IDOS | German Institute of Development and Sustainability

IDOS POLICY BRIEF 1/2023

Green Jobs and the City: Towards a Just Transition in Developing Countries

Alexander Kleibrink, Anna Pegels, Michael Fink & Wolfgang Scholz

Summary

This policy brief examines actions for a just transition of local job markets in developing countries. We identify building blocks for shifting from carbon-intensive towards green jobs in this transition. Green jobs in cities are key to ensure a just transition of local employment markets, both formal and informal, and make cities function more sustainably. They are part of a wider inclusive green economy aiming at carbon-neutrality and resource efficiency with a focus on human well-being and social equity while paying special attention to local nature-based solutions. The transition will create winners and losers. Both need to be managed if the process and outcomes are to be just.

Shifting jobs towards greener sectors for a just transition in cities

Cities account for around 75 per cent of greenhouse gas emissions, 70 per cent of global energy consumption and 75 per cent of natural resource consumption. They are likely to be home to around 70 per cent of the world population by 2050. The relevant economic sectors for a just transition are predominantly in cities: buildings and construction; infrastructures for sustainable energy supply and use; mobility; waste and (waste) water management; as well as the emerging circular economy.

Transformations in these sectors will have a great impact on cities in developing countries, which are home to the fastest-growing urban areas today (United Nations, 2018). Fast-growing cities urgently need to manage uncontrolled urban sprawl by planning and creating new infrastructure as well as to cater to an increasing demand for public services.

A just transition towards an inclusive green economy has far-reaching implications for employment in developing countries. It holds great potential for new job opportunities through greener economic activities, although some may only materialise in the medium to long term. At the same time, compensation for short-term employment losses in carbon- or resource-intensive sectors is needed for social cohesion. One example is the job loss resulting from formalising and greening transport systems. When informal, carbon-intensive transit fleets are removed in favour of large-scale, electrified public transport, current operators and their suppliers would have to find new jobs. Another example are job losses in cities located in coal mining areas, which can undermine the entire economic structure of the municipalities and the region, and require systematic structural support.

Gains and losses are two inherent sides of the required just transition. To break the carbon lock-in and transform all economic sectors towards more sustainable and environmentally friendly practices, it is necessary to "develop […] new perspectives for and with those who stand to lose" (IISD, 2018), including future generations, but also to unlock the innovative potential of those who can benefit from the transformation.

Carbon- and resource-intensive jobs: Climate and other environmental policies will likely have negative effects on existing jobs in carbon- or resource-intensive sectors, such as fossil energy production and mining, construction, heavy industries, combustion engine-based car manufacturing, fossil fuel-based mobility services (informal transit, paratransit or taxi services) and many others, including a wide range of supply and maintenance companies for these sectors. Some industries may face a loss of competitiveness if forced to comply with strict regulations too quickly, or when their financial capabilities are not stable or they need to operate in a highly competitive environment. This may lead to job losses or even to the relocation of industries to countries with lower levels of regulation (Schlegelmilch et al., 2017). The employment shifts across enterprises, industries and sectors may entail adjustment costs for enterprises and workers. Additional government policies, both on the national and international levels, may become necessary to support or even trigger these transitions, and to assist the affected populations and regions with the adjustment process. Shifting employment patterns will require the development of skills and re-training as well as adjustments to the education system (International Labour Organization & United Nations Environment Programme [ILO & UNEP], 2012). The impact will differ from city to city depending on the prevailing economic sectors, the role they play in a globalised economy, and the flexibility in education and vocational training.

Green jobs: Urban climate and environmental action can create green jobs in cities by solving urban problems and making cities function in a nature-positive and CO_2-neutral way, leading to new job profiles such as: energy auditors; experts and workers in a circular economy making use of waste and by-products (e.g. "urban mining"); engineers and urban planners connecting green

and resilient infrastructure; architects and construction experts for retrofitting and constructing buildings with nature-based and renewable energy solutions; e-mobility vehicle maintenance workers; and urban hydrologists for water cycle management. Lower-skilled green jobs can also be created in construction, urban ecology and urban water systems. These new occupations can contribute to greener and more liveable cities with more green jobs. The ILO estimates a net global gain potential of 18 million jobs through sustainable energy transitions by 2030, mostly at medium-skill levels (ILO, 2019). IRENA and ILO (2021) estimate a total of 39 million jobs in the renewable energy sector by 2030. However, accurately quantifying the impact of the transition on job markets is notoriously difficult, in particular when the unregulated and undocumented informal sector needs to be included. Furthermore, not all green jobs will be created in cities, and not all of them in developing countries – according to UNEP (2008), most gains are to be expected in industrialised and emerging countries, such as China and Brazil.

We can identify seven needed shifts for green jobs to materialise in cities:

Figure 1: Shifts towards greener jobs in cities

Strong **informal employment in the construction sector**; unclear or contested land rights and low capacities for integrated urban planning.	»	**Integrated land-use planning** towards a dense and compact city concept, addressing informal urban development and urban sprawl, disaster risks and water-sensitive urban design, food security, and strategic and integrated land-use and mobility planning for green infrastructure and circular economy.
Conventionally trained construction workers, and the development, production and marketing of **conventional construction materials** using energy-inefficient construction techniques.	»	**Green buildings and construction materials, and capacity-building** to retrofit the existing building stock and guide new constructions, including the development of a locally anchored, green construction sector.
Individual, combustion-based transport and conventional freight services, organised in institutional or informal/paratransit fleets, with jobs in manufacturing, operation and maintenance.	»	**Sustainable mobility and urban transportation** by developing mobility options with locally applicable technology and job creation with an emphasis on large-scale, electrified public transport and non-motorised services, as well as freight delivery – including the first and last mile – also at the level of unskilled workers.
Jobs in **fossil fuel energy sector**, such as coal mining and refinery.	»	Support investments in **renewable energy infrastructure**, while at the same time addressing energy efficiency as a cross-cutting issue for the built environment, manufacturing and transport.
Carbon- and resource-intensive infrastructure (e.g. streets geared towards individual car use, conventional construction sector, landfills and incineration plants).	»	Expand or retrofit **green, blue and hybrid urban infrastructure services** as a cross-cutting issue in integrated planning (e.g. bike lanes, waste separation plants, just and resource-efficient water supply systems).
Linear resource use, with the only circularity oriented activities often located in the informal sector, e.g. waste pickers.	»	**Formalised circular economy** approaches – ensuring solid waste avoidance and management as well as repairing, sharing and recycling – to tap unexhausted potentials and create decent jobs, also for unskilled workers.

Source: Authors

These needed shifts can serve to identify interest constellations and encourage discussions about options to develop transformative initiatives with local stakeholders. Strengthening the city level – as outlined in the New Urban Agenda – is key for this, in particular, enabling municipalities to raise own resources and attract business and innovation agents, as well as to develop and implement green, blue and hybrid infrastructure projects. Indeed, the most recent World Cities Report calls for a new social contract that embraces universal basic income, health and housing (UN Habitat, 2022).

Fostering (ex)changes: The role of development cooperation

In many countries in the Global South, cities have only limited mandates and resources regarding their own political decisions, and they highly depend on transfers from national budgets. Obviously, cities have only limited capacities to directly create jobs in the form of municipal employees. They can, however, make use of their strengths of being close to the stakeholders and having the mandates on land-use planning and standard-setting for the built environment. By issuing building permits with specific requirements, for example, they can guide urban development and the local economy towards the transformation. They can also issue local policies and advance pilot projects on a wide range of green production and consumption patterns, as well as strategically foster certain industries within national frameworks. Cities are more closely linked to their citizens and the main local stakeholders in the private sector and civil society than national governments, and thus can discuss and implement actions more quickly.

One key option of development cooperation to support cities in using their strengths is to foster exchanges with peers. A myriad of relevant and suitable local solutions is already in place worldwide. Although just transitions will vary across cities and countries, knowledge transfer of promising practices is critical to accelerate learning and achieve greater scale. South-South cooperation and knowledge transfer can help to replicate and scale up promising approaches. The vast knowledge and experience of municipal, academic and private-sector experts hold an enormous potential for deepening international, regional (e.g. South-East Asia) and national networks to exchange ideas, co-produce knowledge and co-design tailor-made solutions for local governments. Experts from African and Asian cities could, for example, learn from their Latin American counterparts about recycling, public transport systems and civic participation. Experts from Asia, on the other hand, could contribute insights about smart city solutions. Development cooperation could advance local South-South “just transition partnerships” that organise peer exchanges on green place-based economic development with city networks and associations, national and multilateral development banks, as well as philanthropies. This would be a local building block for national efforts such as the multi-donor Just Energy Transition Partnerships with South Africa, Vietnam and Indonesia. For future programmes and projects on the level of cities moving towards a green economy and green jobs, we recommend following the holistic approach of the existing PAGE project, which works with organisations such as UNEP and the ILO, while partnering with ICLEI to benefit from its direct link to cities. We also recommend tapping the knowledge base of C40 and the existing thematic networks of UN-Habitat.

Such partnerships and knowledge bases can help to address the particular challenges inherent in the transformation of complex urban systems. In urban systems, infrastructure, institutions and citizens in all their roles – such as consumers, voters, workforce – are interwoven and inter-dependent. Changes in one element have knock-on effects on all other elements and can lead to unintended consequences. This calls for integrated donor approaches that include the relevant municipal units, but also the affected social groups. Donors should tackle interrelated issues such as good local governance, sound

public finance, decentralisation, local economic development, climate action, education, and science and technology in more integrated and coordinated ways.

Furthermore, these partnerships require the technical knowledge of urban planners as well as the kind of horizontal expertise that can be found in the social and behavioural sciences. Development cooperation can play a critical role by coordinating across donors and international financial institutions and leveraging private investments. Business investments must be coupled with long-term social and education policies to alleviate the negative effects of green job transitions.

Apart from city-based solutions, an enabling national framework for green jobs is needed. This requires a complex policy mix covering fiscal, environmental, economic, employment, training and innovation aspects. Local actions must be vertically integrated with national strategies and national determined contributions. Yet, policy design needs to be backed up by adequate financing; globally, the estimated needs for sustainable urban infrastructure exceed USD 4.5 trillion annually (Cities Climate Finance Leadership Alliance, 2015). Green taxation can help to bridge parts of this finance gap, especially in middle-income countries. Eco-social fiscal reforms at the national level can also increase cities' fiscal leeway. Most cities in developing countries lack own resources and have a weak tax base. Revenues from carbon taxes, for instance, could be earmarked for the promotion of green urban development initiatives. As Baranzini and Carattini (2017) show, earmarking, particularly for environmental purposes, increases the acceptance of carbon taxation by taxpayers. Development cooperation should thus significantly expand its efforts to support the existing approaches for eco-social fiscal reforms in developing and emerging countries (Altenburg et al., 2022; Cottrell, Schlegelmilch, Runkel, & Mahler, 2016). The second reform needed is the vocational training and re-skilling of both the formal and informal labour forces to compensate for job losses and ensure social cohesion and political stability. Here, European experiences with dual education systems can serve as inspiration.

References

Altenburg, T., Bauer, S., Brandi, C., Brüntrup, M., Malerba, D., Never, B. . . .Volz, U. (2022). *Ökologische Strukturpolitik: Ein starker Profilbaustein für die deutsche Entwicklungszusammenarbeit* (IDOS Discussion Paper 8/2022). Bonn: German Institute of Development and Sustainability (IDOS).

Baranzini, A., & Carattini, S. (2017). Effectiveness, earmarking and labeling: Testing the acceptability of carbon taxes with survey data. *Environmental Economics and Policy Studies, 19,* 197-227.

Cities Climate Finance Leadership Alliance. (2015). *State of city climate finance 2015*. Retrieved from https://sdgs.un.org/sites/default/files/publications/2201CCFLA-State-of-City-Climate-Finance-2015.pdf

Cottrell, J., Schlegelmilch, K., Runkel, M., & Mahler, A. (2016). *Environmental tax reform in developing, emerging and transition economies* (Studies 93). Bonn: German Development Institute / Deutsches Institut für Entwicklungspolitik (DIE).

ILO (International Labour Organization). (2019). *Skills for a greener future*. Geneva: Author.

ILO & UNEP (United Nations Environment Programme). (2012). *Working towards sustainable development: Opportunities for decent work and social inclusion in a green economy*. Geneva: ILO.

IISD (International Institute for Sustainable Development). (2018). *Real people, real change: Strategies for just energy transitions.* Retrieved from https://www.iisd.org/system/files/publications/real-people-change-strategies-just-energy-transitions.pdf

IRENA (International Renewable Energy Agency) & ILO. (2021). *Renewable energy and jobs: Annual review*. Abu Dhabi & Geneva: Author.

Schlegelmilch, K., Eichel, H., & Pegels, A. (2017). Pricing environmental resources and pollutants and the competitiveness of national industries. In T. Altenburg & C. Assmann (Eds.), *Green industrial policy. Concept, policies, country experiences* (pp. 102-119). Geneva & Bonn: UN Environment & German Development Institute / Deutsches Institut für Entwicklungspolitik (DIE).

Scholz, W., & Fink, M. (2022). *Green jobs in cities: Challenges and opportunities in African and Asian intermediary cities* (DIE Discussion Paper 7/2022). Bonn: German Development Institute / Deutsches Institut für Entwicklungspolitik (DIE).

UN Habitat. (2022). *World cities report 2022*. Retrieved from https://unhabitat.org/sites/default/files/2022/06/wcr_2022.pdf

UNEP (United Nations Environment Programme). (2008). *Green jobs: Towards decent work in a sustainable, low-carbon world*. Nairobi: Author.

United Nations. (2018). *2018 revision of world urbanization prospects*. Retrieved from https://www.un.org/development/desa/publications/2018-revision-of-world-urbanization-prospects.html

Dr. Alexander Kleibrink is a senior public policy expert with 14 years of diversified experience in place-based development, accountability and innovation policies.

Email: a.kleibrink@alumni.lse.ac.uk

Dr Anna Pegels is a senior researcher in the "Transformation of Economic and Social Systems" programme at the German Institute of Development and Sustainability (IDOS).

Email: anna.pegels@idos-research.de

Michael Fink is a regional planner and energy expert. Currently, he is working as an independent consultant with a focus on sustainable water and energy infrastructures.

Email: michael.fink@uni-dortmund.de

Wolfgang Scholz is an urban planner and researcher with more than 20 years of research experience in the field of informal urban development in the Global South, urban infrastructure and mobility as well as teaching experience both in the Global North and in the Global South.

Email: wolfgang.scholz@tu-dortmund.de

Published with financial support from the Federal Ministry for Economic Cooperation and Development (BMZ).

This policy brief is based on the discussion paper by Wolfgang Scholz and Michael Fink (2022), *Green jobs in cities: Challenges and opportunities in African and Asian intermediary cities* (Discussion Paper 7/2022), Bonn: German Development Institute / Deutsches Institut für Entwicklungspolitik (DIE), DOI: https://doi.org/10.23661/dp7.2022

Suggested citation:
Kleibrink, A., Pegels, A., Fink, M., & Scholz, W. (2023). *Green jobs and the city: Towards a just transition in developing countries* (IDOS Policy Brief 1/2023). Bonn: IDOS. https://doi.org/10.23661/ipb1.2023

IDOS Policy Brief / German Institute of Development and Sustainability (IDOS) gGmbH

ISSN (Print) 2751-4455
ISSN (Online) 2751-4463

DOI: https://doi.org/10.23661/ipb1.2023

Tulpenfeld 6, 53113 Bonn
Email: publications@idos-research.de
https://www.idos-research.de

Printed on eco-friendly, certified paper.