected and recycled), and use little or no electricity.

As informal markets tend to rely more closely on the local environment for their goods and services, they can also be 'more alert to the opportunities and threats posed by environmental or political change than their formal counterparts' (Tandon 2012). The informal economy is neither shielded from the effects of climate change nor is it indifferent to them; rather, it is seeking alternatives to deal with them. Informal economies organise themselves around service work (e.g. waste collection) or around natural capital assets (e.g. land); and they are, for all intents and purposes, at the forefront of adapting to environmental stress (*ibid*).

## The informal economy and development: a governance dilemma

For countries undergoing rapid economic transition in a globalised, highly competitive and resource-constrained world, 'informality' is at the heart of the contemporary governance dilemma. On one hand, states need to broaden their tax base to provide better public services, and also to provide the infrastructure and other public goods that underpin national competitiveness. They also have to respond to citizens who, with rising incomes, are demanding the quality, safety, security and transparency that come with formalisation of markets. But on the other hand, the modern globalised economy increasingly depends on the informal sector that produces for, trades with, distributes for and provides services to the formal economy. Informalisation of primary production and employment is increasingly being observed also in developed countries due to economic downturn. Nevertheless, there is evidence too that the informal economy can develop without much contact with the

formal economy. In Vietnam the main supplier and the main buyer of the informal economy is the informal economy itself; this challenges general assumptions that in fast-growing Asian economies the informal sector will be ensuring the competitiveness of the formal sector (Cling *et al.* 2010).

There is rising awareness of the links between informality, economic inclusion and social cohesion. Recent developments such as the Arab Spring in Tunisia, which was started by a street vendor setting himself on fire having been unable to find any work selling fruit at a roadside stand, have highlighted the fragility of our socio-economic structures.

### Recognition – but still a bias against informal economies

Informality is not always synonymous with poverty. Many people go into informal activities by choice, not just through need. A study conducted by the Swedish International Development Cooperation Agency (Sida) in 2004 illustrated that informal operators make repeated economic calculations along the lines of a cost-benefit analysis as to the relative benefits of formalisation and choose to remain informal (Becker 2004). Similarly, a Small Business Project survey of informal entrepreneurs in South Africa supports this finding: '[w]hen asked whether they were thinking about the possibility of registration, the responses were evenly balanced with 45 per cent saying they were and 43 per cent saying they were not' (USAID 2005:4).

The recent attempt by Lima's mayor to formalise the city's wholesale food markets revealed the importance of powerful groups (wholesalers, retailers, transporters) and the huge amounts of money that circulated in this market. This case also shows what it takes for governments in countries undergoing rapid economic growth to ensure more sustainable and inclusive development. 'Transiting from informal survival strategies to regulated formal competition is a highly contested process in Peru. This transition reveals the economic and social schisms that governments face when reforming markets in countries where informality is still deeply rooted in the economy and behaviours and where formalisation, to succeed, has to deal with real inclusion' (del Pozo-Vergnes 2013).

While the more positive aspects of informal economies have long been recognised, the dominant thrust within global development policy is that informal markets should be formalised. The ILO stated in June 2002 'The fundamental challenge posed by the informal economy is how to integrate it into the formal economy. It is a matter of equity and social solidarity. Policies must encourage movement away from the informal economy. Support for exposed groups in the informal economy should be financed by society as a whole' (ILO 2002).

Yet, the record of formalisation policies and instruments as a means of increasing the welfare of marginalised and vulnerable groups is controversial and patchy. Such policies and instruments can often be more exclusionary, despite statements on the need to empower people. In the name of formalisation, street vendors face eviction, harassment, bribes, and confiscation of their goods (Nguyen *et al.* 2013). Slum clearance schemes are pervasive, with little recognition that such schemes destroy not only the homes of the poor but also their workplaces and livelihoods, undermining their contribution to the local economy.



# Top-down green economy instruments: can they green the informal economy?

Sustainable public procurement, sustainable certification schemes, fiscal reform and green industrial policy are all commonly cited by international organisations as key for accelerating the transition to a green economy. Yet, such mechanisms rarely acknowledge or account for informal economies.

# 3

The policy options associated with a green economy vary according to the local, national and regional context. However, there is a standard list of policy instruments (see Annex I) that are commonly cited by international institutions as a means of driving the transition to greener economies. Here we present a small selection<sup>3</sup> of the most common instruments in order to understand how such mechanisms recognise or seek to engage informal economies as part of the inclusive green growth transition.

## Sustainability standards and certification

Global demand for certified green and sustainable products has been growing over the last two decades and green economy strategies are likely to put a renewed emphasis on standard systems and certification. According to the OECD, the green growth rationale is that 'goods and services that are certified as having been produced in a way that sustains natural assets can increase market value and market share' (OECD, 2013). For the World Bank, 'demand-pull policies such as certification and standards will be a means of driving technology and innovation' (World Bank, 2012a).

Sectors most open to sustainability standards include agriculture, forestry, energy, fisheries and tourism. Positive examples cited in the literature include the East African Organic Products Standard (EAOPS) which united several private and international standards into a single system, reducing the administrative burden on smaller producers to meet competing certification. The Pacific Organic Standard, adopted by ten Pacific Island countries and territories, is also quoted as having helped generate opportunities for the poorest (OECD, 2013). According to the G20 Development Working Group, the introduction of such schemes bring increased income, improved living standards, more resilient livelihoods and extra resources for education, health and other social necessities. However, they also stress that the benefits 'greatly vary and depend on the specific nature of each standard and certification process and what it entails with respect to locally prevailing farming practices' (G20 Development Working Group 2012).

If standard systems and certification were to be rolled out across major sectors at scale, informal economies will be impacted. Historically, certification schemes have struggled to meet the needs of small-scale and informal operators because compliance is costly and beyond their capacity. For example, the EU Forest Law Enforcement and Trade (FLEGT) Action Plan, brought in to tackle the illegal trade in timber, has resulted in a series of Voluntary Partnership Agreements (VPAs) with six developing countries. Eba'a Atyi *et al.* (2013) estimate that per hectare compliance will cost

communities US\$14.71, which 'without external support – these costs will likely drive local producers out of business' (*ibid*). The VPAs insist that 'recognised tenure and use rights must be based on formal recognition', which will also exclude most informal workers from the chains.

Significantly, the OECD recognises the failure of environmental certification schemes as a key lesson for moving forward with green economy planning and highlights the importance of ensuring '... that smallholder farmers can access and benefit from certification and that certification can be used by informal economy producers without having to be formalised' (OECD, 2013).

## Green fiscal reform and charges

Green fiscal reform refers to the range of taxation and pricing measures and is one of the key instruments for shifting the macroeconomic conditions towards greener growth being advocated by donors, the World Bank and the OECD. Green fiscal reforms tend to fall into four groups: 1. Natural resource pricing measures such as taxes for forestry and fishery exploitation; 2. Reforms of product subsidies and taxes; 3. Cost recovery measures, such as user charges for energy and water; and 4. Pollution charges. The reforms aim to generate new revenues from natural resource extraction, while at the same time promoting greater efficiency in the formally subsidised goods or services.

The most commonly cited tool in the context of fiscal reform is the removal of fossil fuel subsidies. Those subsidies cost governments around the world US\$409 billion in 2010, and yet the International Energy Agency (IEA) shows that only 8 per cent of that figure reaches the poorest 20 per cent of the population. The IMF also discovered that, across 20 countries in Asia, Africa, Middle East and Latin America on average the top income quintile received six times more in subsidy than the bottom quintile. According to UNEP, Indonesia removed diesel subsidies for industries and used it for poverty alleviation, and Barbados has used environmental tax revenues to support the poorest. However, beyond the recognition that informal sectors pose a considerable challenge to fiscal policy reforms because they are unreachable, the majority of tax reforms both fail to recognise the existence of informal economies and fail to provide any appropriate alternatives.

## Sustainable public procurement

In developing countries, public procurement represents around 25–30 per cent of GDP, and even higher rates in emerging economies; 35 per cent in South Africa; 43 per cent in India and 47 per cent in Brazil (Perera *et al*, 2007). Sustainable public procurement (SPP) can shape consumption and production trends, generate new domestic markets for green technology and business, and provide examples of good practice for business and consumers.

In recent years, Brazil, China, the Republic of Korea, Ghana, Vietnam and Turkey have implemented green initiatives to protect the environment and mitigate emissions (OECD, 2010). In Brazil, the Central Purchasing System contains 550 sustainable products. The EU is also currently revising their Green Public Procurement Directive to encourage all National Action Plans to set ambitious targets for their national and international procurement policies.

In some cases, SPP has been used to empower disadvantaged groups and communities. In South Africa, public procurement policies are guided by a Black Economic Empowerment. Similarly, Ghana is launching an SPP programme that is likely to have a specific quota for 'Women-owned small businesses'. However, on the whole, SPP is not equipped to respond to informal economies because it usually requires advanced certification schemes in order to prove the environmental or social credentials of goods or services.

## Green innovation and industrial policies

International institutions place a lot of emphasis on green innovation and industrial policies for delivering green growth. Green innovation policies aim to trigger the development and commercialisation of new solutions to environmental problems by encouraging innovation across technologies (horizontal policies) or by supporting a specific technology (vertical policies) (G20 Development Working Group, 2012). The approach is primarily aimed at specific industries or firms and includes incentives and disincentives such as capital subsidies, tax breaks, feed-in tariffs and import protection.

One of the largest, multi-donor initiatives in this space is UNIDO's Green Industry Platform which aims to support green businesses and industry in developing countries. For UNIDO, green industry brings three key benefits to the poorest: jobs, greater income, and new skills. 'The development of the Green Industry sector creates significant employment opportunities for poor and marginalised groups as well as opportunities for improving working conditions by providing skills and technologies to upgrade informal sector activities' (UNIDO 2011). Waste management, the production of heating sources for cooking and the production of sustainable, locally sourced building materials for the construction industry are all cited as industries that improve the lives of the poorest.

UNIDO stresses the role of 'inclusive business development strategies' which to them means increasing the economic returns to the productive factors that the poor possess (e.g. raising returns to unskilled labour), as well as improving access to skills and technologies so as to stimulate entrepreneurship and increase productivity. 'Developing new green businesses (and Green Industries) can simply involve formalising already-existing informal economic activity. Vendors (of all sorts) provide a classic example of small to medium-sized enterprises that are an important provider of employment for the poor. Formalising their businesses and providing other forms of assistance and support would allow many of these vendors to expand their operations, which would increase employment to increase productivity, which would minimize their use of environmentally destructive inputs; and to manage their inventories more efficiently, which could reduce transport emissions' (*ibid*).

The World Bank goes further in recognising the role of informal economies in creating greener industries. They stress the importance of 'informal innovations by local grassroots inventors, largely through improvisation and experimentation', particularly in meeting the needs of poor households at lower costs per unit. As such, informal entrepreneurs seek 'to do more (products) with less (resources) for more (people)' (World Bank 2012a).

# Greening and informal markets in practice: five examples

From waste management, to artisanal mining, energy delivery, housing and food and agriculture, these short cases highlight the untapped value of community-driven approaches for greening local economies.



4

Judging by the emerging literature on green economy, many governments and intergovernmental institutions assume that greening will require instruments to formalise economic activities and labour by introducing regulations and standards. But experiences accumulated over the last two decades regarding formalisation processes in some sectors shed some new light on how some greening and/or formalisation initiatives have emerged from the economic actors themselves, with or without the support of local or national policies. Looking at people's agency<sup>4</sup> and their levels of empowerment is crucial to understand informal markets and assess the problems of their transition to more formal and green structures.

## Waste management

Every year, an estimated 11.2 billion tonnes of solid waste are collected worldwide, and decay of the organic proportion of solid waste is contributing to about 5 per cent of global GHG emissions (UNEP 2012). The global formal waste market, from collection to recycling, is estimated at US\$410 billion (UNEP 2012).

### Greening waste management?

Greening the waste management cycle refers to efforts to prioritise waste avoidance, practice segregation, promote the 3Rs (Reduce, Reuse and Recycle), and implement safe waste transportation, treatment and disposal in an integrated manner, with an emphasis

on maximising resource-use efficiency. For UNEP, indicators of greening the waste sector will include the value of – and jobs related to – the goods generated from the waste sector, such as remanufactured products, recovered energy, and the waste collection services, and processing (UNEP 2011).

In order to increase service coverage and efficiency, greening often also involves mechanisation. This can cover the whole value chain, beginning with the inclusion of fuel-operated vehicles in the collection, through to machinery for the processing, and ending with mechanical processes for the disposal or incineration of waste. Citing academic research (Chalmin and Gaillochet 2009), UNIDO stresses that a new, green industrial approach 'would aim not only to bring this sector into the formal economic sphere, but to modernise its techniques and processes. New or enhanced systems for recycling and reuse of materials would ensure that valuable resources are not wasted, but would also offer opportunities for poverty reduction through the creation of new, formal income-generating industries with improved working conditions' (UNIDO 2011).

Developing countries often lack comprehensive or mechanised solid waste management systems, and it is waste pickers who collect, sort and repackage materials for recycling, the vast majority of whom function as informal operators. The work is dirty and hazardous. Workers generally lack sanitary services, health care or social benefits. Child labour is prominent and life expectancy is low. Waste pickers are often subjected

## BOX 6: INFORMAL WASTE PICKER COMMUNITIES IN CAIRO

Since the 1970s the *Zabaleen*, the traditional waste collectors of Cairo, have operated as part of the informal economy. By 1997, the *Zabaleen* informally handled one-third of the garbage of Cairo's 14 million people, mainly from poorer districts. The *Zabaleen* collected up to 3,000 tonnes of garbage every day, with 85 per cent being recycled directly through micro enterprises that generated jobs and incomes for the local community. According to a local NGO, Community and Institutional Development, the average monthly wage for the waste handling workers ranged between US\$60 and US\$75.

The *Zabaleen*, despite having no legal title, had relatively secure tenure, which allowed them to invest in their settlement, turning it from a low-density rural area into a dense urban community with a diversified economy, including the ownership of plots for pig-raising (*zeriba*) together with a garbage collection route. Since newly settled migrants lacked financial resources, a partnership system developed whereby residents helped finance the cost of setting up a for the new settlers while getting a share of the revenue from selling the pig meat.

Recently, international waste management companies have taken over Cairo's waste collection routes, with annual contracts reaching US\$50 million. As well as from Egypt, there are companies from Spain and Italy now operating in Cairo. The Cairo governorate, has also decided to move sections of the *Zabaleen* operations 25 kilometres away in Cairo's eastern desert settlement of Qattamiya. While the resettlement aims to improve the living standards through better access to water and sanitation facilities, the waste collectors are now faced with increased travel costs, more expensive housing costs and infrastructure, and as a result more are likely to abandon recycling and join Cairo's unemployed poor.

Source: Adapted from Fahmi (2005)

Table 2: Comparison of material recovery by informal and formal sectors in six different cities

City	FORMAL SECTOR		INFORMAL SECTOR	
	Tonnes	% of total	Tonnes	% of total
Cairo	433,200	13%	979,400	30%
Cluj	8,900	5%	14,600	9%
Lima	9,400	0.3%	529,400	19%
Lusaka	12,000	4%	5,400	2%
Pune	-	0%	117,900	22%
Quezon City	15,600	2%	141,800	23%

Source: CWG 2011.

to discrimination and violence, and are vulnerable to exploitation by profiteering intermediaries working across formal and informal chains.

At the same time, however, waste picking provides livelihoods for an estimated 15 million people in Asia, Africa and Latin America. Waste picking offers a critical employment opportunity for people with limited education and skills in the current economic downturn. Flexible hours make it inclusive of women who have other care responsibilities. For many communities, informal waste management systems, techniques and incomes have become interwoven into the structure of the local community (see Box 6).

### Economic benefits of informal waste management

While informal waste picking activities take place outside official channels, unlicensed and untaxed, the sector contributes significantly to the national economy in many developing countries; 'Scrap collectors are entrepreneurs who add value by collecting and then transforming waste into tradable commodities. New enterprises are formed, trading networks evolve, capital accumulation and investments take place and savings are made in terms of raw materials, transport and energy' (Gerdes and Gunsilius 2010).

Comparisons between formal and informal waste management systems have proved revealing. Research from a number of cities shows that informal waste management operations achieve a net benefit while formal waste management operations have a net cost (*ibid*). In part, this is because the formal sector primarily works in collection and disposal, while the informal sector works in waste valorisation. However, it is also because the informal sector is more oriented towards the productive use of waste materials in order to be self-financing (Gunsilius *et al.* 2011). It shows that the informal sector saves the authorities money, mostly due

to avoided collection and disposal costs (€14 million per year in Lima, €12 million in Cairo, and €3.4 million in Quezon City) (CWG 2011).

### Environmental benefits of informal waste management

Research from city studies suggests that the informal sector tends to achieve higher recovery rates (up to 80 per cent) than formal sector equivalents, because waste picking is so essential for their livelihoods and security. Evidence from Egypt showed a drop in recovery rates following private sector involvement in solid waste collection (GTZ, 2010). For example, when controlled management systems of disposal sites are introduced, waste pickers are often denied access to the site.

### Formalisation versus community-driven greening

Modernisation and its globally driven ideals make it more and more difficult for informal entrepreneurs to have access to waste materials. The global commons into which the waste materials are disposed is shrinking. Cities in the process of modernisation assign rights to recyclables to their formal private sector partners as a way of offsetting the costs of operating their modern, overpriced waste systems. They look for buyers for their recyclables, not thinking that these recyclables are already claimed through the informal base of the pyramid that is the recycling value chain (CWG, 2011).

Fortunately, in the context of waste management, there are numerous examples whereby the formalisation process has been conducted in close association with waste picker communities. Waste pickers can often be highly organised and have been able to define their own needs and contracts from formalised structures. In Latin America and South East Asia different models of cooperation between waste picker organisations and formal authorities have evolved, leading to partnerships



## BOX 7: EXPERIENCE OF 'GREENING' E-WASTE

Waste electrical and electronic equipment or e-waste is one subsector of waste management that deserves special mention. E-waste is increasing significantly across the developing world, particularly in emerging economies. For example the consumer boom in India saw 113 million new mobile phone customers in 2008 alone, and a 25 per cent growth in refrigerator sales in 2006–7 to 4.2 million devices.

In India and other emerging economies, recycling of e-waste has been mostly undertaken by the informal sector – with associated negative environmental and health impacts from the hazardous materials. Under pressure from environmental NGOs such as Toxics Link, India passed a law in 2011 which follows extended producer responsibility (EPR) principles – forcing producers to set up take-back schemes for formal recycling. Consumers are also required to dispose of their waste to formal recycling schemes.

Earlier Indian pilots of formal e-waste collection in the IT hub of Bangalore saw informal sector waste pickers excluded from access to waste unless they formalised through a multi-step process dictated by the donor agencies to the programme. Help in the transition from informal to formal was promised but the process of training and various bureaucratic requirements resulted in the formalisation process taking over four years. This imposed a significant financial burden on the waste pickers.

Although at an early stage, there are positive indications that a more inclusive formalisation process may be possible at scale. Toxics Link has joined hands with GIZ, MAIT and Adelphi in a four-city pilot project (Delhi, Kolkata, Pune and Bangalore) which aims to establish a clean e-waste recycling channel in the formal sector that includes the existing waste pickers.

between waste picker organisations and municipalities. In Brazil there is legal recognition of the waste picker profession and a strong government lead in inclusion through guaranteed access to waste materials from federal buildings and financial assistance programmes for waste pickers that organise into membership-based organisations (MBOs), such as associations and cooperatives.

Formalisation is not the only way to secure greater cooperation between the public, formal private and informal private sectors. Community-based organisations and NGOs have contributed to empowering informal waste workers by extending micro-credit and arranging for external funding. For example, Waste-Econ, a collaborative programme funded by the Canadian International Development Agency exploring practical ways of reducing waste in developing countries, has introduced health and education programmes to raise standards in waste picker groups without forcing formalisation. In Trang Minh Commune, Vietnam, Waste-Econ have established a micro-credit programme that focuses on waste pickers and waste processors. Most of the loan recipients surveyed found that the loan funds helped by allowing them to accumulate waste longer before selling it, thus receiving higher prices per kilogram from selling in bulk. Through the programme the women also receive basic training on saving, health and safety issues.

The *Zabaleen* example (See Box 6) shows how greening initiatives, while legitimately trying to improve life in the cities, can work against the livelihoods of large numbers of people who have created their own business structures and find their livelihoods in the

informal sector. Greening waste management often translates into privatisation and mechanisation that destroys rather than creates more employment. But intelligent and appropriate measures and support to organise and establish partnerships with municipalities bring some lessons on more inclusive approaches to deal with informal sectors.

## Agrifood markets

Over the last 15 years the development agenda on food and agriculture has been strongly dominated by the 'Making markets work for the poor' approach. Linking small-scale farmers to high-value markets as part of more 'inclusive business models' has certainly contributed to improving the incomes of many smallholders. But of the 450–500 million small farms around the world, that support a population of roughly 2.2 billion people (Singh 2012), there is evidence that only 1–15 per cent of them are operating in high-value chains whether for exports or to supply local supermarkets (Seville *et al.* 2011). Supermarket expansion in Africa has been overestimated (Humphrey 2007) and even in India with the market reform and opening to foreign direct investment (FDI), supermarkets face the '20/20/20 challenge: they must grow their food sales by 20 per cent a year for 20 years just to reach a 20 per cent market share' (Tschirley *et al.* 2010).

## Informal agrifood markets are the place where most small-scale farmers and low-income consumers' interests meet

Open 'wet' markets, traditional, wholesale and corner shop retail, and street food vending still play a dominant role in food procurement and marketing in developing countries. Products arrive from the rural or peri-urban areas into cities through a wide variety of networks involving several intermediaries. Small-scale farmers, traders, retailers and/or wholesalers use different commercial arrangements which can be based on kinship ties, belonging to the same community or region. What they all have in common is that these agreements are most often not written or formally registered and are fundamentally based on trust and social control. These informal transactions are often present in modern supply chains – between producers and small-scale or even wholesale traders – before becoming more formal later in the chain. The dominance of traders is seen in data from the northeastern Indian states of Bihar and Uttar Pradesh where 71–88 per cent of farmers are still selling their surplus to village traders as they always have (Arya and Asthana cited in Vorley *et al.* 2012). The enthusiasm for value chains has overlooked the reality that the large majority of small-scale farmers in developing and emerging countries continue to sell through their traditional and informal market arrangements (Minten 2007, Tschirley *et al.* 2010).

On the consumer side there is also an emerging body of evidence showing the central role that informal markets of all types play in the daily food security of urban low income consumers: 'traditional informal markets have clearly provided an effective, functional link between farmers and consumers which responds to consumer demand: they should not be regarded as market failures. Moreover, such markets are generally those most often serving the needs of small-scale farmers and resource-poor consumers. The analysis has also demonstrated the large and positive employment implications of such markets' (Staal *et al.* 2006. See also Figuié and Moustier, 2009). In Bogota, Colombia, despite the increase in supermarkets over the last decade, people buy their food in the 120,000 corner stores, 2,500 neighbourhood butchers and 1,500 retail points in open-air fairs (Guarin, 2013). Middle- and even high-income consumers (through their housekeepers) will also prefer to buy in informal markets whether in the wet markets of Hong Kong (Goldman *et al.* 1999), or in Brazilian cities (Farina *et al.* 2005). Attributes of freshness, proximity and conviviality in informal markets are also driven by culture and this matters when it comes to consumers' choices as to where to buy food. Customers often have their preferred sellers and may even have credit based on long-standing relationships like those between restaurant owners and fresh products retailers.

## Greening agrifood markets?

Despite their important role in ensuring income and food for the majority of small-scale farmers, traders, street vendors and low income consumers, informal agrifood markets also have important limitations. Poor environmental performance, traceability and food safety have been addressed by governments, development interventions and private firms from different angles over the last two decades.

With the growing international concern on how to and who is going to feed the 9 billion in 2050, the green economy puts hope in the development of green technologies: 'The modernizing and greening of agro-industries and other vital developing world sectors is another way of enabling the poor to provide for themselves and raise their incomes. Many poor people living in rural areas are smallholder farmers who are finding ways to increase yields by combining their expertise with emerging green technologies. This offers considerable potential in trying to move away from high-emitting, and in many cases, increasingly expensive, agricultural inputs' (UNIDO 2011).

## Standards, certification schemes and sustainability

Value chain interventions have most often focused on poverty reduction and economic impact rather than environmental sustainability (Bolwig *et al.* 2008, cited in Seville *et al.* 2011). Fairtrade and some other standards and certification schemes have integrated improvement in environmental sustainability and socially fair practices besides economic profitability for smallholders. Despite many wins – increased incomes and better skills – for those participating in high-value markets, it is widely acknowledged that these markets, with their strict and costly standards, are quite exclusionary of the majority (Reardon 2005; Ruben *et al.* 2006). Either small-scale farmers cannot comply with these requests or they simply prefer not to enter into these 'modern' formal arrangements. Evidence gathered in Africa, Asia and Latin America shows how producers appropriate modernisation as it suits them best (Vorley *et al.* 2012).

## Food safety, street vendors and greening cities

Food street vending is one of the most visible faces of the informal economy in all developing and emerging countries. This business adapts particularly well to low-income and very poor consumers as they are present in every place where people gather or simply transit. Street vending provides cheap raw seasonal products but also cooked food, which is particularly appreciated by the very poor who cannot afford the costs of cooking at home. A survey carried out in Bangkok showed that 67 per cent of households buy one or two of their



daily meals on the street because it is cheaper and more convenient to do so as vendors are always near the house. Street vending also provides employment opportunities, especially for women (Chung *et al.* 2010, cited in Fellows and Hilmi 2011).

With rapid urbanisation in most of the developing world, issues of food security, food safety and cleaner cities have become a major concern for municipal governments. The emergence of middle classes and their aspirations of better living conditions are certainly pushing for change and formalisation. The drive for a cleaner environment and reduced traffic congestion is the justification for street vendors being pushed away from city centres. Measures adopted can be quite radical; for example the relocation of Lima's wholesale market and surrounding sellers<sup>5</sup> to new premises far from the centre, which led to riots and resulted in the death of four people (del Pozo-Vergnes 2013). Other measures can be softer. In Hanoi dialogue between street vendors<sup>6</sup> and the municipality has led to the provision of training in food hygiene as part of a new policy and as a result vendors can trade in all but 63 streets of the city (Nguyen *et al.* 2013).

Whether a push from emergent middle classes, a pull from markets (standards and certification schemes), from international organisations' recommendations on food security and food safety (FAO<sup>7</sup>), or related

to environmental concerns (UNEP), greening or formalisation of the agrifood sector is a challenge for policy makers. Failures of formalisation processes show the lack of understanding of how this sector functions, its structure, its rules, its potential and its limitations. But as some experiences show too, such as the Kenyan dairy example in Box 8 below, more considered and appropriate measures can help improve the economic, social and health performance of informal food production and trading. Examining these experiences could certainly contribute to better negotiated and accepted policies between authorities and actors in the informal agrifood sector for the benefit of all. Supporting rather than criminalising these actors seems a promising path to explore (see also Box 14).

## Artisanal mining

Artisanal and small-scale mining (ASM) is often cast as dangerous, polluting, and illegal. But while it is true that the sector has its problems, it could also provide sustainable livelihoods for many of the world's poorest people. Experience over several decades suggests that efforts to green ASM will only succeed when integrated into wider efforts to support ASM miners and communities, including through inclusive formalisation processes.

### BOX 8: BUILDING EVIDENCE FOR POLICY CHANGE: THE CASE OF KENYAN DAIRY

After many years of conflict between the Kenyan authorities and the informal dairy sector, the Kenyan authorities realised the potential benefits of providing an enabling environment for small traders. They urgently needed more information as a basis to develop locally derived food safety assurance regulations and standards that also defined the required institutional and technical changes and trade-offs. This provided a research platform for development partnerships to address two important gaps:

- the evidence gap: to address the lack of accurate information on milk-borne health risks; and
- the action gap: the need for practical steps to optimise milk quality in informal milk markets.

The key question was whether evidence-based policy action and technology could form a basis for piloting to help bridge the gap between regulated and unregulated markets.

To respond to this question, a research and development partnership was forged between two international organisations – the International Livestock Research Institute (ILRI) and the UN Food and Agriculture Organization (FAO) – and several Kenyan public sector organisations. They aimed to take appropriate steps to enable informal traders to be accepted into the licensed milk trade. Carrying out risk analyses and demonstrating how human health can be safeguarded from milk-borne hazards were considered critical steps towards changing mindsets and influencing policy in a pro-poor direction. A subsequent training and certification pilot with the participation of the Kenya Dairy Board for small-scale milk traders achieved the 'seeing is believing' requirement for changing mindsets.

*Source: Omore (cited in Vorley 2013)*

## Sustainable development costs and opportunities for ASM

Across 70 countries, ASM provides livelihoods for 20–30 million people, and indirectly supports three to five times that number (see Box 9). This is ten times more people worldwide than employed in large-scale mining. It involves mainly poor people who have few alternative options and for whom mining provides higher incomes than or supplementary incomes to, agriculture, fishing or forestry. ASM miners produce around 85 per cent of the world's coloured gemstones, 40 per cent of all diamonds, 50 per cent of tin and 20 per cent of gold (PACT 2011). The sector is growing fast, in line with rising prices and demand. For instance, in Ghana, the number of ASM workers has reached one million – that's up from around 200,000 a decade ago (IIED 2002).

ASM also carries serious environmental, social and governance challenges. It tends to take place in remote regions with weak institutions. Most ASM is informal, meaning it is either unregulated or operations lack the permits required by law. Even where regulatory frameworks exist, these may be too stringent for ASM miners to comply with (for instance, with costly environmental permitting rules) and often governments lack the capacity or resources to implement policies effectively. Some ASM is illegal, for instance, where it operates on a concession owned by a large mining company – or operates in protected areas – though this can be a grey area, for instance where local miners have customary rights (CASM 2008).

The trading networks for ASM are complicated and difficult to trace. Minerals often filter through powerful middle men, so for some commodities miners capture only a small share of the value. It can be hard to

distinguish the responsible from irresponsible or exploitative: in some cases, traders provide valuable services, like financing, information and linkages to export markets (PACT 2011). The opacity of the trade attracts corruption and crime, and has been linked to conflict in countries like the Democratic Republic of Congo (DRC) (IIED 2002). There are also issues around child labour, gender discrimination, in-migration, tensions with local communities and poor local infrastructure (housing, sanitation, health clinics and schools).

All types of mining impact on the environment. ASM can cause major harm, particularly in the gold sector where many miners use toxic mercury to extract the metal. Other human health threats include water-borne diseases and collapsing tunnels that make ASM so dangerous. Other problems include degraded lands and soil, damage to ecologically important areas, poor waste management, water pollution and pressure on rare species from bush meat hunting.

Environment and informality are inextricably linked. Governments cannot easily oversee environmental management in an unregulated sector. Equally, without clear land rights, legal status or finance, miners themselves lack incentives and means to invest in making their work safer, cleaner or more efficient.

Now is a timely moment to focus on ASM. Perceptions about the sector are starting to shift and efforts are underway to make ASM more sustainable and beneficial for miners and mining communities. For instance, at the African Union Summit in 2009, heads of states adopted the 'Africa Mining Vision', which talks of transforming the ASM sector into an 'engine for sustainable development'.

Two issues are dominating the international agenda on ASM, both of which will shape how national governments address ASM in the near future. One is mercury: the UN's Minamata Convention on Mercury, adopted by 140 countries in October 2013, requires signatory governments to develop plans to reduce or eliminate mercury from artisanal and small-scale gold mines. The other is conflict. A series of new due diligence rules and auditing schemes – from the Kimberley Process to the US Dodd–Frank Act – try to ensure the minerals trade does not fund armed groups or human rights abuses in countries like Sierra Leone and the DRC.

## Greening artisanal and small-scale mining?

Efforts by governments and donors over the last four decades to work with the ASM sector have evolved from technical interventions, focused on safety standards or credit, to regulation and formalisation, and finally towards more holistic approaches, combining a range

### BOX 9: WHAT IS ASM?

'Artisanal' and 'small-scale' mining are different. Artisanal mining uses rudimentary methods, like shovels and machetes, whereas small-scale mining uses more advanced equipment, such as bulldozers and dump trucks. There is huge diversity across different minerals, countries, cultures and localities in terms of who is involved (men, women, children), when they work (seasonal, permanent), their origin (migrant, local) and the structure of trading chains.

ASM can be found in low-price bulk material, like coal, certain industrial minerals and construction materials for local markets (marble, limestone, sand or clay) or high unit-value minerals like gold and precious stones, as well as higher-priced bulk ores and industrial minerals (such as tin, chrome, coltan, barite and fluorspar).

of issues, such as gender, health and alternative livelihoods. Many of these have worked at a pilot or local level, but failed to have lasting impacts at a large scale.<sup>9</sup> Some key lessons learned are highlighted below.

**Getting the incentives right to adopt cleaner technologies and processes.** Much attention has been focused on introducing and educating miners in appropriate technology and more efficient excavation and processing techniques. Examples include the Shamva Mining Centre (SMC) in Zimbabwe, the Swiss-sponsored Support to Artisanal Mining in Mongolia (SAM) programme, which established a mercury-free processing plant, as well as many initiatives to introduce 'retorts'<sup>19</sup> to improve gold recovery and reduce the release of mercury into the environment. A key lesson is that innovations have to provide a financial benefit to the miners. For instance, many gold miners use mercury because it is cheap, available, and efficient, so any innovation must demonstrate that it offers efficiency gains, lower costs or some other kind of financial premium (for instance, through ethical consumer labels – see below).

**Pursuing inclusive, appropriate formalisation processes.** Many ASM experts see formalisation as central to any efforts to improve the sustainable development outcomes of the sector. A review by the Swiss government of its aid to the ASM sector concluded: 'there is no "quick fix" to the mercury problem of ASGM (artisanal and small-scale gold mining), because it is not a "mercury problem" but a formalization challenge' (SDC 2011).

Few governments have had much success in formalisation to date. There are many reasons for this, including a lack of political will, negative perceptions of ASM, weak government enforcement capacity, particularly at the local level, and strong vested interests against formalisation among those who benefit from controlling the trade (e.g. as an illicit source of funding).

However, there are some emerging examples. For instance, in 2008 a case study in Peru suggested that 50 per cent of ASM miners were formalised and that there were 26 miners' associations (CASM 2008). The formalisation process in Peru is still on-going but key factors aiding progress are said to include the stakeholder consultation that preceded the new regulatory framework for ASM, and strength of miners' groups. Being organised in groups or cooperatives can provide miners with a stronger voice with government and the necessary economies of scale (e.g. to reduce registration costs). Yet outside Latin America, formal organisation among miners is low (*ibid*).

**Better knowledge-sharing and stakeholder dialogue.** Policy-makers, local officials or NGOs often have little understanding of the sector or local realities. And while there is good technical experience, there

has been significant under-investment in lesson-sharing over the years, which prohibits scale-up and replication. More collaborations are needed – for instance, with large-scale mining providing technical advice on safety or engineering processes to neighbouring ASM miners – yet the sector itself is marked by high levels of conflict, distrust and non-communication among different actors. Any efforts to green or formalise the sector will require significant investment in knowledge-sharing and stakeholder dialogue (Buxton 2013).

## Role of 'bottom up' market-led approaches in greening the informal sector?

A recent innovation in the ASM sector is the development of market-led, voluntary certification schemes – such as Fairtrade and Fairmined Gold – which seek to use consumer demand for ethical products to improve social and environmental outcomes for miners and local communities. They offer a premium to ASM groups to invest in cleaner, greener production techniques and local development projects (see Box 10). Such schemes are still very new and trade only tiny volumes of gold, mainly from Latin America. They face big challenges, particularly how to increase market demand and the number of ASM organisations involved. Lessons from other fair trade sectors also highlight

### BOX 10: VOLUNTARY CERTIFICATION IN ASM – THE CASE OF ORO VERDE

Oro Verde (Green Gold) is a Colombian initiative working with Afro-Colombian artisanal gold miners in the Chocó bioregion. This is an area marked by high rates of poverty, social exclusion, a very sensitive ecosystem, and violent conflict – linked to armed groups and to disputes around concessions to large-scale mining. Oro Verde has involved about 1,200–1,300 miners in the certification system and the premium they earn helps pay for local community development projects and diversification into other livelihood activities. The initiative has strong ownership from the communities who helped design the standard. Now a brand in its own right, the programme has successfully merged the ancestral knowledge of local communities with scientific and technical know-how to make gold mining clean, green and safe.

Source: World Intellectual Property Organization (WIPO) See [www. http://www.wipo.int/ipadvantage/en/details.jsp?id=3509](http://www.wipo.int/ipadvantage/en/details.jsp?id=3509) for more information

the critical need to strike a balance between strong ethical and environmental standards, and the inclusion of vulnerable groups with the least capacity or financial resources to achieve the upgrades and monitoring required (Blackmore *et al.* 2013).

## Energy delivery

The informal energy sector is a source of employment, livelihoods and resources. There are many different types of informal activities related to energy access. Wood fuel is the main primary source of energy for most of the world's poorest and is often accessed informally, while low-income communities in cities often rely on informal access to electricity. To date there has

been very little consideration of the informal sector in discussions around the UN Sustainable Energy for All programme and similar initiatives. Informal energy chains can provide significant socio-economic benefits to low-income populations. Yet, if unregulated, some of these activities can be environmentally damaging or dangerous.

### Informal biomass energy chains

A key area for informal activity is the biomass energy market. As Chambwera *et al.* (2011) note, the forest underpins much informal economic activity, including trade in timber for firewood. In some cases, this can be carried out on a sustainable basis, but often the

## BOX 11: KENYAN COMMUNITIES DRIVE AFFORESTATION FOR CHARCOAL PRODUCTION

In Kenya burning charcoal is the means by which most poor people cook their food and heat their homes (82 per cent of urban and 34 per cent of rural households). Ninety-nine per cent of that charcoal is processed in traditional earth kilns, which tend to be inefficient (10 per cent conversion efficiency compared to 30 per cent with other technologies). By the 1990s, due to alarming deforestation linked to demand for charcoal, a presidential decree banned its production. But as no other household fuels were on offer, charcoal trade was driven underground and became unregulated and deforestation rates continued to rise.

### A new approach

By the early 2000s the Kenyan government conceded the limitations of the ban, and instead developed policies to promote sustainable production of charcoal (e.g. the Energy Policy Act and the Forest Act) including the Charcoal Subsidiary Legislation that opened up the sector for growth. In 2002 community groups including Youth to Youth Action Group, Thuiya Enterprises Ltd and Ranchar Agroforestry Initiative for Development (RAID – an umbrella of community-based organisations) initiated a community-driven commercial afforestation project on 200 hectares of land to enhance the livelihoods of the local communities through sustainable charcoal production.

The scheme supports farmers to plant two fast-growing species of acacia trees and after six years they can sell the wood to charcoal producers. RAID provides seedlings to farmers and helps to identify and negotiate better prices on behalf of the charcoal producers. Revenues come to farmers from short seasonal crops for the first and second year. In the third to sixth years, they get income from honey, poultry and dairy goats. In the third year, farmers are loaned one beehive for every 500 Acacia trees planted, with an anticipated yield within three months, providing interim income. The farmer repays RAID for the beehive with 2 kg (US \$6) of honey from every harvest (US \$24 per year) for three years. The money paid to RAID is used as a revolving fund for buying more beehives. The youth benefit from raising tree seedlings; women from trading in efficient cooking devices, beans and groundnuts; men are mainly involved in tree planting, management and charcoal processing. Women get firewood from tree tops and smaller branches.

### Conclusions

The project delivered total financial benefits of US\$2m for all key actors from 200 hectares of forest in the six-year tree planting rotation period. Revenue was collected by all actors in the supply chain (three seedling producers, 540 farmers, three community-based charcoal producers, transporters and retailers). Non-timber forest products strengthen the charcoal value chain by making the wood farming process more lucrative, thus reducing the costs of wood and charcoal to producers and retailers.

Source: *Practical Action Consulting Eastern Africa (2010)*



unregulated trade in firewood, compounded by an absence of sustainable forest management, serves to undermine the ecosystem that local communities rely on. The greening of this sector is synonymous in many people's minds with formalisation.

More than two billion people depend on biomass as their primary source of energy, while the share of biomass in the global energy mix is expected to rise from 10 per cent to 30 per cent by 2050 (IEA 2012). Biomass energy value chains are labour intensive, offering employment to reduce poverty. Deforestation and health risks (of indoor air pollution from stoves) can be addressed through more sustainable harvesting, efficient processing and stove technologies (Macqueen and Korhalliler 2011). Yet in some of the poorest countries, biomass energy supply chains are considered unsustainable and dirty, while activities such as charcoal production are illegal or at best not recognised by the government, or they are captured by powerful elites that profit from informal land tenure and biomass use rights (*ibid*). For example, in Malawi nearly 100,000 people supply charcoal to 93 per cent of the population, but none of them has been issued with a charcoal permit (*ibid*).

Macqueen and Korhalliler (2011) highlight the need to clarify rights and responsibilities in biomass value chains, which will require strong public pressure, backed by robust evidence. They recommend putting biomass energy at the heart of national energy strategies; creating formal markets built on secure biomass tenure rights for local people, with the rights to grow, manage and harvest biomass on farms or community lands, and strong investment in research and development of sustainable biomass technologies (*ibid*).

## Informal settlements and energy access

While biomass energy value chains are often seen as a rural issue, the consumers of firewood and charcoal are often urban residents, some of whom live in informal settlements. Informal settlements have a number of energy challenges aside from cooking fuel. The electricity grid is often not extended to their settlements, and with no land tenure, they have no rights to public services such as grid electricity – even if a grid extension would be feasible. Informal settlers often tap into electricity grids, which is dangerous and unsustainable. This is often semi-formalised as some residents sell on the power to their neighbours, though this might also fall under local mafia control.

Development experts see the value in promoting renewable energy in informal settlements. Solar products have the great advantage of being portable – which means they can be taken along if a family has to move out or move on – they are less likely to be destroyed in a forced resettlement process. Even mini-grids could be quickly dismantled and taken along to the next place. Solar lanterns also have the advantage over kerosene lamps of posing less of a fire hazard, while solar mini-grids allow freedom from diesel distribution networks (see below).

## Informal distribution networks

Informality is often seen as something to be overcome in energy markets, but in some cases it acts as a market enabler. For instance, one technique adopted by solar product entrepreneurs is to employ informal distribution channels to reach the poorest and most outlying customers. Small-scale informal entrepreneurs, who already sell products like frozen fish or corrugated iron, or respected community representatives such as schoolteachers, are enlisted to sell solar products

### BOX 12: GREENING THE FUELWOOD SECTOR IN NIGER

In Niger, legislation introduced in 1992 has increased rural fuelwood markets and the extent of managed forest, based on a quota system agreed with local communities. A study carried out in the early 1970s demonstrated how better land tenure and commercial rights to harvest and sell fuelwood could incentivise local restoration and sustainable management of natural woodland. The first detailed survey of the country's biomass energy supply was completed in 1984. Two follow-up projects were then launched in 1989 and 2000 which helped to develop legislation for rural fuelwood markets, and address issues of urban consumption, including promotion of fuel-efficient stoves. A Government Order catalysed by these projects in 1992 clarified forest management regulations, expanded managed forest areas, and replaced fuelwood-cutting permits with a tax on firewood transportation, some of which is channelled back into local forest management funds. Between 1989 and 2002, the number of functioning rural fuelwood markets rose from 85 to 150, while harvesting increased from 75,000 to 162,000 cubic metres per annum. While the original targets of this initiative have not been met, and corrupt practices still take place in the sector (tax appropriation and rent seeking by officials), the model has moved in the right direction.

Source: Macqueen and Korhalliler (2011)

to low-income markets in outlying rural communities (Wilson *et al.* 2012). Solar product distributors in Africa, Tough Stuff and d.light, try to capitalise on the opportunities offered by informal networks by training 'village entrepreneurs' to sell their products, thereby reaching more remote customers and ensuring that some value is captured locally through distribution (*ibid*). In other cases, urban customers or members of the diaspora with larger disposable incomes are targeted, with a view that if they are willing to try new products themselves, they might also promote products through gifts and word of mouth when they visit their home village. The value of such an approach is that the informal distribution channels benefit from trust already established, as existing vendors, teachers and relatives are well known to the local end users.

However, not all informal distribution networks are so benign, and some have major environmental impacts. One of the largest informal markets is Nigeria's diesel fuel market, which is closely related to the huge illegal industry established around theft of crude oil in the Niger Delta (Katsouris and Sayne, 2013) (Box 13).

Despite the dangers and environmental destruction associated with the informal and illegal trade in diesel fuel, backyard generators can also provide the benefit of self-reliance to local communities without access to electricity. In Nigeria, even those with access to the national grid complain about its unreliability. When people have their own diesel generators, and they can afford the diesel to power them, they find they have flexibility to power a range of energy services – and this often equates to status in the local community. This demand for diesel is a strong pull on the local informal markets. The real challenge now is to convince people that renewable energy sources, such as solar-powered

micro-grids or biodiesel generators, can be as effective and liberating as a backyard diesel generator.

## Conclusions

It is clear that there is a great need to understand informal markets and entrepreneurial networks much better, so as to identify where they can help to bring people out of poverty, and where they ought to be managed more effectively for greener development. In some cases, such as the case of biomass energy, formalisation may provide a greater opportunity for longer term, sustainable and greener supply chains. In others, such as the emerging low-income markets for solar lighting products, informal distribution networks provide enterprise opportunities that would not otherwise be possible. In other cases, such as the informal diesel trade in Nigeria, the scale of crime, danger and environmental damage mean that there is a great desire to end the trade altogether. On the other hand, it is providing people in poor and outlying communities with the opportunity to operate 'backyard' generators and gain a certain amount of economic benefit and social status.

## Housing, infrastructure and food

Reflections on informal urban housing, infrastructure and food systems demonstrate that informality tends to develop when formal systems do not function to meet the needs or uphold the rights of the poorest and most marginalised groups (Mitlin and Satterthwaite 2013). The poor have established informal enterprises that provide more affordable goods or more accessible services and amenities in the gap left by the formal

### BOX 13: BUNKERING AND BUSH DIESEL IN THE NIGER DELTA

According to a 2013 Chatham House report, the Niger Delta has seen a boom in illegal refining since 2009/2010. This is attributed to a more permissive law-enforcement atmosphere following the government's 2009 amnesty for Niger Delta militants; the removal of subsidies on diesel; and rising local demand for diesel to power generators. The extent of the so-called 'bush refining' business is difficult to estimate, as it is so dispersed and secretive. The primitive refining technology employed in 'bush refining' yields low-quality products and creates waste and spills, with more than 70 per cent wastage in some cases. The domestic market offers opportunities for blending, smuggling and informal street-selling. Factories in major Nigerian cities are now reportedly running on blends of imported and 'bush diesel'. While 'bush diesel' may be satisfying increasing local demand for decentralised energy access, the bunkering business is held responsible for much of the oil pollution in the region. For example, Shell blames saboteurs for at least 75 per cent of all oil spill incidents in areas of operation. Thieves sabotage pipelines to shut them down, in order to install new taps before the oil starts to flow again. Newer techniques allow tapping with less leakage, but thieves still spill crude during tapping and loading. Theft also damages infrastructure: the Nembe Creek Trunkline (NCTL) and the Trans Niger Pipeline (TNP) have been shut at least twice since January 2013 to repair damage caused by thieves.

Source: Katsouris and Sayne (2013)

public and private systems (*ibid*:202). Similarly, informal settlements are often formed when land markets, housing and building regulations, and a shortage of publicly provided alternatives, price certain groups out of formal housing.

### Informality and its trade offs

When the inadequacies of the formal system push the urban poor to pursue informal economic activities and service provision, these alternatives often function effectively because the solutions are driven by the immediate needs of the urban poor. Indeed, informal goods and services provision can influence and contribute to the development of formal models for pro-poor urban development. There are, however, complex trade-offs; informal markets and services may be more accessible or affordable for the urban poor, but they are often accompanied by a lack of basic civil and human rights and of a public or private failure to address environmental challenges, or they may be more expensive. Fresh water provision in marginalised settlements un-served by water utilities embody this paradox. Water vendors are notorious for selling water that can be expensive and which is often untreated or dirty (Budds and McGranahan 2003). Prices would fall and water quality would improve if the utility extended water provision to the informal settlements. Pursuing a policy of formalising water vendors could lead to prohibitive price increases that would push the poorest groups to find other informal sources.

Increasingly, the risks and hazards linked to informal markets and informal housing are being exacerbated by climate change; unseasonal variations in climate can affect crops which impact on food sellers and on low-income consumers in slums who rely on them. Meanwhile flooding and extreme weather conditions can have devastating impacts on housing and basic services in informal settlements, which have not been constructed appropriately. Consequently these communities are developing their own food services and housing which are more resilient to these shocks and hazards.

### Managing risks without formalising

The urban poor have developed strategies to mitigate these risks without formalising; this is because formalising can often be economically and politically exclusionary for the poorest, at least in the absence of radical reforms to the formal system that propelled the poorest groups to seek out solutions at the margins of the state and its legal regulations. The urban poor often pursue a middle road that partially legitimises their informal basic services, housing and goods without jeopardising the affordability and accessibility that comes with informality. In practice this means forging partnerships with other communities, local government

or NGOs to develop local systems that can deliver housing, basic services and essential goods such as food.

It has been estimated that 30–60 per cent of inhabitants of cities in the global south live in informal or illegal settlements (Mitlin and Satterthwaite 2013: 6) and these slum dwellers rarely have access to sufficient formal sources of finance or land required to buy or develop decent housing or to access basic services. The homes that they live in are often undermined by insecure tenure but the urban poor may not always pursue absolute ownership of land, because with secure tenure and formalisation can come further taxes and living costs. Some organised urban poor groups have pursued more secure tenure, where basic services have been developed with some support from the state, but they have not sought land ownership (Mitlin and Satterthwaite 2013:170). This demonstrates how the line between formality and informality is blurred and unfixed. Slum dweller groups have had considerable success in reforming building and urban planning regulations so that slum dweller-led community construction is recognised, and so that rules around plot sizes and building materials have been adapted to accommodate the needs and means of slum dwellers (*ibid*: 171) and their experiences demonstrate how the urban poor use informal and formal markets and mechanisms in different ways to address their needs in different contexts.

### Greening the urban informal sector

Increasingly the slum upgrading methods being used by affiliates of the international federation of urban poor groups, Shack/Slum Dwellers International (SDI), are focused on developing housing and basic services that are resilient to climate change and environmental risks and hazards by improving drainage and developing innovative soil-compressed interlocking brick technologies for more weatherproof housing. SDI now has an explicit commitment to developing incremental resilient slum upgrading (SDI 2012), and reflects how the greening of informal services can emerge responsively, as urban poor groups develop more resilient housing and basic service provision locally.

The greening of informal systems in urban areas also presents opportunities to overcome some of the sectoral barriers that can hinder the greening of formal services and economies. There is scope for marginalised groups to engage with diverse actors and experiment with partnerships to develop more inclusive and appropriate arrangements that provide sustainable services instead of being the subjects of policies and projects that are implemented from the top down and which may not reflect local realities.

## BOX 14: BUILDING FOOD SECURITY THROUGH INFORMAL NETWORKS IN NAIROBI AND ACCRA

Urban food insecurity is becoming an increasing problem for the urban poor, in light of climate change, rising food prices and growing urban populations. Debates on food security have tended to focus on developing production in urban and peri-urban areas, but this approach overlooks how difficult it is for urban poor groups to access land and water in cities in the Global South. Planning for food security has been advocated as an alternative method of enhancing food security for the urban poor, and this is premised on developing local partnerships between local authorities and urban poor groups from informal settlements.

Federations of urban poor groups in settlements in Nairobi and Accra have been working to firstly map and understand the role of food vendors in informal settlements. Informal vendors are the principal food providers in informal settlements where households cannot afford the fuel, implements, water, waste collection, or storage such as a refrigerator that is required to cook at home. Meetings and workshops in the communities were used to forge relationships between the community groups, local government and service providers such as waste management companies. As a result of these meetings, a set of priorities was established to improve food accessibility in the settlements, to develop appropriate infrastructure and waste collection services and also to ensure that groups vulnerable to malnutrition, specifically single mothers and young children, had access to cooked food through child day-care centres.

This example demonstrates how informal food vendors in partnerships with local government and local NGOs have the potential to develop more sustainable food systems. Marginalised urban poor groups can drive processes to develop contextualised food systems, instead of being the subjects of decontextualised projects and policies that may not reflect local needs.

*Source: Tacoli et al. 2013*



# Looking Forward

5

Accelerated by Rio+20, developed, developing and emerging economies are launching national and regional green economy plans, policies and initiatives. Many of these governments, are being advised by UN bodies, private sector companies (e.g. McKinsey, the Monitor Group and PricewaterhouseCoopers) and new intergovernmental institutions (e.g. Global Green Growth Institute) on how to grow and be green. Inclusive business models, besides trying to adapt to reach out to new consumers and engage smaller producers, are also integrating more environmentally friendly practices. The green economy is no longer merely a theoretical exercise; it is driving national planning processes and is drawing in considerable international finance from donors, investors and businesses alike.

While notions of 'inclusivity' appear to be at the heart of debate, this paper has sought to demonstrate that there are some gaping holes and unanswered questions that urgently need to be tackled. International organisations are keen to emphasise inclusivity and welfare as the product of green growth, but there are few references within the growing body of mainstream literature as to how greening may take place in informal markets, which is where the majority of poor people produce and trade. In part, this can be put down to the assumption that economic growth will lift people out of poverty and therefore absorb and formalise informal economies. It may also be because some of the macroeconomic modelling of green growth scenarios lacks the data or the means to account for informality or that they are only designed for the formal/regulated part of the economy. The end result is that in much of the literature, modelling and analysis of green economy, the informal economy is largely unaccounted for and thus the instruments proposed for greening are a poor fit.

The danger is that state regulation or protection may not extend to informal sectors and that access to the public commons may be further curtailed in the name of green policy objectives. If greening necessitates formalisation then environmental policies will limit the wider economic diversity. In the words of Ela Bhatt, the founder of the Self Employed Women's Association, a union of over 1.3 million informal workers in India, 'to promote and encourage hybrid economies in which micro-businesses can co-exist alongside small, medium, and large businesses, in which the street vendors can co-exist alongside the kiosks, retail shops, and large malls ... they should try to promote a level playing field in which all sizes of businesses and all categories of workers can compete on equal and fair terms' (Chen, 2012).

Greening is only one of many policy dilemmas associated with informality. Informal workers and entrepreneurs are already largely excluded from mainstream processes such as government planning, allocation of budgets for infrastructure, economic development and social support. The lack of recognition of informal economies in the modelling and analysis of the green economy transition at the international level is likely to feed into regional, national and municipal approaches, and risks further marginalising vast sections of the economy and society. Developing green business solutions and technologies are not always equal to sustainable or inclusive development.

In this paper, we have highlighted the 'invisibility' of the informal economy in the green economy literature and international debates. We have also emphasised through some examples how greening may work against the livelihoods of millions of vulnerable people in many sectors like waste management, artisanal mining, forestry, artisanal fishing, agrifood and housing. Greening or formalisation policies and practices can be more exclusionary than inclusive. But we have pointed to some examples that show the possibilities of greening through more intelligent and appropriate approaches. Supporting rather than criminalising economic actors involved in the informal economy appears a better path to explore.

In order to challenge the more institutionalised framing that currently characterises the green economy, it will be important to redirect research towards this rapidly unfolding agenda. There is an evident divorce between the objectives of inclusion and welfare stated in development discourse and the reality of many countries where the informal economy is important or even dominant. Understanding how informality operates in different sectors, its structure and organisation, its benefits and potential as well as its downsides, is an urgent knowledge gap to fill. There are many concrete experiences that can provide evidence, analysis and lessons of possible routes to green local economies through light-touch appropriate mechanisms aiming to link formalisation with a real inclusion process. The informal economy is the space where the majority of people in developing and emerging economies produce, trade and live. Understanding its dynamics and looking at cases where policies, mechanisms and effective support have worked for people will allow strong evidence to be gathered that could guide the improvement of informal markets in order to transition to more inclusive societies.

# Annex I: Green economy policies and tools

The following list has been taken from a joint publication to the G20 Development Working Group by the AfDB, the OECD, the UN and the World Bank; *A Toolkit of Policy Options to Support Inclusive Green Growth*. <http://www.oecd.org/greengrowth/toolkit.pdf>

- Environmental Fiscal Reform and Charges
- Public Environmental Expenditure Reviews
- Sustainable Public Procurement
- Strategic Environmental Assessments
- Social Protection Instruments
- Payment For Ecosystems Services
- Certification for Sustainable Production
- Tools to frame environmental policies: Communication and Nudging
- Green innovation and industrial policies
- Decision making under uncertainty
- Project Level Impact Assessment
- Analysis of Labour Market and Income Effects
- Framework and Guidelines on Land Policy in Africa
- Integrated Water Resources Management (IWRM)
- Green Accounting

# Notes

1 The term 'green economy' dates back to 1989 with the publication *Blueprint for a Green Economy* by David Pearce for the London Environmental Economics Centre (LEEC), which was a joint venture by IIED and the department of Economics of University College London (UCL).

2 The Green Economy Coalition is an alliance of 40 international and national organisations including trade unions, NGOs, the United Nations, business and research organisations committed to the transition to green economies. See [www.greeneconomycoalition.org](http://www.greeneconomycoalition.org)

3 It is important to note that there is a vast number of 'green' instruments that could impact on informal economies in both positive and negative ways including land tenure reform, payment for ecosystem services, etc. See Annex I.

4 Agency refers to the freedom to choose that becomes freedom of opportunity when people have the capacity to act on choices. This depends on their assets and capabilities as described by Sen (1985). It is a set of actions people develop to meet their needs, manage risks and make progress towards achieving their aspirations (Bennett 2002).

5 Every day in La Parada 20,000 people traded 5,000 tonnes of fresh agricultural produce, 260 lorries entered the city centre and 30 tonnes of waste were produced.

6 The number of fruit and vegetable street vendors was 5600 in 2004, of whom 3117 were vegetable vendors; in 2009 vegetable vendor numbers had risen to 6320. These results show the important contribution of unregistered independent traders to the rapid distribution of large amounts of vegetables and fruit – 37 per cent of the total demand volume of vegetables (Nguyen Thi Tan Loc *et al.* 2009).

7 FAO has been working with mayors since 2003 on these issues: See *The informal food sector: Municipal support policies for operators* – A briefing guide for mayors, city executives and urban planners in developing countries and countries in transition. 'Food in Cities' Collection, No. 4 – FAO, Rome 2003

8 For neat reviews of the how ASM interventions have evolved over time see AngloGold Ashanti (2012) *Timeline of Key Events in the Global Artisanal and Small-Scale Mining (ASM) Sector since 1960*; and Telmer, K., and Persaud A. (2013) *Historical and Modern Government Responses to Artisanal and Small-Scale Gold Mining*.

9 Retorts are simple mercury recycling technologies to reduce human exposure and environmental contamination.

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*The Informal Economy: A primer for development professionals on the importance of the informal economy in developing countries* by Muyeye Chambwera, James MacGregor, Antonia Baker (IIED, 2011) <http://www.iied.org/informal-economy-route-or-out-poverty>

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*Resilient Dynamism? An informal word with leaders meeting in Davos*, a blog by Bill Vorley, (IIED, 2013) <http://www.iied.org/resilient-dynamism-informal-word-leaders-meeting-davos>

*Regoverning Markets: A Place for Small Scale Producers in Modern Agrifood Chains?* By Bill Vorley, Andrew Fearne, Derek Ray (IIED, 2006) <http://pubs.iied.org/X00061.html>

*Reducing Urban Poverty in the Global South* by David Satterthwaite and Diana Mitlin (Routledge, 2014)

# Acronyms and abbreviations

ASM	artisanal and small-scale mining
CSO	community-based organisation
EPR	extended producer responsibility
FAO	Food and Agriculture Organization of the United Nations
GEC	Green Economy Coalition
GEI	UNEP's Green Economy Initiative
GGGI	Global Green Growth Institute
GIZ	German Society for International Cooperation
IEA	International Energy Agency
ILO	International Labour Organization
ILRI	International Livestock Research Institute
MAIT	Manufacturers' Association for Information Technology
MBO	membership organisation
NGO	non-governmental organisation
OECD	Organisation for Economic Co-operation and Development
RAID	Ranchar Agroforestry Initiative for Development,
SDI	Shack/Slum Dwellers International
Sida	Swedish International Development Cooperation Agency
SPP	sustainable public procurement
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
UNIDO	United Nations Industrial Development Organization
UNRISD	United Nations Research Institute for Social Development
VPA	Voluntary Partnership Agreement
WIEGO	Women in Informal Employment: Globalizing and Organizing

'Inclusive green growth' is no longer just a buzz term. It is shaping donor priorities, influencing national development plans and attracting investment. Yet inclusive green growth policies commonly promoted by international institutions make little, if any, reference to informal economies – which are expanding in all parts of the world in response to changes in our formal economies, and which cater for the world's poor. This paper aims to provoke discussion on two main questions: What does green economy mean in the context of informal markets where the world's poorest and most vulnerable people produce and trade? and does 'greening' necessitate formalisation, or can it happen through people's own actions?

IIED is a policy and action research organisation. We promote sustainable development to improve livelihoods and protect the environments on which these livelihoods are built. We specialise in linking local priorities to global challenges. IIED is based in London and works in Africa, Asia, Latin America, the Middle East and the Pacific, with some of the world's most vulnerable people. We work with them to strengthen their voice in the decision-making arenas that affect them – from village councils to international conventions.



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Funded by:



This research was part-funded by UK aid from the UK Government, however the views expressed do not necessarily reflect the views of the UK Government.



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