Chapter 1

Green industrial policy and international trade

Key contents of the chapter:

1. The need for government action to sustain the transition to an inclusive green economy has gained traction, particularly after the 2008 economic crisis. A variety of policy rationales (e.g. situations where the forces of the market lead to undesirable or sub-optimal outcomes, so-called ‘market failures’) can provide a basis for the conduct of green industrial policies. These policy rationales include lack of appropriability (internalisation) of certain benefits, imperfect competition in goods markets, capital markets failures, learning processes, potential for increasing returns to scale, potential for agglomeration economies, and coordination/sequencing problems.

2. Within the broad range of green industrial policies, a sub-set consists of trade (e.g. border measures or provisions in trade agreements) or trade-related measures (e.g. support schemes, standards, sustainable public procurement and manufacturing, and employment-related schemes). The need to harness trade as an instrument to support the transition to an inclusive green economy has been recognised by States in international policy frameworks, particularly in the Sustainable Development Goals adopted in 2015 as part of the 2030 Agenda for Sustainable Development.

3. A number of organisations, including those forming the PAGE Partnership, have developed a wealth of resources relating to green industrial policy, trade and the green economy, specific sectoral policies, specific policy tools, and specific countries. The present manual relies on and complements these resources by providing an overview of a selection of trade and trade-related green industrial policy tools. By outlining their implications with regards to trade policy and placing them in the context of an integrated methodology, it aims to assist decision makers in their efforts to transition to an inclusive green economy, based on their country’s own unique context and aspirations.

4. The methodology is embedded in UNIDO’s overall strategic green industrial policy methodology and expands it as regards the assessment and use of trade and trade-related green industrial policy tools.
Green industrial policy and trade

1.1. The green industrial policy turn

Green Industrial Policy can provide an instrument to facilitate structural change and accelerate a country’s transition towards an Inclusive Green Economy. A range of reports from international organisations, including UN Environment’s Green Economy Report, the New Climate Economy Reports, as well as a stream of publications from the organisations forming the Partnership for Action on Green Economy (PAGE), namely UN Environment (formerly UNEP), the United Nations Industrial Development Organisation (UNIDO), the United Nations Development Programme (UNDP), the United Nations Institute for Training and Research (UNITAR) and the International Labour Organisation (ILO) have investigated different dimensions of the transition to an inclusive green economy and the role of green industrial policy within it. The policy mandate for these efforts is stated in the 2030 Agenda for Sustainable Development, which in its Sustainable Development Goal (SDG) 17 identifies trade as one of the key means of implementation of the Partnership for Sustainable Development envisaged in the Agenda.

Green industrial policy tools can be broadly understood as ‘sector-targeted policies that affect the economic production structure with the aim of generating environmental benefits’ (World Bank (2013)). A green industrial policy is therefore ‘an industrial policy that is meant to trigger and facilitate structural changes as entailed, or required, both to respond to environmental conditions or situations, and to develop a green, circular economy’ (UNIDO (2016)). As such, learning lessons from industrial policy in the past can provide important guidance for countries transitioning to an Inclusive Green Economy. Importantly, however, green industrial policy is not a mere repetition of industrial policy approaches explored in the past. The objectives and policies of green industrial policy are broader. In addition to higher productivity, competitiveness and economic growth, green industrial policy has the core aim of reducing the environmental footprint of economic processes and ensuring inclusiveness (UN Environment/DIE (2017c)).

Green industrial policies therefore seek to embed the economic production structure in an Inclusive Green Economy concept (UNIDO (2016)). As such, green industrial policy must fully integrate and take into account the potential for synergies but also for trade-offs between different objectives in

1 In contrast to UNIDO (2016), which focuses specifically on the manufacturing industry, this manual takes a broader – yet fully consistent – approach to defining green industrial policy, following UN Environment (2017). Green manufacturing is discussed as a separate tool or an enabling condition in this manual (see Chapter 5).
not only a national, but global context. At the core of such integration is the idea that ‘decoupling’ growth from environmental degradation is possible through a carefully assessed set of policies and that it can be a key strategy for States to be competitive in the economy of the future.

The instruments of green industrial policy are intended to enable or trigger structural changes, particularly in situations in which so-called ‘market failures’, or imperfect market conditions, prevent the structural changes required to shift to a global green economy. They seek to set the right incentives for facilitating this shift, while boosting a country’s economic competitiveness and promoting sustainable growth. The following list (Cosbey (2013)) identifies some of the most common policy rationales for green industrial policy. They are further developed and placed in context in chapters 2 to 7 by making reference to specific examples:

- **Lack of appropriability**: investment in the development and production of goods, services and works that have benefits in terms of inclusiveness, environmental protection, or technological spillover cannot be realized through mere market forces (i.e. through the price of the goods sold or services provided). States can take action to ‘internalise’ these ‘positive’ externalities by ensuring that providers of these goods and services are compensated for at least a part of the broader benefits generated, both as a matter of fairness and as a way of incentivising such beneficial activities.
- **Imperfect competition in goods markets**: the lack of appropriability problem is even more acute if beneficial industries are not only unable to reap the full benefits of their investment (because their ‘positive’ externalities are not compensated) but, in addition, they have to compete with producers who are not required to pay for their negative externalities (e.g. pollution) or are massively subsidised for political economy reasons (e.g. fossil fuel subsidies).

- **Capital market failures**: in the absence of State action, through so-called ‘sunrise policies’, some of these beneficial industries may not be able to access sufficient financial resources (e.g. because lenders/investors are reluctant to support producers in early stages or are unfamiliar with the sector). Investors tend to prefer investing in incremental improvements of existing technologies rather than in the more speculative and riskier emergence of truly new technologies. This inherent bias may hinder or delay innovation unless States help to reduce the risk or facilitate access to finance.

- **Learning by doing**: sunrise policies may also help companies to go through a ‘learning-by-doing’ process that can eventually result in the realisation of an – until then – latent comparative advantage (a comparative advantage that could only emerge after the industry had grown sufficiently).

- **Increasing returns to scale**: without some initial support that allows companies to reach a certain volume of production, a competitive ratio between the costs per unit produced and the revenues of the company may not be achieved.

- **Agglomeration economies**: State action may facilitate ‘virtuous circles’ among different complementary industries that emerge and thrive together in a symbiotic manner, as in the example of Silicon Valley.

- **Coordination or sequencing problems**: much in the same way as the emergence of complementary industries can generate synergies, the absence of some industries may prevent the emergence of some others or make them less competitive.

These policy rationales as well as the role of government action in addressing them are discussed in great detail in the *Green Economy Report* published by UN Environment in 2011, in the run-up of the 2012 Rio Summit on Sustainable Development (see below in section 2.2.)

The types of policies that can be used to address these market conditions and failures have been organised under different headings, with references to ‘soft’ (general market organisation) and ‘hard’ (more targeted and differential) industrial policy, ‘sunrise’ (promoting the emergence of industries) and ‘sunset’ policies (phasing-out certain industries), among others. Green industrial policy can also rely on such distinctions. However, as noted earlier, green industrial policy is not merely a repetition of industrial
policy approaches. It has a wider set of objectives and it relies on a wider set of policy instruments, including environmental policies. At the heart of green industrial policy is the need to integrate different objectives, including productivity, growth inclusiveness and environmental protection, through a wide set of policies capable of decoupling growth from social and environmental degradation.

As discussed next, the focus of this manual is not on the wide range of policies on which green industrial policies can rely but only on a sub-set of them, namely trade or trade-related green industrial policies. A variety of resources and tool-kits, including some addressing green industrial policy in general (e.g. PAGE’s Practitioner’s Guide to Strategic Green Industrial Policy (2016), or UNIDO Green Industrial Policy. Policies for supporting Green Industry (2011)) and others more focused on trade aspects (e.g. UN Environment’s Green Economy and Trade (2013)), are reviewed in section 2 of this chapter. Diverging opinions exist on the desirability of some trade-related green industrial policies presented in this manual, their environmental and economic impacts and their potential risks. A survey of the empirical literature relating to the advantages and disadvantages of some trade-related green industrial policies is provided in Cosbey (2013). The empirical aspects of green industrial policy in general are dealt with in more detail in UN Environment/ DIE (2017c).

Importantly, policy makers must take into account the fact that, depending on their design and implementation, trade-related green industrial policy tools may be consistent or inconsistent with the international obligations of a State in the areas of trade, investment and environment. This key issue has been identified and explained in detail in some recent studies (Viñuales (2012); Viñuales (2013); Wu/Salzman (2014); Dupuy/Viñuales (2015); Boute (2017)). The analysis provided in such studies of the complex relationship between green industrial policy and economic liberalisation, and the need to support
synergies and defuse frictions between them is at the roots of the development by the PAGE partner organisations of this manual. The manual is therefore meant as a policy-relevant but not a policy-prescriptive tool-box, and it cannot replace a case-by-case analysis in the context of a country’s specific circumstances. It is intended to give policy makers an overview of the tools available and clarify their structure and operation, while outlining their implications with regards to trade policy, referring to the most relevant examples (successful but also unsuccessful), and pointing to more specific tool-kits.

1.2. Trade-related green industrial policies

This manual focuses on a sub-set of green industrial policies, namely trade policies that can be harnessed to promote green industries and green industrial policies that are particularly relevant from an international trade perspective. The first category includes typical trade policies, such as tariffs and other border measures or provisions in trade agreements, which can be used to conduct green industrial policy or to secure policy space for domestic instruments that promote green industrial policy. The second category encompasses policy instruments, such as subsidies and other support schemes, standards and public procurement, which due to their influence on trade are highly regulated in international trade law. This category also covers employment-related policies, because trade normally entails major structural adjustment. This, together with the transitional dimension of the move to a green economy, calls for adequate employment and social policies. For ease of reference, both categories will be referred to as ‘trade-related green industries policies’.

The selection of the six policy tools presented in this manual is based on discussions among PAGE partner organizations as well as on the consultation of five external experts. The focus on trade is part of current efforts of PAGE to advance the trade and environment agenda under the umbrella of the 2030 Agenda for Sustainable Development and its Sustainable Development Goals (SDGs). As noted above, SDG 17 on partnerships sees trade as one of the activities through which the implementation of the SDGs can be promoted and achieved. Trade, and more generally, the connection between trade and the transition from a brown to an inclusive green economy, are mentioned in several substantive SDGs. For example: SDG 2 on food security mentions the need to remove distortive barriers in agricultural markets; the need for international cooperation in the diffusion of clean technologies is highlighted in SDG 7 as a means to ‘ensure access to affordable, reliable, sustainable and modern energy’; SDG 8 on sustainable and inclusive economic growth refers to an increase of Aid for Trade support to developing countries, particularly least
developed countries; SDG 9 on industry, innovation and infrastructure refers to the development of ‘quality, reliable, sustainable and resilient infrastructure’, to the promotion of ‘inclusive and sustainable industrialization’ and to the upgrading of ‘infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes’; SDG 11 on the conservation and sustainable use of oceans mentions the removal of distortive fisheries subsidies; SDG 12 on sustainable consumption and production patterns mentions the promotion of ‘public procurement practices that are sustainable’.

Thus, trade is at the heart of the 2030 Agenda for Sustainable Development. At the same time, trade is a highly regulated area, and countries must take into account the global, regional and bilateral frameworks in considering the adoption of domestic policies or negotiating international agreements. The manual supports this by providing a general overview of the state of trade law relating to the six policy tools discussed in the following chapters. Overall, the manual is intended as a practical and policy-relevant tool-box to guide national partners in exploring the use of the main trade-related green industrial policy options. It is targeted primarily at national policy makers and green economy professionals, but also to negotiators of trade and investment agreements.
2. The manual in the broader context of green industrial policy resources

2.1. Overview of existing resources

Over the last years, the organisations forming PAGE as well as several other organisations have developed a number of resources and tool-kits to guide States in their efforts to conduct a green industrial policy to transition from a brown to an inclusive green economy. These resources have covered five main areas, namely the conduct of green industrial policy in general (section 2.2), trade aspects of the transition to a green economy (section 2.3), some specific sectors (e.g. green jobs, renewable energy, fisheries, agriculture, tourism, etc.) (section 2.4), some specific tools and processes (e.g. public procurement, provisions in trade agreements) (section 2.5), and some specific countries (section 2.6). The main resources in each of these areas are discussed in turn and the complementarity with this manual is indicated. These and other resources are also mentioned in the subsequent chapters, as relevant, in a dedicated section at the end of each chapter.

2.2. Green industrial policy

Among the many resources that government officials can use to develop a green industrial policy strategy, two stand out. The first is the comprehensive Green Economy Report published in 2011 by UN Environment in advance of the Rio Summit on Sustainable Development (2012). This report was a key step in:

- Challenging several misconceptions regarding government action in facilitating the allocation of capital;
- Revealing a growing consensus on the need for action to transition to a green economy; and
- Providing a detailed discussion of how to reorient enabling conditions such as ‘national regulations, policies, subsidies and incentives, as well as international market and legal infrastructure, trade and technical assistance’ from a system implicitly biased in favour of a brown economy (relying on fossil fuels, resource depletion and environmental degradation) to a system favouring a green economy.

The focus of the report is on the economic and environmental rationales for embracing the transition. It is therefore not intended to offer a policy toolbox for action, but as an important reference for government officials and policy makers in understanding the implications of a transition and, crucially, in advocating it.
Another significant resource is the PAGE report led by UN Environment and produced in cooperation with the German Development Institute (DIE), *Green Industrial Policy: Concept, Policies, Country Experiences* (UN Environment/DIE (2017c)). This report provides an up-to-date overview of the debate on Green Industrial Policy in a development context. It refines the conceptual understanding of green industrial policy and its potential for driving structural change. In addition, it demonstrates environmental and economic co-benefits of green industrial policies and provides an overview over policy instruments available.

A third important resource was developed by UNIDO in the context of a PAGE project, which resulted in a *Practitioner’s Guide to Strategic Green Industrial Policy and supplement to the Guide* (2016). The guide, together with its supplement, provide a detailed description of the process through which green industrial policies can be identified, assessed and implemented. The guide organises this process in six phases and provides, for each phase, detailed procedural suggestions, including stakeholder coordination:

- **Phase 1**: High-level vision setting (it must rely on an influential lead, provide a long-term view, and rely on sufficient consultation and engagement with relevant stakeholders)
- **Phase 2**: Stock-taking (policy and data stock-taking for baseline-setting and benchmarking, conducted in parallel with phase 1)
- **Phase 3**: Prioritising intervention areas and goal-setting
- **Phase 4**: Policy domains and policy instruments (identification of specific domains, e.g. product, capital, land, labour or technology markets, and policy tools)
- **Phase 5**: Policy pathways design and impact assessment (identifying scenarios according to policy choices and assessing the impact of each scenario, conducted in parallel with phase 4)
- **Phase 6**: Implementation (the output would be a strategic document identifying the baseline, the opportunities, the vision agreed, the priorities set, the policy instruments selected, the strategy to reach it, including benchmarks).

The guide provides a variety of concepts and tools to be considered in managing each phase. As such, it offers a useful basis for government officials and policy makers to organise the process of introducing and conducting green industrial policy. Its focus is not on trade but on green industrial policy in general and it only provides a concise overview (particularly in the supplement) of the policy tools available. The present manual is thus complementary in that (i) it focuses specifically on trade-
related green industrial policy tools and (ii) it provides a methodology that is fully consistent with the more general methodology of UNIDO’s guide (particularly as regards phases 2, 3, 4 and 5 of that methodology).

A fourth resource is the development of country-level green industry assessments by UNIDO, within the framework of PAGE. So far, four country assessments have been developed with a focus on Burkina Faso (2016), Ghana (2016), Peru (2016) and Senegal (2016).

2.3 Green Economy and Trade

Following the 2012 Rio Summit on Sustainable Development, UN Environment undertook the Green Economy and Trade Opportunities Project (GE-TOP) to identify and enhance possibilities for sustainable international trade. The founding piece of this project is the report Green Economy and Trade: Trends, Challenges and Opportunities (2013), which has been followed by a number of specific reports focusing on the potential of certain sectors in specific countries, including solar energy exports from Ghana (2015 and 2016), certification and biotrade exports in Peru (2015 and 2016), sustainability standards in aquaculture in Vietnam (2015 and 2016), sustainability standards in the agricultural sector in Chile (2016), and organic farming in South Africa (2016). The project follows a case-based approach with a combination of enabling conditions in specific sectors as applied to particular countries in order to take advantage of sustainable trade opportunities. Its focus on trade-related opportunities differs from the 2016 UNIDO Guide. The material is mostly organised around different types of sectors, particularly agriculture, fisheries and aquaculture, forestry, energy, manufacturing, and tourism. Government officials can make good use of this resource when considering action in these specific sectors and they can also request a more specific study of trade opportunities in their own economies, as in the case of Ghana, Peru, Chile, Vietnam and South Africa. Unlike the present manual, the GE-TOP report is not concerned with presenting a toolbox of trade-related policy measures that can be explored by a country to harness trade for green industrial development. This is the main area of complementarity between the GE-TOP report and the present manual.

The second resource that must be noted is the third edition of Trade and Green Economy: A Handbook, developed by UN Environment and the International Institute for Sustainable Development (IISD) and published in 2014. This handbook provides an accessible and comprehensive discussion of the legal aspects of the trade and environment nexus, including the World Trade Organisation (WTO) system and free trade agreements. Government officials can refer to this resource when seeking to understand the legal space for the adoption of certain green industrial policy measures. The present
manual discusses these dimensions too, but focuses specifically on certain types of policy measures, whereas the handbook provides a more general account of the law in this area.

The third resource that is worth noting is the e-learning course on *Green Economy and Trade* developed by UNITAR in collaboration with UN Environment within the context of a PAGE project. This e-learning course provides an introduction to the trade-related opportunities arising from the transition to a green economy and relies on a variety of sources, including the two resources previously discussed. Its contents are organised in five modules, namely one introductory module on trade and the green economy, one module providing an overall view of the analytical framework that government officials can rely on when exploring trade-related opportunities (enabling conditions, policy assessment and design, sectoral and cross-sectoral opportunities, and specific domestic and international actions), two sectoral modules (one on sustainable agriculture and the other on renewable energy), and a module concisely introducing the main rules of international trade law. Unlike the present manual, the learning course is simply an introductory resource, not a tool-box.
Despite the different perspectives taken in the resources discussed so far, the material presented in them and their recommendations are consistent and complementary with the contents on the present manual.

2.4. Sector-specific and cross-sectoral resources

Many resources have been developed for specific sectors. The reports available are numerous and, therefore, only those that stand out can be mentioned here.

With respect to the agricultural sector, organisations such as the Food and Agriculture Organisation (FAO) regularly publish reports providing authoritative data on agricultural markets, including *The State of Food and Agriculture* or *The State of Agricultural Commodity Markets*. Two other organisations, the Research Institute of Organic Agriculture (FiBL) and the International Federation of Organic Agriculture Movements (IFOAM) – Organics International, published annually a report on *The World of Organic Agriculture*, that also provides authoritative data.

There are also a number of regular authoritative publications on energy markets, such as those of the International Energy Agency’s *World Energy Outlook* or REN21’s *Renewables [2016] Global Status Report*. The International Renewable Energy Agency (IRENA) also publishes a series of handbooks on questions such as biogas for road vehicles, electric vehicles, biofuels for aviation, long-term modelling of renewable energy scenarios, wind power, smart grids, and many others.

A cross-sectoral area where several resources have been developed is green jobs. Some tools that stand out include UN Environment/ ILO’s, *Green Jobs. Towards decent work in a sustainable, low-carbon world* (2008), IRENA’s *Annual Review of Renewable Energy and Jobs*, and above all the ILO’s work on green jobs, such as *Assessing Green Jobs Potential in Developing Countries: A Practitioner’s Guide* (2011) and the *Guidelines for a just transition towards environmentally sustainable economies and societies for all* (2015).

Other selected resources are mentioned in the tool chapters of this manual. As a general matter, this manual adopts a cross-sectoral approach focusing on trade-related policy tools to promote green industrial development in a variety of sectors.

2.5. Tool-specific resources

Many resources exist on specific policy tools relevant for this manual. In some cases, these resources provide a much more comprehensive presentation of the policy tools discussed in the present manual. The most important and up-to-date ones are mentioned in the tools chapters of this
manual. The relation between such resources and this manual is one of specificity. Whereas the resources in question can provide great detail with respect to a tool such as local content requirements or green public procurement, among others, this manual is intended to provide a full ‘menu for choice’ allowing government officials and policy makers to identify and understand the main varieties of each policy tool and, as the case may be, to go deeper in the investigations of one or more of them.

### 2.6. Country-specific resources

Much of the work of the PAGE partner organisations is to assess the situation of specific countries and develop tailored recommendations on how to develop green industries, including through trade-related green industrial policies. A simple search in the databases of just one organisation (UN Environment) shows that it has developed several dozen reports and briefs relating to trade and the green economy for at least twenty different countries. Some examples were mentioned in the context of UNIDO’s green industry assessments (see section 2.2. above) and the GE-TOP programme (see section 2.3 above).

Of particular relevance for the present manual are the *Green Economy Industry and Trade Assessments conducted for Ghana (2015) and South Africa (2017)* which can be seen, to some extent, as an implementation of the manual. The manual provides a general methodology to identify the questions that must be considered when conducting such assessments for a specific country, with particular reference to the menu of policy tools. However, instead of focusing on the economic opportunities not fully explored by certain countries in their green economy and trade sectors, which requires a country-specific analysis, the focus of the manual is on the policy instruments that may be used to promote these sectors, as well as on the implications of using them from a trade policy perspective.
3. How to use this manual: Methodological framework

The methodology presented in this manual has been specifically designed to complement previously reviewed tool-kits and manuals, particularly the process guidance developed in UNIDO’s Practitioner’s Guide on Strategic Green Industrial Policies. It can be used in two main ways. Firstly, the manual can be used as a stand-alone tool-box by government officials, policy-makers and/or trade negotiators who want to consider a wide range of trade-related policy options to advance certain pre-set goals. The manual will be helpful for decision makers working on various policy areas, including but not limited to: industrial development, economic policy, labour, environment, and trade policy. From this perspective, the manual offers a tool-box that can be used much in the same way as other general tool-boxes reviewed in this chapter and subsequent ones. Secondly, when a State is still in the process of exploring whether or not to conduct a green industrial policy and no general or specific goals have been set, a broader strategic process is necessary. This is the type of process that the UNIDO guide envisions and where trade-related options are but one aspect of a broader policy process. The present manual can be used to support this process by supplementing the UNIDO guide.

Specifically, within the broader six-phase process introduced in that guide, the methodology presented provides decision makers with more information on phases 2 to 5, namely (2) stocktaking, (3) prioritising intervention areas and goal-setting, (4) selecting policy domains and policy instruments, (5) designing and assessing policy pathways. Phase 1 (high-level vision setting and stakeholder consultation) and phase 6 (implementation) do not call for additional specification and users of this manual are referred to UNIDO’s guide for further information. Figure 1 provides an integrated overview of the methodology.
### Figure 1: Methodology to guide trade-related green industrial policy

<table>
<thead>
<tr>
<th>High-level vision setting and stakeholder consultation [UNIDO phase 1]</th>
<th>See UNIDO Practitioner’s Guide for Strategic Green Industrial Policy – Phase 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stock-taking [UNIDO phase 2]</td>
<td>Gathering information of socio-economic, environmental and existing policies to define a baseline, particularly in regards to the following enabling conditions for trade-related green industrial policies:</td>
</tr>
<tr>
<td></td>
<td>• Appropriate resource endowment and political/social conditions</td>
</tr>
<tr>
<td></td>
<td>• Public investment and access to credit</td>
</tr>
<tr>
<td></td>
<td>• Adequate infrastructure</td>
</tr>
<tr>
<td></td>
<td>• Domestic legal and regulatory framework</td>
</tr>
<tr>
<td></td>
<td>• Integration into international agreements</td>
</tr>
<tr>
<td>Prioritising intervention areas and goal-setting [UNIDO phase 3]</td>
<td>Identifying policy rationales to be acted upon and sustainability goals to be reached. Policy rationales may include, among others:</td>
</tr>
<tr>
<td></td>
<td>• Lack of appropriability</td>
</tr>
<tr>
<td></td>
<td>• Imperfect competition in goods markets</td>
</tr>
<tr>
<td></td>
<td>• Capital market failures</td>
</tr>
<tr>
<td></td>
<td>• Learning processes</td>
</tr>
<tr>
<td></td>
<td>• Potential for increasing returns to scale</td>
</tr>
<tr>
<td></td>
<td>• Potential for agglomeration economies</td>
</tr>
<tr>
<td></td>
<td>• Coordination or sequencing problems</td>
</tr>
<tr>
<td>Selecting the tools [UNIDO phase 4]</td>
<td>Matching selected policy rationales with policy options. Policy options may include:</td>
</tr>
<tr>
<td></td>
<td>• Border measures</td>
</tr>
<tr>
<td></td>
<td>• Support-schemes</td>
</tr>
<tr>
<td></td>
<td>• Standards</td>
</tr>
<tr>
<td></td>
<td>• Sustainable public procurement and manufacturing</td>
</tr>
<tr>
<td></td>
<td>• Provisions in trade agreements</td>
</tr>
<tr>
<td></td>
<td>• Employment-related schemes</td>
</tr>
<tr>
<td>Design and assessment [UNIDO phase 5]</td>
<td>Specific design of policy option:</td>
</tr>
<tr>
<td></td>
<td>• Selection within each tool of specific design features</td>
</tr>
<tr>
<td></td>
<td>• Assessment of consistency and impact:</td>
</tr>
<tr>
<td></td>
<td>• Legal assessment</td>
</tr>
<tr>
<td></td>
<td>• Integrated socio-economic and environmental impact assessment</td>
</tr>
</tbody>
</table>

The **stocktaking phase** is intended to develop a sufficient understanding of the initial conditions where trade-related green industrial policies could be used. Of particular importance is the understanding not only of the socio-economic basis (including enabling conditions such as appropriate resource endowment and political/social conditions, public investment and access to credit, adequate infrastructure) but also of the relevant legal and policy framework (enabling conditions such as the domestic legal and regulatory...
framework and the integration of a country within international trade and investment agreements). Some of the trade-related policy tools discussed in this manual, particularly those that can be seen as ‘soft’ or ‘structural’ industrial policies, may be used to adjust these enabling conditions to make them more conducive for more targeted or ‘hard’ green industrial policies. However, most trade-related green industrial policies tend to be specific and therefore rather on the ‘hard’ side.

The prioritisation of intervention areas and goal-setting is a very important process that must rely both on the information arising from the stocktaking exercise and on strategic considerations. From the perspective of this methodology, the two main questions are the identification of the specific policy rationales or latent opportunities that the policies intend to address and the identification of the specific goals to be achieved by doing so. Even if the stocktaking process indicates that several challenges require action, governments may prefer, for a variety of strategic and political considerations, to focus only on some of them. Furthermore, as it is not always clear where a latent comparative advantage of a country lies, policy making upon that basis always entails some degree of uncertainty. This makes political leadership and stakeholder consultation in phase 1 particularly important and highlights the need for careful assessment of the measure before and during implementation. Country-specific Green Industry and Trade Assessments, such as those conducted for Ghana and Peru can help governments identify opportunities for trade-related green industrial policy in their specific country context.

The selection of the policy tools must be based on the specific policy rationales that the government aims to address. Not every trade-related policy tool may be effective or useful to address every challenge. This manual provides guidance in this regard by identifying six trade-related green industrial policy tools, each with its different varieties explored in the practice of States, and by linking them to specific policy rationales. The tools are, as mentioned in figure 1, border measures, support-schemes, standards, sustainable public procurement and manufacturing, provisions in trade agreements, and employment-related schemes.

Once the policy rationales and the most appropriate policy tools have been identified, it is important to select the most suitable varieties or options within each policy tool and assess their individual and combined legality and impact. This manual provides guidance on the wide variety of design options for each trade-related green industrial policy tool as well as on their consistency with international agreements. The room left for green industrial policy in international trade law is not without limits and these must be taken into account in designing a strategy. Similarly, the social and environmental impacts of such policies must be assessed. This manual provides some guidance on assessment methodologies in connection with employment-
related schemes, which are partly a tool to reduce adverse impacts. Further guidance on integrated policy assessments can rely on some useful resources developed by UN Environment, namely the *Reference Manual for Integrated Assessment of Trade-Related Policies* (2001), the *Training Resource Manual. Integrated Assessment* (with focus on trade-related policies) (2004), the *Integrated Policy-Making for Sustainable Development. A Reference Manual* (2009) and the more recent *Guidelines for conducting Integrated Environmental Assessments* (2017). These resources provide a range of approaches and methodologies presented in a very practical manner.

The methodology outlined in this section will be recalled at the end of each of the tool chapters of this manual and adjusted to the specific policy tool discussed in the chapter. A carefully selected list of additional resources is provided at the end of each chapter for further reference.
Resources

NB: all links last visited on 15 September 2017


Green Industry Assessments

GE-TOP Project:


### Green Economy Industry and Trade Assessment (GITA):


---

- UNITAR, *Green Economy and Trade (e-learning course), (leaflet)*