Greening economies in partner countries: priorities for international cooperation

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Context

Large parts of the global economy are heading in the direction of environmental sustainability. Due to increasingly stringent environmental and climate policies, regulations, new sustainable technologies and business models are gaining ground. These, in turn, are changing locational competitive advantages. Smart industrial policy anticipates such changes; it guides and promotes the domestic economy so that it can take advantage of the opportunities offered by this structural change at an early stage. This also applies to economic and employment promotion in development cooperation.

It is increasingly evident, however, that the sustainability transition must be just to be acceptable and, thus, feasible. This holds true both in the Global North and the South. Development policy has adopted the “just transition” approach, implying that the shift to a green economy must be fair and equitable for all. This has an international dimension, as Southern countries need to have their just share in the emerging green industries, and a national one, avoiding that workers, consumers and disadvantaged communities are negatively impacted by the transition. A just transition recognizes the importance of protecting workers' rights and ensures that they – both women and men – have access to new employment opportunities in emerging green industries.

By focusing on green and inclusive industrial policy as a driver of development, German cooperation could expand the specific profile it has already established in some areas - e.g., promotion of renewable energies, ecological standards in supply chains, etc. BMZ's new core theme strategy "Sustainable economic development, training and employment" clearly shifts gears towards a perspective of a just and green structural transformation and highlights new elements, such as green and inclusive industrial policies, promotion of circular economies, eco-social fiscal reforms, the hydrogen economy, and exploiting sustainable urbanization as a just transition agenda. Yet, these new and timely orientations still need to be translated into concrete reforms of ongoing cooperation portfolios. IDOS has been invited to support BMZ in this challenge. Given this context, we present and discuss, together with some of our international research partners, ideas for the implementation of BMZ's new core theme strategy that are

- **innovative** in the sense that they suggest new priorities and/or new types of policy support and
- **concrete** in the sense that they can easily be incorporated into ongoing international cooperation programmes.

This short paper is organized along six policy fields that, as we believe, hold a) specific challenges for a just green transition, such as balancing local energy access needs and international export opportunities for green hydrogen, b) substantial win-win potential, e.g. by reducing poverty with a smart environmental fiscal reform design, and c) concrete options for additional, targeted action by international development cooperation. These policy fields should

be given greater weight in the future. All of these policy fields have in common that they synergistically link structural change that creates jobs with climate and other environmental policy goals. For each, we outline key challenges, give examples of win-win potential, i.e., co-benefits and local acceptance of green and inclusive industrial policy, and provide first ideas for concrete actions for international cooperation to foster a just green transition.

1) Phasing-in eco-social fiscal reforms in a just and acceptable way

The ambition to transform economic systems needs to ensure that people and businesses stop environmentally harmful practices. There is growing consensus on the importance of pricing environmentally harmful behaviour, like emissions or waste, and removing fossil fuel subsidies as one of the most important reforms to encourage consumers and producers to adopt climate and environmentally friendly behaviour. Yet, in stark contrast to the key role assigned to pricing reforms in the green economic transformation, few international development agencies engage in this reform area (with the exception of IMF and the World Bank; German cooperation with Indonesia is one of the few bilateral exceptions). German and international development cooperation should place much greater attention on supporting partner countries to develop and implement context-specific pricing policies that deal with the negative socio-economic effects of pricing carbon and removing fuel subsidies. Promoting coordinated efforts between countries is critical in raising ambition of climate policies and making the playing field more equal to avoid carbon leakage. The global north has a responsibility to support low- and middle-income countries due to historical and current responsibilities.

As such reforms deliberately increase prices of polluting goods and services, consumers face an increased economic burden. Particularly, poor and vulnerable households feel these pricing effects, which can exacerbate their economically constrained situations. Concerns about negative effects on lower income households have blocked environmental pricing reforms several times, as recent experiences have shown, e.g., in France, Nigeria and Ecuador. In addition, there are concerns that climate policies such as carbon pricing will, by shifting economic incentives towards renewable energy and making fossil fuels more expensive, disrupt employment and the economy of communities that depend on fossil fuels, such as coal communities.

Such challenges could become nonetheless win-win situations if governments channel the revenue raised from environmental and carbon pricing or subsidy reforms towards pro poor compensation mechanisms. The concept of eco-social fiscal reforms seeks to combine the mentioned pricing reforms with the use of revenues for socio-economic purposes, such as social protection in support of affected households. Evidence has shown that eco-social fiscal reforms can decrease poverty in the short term compared to the status quo if revenues from carbon pricing are used to compensate poor and vulnerable households. Similarly, governments can address potential job losses from carbon pricing with well-designed social policies and labour market measures. Recent research shows that climate policies will create net employment gains (meaning that the number of jobs created is higher than of jobs disrupted). Also, workers in the fossil fuel industry that may lose their jobs can be re-trained and re-allocated to take advantage of the new jobs in renewable energy and green sectors. For workers that cannot be re-trained and re-allocated to new jobs, adequate compensation mechanisms can be used.

Development cooperation has an important role to play in supporting partner countries to reap the synergies between the ecological and economic aims of eco-social fiscal reform. Efforts such as the Just Energy Transition Partnerships as well as Climate and Development Partnerships (P+) provide a starting point to discuss such reforms, coordination across countries and give development partners the opportunity to promote eco-social fiscal reforms. Particularly, the Just Energy Transition Partnerships (JETPs), of which carbon pricing is one component, are multilateral efforts that put energy transitions and social justice at the forefront and could help to raise awareness for such reforms. Development partners should encourage partners to use eco-social fiscal reforms as a key tool to address climate change and environmental harmful behaviour.

Recommendations in a nutshell:

- Make eco-fiscal reforms a priority area in at least 15 of the > 40 partner countries with whom Germany cooperates on “sustainable economic development”.
- Develop and document good practices for eco-social fiscal reforms that systematically link incomes from pricing pollutions for pro-poor spending.
- Ensure the eco-social fiscal reform agenda is treated prominently in international policy processes such as JETPs, Climate and Development Partnerships (P+) and emerging climate clubs.
- Ensure that all partnerships entail comprehensive communication strategies based on recent public acceptability studies to explain the benefits of eco-social reforms.

2) Promoting inclusive green finance to enable just transitions

A green transition requires large amounts of investment, both public and private. Across the financial system, banks and investors need not only analyse and mitigate physical and transition risks related to environmental change, they also need to align their portfolios with sustainability goals. Investment in and lending to carbon-intensive, polluting activities need to be rapidly phased out, while investment in new, low-carbon infrastructure – especially in the energy and transport sectors –, the retrofitting of the existing building stock, sustainable land use, and the development and deployment of clean technology needs to be scaled up. While this is a challenge across all sectors, micro, small and medium enterprises (MSMEs), poorer households, and women face particular challenges as they face considerably worse access to (sustainable) finance.

Environmental policies, new technologies and changes in consumer and investor sentiment may tilt the financial sector away from serving ‘dirty’, polluting sectors. While divestment from environmentally harmful activities is important and welcome in principle, it may have unintended and undesirable consequences unless additional measures are adopted. It may affect MSMEs more than large firms that have better access to private equity and other sources of funding. New environmental standards requiring businesses to adopt clean technology may threaten the survival of MSMEs that are not able to make such investments without access to affordable financial services. Similarly, agricultural producers may not be able to adopt climate-resilient and sustainable production methods unless they obtain credit to finance this. Furthermore, when financial institutions grant preferential treatment to the

financing of ‘green’ companies and projects and punish ‘dirty’ ones, MSMEs struggle to pay for green credentials such as a sustainability assessment by third parties, meaning they might not qualify for access to green financing channels even when their activities are environmentally sound. Thus, despite being well-intentioned, green finance policies may exacerbate financial exclusion.

To ensure that a green transition can succeed, it needs to be a just transition. This will require financial policymakers to adopt an equity lens and develop strategies to support inclusive green finance (IGF). IGF is not a panacea, but it can play an important role in helping vulnerable groups to adapt to global environmental change and strengthen their resilience. IGF can also facilitate mitigation action by vulnerable groups while supporting their economic opportunities. Without empowering households at the bottom of the economic pyramid and enhancing the business opportunities of MSMEs, a just transition to an environmentally sustainable economy will be impossible to achieve.

IGF can be promoted through direct interventions as well as market shaping policies. Direct interventions in the market to promote IGF include, for example, the provision of credit guarantees or the introduction of sectoral credit targets for green lending to MSMEs or climate-mitigating farmers. Market-shaping policies for IGF are designed not just to prepare the private sector to offer financial services for green projects that also support vulnerable groups, but to also create the right incentive structures as businesses compete in delivering those services. Some of these services (such as microinsurance or credit risk guarantee schemes) are specifically designed to enhance the protection of vulnerable populations, others, such as retail mobile payments, provide the technology for a de facto safety net among individual clients. Digital financial services hold a particular promise in this context, but for these to thrive, policymakers need to implement regulatory enablers to facilitate the development and adoption of digital payment services, mobile money, and the second and third-generation services that build on this infrastructure. Regulatory enablers include rules and frameworks for non-bank e-money issuance, use of agents, risk-based customer due diligence, and – especially important – consumer protection.

International development cooperation can support domestic policymakers – especially at finance ministries, central banks and supervisory authorities – in devising approaches for IGF. Capacity building measures can support them in designing proportionate regulation and disclosure frameworks and in developing IGF policies. Furthermore, development cooperation can support monetary and financial authorities in developing a digital infrastructure that will facilitate automated disclosures and transition risk assessments and bring down the cost of lending and insurance products for MSMEs and households. For instance, regulators can design an automated disclosure infrastructure in a way that data can be directly sourced from the real economy via the Internet of Things, e.g., from real estate with self-reporting capabilities such as smart meters. By bringing together the complementary aims of green finance and financial inclusion, such activities can help to improve the livelihoods of low-income households and the business prospects of MSMEs while simultaneously contributing to climate change adaptation and mitigation, minimizing associated risks for the financial sector.

Recommendations in a nutshell
• Promote IGF through direct interventions, such as the provision of credit guarantees for green lending to MSMEs, as well as market shaping policies, such as creating an enabling regulatory framework for the development of relevant digital financial services and customer protection in digital payment services. • Build policymakers' capacity in developing IGF policies and in designing proportionate IGF regulation and disclosure frameworks. • Support monetary and financial authorities in developing a digital infrastructure that will facilitate automated disclosures and transition risk assessments and lower the cost of green lending and insurance products for MSMEs and households.

3) Creating green demand: Sustainable consumption and circular economy

Simply focusing on the supply side will not suffice to achieve sustainable and circular economies. Increased resource-efficiency of goods and services may lower their price, and thereby even increase overall consumption levels. Growing purchasing power of middle-class populations further contributes to global consumption growth. This purchasing power needs to be channelled into creating demand for the new green business models needed to create green growth and jobs. To successfully establish low carbon and circular systems, it is essential to integrate consumption patterns with supply-side strategies, emphasizing the systemic connection between consumer behaviour and production. Considering the demand side in the transition to a circular and low carbon economy is, therefore, key.

Aligning consumption choices with circularity and carbon neutrality requires fundamental changes in behaviours and attitudes. Circular consumption, for example, does not only need increased efforts to recycle used products and materials, but also to move higher up in the circular economy hierarchy, towards reducing waste, and reusing and repairing products. These activities hold particular employment potential, since they substitute material input by labour input. Repairing and repurposing of materials and products is a point in case. Other activities, such as the replacement of harmful materials, such as plastics, hold particular innovation potential.

Positive examples of such changes already exist and need further strengthening. They include trends towards cycling and public transportation, vegan and organic products, telecommuting, the use of reusable packaging, and the sharing economy. Other trends, such as repair cafés in the Global North, are positive, but struggle with scaling. In the Global South, repairing and reselling activities are much more frequent, but can struggle with unsustainable practices, such as the incorrect handling of harmful substances. The restructuring of economic activities towards circularity can indeed have strong social repercussions. All transformative endeavours need to avoid potential negative, or, ideally, create positive effects on vulnerable groups, such as women, low-income consumers, and informal workers in the waste sector. This is not automatically given, since the establishment of formal recycling systems, for instance, creates formal jobs, but can crowd out informal waste collectors.

The needed changes in consumption patterns are often closely tied to social and cultural norms and can thus take time. However, they can be supported and accelerated by shaping behavioural contexts to make sustainable consumption as easy, convenient, and attractive as

possible. This can include changes in infrastructure, such as frequent, cheap, safe and clean public transport, or in rules and institutions, such as mandatory and homogenized take back systems for packaging or electronics. Gender aspects can be particularly important in the uptake of sustainable infrastructure, for example, regarding personal safety in public transport. Furthermore, the promotion of awareness and market transparency through standards or labels, in cooperation with the private sector, is key to enable informed consumer decisions. Initiatives like the Textile Alliance and the "Grüner Knopf", energy labelling, and certification of environmentally friendly products demonstrate successful cases of German development cooperation. The gained experiences could be used to expand to new partnerships, for example with large retailers, to reach wider consumer groups, also in the Global South.

Efforts to address sustainable consumption by German development cooperation have largely focused on fostering sustainable consumption choices by German consumers and thereby positively influencing production conditions in the partner countries. In contrast, local and regional sustainable consumption in the Global South have yet not been widely addressed. They are, however, key elements of the green transition, in particular for countries which do not have the possibility to grow their green industries based on exports. Many partner countries, especially in Africa, are comparatively little integrated in international trade relations. Due to increasingly higher requirements in international trade - in terms of minimum quantities of supply, technological complexity, quality standards, certifications, etc. - this integration is likely to become even more difficult in the future. In this respect, domestic consumption (or regional consumption, as in the case of the African Continental Free Trade Area) is and will remain essential for the opportunities of economic development in these countries. While sustainability incentives are increasingly anchored in international value chains and trade agreements, the incentives for "greening" in domestic markets are comparatively weak. Since product differentiation based on sustainability standards and -- if buyers are willing to pay -- price premiums are possible, this can be a considerable opportunity for local value creation.

We thus see the following areas to hold high potential for future development cooperation:

First, in the field of circularity, a stronger focus on waste avoidance rather than recycling (or landfilling) is required. To achieve this, partner countries should be supported in reforming regulations and economic incentives, covering all waste avoidance steps from product design to use, re-use, re-purposing, and repair. Where specific materials are problematic (e.g., plastic), local development and sourcing of alternative materials can be a job motor. Similarly, new business models for circular services need to be developed and adapted to local contexts, such as, collection and cleaning services for re-usable packaging, or repair services. Since labour in the waste sector is often informal, reforms need to pay particular attention to inclusivity.

Second, partner countries will need support in systems design capacities and behavioural knowledge. Circularity and low carbon consumption require an overhaul of entire value chains and the complex creation of new industry-consumer systems, which in turn needs a deep understanding of the interdependence of infrastructure, institutions and human behaviour as elements of each system. While infrastructure and institutions are often relatively well understood, and many support programmes already aim at improving these elements, integrating the consumers as (re-)users and suppliers into circular, low carbon economic systems will require knowledge of behavioural insights. This need is indeed cross-cutting, since it spans all parts of the economy where behavioural change is required, such as, mobility choices, housing, all areas of consumption etc. Advisory support could be directed at all levels

of government (e.g., at national level, on the impacts of green macro level policies on citizen behaviour; or at municipal level on the design of citizen-friendly public transport) and at private actors, such as environmental NGOs seeking to design impactful consumer awareness campaigns, or firms looking for attractive green product design. Again, these endeavours need to be inclusive and pay particular attention to the needs of women and other vulnerable groups.

Third, fostering *domestic and regional* sustainable consumption is a key area for building green markets in many partner countries. The experience gained in the Global North can offer valuable lessons, in particular when it comes to consumer awareness raising. This is needed to stimulate demand for products which adhere to sustainability standards, in turn allowing for product differentiation and value creation beyond export markets.

Fourth, development cooperation needs to identify and involve key actors in the systems who can act as catalysts (or dealbreakers). Supermarket chains, for example, can aid enforcement of Extended Producer Responsibility schemes by banning products from non-compliant companies from their shelves. They are also key to forming consumer habits, for example, by offering and advertising products with sustainability labels, and are therefore a bridgehead in sustainable industry-consumer systems.

Recommendations in a nutshell
• Shift the focus of development cooperation from (end of pipe) waste management to waste avoidance, e.g., eco-design, repair and reuse systems. • Support systems design capacities and behavioural knowledge, to integrate consumers in low-carbon and circular industry-consumer systems. • Given the increasing purchasing power of rising middle classes, prioritise support for greener local consumption, for example through standards, labels and new business models. • Develop new collaborate formats with key actors shaping systems of consumption and production – e.g., supermarket chains and regulators introducing eco-design guidelines.

4) Green hydrogen partnerships for local value and industrial competitiveness

The global roll-out of the hydrogen economy is essential for achieving net zero in 2050, as green hydrogen (GH2) is the only reliable option when it comes to the decarbonisation of hard-to-abate industries, such as steel and cement, and of heavy and long-distance transport. The lack of renewable energy resources in industrialised countries of the Global North (especially the EU, Japan, and South Korea) ties their industrial decarbonisation pathways to a certain extent to the ability and willingness of countries in the Global South to produce and export GH2.

However, the ramp-up of the global hydrogen market is still fraught with major technological, market, and regulatory uncertainties. As GH2 can be produced basically everywhere where renewable electricity is abundant and cheap, and water is available, it is likely that a fierce price competition will emerge, and the surplus which developing countries may generate from exporting hydrogen will be limited. This is even more the case for countries outside pipeline distance from import hubs, as vessel transport of hydrogen and derivatives under current conditions increases the hydrogen price by at least a factor of two. Given these uncertainties - and considering the hype dynamics characterising the market formation today - it is

challenging for countries to position themselves in the future hydrogen trade. Most of the national hydrogen strategies published by developing countries therefore suggest a dual and gradual approach, often first addressing own decarbonisation needs in industry and transport before considering exports. This makes a lot of sense, as without local offtakers, the uncertainties regarding export opportunities (e.g., transport logistics, prices) involve risks of stranded assets. Also, many developing countries are not willing to accept their traditional role in the global division of labour, whereby commodities are produced by them with imported technologies from more advanced countries and exported with very limited local value addition or knowledge spillovers.

The local use of GH2 also offers opportunities for economic development. Especially for countries that are dependent on fossil energy imports, local renewable energy and hydrogen generation would enhance energy security and potentially improve the balance of trade, while also creating jobs and enable technological learning. However, labour effects of GH2 projects are mainly restricted to the construction phase, whereas the operation of renewable energy plants and electrolysers will create only few permanent jobs. The use of GH2 in hard-to-abate industries such as cement, refineries and fertilizers could create comparatively more jobs and give a competitive green edge to these industries (which is particularly relevant for those countries potentially affected by other countries' carbon border adjustment measures), while also supporting domestic climate targets.

International cooperation to support the ramp-up of the GH2 economy needs to strike a fine balance between European import requirements, local decarbonization requirements and industrial development ambitions to diversify and upgrade local production networks in an inclusive and labour-intensive way. It should also exploit the potential synergies between a Just Energy Transition (incl. GH2) and various SDGs, e.g., SDG 7 (access to clean energy) and SDG 8 (decent work), while considering the trade-offs with others, e.g., SDG 6 (access to clean water).

Steering the global GH2 market ramp-up, Germany has developed a wide range of cooperation schemes, from support multiple bilateral advisory projects as well as pilot projects under the PtX Development Fund (BMZ) and PtX Growth Fund (BMWK) to global hydrogen diplomacy financed by the Federal Foreign Office, to competence development and GH2 research grants funded by the BMBF.

This integrated, multi-instrument approach should be maintained. We suggest four main areas for increased cooperation.

First, Germany should continue offering strategic support to the design and implementation of national hydrogen strategies, with a focus on two aspects: (a) the just transition dimension in terms of increasing local value added, a fair distribution of incomes derived from hydrogen exports as well as due diligence in project design and subsidy allocation; (b) to prioritise green hydrogen while being open to blue hydrogen as a bridge technology that should not be locked-in.

Second, international cooperation should focus on strengthening technical and scientific capabilities in partner countries to reduce the level of market and technological uncertainties. Germany can capitalize on existing and internationally recognized competencies, e.g., by

- strengthening competencies in industrial policy design and implementation, technology and market assessment as well as technology-related policy advice

- strengthening Technical and Vocational Training (TVET) centres in the hydrogen sector,
- strengthening scientific competencies, research and development cooperation in GH2, such as the International Master Program in Energy and Green Hydrogen (WASCAL, RWTH, Forschungszentrum Jülich),

Third, developing distributive solutions for more just and inclusive outcomes. Entry barriers into the emerging hydrogen economy are high in terms of technological sophistication, capital requirements and economies of scale. Hence, industrial linkage potentials are quite limited, especially in most low-income countries. Cooperation programmes should therefore systematically explore alternative mechanisms for benefit-sharing, such as direct payments from hydrogen export incomes to citizens, community participation in renewable energy projects, or mandatory oversizing of energy projects and desalination plants to be able to provide national households with energy and water. German cooperation might take stock of such solutions globally and develop an advisory format to feed them into national and international debates.

Fourth, the ramp-up of the GH2 economy as a global public good requires more cooperation and coordination on the multilateral level. The wide network of Germany's energy and hydrogen partnerships should be used to initiate North-South and South-South hydrogen dialogues on a variety of topics, e.g., to encourage peer learning on hydrogen industrial policy, to address open questions around international logistics of hydrogen trade and to develop and harmonise standards. A multilateral competence centre and think tank on hydrogen technologies, markets and systems – similarly to the IEA-TCP, but with a strong mandate by and focus on developing countries – should be considered.

Recommendations in a nutshell
• Germany should continue offering strategic support to the design and implementation of national hydrogen strategies, supporting a just transition approach (details above) and prioritising green over other "colours" of hydrogen. • Strengthen industrial policy think tanks, technology and market assessment agencies, technology-related policy advice as well as skills development • Explore distributive mechanisms to spread the gains from hydrogen investments and ensure societal acceptance. • Invest more in multilateral cooperation, encouraging international peer learning and collaborative efforts to address key obstacles to hydrogen market ramp-up.

5) Converting the necessary shift to sustainable cities into an economic stimulus package for massive employment generation

Urbanization trends in low- and middle-income countries require thinking of innovative ways to develop compact cities with mixed neighbourhoods and building uses. In the next 30 years, African cities will be home to an additional 950 million people – and 80% of the buildings required in 2050 are yet to be built (OECD, 2020). If this infrastructure is built in the same way it has been done in the last decades, it will lock-in extremely high carbon emissions for the rest of the lifetime of this infrastructure. What is needed is (a) the development of new green

and affordable housing, (b) the retrofitting and refurbishing of existing buildings as well as (c) integrated land-use and mobility planning to serve neighbourhoods with low-carbon and space-efficient mobility solutions. The point here is: All these measures have an enormous employment potential. Just in Sub-Saharan Africa, some 15-20 million jobs need to be created every year. Construction is one of the biggest employment generators in the region, and one with relatively low entry barriers for unskilled and semi-skilled workers. The urban sustainability shift might therefore be turned into a pro-poor economic stimulus package for massive employment generation – and it entails opportunities for small firms and innovative start-ups that develop, test and disseminate new business models.

The construction and mobility sectors offer particular opportunities for a just green transition with co-benefits for climate change mitigation, resource efficiency, and a variety of green jobs with different levels of labour intensity and skills over time. In construction value chains, employment opportunities in a sustainable city likely include (non-exhaustive):

- Retrofitting green, blue and hybrid infrastructure services (various job types and skills), mix of temporary and permanent employment;
- Local value chain development for alternative raw materials and reused materials: brick construction and masonry (low to mid skill), building design and planning (high skill);
- Digital material passport creation and related services such as training (mid to high skill);
- Installation and service/maintenance jobs for solar energy, such as solar water heaters (low skill), solar roofs (medium skill), energy efficient appliances (maintenance: low skill, manufacturing: various skills), cooling, e.g., green roofs (low skill), air conditioning installation and maintenance (medium skill), likely permanent employment;
- Shift from Portland cement to sustainable LC3 cement and other materials (this could include job creation and job losses, depending on local resources and import/export dynamics).

In the mobility sector, employment opportunities in a sustainable city likely include (non-exhaustive):

- Investment in mass transit infrastructure is more labour intensive than road infrastructure (especially low-skill jobs for construction), temporary employment;
- Operations, maintenance, IT services in mass transit on the long term (medium to high skill), permanent employment;
- Manufacturing and implementation of railway systems and electric vehicles: buses, e-bikes and other light vehicles for passenger and freight last mile (mid to high skill), likely permanent jobs.

Additionally, employment opportunities for both sectors combined likely include (non-exhaustive):

- Investment in transit-oriented development (TOD) around mass-transit stations: construction jobs to renovate streets with wider sidewalks, bike lines, remove street parking, gardening, etc. (low to mid skill), temporary employment;
- TOD can create permanent employment in local retail, leisure, gastronomy (various skills);

- TOD and green city policies also generate land value uplift and real-estate development that can be caught through land value capture (LVC) strategies to reinvest in more transit lines and maintain existing ones.

In addition to direct employment generation in construction and related services, building compact green cities with mixed-use neighbourhoods has many other co-benefits in terms of economic development and employment: population density is correlated with increased productivity, wages and new jobs (Collier et al., 2018). Firms need proximity to resource markets and clients and benefit from better mobility and reliable access to public services (energy and water). Employees benefit from short travel times and are likely to adjust consumption habits to local on-site retail, leisure and services if these are easily available, attractive and affordable. Female employment is facilitated if commute times between home, work, and childcare options are minimal. Gearing green city planning towards these needs and benefits can create jobs. It also requires anticipating the required skills and needs for re-skilling and job shifts over time and across key sectors such as construction and mobility. Some of the jobs generated may only be temporary, e.g., for a specific rail or bus rapid transit system (BRT) construction project. Analysing and anticipating the necessary transfer of, for example, low-skilled construction workers across sectors should become an essential part of an integrated employment agenda for sustainable cities. In parallel, positive direct employment effects of mixed-use dense areas close to a railway station and indirect effects (employment created in supply chains not directly located in cities or engaged in green sectors) require more attention.

Development cooperation should put employment creation in sustainable cities more centre stage, systematically plan requirements for employment creation, in particular for women, within and across sectors and anticipate skilling and re-skilling for green jobs, including time effects (job permanence, timing of reskilling). The construction and mobility sectors offer a range of opportunities for a green transition in cities to start such a shift in the agenda. We also advise integrating informal systems in both mentioned sectors, such as self-construction in non-formal settlements and paratransit operators. A gender inclusive approach is essential, as both sectors are mainly male dominated, to ensure that the urban green transition is just.

Recommendations in a nutshell

- Make sustainable urbanization a priority in cooperation programmes – given its vast potential for employment creation and enterprise development particularly in the “sustainable economic development” portfolio of German cooperation
- Support partners in integrating land-use, construction and mobility planning to stimulate employment in compact, mixed-use neighbourhoods and buildings
- Develop tools for anticipating green jobs potential and skills required within cities
- Systematically plan for skilling and –reskilling for green jobs within and across sectors, including time effects (e.g., job permanence, long-term industrial capacity building)
- Support innovative green business models (alternative/reused materials, retrofits, digital options) along the whole construction value chain
- Foster transit-oriented development approaches in urban programmes and discourage urban sprawl

6) Adopt a green industrial policy perspective and enlarge policy space in international trade rules

Industrial policies - above all policies that facilitate structural transformation towards more productive and better-remunerated activities, encourage technological learning and support upgrading towards higher-value activities in global value chains - can be an important policy element for promoting economic development. For example, industrial policies have played a role in several (mostly East Asian) countries that managed to close the productivity and income gap vis-à-vis the industrialised nations while other countries remained stuck in a middle-income trap or even fell further behind. Yet, development agencies have rarely systematically adopted a perspective of productivity-enhancing structural transformation (with few exceptions, including UNIDO and JICA). Core institutions of industrial policymaking – technology foresight agencies, coordinating platforms for industry upgrading (such as national platforms for electromobility) and policy think tanks dealing with overall structural change or sector-specific economic upgrading strategies – have not been considered key partners in German cooperation. Sector-wide approaches have been applied successfully in rural development programmes (and increasingly energy system reform programmes), but not in the domain of industry and services. German cooperation has a strong track record in vocational training – yet without systematically deriving skills development from sector upgrading strategies; likewise, promoting decent work via labour standards has been high on the agenda, but without assisting partners in their pursuit of industrial upgrading into more lucrative markets, even though this would amplify the space for establishing decent working conditions.

BMZ's recent core theme strategy for the first time recognises the importance of industrial policy, with a special emphasis on green and just transformations. The challenge now is to apply this new orientation to partner country industries and value chains confronting green and just transformation challenges – automotive, chemical, fertilisers – or industries that have greater demand in a greener economy – from bio-substitutes for plastics to urban rail.

International trade law has often limited industrial policy space, above all for certain instruments of industrial policy such as tariffs or export bans, to avoid trade distortions. If, however, the need for policy support for inclusive, green and productivity-enhancing transformations is recognised, the policy space for green industrial policy instruments needs to be enlarged.

At the same time, for many green industrial policy instruments, policy space needs to be accompanied by fiscal space. Whereas high-income countries can adopt costly green industrialization policy measures, these are often unaffordable for low- and middle-income countries. Hence, from a development policy perspective, it is particularly important to empower partner countries to develop and implement their own strategies on industrial policy (but ideally also enlarge their fiscal space or promote their ability to implement green subsidies). The focus should be on identifying economic sectors that are key for social and ecological transformations.

A reform of international trade rules has the potential to support green industrialization. A primary impediment arises from the existing trade regulations, which render the distinction between "beneficial" and "detrimental" subsidies arduous. The Subsidies and Countervailing Measures (SCM) agreement, initially enacted by the consortium of 123 World Trade Organization (WTO) members in 1995, contained a roster of permissible ("non-actionable") subsidies intended for specific purposes (e.g., specific research endeavours or environmental compliance adaptation). Regrettably, this catalogue lapsed more than twenty years ago, when

WTO constituents were unable to reach a consensus on its extension. Lately, there is a burgeoning interest in revisiting the demarcation between “good” and “bad” subsidies with a focus on endorsing investments in green technology while simultaneously curbing subsidies that generate environmental harm.

To tackle this challenge, WTO members can draw inspiration from the Agreement on Agriculture, which initiated the systematic reduction of extensive agricultural subsidies. A pivotal element of this WTO Agreement involved the inception of a “traffic light” framework. This framework, when integrated into the SCM agreement, can effectively enhance the differentiation between distinct categories of industrial subsidies. The objective is to confine financial backing for trade-distorting subsidies (denoted as the “amber box”), identify subsidies with minimal trade-distorting impacts (termed the “green box”), and delineate a class of subsidies exempt from caps on total expenditure (recognized as the "blue box"). While generating agreement on these categories in the context of industrial subsidies is difficult (e.g., what does and does not constitute a blue box subsidy), together with other EU Members, Germany should promote a reform of trade rules in this regard.

Under certain conditions, trade rules should permit clearly defined green subsidies. Key conditions include that subsidies are proportionate (i.e., environmental benefits exceed trade distortion costs), do not adversely affect less-industrialized countries or vulnerable populations, and are partially dedicated toward climate finance or other support for low-income countries to promote their fiscal space. An integral element of blue box expenditures in the context of green industrial subsidies would thus entail the responsibility of extending financial and technical support to low-income countries, thereby guaranteeing their equitable participation in the benefits derived from richer countries' spending.

In addition, there are many other ways in which trade can be harnessed to support the transition towards low-carbon, climate-resilient, and socially inclusive economies. For example, the EU and other WTO members should focus on the provision of preferential market access for green goods, green technology, and green services from developing countries. Moreover, WTO members should ensure inclusive harmonization of sustainability and other product and service standards. In addition, WTO Members should promote the transfer of green technology to developing countries, in accordance with Article 66 of the Trade Related Intellectual Property Rights Agreement (TRIPS) and Art. 27 of the UNFCCC to allow them to move up the value chain toward higher incomes and engage in efficient sustainable production. In addition, wealthy states, foundations, and other donors should support a fund that promote the transfer of decarbonisation technologies.

Recommendations in a nutshell

- Place more emphasis on structural change, via promotion of core institutions of industrial policy – technology foresight agencies, coordinating platforms for industry upgrading, policy think tanks – to enable the transformation towards high productivity green industries.
- Work towards trade rules that, under certain conditions, allow for clearly defined green subsidies.
- Make use of other ways to promote the green transformation in the context of the trading system, e.g., by working towards preferential market access for green goods and services from low-income countries or supporting technology transfer

Conclusions

Many international cooperation agencies are currently shifting their cooperation programmes towards environmental sustainability. Quite how these shifts interact with economic development opportunities, and how they can be made inclusive, is, however, in many cases still unclear. It is evident that the occurring challenges in the Global South will differ from those in the North. It is, therefore, imperative to co-develop successful and locally adapted programmes that consider both national development and local and global environmental interests. This input paper aims to support development cooperation actors to focus their communication with international partners on feasible co-benefits and opportunities, without downplaying or ignoring risks and time pressure. After all, the feasibility of green transformations hinges upon acceptance, not only by policymakers, but also by enterprises, consumers, and voters.

German development cooperation is explicitly addressing the challenge in its new core theme strategy "Sustainable economic development, training and employment". In this input paper, we hope to provide innovative elements to the discussion. We chose the above six policy fields since they seem to hold particular promise for synergistic co-benefits between greening and inclusive economic development. This said, the above list is neither comprehensive nor static. The green and just transformation spans all areas of the economy, and indeed of society, which makes a truly comprehensive list impossible. Similarly, other areas may become important in future, such as the bioeconomy. Some of these areas were covered in an earlier paper (Altenburg et al., 2022).

To achieve lasting changes in the above policy fields, coordination within ministries and between ministries is needed. BMZ has reinforced its exchange and cooperation process between its environmental and economic units, which is crucial to building a coherent policy agenda and communicating with one voice. Furthermore, development policy needs to focus its efforts on the large levers of a just transition. These levers are more likely to be on the macro than on the micro level, such as eco-social fiscal reforms, the introduction of eco-design regulations, the use of behavioural insights to create green demand, or the implementation of market ramp-up schemes for new green technologies, such as H2Global for green hydrogen.