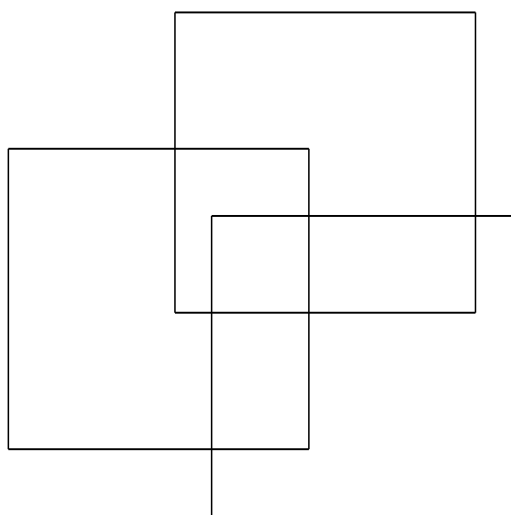




Draft policy guidelines for a just transition towards environmentally sustainable economies and societies for all

**Report for discussion at the Meeting of Experts on Sustainable
Development, Decent Work and Green Jobs**
(Geneva, 5–9 October 2015)



MESDDW/2015

INTERNATIONAL LABOUR ORGANIZATION

Enterprises Department

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1. Introduction

1.1. Background, purpose and structure of this report

1. At its 321st Session (June 2014), the Governing Body of the ILO endorsed the proposal¹ to hold a tripartite meeting of experts in 2015 as a follow-up to the conclusions of the 102nd Session of the International Labour Conference in 2013 concerning achieving sustainable development, decent work and green jobs.² The meeting is scheduled for 5–9 October 2015, in Geneva. Eight experts nominated by governments,³ eight by workers' organizations and eight by employers' organizations will convene for five working days to review and endorse policy guidelines for a just transition.
2. The intended outcomes of the meeting are to:
 - I. review, amend and adopt draft policy guidelines on a just transition towards environmentally sustainable economies and societies for all, based on a compilation and thorough review by the Office of the experience gained through country policies and sectoral strategies to achieve environmental sustainability, the greening of enterprises, social inclusion and the promotion of green jobs;
 - II. distil lessons and good practices through tripartite dialogue to guide in policy formulation in each of the nine policy areas identified in the just transition framework; and
 - III. recommend ways to give practical effect to the guidelines in terms of their dissemination and practical application by constituents at the country level.
3. After a short introduction (Chapter 1), Chapter 2 of this document outlines the vision and principles and provides an overview of the overall policy framework for a just transition, as set out in the 2013 conclusions. The draft policy guidelines for each area of the policy framework are then presented in Chapter 3.
4. The meeting of experts will revise the draft policy guidelines as appropriate and make recommendations concerning their practical application. The outcome will be submitted to the 325th Session of the Governing Body (November 2015) for formal adoption as "Policy guidelines for a just transition towards environmentally sustainable economies and societies for all" and the Governing Body's guidance will be sought on how to give effect to them.

¹ ILO: *Reports of the Officers of the Governing Body – First report: Arrangements for the Meeting of Experts on Sustainable Development, Decent Work and Green Jobs (Geneva, 5–9 October 2015)*, Governing Body, 321st Session, Geneva, June 2014, GB.321/INS/10/1.

² ILO: *Conclusions concerning achieving decent work, green jobs and sustainable development*, adopted by the International Labour Conference at its 102nd Session, Geneva, 2013. Hereinafter, "the 2013 conclusions".

³ The following governments were invited to nominate independent experts: Brazil, Germany, Indonesia, Kenya, Mauritius, South Africa, Turkey and United States.

1.2. Evidence base for the draft guidelines

5. A rapidly growing body of evidence has developed over the last decades as more and more countries and the private sector have taken steps to transform their economies and businesses.
6. The evidence has been documented and analysed in global reports issued by the joint Green Jobs Initiative of the United Nations Environment Programme (UNEP), the ILO, the International Organisation of Employers (IOE) and the International Trade Union Confederation (ITUC) in 2008⁴ and 2012,⁵ and the 2013 ILO report, *Sustainable development, decent work and green jobs*.⁶ In 2011, the ILO and the European Centre for the Development of Vocational Training (CEDEFOP) compiled additional evidence regarding skills.⁷ The Office has also conducted a dedicated search to identify more recent sources. Moreover, the draft guidelines draw on recent work by the Organisation for Economic Co-operation and Development (OECD)⁸ and the World Bank Group.⁹
7. The draft guidelines are based on the relevant research and policy lessons from around the world, which are included as references throughout the report.
8. While the available evidence typically provides lessons concerning elements of a just transition rather than examples of complete and coherent approaches, between them they constitute a solid evidence base for guidelines.
9. The 2013 conclusions give specific meaning to the concept of a just transition, internationally agreed by the constituents of the ILO's 185 member States. The guidelines based on those conclusions offer practical orientation on how to achieve this goal.
10. The guidelines should assist governments and the private sector in formulating strategies for sustainable development and for coping with climate change. Once the guidelines have been applied in a sufficient number of countries, a review of their experiences would be worthwhile.

⁴ UNEP: *Green jobs: Towards decent work in a sustainable, low-carbon world* (Nairobi, 2008).

⁵ ILO and International Institute of Labour Studies (IILS): *Working towards sustainable development: Opportunities for decent work and social inclusion in a green economy* (Geneva, 2012).

⁶ ILO: *Sustainable development, decent work and green jobs*, Report V, International Labour Conference, 102nd Session, Geneva, 2013.

⁷ O. Strietska-Ilina et al.: *Skills for green jobs: A global view – Synthesis report based on 21 country studies* (Geneva, ILO and CEDEFOP, 2011).

⁸ OECD: *Towards green growth? Tracking progress* (Paris, 2015).

⁹ World Bank: *Decarbonizing development: Three steps to a zero-carbon future* (Washington, DC, 2015).

1.3. Potential applications of guidance on a just transition

11. The vision, principles and policy framework established by the 2013 conclusions are of direct relevance to international and national efforts to achieve low-carbon, environmentally sound and socially inclusive sustainable development.
12. The outcome document of the United Nations Conference on Sustainable Development (UNCSD; Rio+20) refers to the importance of a just transition in the context of the role that governments, trade unions, and workers and employers have to play in promoting decent work for all and the need to help workers adjust to changing labour market conditions.¹⁰
13. In the Cancun Agreements of the United Nations Framework Convention on Climate Change (UNFCCC),¹¹ governments recognized that “addressing climate change requires a paradigm shift towards building a low-carbon society that offers substantial opportunities and ensures continued high growth and sustainable development ... while ensuring a just transition of the workforce that creates decent work and quality jobs”.¹²
14. The guidelines should be of direct use for the implementation of the sustainable development goals, national climate strategies and international climate agreements.

¹⁰ UNCSD: *The future we want*, Resolution 66/288, adopted by the General Assembly on 27 July 2012.

¹¹ UNFCCC: *Report of the Conference of the Parties on its sixteenth session, held in Cancun from 29 November to 10 December 2010*, FCCC/CP/2010/7/Add.1.

¹² At the time of writing, the draft negotiating text for the 21st Session of the UNFCCC Conference of the Parties (COP21), to be held in Paris in December 2015, contained references to a just transition.

2. Vision, principles and policy framework for a just transition

15. This chapter reproduces the vision and the guiding principles for a just transition set out in the 2013 conclusions concerning achieving decent work, green jobs and sustainable development, which are the basis for the draft policy guidelines.¹
16. The final section provides an overview of the policy areas identified in the 2013 conclusions. The objectives and orientations for each of those policy areas have been incorporated into the draft guidelines in Chapter 3.

2.1. Our vision

17. The four pillars of the Decent Work Agenda – social dialogue, social protection, rights at work and employment – are indispensable building blocks of sustainable development and must be at the centre of policies for strong, sustainable and inclusive growth and development.
18. Sustainable development means that the needs of the present generation should be met without compromising the ability of future generations to meet their own needs. Sustainable development has three dimensions – economic, social and environmental – which are interrelated, of equal importance and must be addressed together.
19. Sharing a common global purpose, there are different approaches, models and tools available to each country, in accordance with its national circumstances and priorities to achieve sustainable development in its three dimensions, which is our overarching goal.
20. A just transition for all towards an environmentally sustainable economy, as described in this document, needs to be well managed and contribute to the goals of decent work for all, social inclusion and the eradication of poverty.
21. Decent work, poverty eradication and environmental sustainability are three of the defining challenges of the twenty-first century. Economies must be productive to meet the needs of the world's growing population. Societies must be inclusive, providing opportunities for decent work for all, reducing inequalities and effectively eliminating poverty.
22. When referring to the greening of economies, enterprises and jobs, we consider it in the context of sustainable development and poverty eradication. This is one of the important tools for achieving sustainable development and could provide options for policy-making. In this context, we welcome the document “The Future We Want” adopted by the United Nations Conference on Sustainable Development (Rio+20).
23. The greening of economies presents many opportunities to achieve social objectives: it has the potential to be a new engine of growth, both in advanced and developing economies, and a net generator of decent green jobs that can contribute significantly to poverty eradication and social inclusion. The greening of economies will enhance our ability to manage natural resources sustainably, increase energy efficiency and reduce waste, while addressing inequalities and enhancing resilience. The greening of jobs and the promotion

¹ ILO: *Conclusions concerning achieving decent work, green jobs and sustainable development*, adopted by the International Labour Conference at its 102nd Session, Geneva, 2013.

of green jobs, both in traditional and emerging sectors, will foster a competitive, low-carbon, environmentally sustainable economy and patterns of sustainable consumption and production, and contribute to the fight against climate change.

24. Managed well, transitions to environmentally and socially sustainable economies can become a strong driver of job creation, job upgrading, social justice and poverty eradication. Greening all enterprises and jobs by introducing more energy- and resource-efficient practices, avoiding pollution and managing natural resources sustainably leads to innovation, enhances resilience and generates savings which drive new investment and employment.
25. Sustainable development is only possible with the active engagement of the world of work. Governments, employers and workers are not passive bystanders, but rather agents of change, who are able to develop new ways of working that safeguard the environment for present and future generations, eradicate poverty and promote social justice by fostering sustainable enterprises and creating decent work for all.
26. The path to environmentally sustainable development involves a wide range of efforts and activities from the ILO and member States, who have widely varying capabilities and ability to act in accordance with the reality of each State. In that context, cooperation, information sharing and joint action within the mandate of the ILO will be valuable.
27. We recall the principle of common but differentiated responsibilities as set out in the Rio Declaration on Environment and Development (1992).

2.2. Opportunities and challenges

28. In the transition to environmentally sustainable economies and societies, the world of work can benefit from some major opportunities, for example:

- net gains in total employment from realizing the potential to create significant numbers of additional decent jobs through investments into environmentally sustainable production and consumption and management of natural resources;
- improvements in job quality and incomes on a large scale from more productive processes as well as greener products and services in sectors like agriculture, construction, recycling and tourism;
- social inclusion through improved access to affordable, environmentally sustainable energy and payments for environmental services, for instance, which are of particular relevance to women and residents in rural areas;

and faces some major challenges, for example:

- economic restructuring, resulting in the displacement of workers and possible job losses and job creation attributable to the greening of enterprises and workplaces;
- the need for enterprises, workplaces and communities to adapt to climate change to avoid loss of assets and livelihoods and involuntary migration; and
- adverse effects on the incomes of poor households from higher energy and commodity prices.

Given the scale and urgency of these environmental and employment challenges, it is clear that the world will have neither the resources nor the time to tackle them separately or consecutively. Tackling them jointly is not an option, but a necessity.

2.3. Guiding principles

29. The following principles should guide the transition to environmentally sustainable economies and societies:

- (a) Strong social consensus on the goal and pathways to sustainability is fundamental. Social dialogue has to be an integral part of the institutional framework for policy-making and implementation at all levels. Adequate, informed and ongoing consultation should take place with all relevant stakeholders.
- (b) Policies must respect, promote and realize fundamental principles and rights at work.
- (c) Policies and programmes need to take into account the strong gender dimension of many environmental challenges and opportunities. Specific gender policies should be considered in order to promote equitable outcomes.
- (d) Coherent policies across the economic, environmental, social, education/training and labour portfolios need to provide an enabling environment for enterprises, workers, investors and consumers to embrace and drive the transition towards environmentally sustainable and inclusive economies and societies.
- (e) These coherent policies also need to provide a just transition framework for all to promote the creation of more decent jobs, including as appropriate: anticipating impacts on employment, adequate and sustainable social protection for job losses and displacement, skills development and social dialogue, including the effective exercise of the right to organize and bargain collectively.
- (f) There is no “one-size-fits-all”. Policies and programmes need to be designed in line with the specific conditions of countries, including their stage of development, economic sectors and types and sizes of enterprises.
- (g) In implementing sustainable development strategies, it is important to foster international cooperation among countries. In this context, we recall the outcome document of the United Nations Conference on Sustainable Development (Rio+20), including section VI on means of implementation.

2.4. The policy framework for a just transition towards environmentally sustainable economies and societies

30. The basic policy framework to address the challenges of a just transition for all laid out in the conclusions identifies the following policy areas and corresponding objectives as relevant.

Table 1. The policy framework for a just transition

Policy area	Overall objective for a just transition
Policy coherence and institutional arrangements for a just transition for all	Designing and implementing country-specific policy mixes; mainstreaming sustainable development, cooperation and coordination between policy fields; making institutional arrangements to ensure the participation of all relevant stakeholders.

Policy area	Overall objective for a just transition
Social dialogue policies	Establishing mechanisms of social dialogue, including the practice of tripartism and collective bargaining, as effective tools for the design of policies at all levels.
Macroeconomic and growth policies	Realigning incentives and resources to promote sustainable production and consumption patterns, and place full and productive employment and decent work for all at the centre of economic and social policies.
Industrial and sectoral policies	Aligning macroeconomic policies and complementing them with sector-specific measures to balance sectoral shifts in outputs and employment and to ensure a just transition in each sector, with an emphasis on addressing environmental challenges and mobilizing the potential for decent work through greening.
Enterprise policies	Creating an enabling environment that supports more sustainable and greener enterprises that can deal effectively with higher resource prices and more demanding environmental regulation on their businesses and that are resilient to the impacts of climate change on the one hand, and contribute to investment and eco-innovation and are able to seize opportunities in new and expanding markets for environmental goods and services on the other.
Skills policies	Ensuring adequate skills at all levels to promote the greening of economies and to facilitate a just transition, including skills that support entrepreneurship, resilience and innovation in enterprises, especially in micro-, small and medium-sized enterprises. This includes retraining and upgrading the skills of the existing workforce.
Occupational safety and health policies	Ensuring safety and health among all workers and protecting them against occupational hazards and risks arising both in conventional and emerging sectors in the transition to a greener economy.
Social protection policies	Ensuring adequate social protection systems (providing health care, income security and basic social services) to enhance resilience and safeguard populations against the negative impacts of economic restructuring, climate change and resource constraints.
Labour market policies	Ensuring that temporary and structural adjustments due to greening policies are well managed, actively pursuing job creation and access to new job opportunities and limiting the loss of employment (through professional or geographical mobility and other measures).

- 31.** International labour standards offer a robust framework for addressing the challenges in the world of work associated with the greening of the economy and, more broadly, with the transition towards sustainable development and poverty eradication. They serve as tools for governments seeking, in consultation with employers and workers, to draft and implement labour laws and social policies in conformity with internationally accepted standards. This includes respect for the principle of gender equality. With the right policies and strategies in place, a just transition can help to close gender gaps and reduce gender inequality.
- 32.** The relevant standards and resolutions are listed in the appendix to the 2013 conclusions. They, and others with a direct bearing on the abovementioned policy areas, are presented in the respective policy sections in Chapter 3 below.

-
- 33.** The final policy area referred to in the conclusions is social dialogue and tripartism as an effective tool for policy design and for building commitment. In keeping with paragraph 14(3)(n), social dialogue and tripartism have been included in the guidelines as an overarching tool for policy-making. Additional references have been included in the respective policy sections, where appropriate.

3. Policy guidelines

3.1. Introduction

34. The ultimate objective of these policy guidelines is to enable ILO constituents to leverage the process of structural change towards a greener and low-carbon economy for the large-scale creation of quality employment opportunities, the extension of adequate social protection, the advancement of social inclusion and the realization of fundamental principles and rights – for current and future generations alike. This requires effective policy coherence, with, on the one hand, environmental and economic policies that take account of their impacts on the world of work and, on the other, social, employment, skills and labour market policies that incorporate environmental sustainability as one of their goals.
35. In this chapter, operational guidance is proposed for the key policy areas and institutional arrangements identified in the 2013 conclusions. First, we look at ways in which country-specific policy mixes can be designed and implemented, combining relevant policy areas and instruments. This includes the institutional arrangements needed for coherent policy-making and implementation, and in particular the role social dialogue needs to play in policy-making. The remainder of the chapter discusses each of the policy areas identified in the 2013 conclusions in terms of the specific objectives for a just transition, relevant policy instruments, international labour standards and high-level ILO policy documents that provide guidance, and proposes a course of action.
36. As the conclusions emphasized the importance of international labour standards in addressing the challenges of the world of work associated with the greening of economies and, more broadly, with the transition towards sustainable development and poverty eradication, the guidelines link those standards and International Labour Conference resolutions referenced in the 2013 conclusions as well as other standards and policy documents relevant to the respective policy areas throughout.

3.2. Policy coherence and institutional arrangements for a just transition for all

(i) *Purpose and objectives for a just transition*

37. **A country-specific policy mix:** There is no one-size-fits-all approach for policies for a just transition: policies and programmes need to be designed in line with the specific circumstances of individual countries. The greening of economies in the context of sustainable development and poverty eradication will require a country-specific mix of macroeconomic, industrial, sectoral and labour policies that establish an enabling environment for sustainable enterprises to prosper and create decent work opportunities by mobilizing and directing public and private investment towards environmentally sustainable activities.
38. The aim should be to generate decent work throughout the supply chain, in dynamic, high value-added sectors that stimulate the upgrading of jobs and skills, as well as to create jobs and improve productivity in more labour-intensive industries that offer employment opportunities on a wider scale.

39. Cooperation and coordination: As the challenge of a just transition cuts across several domains, there is a need for mainstreaming of sustainable development across all areas and for cooperation and coordination between employment authorities and their counterparts in various fields, including finance, planning, environment, energy, transport, health, and economic and social development.

40. Institutional arrangements with the participation of relevant stakeholders: Institutional arrangements must be adapted to ensure the participation of all relevant stakeholders at the international, national, regional, sectoral and local levels in the building of an appropriate policy framework. Internal coherence should be sought in order to integrate the three dimensions of sustainable development effectively.

(ii) Nature of instruments

41. Ex-ante assessments of the expected impact of specific greening policy measures have been a key ingredient for successful policy-making. Assessments can ensure that specific needs of countries and the diversity of sectors and local economies are taken into account. They enable policy-makers and stakeholders to clarify the link between environmental issues and policies on the one hand, and the effects on social groups and objectives on the other – including employment creation, the quality of employment gained or lost and the generation and distribution of income. As the transformation to a more sustainable economy is largely policy-led, anticipation of impacts can help in the prioritization of policy options for a smooth and just transition.

42. A range of assessment methods have proven helpful in informing policy, including sectoral studies, input/output analyses, social accounting matrices and computable general equilibrium models, as well as a variety of complex dynamic models which use systems analysis and sometimes combine physical and economic variables.¹

43. Assessments of environment-related employment dynamics can be conducted periodically as part of the monitoring and evaluation of policies.²

44. Data: It is useful if assessments and monitoring and evaluation are based on sets of relevant indicators which can be measured and tracked over time, such as the green economy indicators.³ Relevant social and labour indicators should be included in the sets.⁴ It is also helpful if assessments identify green jobs which are necessary to achieve

¹ For examples, see table 2.1 in ILO: *Sustainable development, decent work and green jobs*, Report V, International Labour Conference, 102nd Session, Geneva, 2013, pp. 30–31.

² ILO: *Green jobs in Mauritius: Experiences from a Small Island Developing State* (Geneva, 2013).

³ UNEP: *Using indicators for green economy policymaking* (Geneva, 2014).

⁴ Including all stakeholders is critical for the success of policies. In India, a Multistakeholder Taskforce on Green Jobs and Climate Change was established in March 2009 under the leadership of the Ministry of Labour and Employment, including representatives of workers' and employers' organizations, government departments, research institutions and non-governmental organizations (NGOs). See M. Govindan and J. Bhanot: *Green jobs in India: Potentials and perspectives*, Friedrich Ebert Stiftung, Economy of Tomorrow series (Dec. 2012). However, India still needs to develop labour market information and national occupational standards for all jobs. See S. Sanghi and J. Sharma: "Local development strategy, green jobs and skills in the Indian context", in OECD and CEDEFOP: *Greener skills and jobs* (Paris, 2014).

environmental sustainability in line with the guidelines adopted by the 19th International Conference of Labour Statisticians.⁵

45. **Compatibility with national development policies:** At the national level, one critical success factor is ensuring links and desired compatibility with national development policies and strategies. In that regard, green growth or green economy strategies can provide an opportunity to link environmental and economic objectives.^{6,7}
46. **Institutional approaches:** Within government, several institutional approaches can be pursued to enhance coordination and policy coherence. They should consider the coherence of social, economic and environmental policies both within and across different sectors of the economy.⁸
47. Among the most important elements in this process are high-level leadership and direction; clear structures and accountabilities for coordination and collaboration; a clear articulation of policy priorities and linkages among them; and appropriate dedicated human resources for coordination purposes.⁹
48. However, because institutional settings vary widely from country to country, it is not possible to produce one single blueprint. Such efforts need to be in alignment with national structures; in some cases, changes to the organizational culture in the relevant ministries and agencies may need to be initiated to foster greater cooperation.
49. The establishment of inter-ministerial mechanisms engaging the respective line ministries can play an important role in bringing about greater policy coherence. This is critical with regard to policy dialogue; data gathering and information sharing; cross-cutting analytical framework; joint planning; coordination in the implementation process; and monitoring and evaluation of progress achieved.¹⁰ For full integration, more comprehensive

⁵ ILO: *Report of the Conference*, Report III, 19th International Conference of Labour Statisticians, Geneva, 2–11 October 2013.

⁶ Countries as diverse as Cambodia, Chile, China, Ethiopia, Ireland, the Nordic countries and Viet Nam have done so. See OECD: *Towards green growth? Tracking progress*, OECD Green Growth Studies (Paris, 2015), Annex 1.

⁷ The European Commission's Green Employment Initiative, for instance, lays out an integrated framework including targeted policy responses and tools to ensure that "the employment and environmental agendas converge". It focuses on six priority areas: bridging skills gaps; anticipating and securing green economy transitions; supporting job creation (through green tax reform, green procurement and social enterprise); improving data quality and monitoring; promoting social dialogue; and strengthening international cooperation. European Commission: *Green Employment Initiative: Tapping into the job creation potential of the green economy*, COM(2014) 446 final (Brussels, 2014).

⁸ OECD: *Aligning policies for the transition to a low-carbon economy*, Ministerial Council Meeting, 3–4 June 2015.

⁹ These elements are drawn from OECD: *Towards green growth? Tracking progress*, op. cit.

¹⁰ The same is true for intergovernmental organizations. The OECD, for example, has made a concerted and sustained effort to integrate green growth across its work programme to ensure greater coherence. See *ibid.*

institutional changes are required in order to overcome silos and anchor environmental challenges in economic decision-making.¹¹

50. National and regional/local levels of governance play an important part in translating principles into policy and budgeting processes. Regional and local authorities are often the ones facing the tangible impacts of structural economic changes in their territories arising from the transition to greener economies. They are also best placed to guide the conversion from declining industries to greener activities, and to deal with the necessary change in regional and professional identity, which is often linked to traditional and long-established industries (such as in coalmining or steel-industry regions). Local governments' responsibilities for activities such as waste management, public procurement, water resources and public transportation mean that they have the know-how to provide the appropriate solutions tailored to the local needs and contexts.

51. The establishment of monitoring and evaluation mechanisms based on clear targets and strategies will help to ensure consistent and transparent tracking of implementation, measure progress and identify success factors or impediments. The statistical approach and assessments referred to above and alignment with new sets of indicators on the green economy provide elements of a framework that can be applied, taking account of national specificities.

(iii) Principles, including relevance of international labour standards

52. The underlying principles are those set out in the 2013 conclusions. The relevant international labour standards and high-level ILO policy documents are identified for each specific policy area in sections 3.3–3.10.

(iv) Recommended course of action

53. Governments should:

- (a) provide stable policy signals based on social consensus and a regulatory framework to enable sustainable enterprise development and promote inclusive labour markets for the transition to sustainable economies;
- (b) review and prioritize those international labour standards most relevant to the transition towards a greener economy and decent jobs, with a view to their ratification and full implementation;
- (c) fully integrate provisions for a just transition into national plans and policies for development, the achievement of the sustainable development goals, green growth and national environmental and climate change targets;
- (d) integrate principles for a just transition into the agendas of all line ministries rather than assigning them to only one ministry;

¹¹ For example, Canada, Czech Republic, Estonia, Finland, Japan, Slovakia and Sweden have done so. Cambodia and Viet Nam have both set up formal inter-ministerial coordinating bodies to oversee the implementation of their respective green growth strategies. In Canada, the Deputy Ministers' Committee on Climate Change, Energy and the Environment brings together senior decision-makers from across federal departments; however, there is a separate committee that addresses economic trends and priorities. See OECD: *Towards green growth? Tracking progress*, op. cit.

-
- (e) ensure close collaboration between relevant national ministries, including ministries of economic planning and finance, with a view to establishing commitments and agreements that can withstand changes in the fiscal and political landscape;
 - (f) ensure the full participation of relevant stakeholders at all levels and stages of the policy process in line with the principles and guidelines concerning social dialogue;
 - (g) carry out ex-ante assessments based on appropriate sets of gender-disaggregated indicators for relevant economic, environmental, social and labour variables to inform policy choices;
 - (h) include research and impact evaluations in environmentally sustainable economic and social policies to ensure that optimal balances of policy measures are achieved;
 - (i) encourage and, where appropriate, actively engage in collaborative efforts among governments, employers' and workers' organizations, international organizations, enterprises and workers to effectively incorporate enabling policies for a transition towards environmental sustainability.

54. Governments and social partners should:

- (a) consider concluding agreements for the implementation of policies between workers and employers (referred to jointly as the “social partners”), government institutions and other relevant stakeholders;
- (b) mobilize funding, support and assistance, facilitated where necessary by international organizations, particularly for less-developed economies and those with limited macroeconomic capacities;
- (c) share knowledge and best practices regarding environmentally sustainable macroeconomic and sectoral policies;
- (d) promote cooperation:
 - at the national level, where social partners cooperate with the authorities in developing, implementing and monitoring policies in accordance with national practices;
 - at the industry level, where social partners can have a key role through collective bargaining in ensuring that jobs are decent, in forecasting skills needs and in designing adequate training and retraining initiatives;
 - at the local level, where local authorities, employers, trade unions, and research and training institutions need to cooperate to effectively integrate the transition into local economic development;
 - at the enterprise level, where social partners can contribute to greening workplaces and facilitating the acceptance of green policies and promote vocational adaptation.

3.3. Social dialogue for a just transition

(i) Purpose and objectives for a just transition

55. Social dialogue mechanisms, including the practice of tripartism and collective bargaining, serve as effective tools for the design of policies at all levels. Social dialogue can form a strong basis on which to build on the commitment of workers and employers to the necessary joint action with governments in the transition process.¹²

56. Social dialogue aims to:

- promote consensus building among the major stakeholders;
- resolve critical socio-economic issues and improve economic performance;
- inform policy-making by contributing essential information to assessments of impacts, challenges and opportunities, and innovative ideas and solutions; and
- ensure that positive social and labour market outcomes are achieved through coherent and complementary environmental, economic, social and labour policies and programmes.

57. Social dialogue is a critically important component of a just transition, not only in the workplace, where the voice of workers and trade unions is needed to help design new sustainable production systems and work practices, but also at the regional, national, sectoral and local levels, where it ensures that the impacts of the transition are considered and managed and that sustainability is achieved in the wider society and economy.^{13, 14, 15}

(ii) Nature of policy instruments

58. Social dialogue is the involvement of workers, employers and governments in decision-making. It includes all types of negotiation, consultation and exchange of information on common interests among representatives of these groups. It is used to address economic, labour and social issues and related environmental issues.

¹² ILO: *Conclusions concerning achieving decent work, green jobs and sustainable development*, adopted by the International Labour Conference at its 102nd Session, Geneva, 2013.

¹³ ILO: *Climate change and labour: The need for a “just transition”*, International Journal of Labour Research, 2010, Vol. 2, Issue 2 (Geneva).

¹⁴ For example, in Germany a large-scale energy-efficient building renovation programme was initiated jointly by trade unions, employers and NGOs – a cooperative model rooted in social dialogue. Confederation of German Trade Unions (DGB): “Energy saving and energy efficiency in the redevelopment of existing buildings”, presentation at the conference on “Initiatives involving social partners in Europe on climate change policies and employment”, Brussels, 1–2 March 2011. In China, the design and implementation of a programme to assist laid-off forestry workers were based on tripartite committee consultations at the national and local levels. Ministry of Human Resources and Social Security of China: Background information of the Natural Forest Protection Programme (Beijing, 2011).

¹⁵ ILO: *Promoting decent work in a green economy*, ILO Background note to UNEP: *Towards a green economy: Pathways to sustainable development and poverty eradication* (Geneva, 2011).

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59. Social dialogue can be bipartite – between workers and employers – or tripartite – where government is also included. Bipartite social dialogue may take the form of collective bargaining or other forms of negotiation, cooperation and dispute prevention and resolution. Tripartite social dialogue brings together workers, employers and government to discuss public policies, laws and other decisions that affect the workplace or the interests of workers and employers.¹⁶
 60. Joint labour–management committees can play an important role. These committees work to identify ways to improve energy and resource efficiency and to reduce emissions of carbon and other pollutants. Employers and trade unions work together in greening the workplace, building on joint work on occupational safety and health (OSH) and other issues. In some countries, workers’ environmental representatives have been created, with the mandate to discuss issues related to the environment, both in terms of impacts and new investments needed.
 61. Ideally, the social partners should be involved from the policy design stage through to the monitoring and evaluation of outcomes.
 62. Effective social dialogue is built on respect for, and implementation of, freedom of association. Where there is an absence of full respect for freedom of association, the social dialogue process will lack legitimacy, and hence cannot be sustainable. Government plays a critical role in enacting appropriate national laws and regulations and in enforcing them effectively.¹⁷

(iii) Principles, including relevance of international labour standards

63. ILO Conventions and Recommendations provide detailed rules and guidelines on how governments should develop social dialogue in key policy areas, including employment, social protection and human resources. The most relevant instruments and high-level policy documents are:

Conventions and Recommendations

- Freedom of Association and Protection of the Right to Organise Convention, 1948 (No. 87)
- Right to Organise and Collective Bargaining Convention, 1949 (No. 98)
- Tripartite Consultation (International Labour Standards) Convention, 1976 (No. 144)
- Labour Relations (Public Service) Convention, 1978 (No. 151)
- Collective Bargaining Convention, 1981 (No. 154), and Recommendation, 1981 (No. 163)
- Collective Agreements Recommendation, 1951 (No. 91)
- Consultation (Industrial and National Levels) Recommendation, 1960 (No. 113)

¹⁶ ILO: *Social dialogue: Recurrent discussion under the ILO Declaration on Social Justice for a Fair Globalization*, Report VI, International Labour Conference, 102nd Session, Geneva, 2013.

¹⁷ ILO: *Key features of national social dialogue: A social dialogue resource book* (Geneva, 2003).

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- Tripartite Consultation (Activities of the International Labour Organisation) Recommendation, 1976 (No. 152)
 - Labour Administration Convention, 1978 (No. 150)
 - Employment Relationship Recommendation, 2006 (No. 198)

Conclusions

- Conclusions concerning the recurrent discussion on social dialogue, adopted by the International Labour Conference at its 102nd Session (2013)

(iv) Recommended course of action

64. Governments should:

- (a) actively promote and engage in social dialogue in line with international labour standards, at all stages from policy design to implementation and evaluation and at all levels from national to enterprise level, to forge consensus on pathways towards an environmental sustainability that also advances decent work;
- (b) guarantee the right for all workers and employers – women and men alike – to participate in social dialogue, including those working in the informal economy and in newly emerging sectors where workers are not unionized and employers' organizations have not yet been created;
- (c) promote the creation and development of various dialogue structures – multipartite, bipartite, and tripartite – as they complement each other in the discussion of the best means to implement environmental goals;
- (d) formalize social dialogue mechanisms related to the transition to a greener economy to ensure continuity regardless of political cycles.

65. Social partners should:

- (a) raise awareness and understanding and provide guidance among their members about developments relevant for the greening of enterprises and the creation of decent green jobs for women and men;
- (b) play an active role in the formulation, implementation and monitoring of national sustainable development policies, articulating the pivotal role of employers and workers in bringing about environmental sustainability with decent work and social inclusion;
- (c) promote the active participation of their members in social dialogue at the enterprise, sectoral and national levels to assess opportunities and resolve challenges posed by the transition;
- (d) promote the inclusion of specific environmental clauses in collective agreements as a concrete way of facilitating cooperation between employers and workers and encouraging them to comply with environmental regulations, meet company objectives and targets regarding sustainability and develop the training of workers and managers.

3.4. Macroeconomic and growth policies

(i) Purpose and objectives for a just transition

- 66.** There is an urgent need to make the model of economic development environmentally sustainable, to create sufficient numbers of good-quality jobs and to overcome growing inequality and persistent social exclusion. Macroeconomic and growth policies need to realign incentives and resources to promote sustainable production and consumption patterns, create an enabling environment for sustainable enterprises, and place full and productive employment and decent work for all at the centre of economic and social policies.
- 67.** Targeted fiscal, monetary and trade policy measures, market-based instruments, public procurement and investment policies can create frameworks for enterprises and investors to adopt or promote more innovative economic practice, based on the sustainable use of resources, leading to increased access to economic opportunity and more inclusive labour markets.
- 68.** It must be recognized at the policy design stage that policies for a green transition may have adverse effects on income distribution, including energy poverty and negative effects concentrated on some sectors or communities.
- 69.** Appropriate laws, regulations and other policies aimed at environmental improvements that lead to resource and energy efficiencies and the prevention of environmental and social degradation can align private incentives with public policy objectives and can be cost-effective in the long term.
- 70.** Legislative and regulatory certainty and the rule of law are needed in order to promote environmental and social sustainability, while stimulating innovation and investments in human, social and environmental capital. These are the prerequisites for long-term competitiveness and economic prosperity, social cohesion, quality employment and better environmental protection.
- 71.** Macroeconomic policies must also take account of constraints that can limit implementation, including lack of finance, inadequate infrastructure and inadequate and mismatched skills. Without a resource mobilization strategy, policies to promote environmental sustainability and green jobs are likely to remain ineffective. Fiscal consolidation programmes can curtail green investment and growth and increase the costs of environmental damage in the future, which should be taken into account in decisions on the pace and level of consolidation programmes.

(ii) Nature of policy instruments

- 72.** A wide range of macroeconomic policy tools are available to governments striving for a transition towards environmentally sustainable economies and societies. Through a suitable combination of policy instruments, governments can provide incentives for the adoption of green workplace practices and disincentives for unsustainable practices, and encourage investment in green technologies, products and services. Such policies can also ensure that prices reflect scarcity and environmental damage, and that price signals align with the goal of reducing resource consumption and pollution.

73. The main macroeconomic policy instruments include the following:

- (a) **Taxes** on energy and resource consumption or on emissions internalize costs not reflected in market prices. They can have different impacts on enterprises, depending on their size and economic sector, as well as on consumers, as poorer households spend a higher share of their income on energy.
- (b) **Emissions trading** or cap-and-trade schemes are systems in which progressively lower emissions limits are established and permits are issued which can then be traded. If well designed, they make prices reflect costs more fully and can achieve reductions in greenhouse gas emissions at least cost.¹⁸ The revenue raised from the sale of permits can be used to reduce the cost of labour and to compensate those negatively affected by the transition (see “eco-taxes” under (d) below).
- (c) **Subsidies** can modify resource prices for consumers and producers. Traditional fossil fuel energy and resource subsidies incentivize unsustainable consumption and production patterns and hinder investments to reduce emissions and to increase resource efficiency. They also tend to be socially regressive, as the major consumers who receive the largest subsidies are typically well-to-do households and enterprises.¹⁹ However, green subsidies can also intervene in the market to favour environmentally sustainable activities.
- (d) **Environmental tax reform or eco-taxes** promote environmentally friendly activities by raising revenue through energy and resource taxes, cap-and-trade schemes or subsidy reform and invest the proceeds to generate social and environmental benefits. Eco-taxes, which are used to reduce the cost of labour, in particular by funding social protection for workers, can generate a “double dividend”, improving environmental sustainability while generating net job creation.²⁰
- (e) **Price guarantees** are market-based instruments that can be used to secure attractive prices for environmental goods and services and thus encourage investment in them. The cost is borne by consumers. “Feed-in tariffs”, which set a price for electricity fed

¹⁸ World Bank: *State and trends of carbon pricing 2014* (Washington, DC, 2014); International Carbon Action Partnership: *Emissions trading worldwide: Status report 2014* (Berlin, 2014).

¹⁹ A study of 20 countries indicates that the poorest fifth of the population receives on average less than 8 per cent of the benefits, while some 43 per cent go to the richest fifth. The savings from reduced subsidies should be used to compensate the poor, as has been done in the Islamic Republic of Iran. World Bank: *Decarbonizing development: Three steps to a zero-carbon future* (Washington, DC, 2015).

²⁰ Imposing a price of around €30 per ton of carbon dioxide (CO₂) and using the revenue to reduce the cost of labour could create 14.3 million net new jobs over a period of five years. ILO and ILS: *World of Work Report 2009: The global jobs crisis and beyond* (Geneva, 2009). Experience in Germany shows that eco-taxes can lower social security contributions. M. Kohlhaas: “Beschäftigungswirkungen der ökologischen Steuerreform in Deutschland: Vergleich der Analysen mit LEAN und PANTA RHEI” [Employment effects of ecological tax reform in Germany: Comparison of analyses with LEAN and PANTA RHEI], in S. Briem et al. (eds): *Ansätze zur Modellierung von Beschäftigungseffekten in Energiesystemen* [Approaches to modelling employment effects in energy systems] (Berlin, 2004). A World Bank study (*Decarbonizing development*, op. cit.) confirms the potential benefits of recycling carbon revenues, especially if accompanied by targeted investment subsidies, performance standards and mandates.

into the national grid from renewable sources, are widely used. Such measures have led to rapid deployment and reduced cost of renewable energy.²¹

- (f) **Public investment** is likely to be a key component of green economy and climate change adaptation strategies, including for climate-induced migration, in most countries. Public investment could be purposely directed to remove binding constraints in infrastructure creation or human resource development together with targeted social protection measures and employment promotion schemes.
- (g) **Counter-cyclical policies** can also play a role. Public investment in green infrastructure became a common and effective element in fiscal stimulus packages deployed since the 2008–09 economic crisis, for example.²²
- (h) **Access to finance** is a critical requirement. Along with supportive monetary policies such as a competitive exchange rate and affordable credit, a range of measures, including special lending windows by development banks, soft loans and loan guarantees, can alleviate a binding constraint for potential investors in environmental sustainability.^{23, 24}
- (i) **Crowding in of private investment** can be achieved by public investment in combination with fiscal and other market-based and regulatory instruments, triggering private investments which significantly amplify public spending.²⁵

²¹ As of 2014, 108 governments had adopted feed-in tariffs. Renewable Energy Policy Network for the 21st Century (REN21): *Renewables 2015: Global status report* (Paris, 2015). An estimated 75 per cent of solar photovoltaic (PV) and 45 per cent of wind energy capacity worldwide were created through feed-in tariff policies. Deutsche Bank Climate Change Advisors: *GET FiT Program: Global energy transfer feed-in tariffs for developing countries* (2010).

²² More than 70 countries have enacted fiscal stimulus packages. ILO and World Bank: *Joint synthesis report: Inventory of policy responses to the financial and economic crisis* (Geneva and Washington, DC, 2012). Public investment in green infrastructure was a common element in such packages. Approximately US\$440 billion out of \$3.2 trillion in worldwide stimulus investments, or 14 per cent, was in support of greening objectives (investing mostly in rail systems, power grids and buildings). N. Robins, R. Clover and C. Singh: “A climate for recovery: The colour of stimulus goes green”, HSBC Global Research, 25 Feb. 2009. An assessment of US stimulus spending is found in D.J. Wilson: “Fiscal spending jobs multipliers: Evidence from the 2009 American Recovery and Reinvestment Act”, in *American Economic Journal: Economic Policy 2012*, Vol. 4(3), pp. 251–282.

²³ In Germany, for example, low-interest loans of €34 billion in the period 1990–2011 provided critical support for renewable energy development, mostly in wind energy. W. Lütkenhorst and A. Pegels: *Germany’s green industrial policy: Stable policies, turbulent markets – The costs and benefits of promoting solar PV and wind energy* (German Development Institute, Jan. 2014), pp. 26–27. In the United States, the Advanced Technology Vehicle Manufacturing Initiative authorizes up to \$25 billion in loan programmes, which the Department of Energy estimated would create or save 38,700 jobs: W. Canis and B.D. Yacobucci: *The Advanced Technology Vehicles Manufacturing (ATVM) Loan Program: Status and issues*, Congressional Research Service (2015).

²⁴ Multilateral development banks pledged at the Rio+20 Conference in June 2012 to provide US\$175 billion over ten years to help fund sustainable transportation systems, of which \$45 billion has been approved to date. Multilateral Development Banks: *Progress report (2013–2014) of the MDB Working Group on Sustainable Transport* (2015).

²⁵ In Germany, €30 billion of public investment in energy-efficient buildings has triggered total investment of at least €118 billion since 2006. Government data indicate that in 2010 the programme helped to create or maintain some 340,000 jobs, principally in local crafts enterprises.

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- (j) **Public procurement** can be used to create or boost demand for environmentally sustainable goods and services. Procurement can at the same time favour access for micro-, small and medium-sized enterprises (MSMEs) and promote social inclusion.
 - (k) **Regulatory instruments** such as norms, standards, quotas and mandates are used where market-based instruments are ineffective or insufficient to attain policy objectives.²⁶ While it is essential that prices reflect environmental impacts, additional instruments and measures are typically needed.
 - (l) **Targets** or industry-wide strategies, such as emissions targets, are regularly adopted on a national and international scale. Targets provide policy certainty for investors, particularly when enshrined in laws.²⁷
 - (m) **Trade**, along with investment policies, can be a means to facilitate technology transfer, particularly green innovation spillovers from developed to developing economies,²⁸ or to stimulate industrialization through protection for domestic green industries in their infancy.²⁹

(iii) Principles, including relevance of international labour standards

- 74.** The international labour standards most directly related to the macroeconomic context are the ILO Employment Policy Convention, 1964 (No. 122), and Recommendation, 1964 (No. 122). They place the promotion of full, productive and freely chosen employment as a central goal for stimulating national economic growth and development.
- 75.** The Labour Clauses (Public Contracts) Convention, 1949 (No. 94), is relevant for public procurement of green goods and services.
- 76.** The ILO Declaration on Social Justice for a Fair Globalization of 2008 reinforced this link by calling on the member States to place full and productive employment and decent work at the centre of economic and social policies through, inter alia, creating a sustainable institutional and economic environment.

Federal Government of Germany: *CO₂-Gebäudesanierung – Energieeffizient Bauen und Sanieren* [Energy-efficient building renovation].

²⁶ World Bank: *Decarbonizing development*, op. cit.

²⁷ As of early 2015, at least 164 countries had established renewable energy targets. REN21: *Renewables 2015: Global status report*, op. cit.

²⁸ Global trade in environmental goods (excluding services) nearly tripled, from \$231 billion in 2001 to \$656 billion in 2012. International Trade Centre: *Trade in environmental goods and services: Opportunities and challenges* (Geneva, 2014). Green trade flows among developing countries, too, are rising in importance; renewable energy products saw a compound annual growth rate of 30 per cent between 2004 and 2012. UNEP: *South–South trade in renewable energy: A trade flow analysis of selected environmental goods* (Nairobi, 2014).

²⁹ See the discussion of domestic content regulations in section 3.5.

77. More recently, the 2014 ILO conclusions concerning employment³⁰ set out the need for a comprehensive employment policy framework that includes, inter alia, pro-employment macroeconomic policies; trade, industrial, tax, infrastructure and sectoral policies that facilitate structural transformation processes; and policies to tackle the challenge of environmental sustainability and ensure a just transition for all.

(iv) Recommended course of action

78. Countries should adopt macroeconomic and growth policies that promote sustainable production and consumption patterns, create an enabling environment for sustainable enterprises and place full and productive employment and decent work for all at the centre of economic and social policies.

79. Joint and collaborative efforts are required from governments, international organizations, enterprises and workers to incorporate macroeconomic policies effectively in a transition towards environmental sustainability.

80. Governments and social partners should:

■ **align economic growth with social and environmental objectives:**

- (a) incorporate environmentally sustainable macroeconomic policies into medium- and longer-term national development and action plans;
- (b) adopt binding targets, ideally by law, to signal long-term commitments;
- (c) establish long-term financing requirements from public and private sources under different scenarios, to ensure adequate funds and commitments are in place;

■ **utilize market-based instruments to the extent possible:**

- (d) use a combination of taxes, permits, subsidies, guaranteed prices and loans to better align prices and incentives with environmental targets; and implement environmental tax reforms and recycle revenue to reduce the cost of labour and to compensate those disproportionately affected by price rises and structural change;
- (e) ensure sufficient and effective monitoring and evaluation of the uptake and impact of the package of measures and ensure compliance with the intent and rules of the instruments;

■ **adopt appropriate regulations:**

- (f) complement market-based instruments with regulations to ensure policy effectiveness;
- (g) facilitate compliance with regulations through information and guidance adapted to different target groups, such as MSMEs; and monitor compliance and enforce quotas, standards and norms;

³⁰ *Conclusions concerning the second recurrent discussion on employment*, adopted by the International Labour Conference at its 103rd Session (2014).

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- **invest public funds in greening the economy:**
 - (h) use public investments to develop infrastructure with low environmental impact, such as public transport, to rehabilitate natural resources, such as forests and protected areas, and to prioritize resilience to reduce the risk of displacement;
 - (i) direct fiscal revenue towards social protection and active labour market policies to help workers adjust to environmental sustainability policies;
 - (j) use public procurement to incentivize a shift to environmentally sustainable goods and services and promote social inclusion by ensuring that MSMEs and disadvantaged groups have access to public purchases;
 - **develop trade and investment policies:**
 - (k) use trade and investment policies to facilitate access to environmentally friendly technology, to nurture domestic green industries in their infancy, and to encourage and facilitate green innovation and jobs.

3.5. Industrial and sectoral policies

(i) *Purpose and objectives for a just transition*

- 81.** While the greening of economies is a global challenge, many environmental problems affect particular sectors; therefore, solutions must be sought and policies adopted at the sectoral level. Numerous countries have used industrial policy to support the shift to greening their economy.³¹ The objective of a just transition policy is to carefully manage the resulting shifts among and within sectors due to economic restructuring, allowing for fair adjustments for the enterprises and workers affected, including those displaced due to climate change and environmental degradation.
- 82.** As a complement to macroeconomic policies, industrial and sectoral policies and, where appropriate, public–private and public–public partnerships are effective in helping to improve both the environmental and employment performance of existing businesses and stimulating growth in green products and services.
- 83.** Efforts need to focus on key sectors that are most relevant for environmental sustainability and job creation in the national economy, such as agriculture, water management and sanitation, forestry, fisheries, energy, resource-intensive industries, construction, waste management and recycling.
- 84.** In a number of these sectors, a large proportion of employment is informal. Low incomes and poor working conditions in key economic sectors can be a major obstacle to achieving sustainability. Therefore, sectoral policies to develop these sectors should also aim to formalize enterprises and workers.

³¹ Several examples of national policies related to key sectors for environmental sustainability and employment are discussed in ILO: *Sustainable development, decent work and green jobs*, op. cit.; and ILO and ILS: *Working towards sustainable development: Opportunities for decent work and social inclusion in a green economy* (Geneva, 2012).

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85. Some sectors and subsectors are experiencing increases in employment because their products, services or production systems contribute to environmental sustainability and there is a growing demand for them (for example, renewable energy products and services). In contrast, sectors and subsectors with a large environmental footprint are faced with slower growth or even contraction as a consequence of reduced demand, restrictions on resource consumption or pollution control.
86. Since activity and employment in individual sectors may be concentrated in certain geographical areas, concentrated negative impacts may occur in locations that offer few alternative opportunities. In addition to measures such as temporary income replacement, or skills and active labour market policies for affected workers, there is often a need for sectoral policies to diversify local economies, including as an adaptation measure for displaced workers.
87. In some instances, environmental policies affecting specific sectors lead to the adoption of new technologies or to a restructuring within the sector, causing a shift in employment towards processing and services.³² Since education and skills levels in sectors facing restructuring and possible loss of employment are often low, emphasis should be placed on retraining or skills upgrading, for example training fishers in sustainable forms of aquaculture or retraining them for jobs in marine parks.

(ii) Nature of policy instruments

88. Sectoral and industrial environmental policies have proven important for a transition to greener economies, either as stand-alone policies or, more effectively, as a complement to macroeconomic and regulatory policies. Their impact is enhanced by the fact that sectors often have specific governance instruments and institutions, such as collective bargaining and other forms of social dialogue, all of which present opportunities to pursue economic, environmental and social objectives in an effective way. Policies are most successful if they are coordinated among all relevant ministries and in effective dialogue with all stakeholders.
89. Instruments range from specific measures to comprehensive industry policy packages:
- **Sectoral regulations** set production and performance standards that apply to a given economic sector. They include: energy consumption norms for automobiles; pollution limits for power plants; building standards; appliance efficiency requirements; product take-back laws to extend producer responsibility; set-asides in agricultural or forestry areas to preserve biodiversity; and waste management and recycling regulations.³³

³² As revealed by case studies of Bangladesh, Costa Rica and Mali. See O. Strietska-Ilina et al.: *Skills for green jobs: A global view – Synthesis report based on 21 country studies* (Geneva, ILO and CEDEFOP, 2011).

³³ For example, proposed US standards to reduce carbon pollution by 25 per cent in the period 2012–20 could create 274,000 new efficiency-related jobs (including re-spending effects). Natural Resources Defense Council: “New carbon pollution standards can save Americans \$37.4 billion on electric bills, create 274,000 jobs”, press release, 29 May 2014.

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- **Mandates** typically consist of mandatory requirements, such as a given share of renewable energy in a power supply, a minimum clean fuel mix for vehicles (such as ethanol and biodiesel) or minimum recycled content. They contribute to stimulating the production and consumption of environmentally sustainable goods and services within or across sectors.³⁴
 - **Incentives** include green subsidies, such as price support measures, tax breaks, direct grants and loan support,³⁵ and measures to facilitate the transfer of technology among countries. Financial disincentives include taxes, charges and levies, or the removal of environmentally harmful subsidies that discourage production and consumption of certain goods and services.
 - **Industrial policies** span a range of measures. Policies on, and investment in, research and development, human resources (skills) and education encourage the development of industries of strategic importance. Furthermore, market development policies, including the use of procurement policies or domestic content requirements, have been prominent in certain countries.³⁶
 - **Sectoral protection policies** are measures designed to limit or offset the negative impacts of greener growth and environmental changes. They may include targeted measures such as unemployment benefits, temporary payments, retraining and redeployment of the workforce in a specific sector.
 - Sectoral schemes for **product labelling and certification** can be used to set environmental and social standards, inform consumers and provide third-party verification.³⁷

³⁴ As of 2014, 99 national or provincial authorities had adopted renewable energy quotas known as portfolio standards, 21 countries had renewable heat mandates, and 64 national or provincial authorities had put biofuel mandates in place. REN21: *Renewables 2015: Global status report*, op. cit.

³⁵ In the field of renewable energy, 126 countries offered capital subsidies or grants, investment production tax credits (used mostly in higher-income countries), energy and value added tax reductions or public financing, as of 2014. See *ibid.*

³⁶ Domestic content rules for wind and solar energy have been implemented in Brazil, Canada, China, India, South Africa, Turkey, Ukraine and other countries. J.-C. Kuntze and T. Moerenhout: *Local content requirements and the renewable energy industry – A good match?* (Geneva, International Centre for Trade and Sustainable Development, 2013). In Brazil, such rules helped raise the number of foreign wind energy manufacturers setting up factories from one in 2007 to ten today. International Renewable Energy Agency (IRENA): *Renewable energy and jobs: Annual review 2015* (Abu Dhabi, 2015).

³⁷ Multiple initiatives promote environmentally and socially sustainable practices (organic production, fair trade, worker welfare) in the coffee and cotton sectors. J. Potts, M. Opitz and C. Wunderlich: *Closing the gaps in GAPS: A preliminary appraisal of the measures and costs associated with adopting commonly recognized “good agricultural practices” in three coffee growing regions*, International Institute for Sustainable Development (Winnipeg, 2007); Fairtrade International: “Cotton”, at: www.fairtrade.net/cotton.html. Forest certification programmes such as the Forest Stewardship Council in the United States and the international Programme for the Endorsement of Forest Certification seek to ensure environmental, social and economic benefits.

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- Clean energy and other green investments can diversify and revive **regional economies** suffering from economic crisis in sectors such as mining, shipbuilding, agriculture, forestry and fisheries.³⁸ Urban and regional planning can contribute to sustainable housing and transportation systems.

(iii) Principles, including relevance of international labour standards

- 90.** Sectoral policies are, by their nature, cross-cutting. Therefore, the principles and standards that apply to sectoral policies are the same as those that guide other policy areas. Useful sector-specific guidance on social and labour policy can be found in the conclusions of ILO sectoral meetings.³⁹
- 91.** A number of international labour standards and national labour laws are specific to individual economic sectors, including mining, agriculture, fisheries and construction (see, for example, those listed in section 3.8 on occupational safety and health policies). Although not exhaustive, these instruments, combined with national laws and regulations, can provide guidance to governments and social partners on a coherent and coordinated application of labour laws and regulations at the international and national levels. They can also facilitate the involvement of employers and workers in dialogue and collective bargaining at the sectoral level.

(iv) Recommended course of action

- 92.** Governments and social partners should:

At the policy formulation stage:

- (a) design sectoral policies and programmes in line with the specific conditions of each sector and the types and sizes of enterprises operating in the sector;
- (b) foster effective social dialogue at the sectoral level to promote consensus building and social acceptance as prerequisites for the successful implementation of policies;
- (c) establish regulations, mandates and incentives that stimulate demand, investment and development of markets for goods and services in sectors and subsectors that are particularly important for the greening of national economies;

³⁸ In the Gaspé peninsula in Quebec, the establishment of wind turbine manufacturing and maintenance facilities helped reduce unemployment. OECD: *Linking renewable energy to rural development*, OECD Green Growth Studies (Paris, 2012). In Germany, former shipyard workers found employment in manufacturing equipment for the offshore wind sector. D. Fornahl et al.: “From the old path of shipbuilding onto the new path of offshore wind energy? The case of Northern Germany”, in *European Planning Studies*, 2012, Vol. 20, No. 5, pp. 835–855. In Spain’s Bierzo Valley, in 2006 the Fundación Ciudad de la Energía [City of Energy Foundation] assisted in attempts to transition from coalmining to a low-carbon economy. C. Martínez-Fernández et al.: *Improving the effectiveness of green local development: The role and impact of public sector-led initiatives in renewable energy*, OECD Green Growth Papers (Paris, 2013).

³⁹ See the website of the ILO Sectoral Policies Department, <http://www.ilo.org/sector/Resources/recommendations-conclusions-of-sectoral-meetings>. For an extensive discussion of policies applicable to key economic sectors, see ILO and ILS: *Working towards sustainable development*, op. cit.

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- (d) ensure that policy instruments for market creation and incentives are used in a stable, predictable and transparent manner, give certainty to investors, and are time-bound and phased out over time in order to minimize market and price distortions, encourage innovation and ensure effective use of public resources;

At the policy implementation stage:

- (e) undertake steps and design measures to facilitate formalization, particularly in the waste management and recycling sectors, to combat informal, precarious and hazardous work;
- (f) formulate accompanying policies through social protection, unemployment insurance and benefits, skills training and upgrading, workforce redeployment and other appropriate measures to support workers employed in sectors negatively impacted by greening policies;
- (g) ratify or otherwise implement relevant international labour standards pertaining to environmental sustainability, conditions of work, OSH, and labour migration in specific sectors;
- (h) establish and strengthen institutional and technical capacities at the regional and local levels, as subnational authorities are often best placed – and in some countries mandated – to guide the transition from declining industries to greener activities, and to address the necessary change in regional identity, often linked to traditional and long-established industries (for example, in fishing, coalmining or steel-industry regions).

3.6. Enterprise policies

(i) Purpose and objectives for a just transition

- 93.** Enterprises play a key role in the transition to environmentally sustainable economies and societies, as the social, economic and environmental dimensions are inextricably linked in the workplace.
- 94.** Enterprises are a main driver of employment and wealth creation, but at the same time they are a major contributor to resource depletion, pollution and global warming. While countries need to expand their enterprise base to deliver goods and services, eradicate poverty and create jobs, unsustainable economic growth is resulting in depletion of the resources and severe degradation of the environment upon which the poorest in society and the least-developed countries are most dependent.
- 95.** The objective of enterprise policies should be to enable a transition towards more sustainable and greener enterprises that are resilient to the impacts of climate change and to higher resource prices and are able to comply with more demanding environmental regulation on their businesses. Enterprises should also be able to contribute to eco-innovation and to seize opportunities in new and expanding markets for environmental goods and services.
- 96.** Policies should promote environmentally sustainable management practices and resource efficiency while increasing productivity and competitiveness, reducing costs and improving workers' health.

97. MSMEs provide two-thirds of all jobs globally and also create the majority of new jobs.⁴⁰ However, they often have only limited access to information on how to make their operations more resource efficient and responsive to the need for greater environmental protection and sustainability. Providing an enabling environment and assisting MSMEs, including cooperatives and entrepreneurs, is key to a successful transition.

(ii) Nature of policy instruments

98. Governments should foster the greening of enterprises and jobs through regulatory and non-regulatory frameworks that support environmental sustainability while stimulating innovation and encouraging investments both at home and abroad.⁴¹

99. An enabling environment for sustainable enterprises seeks to improve their economic prospects, overcome decent work deficits for workers and ensure that economic activities are environmentally sustainable.⁴²

100. A standardized, rules-based approach to establishing environmental requirements is preferable to a highly differentiated one, including for most MSMEs.⁴³

101. Access to information and guidance is important for MSMEs, along with enforcement.

102. The following are examples of good practices for both regulatory and non-regulatory instruments:

Regulatory instruments:

- **stable regulatory and price signals**, thereby enhancing security for investment;⁴⁴
- a **tailored, sectoral approach** to regulation, communication and enforcement; and tailored regulatory instruments that avoid activity-based regulation for low-risk installations;
- **enforcement capacity** and a structure to provide information to businesses and assist them in achieving compliance;⁴⁵

⁴⁰ Based on information for 99 countries covering the period from 2006 to 2010. See M. Ayyagari, A. Demirgüç-Kunt and V. Maksimovic: *Small vs. young firms across the world: Contribution to employment, job creation, and growth*, World Bank Policy Research Paper No. 5631 (Washington, DC, 2011). See also ILO: *Small and medium-sized enterprises and decent and productive employment creation*, Report IV, International Labour Conference, 104th Session, Geneva, 2015.

⁴¹ ILO: *Conclusions concerning the promotion of sustainable enterprises*, adopted by the International Labour Conference at its 96th Session, Geneva, 2007.

⁴² *ibid.*, and ILO: *Conclusions concerning small and medium-sized enterprises and decent and productive employment creation*, adopted by the International Labour Conference at its 104th Session, Geneva, 2015.

⁴³ E. Mazur: *Green transformation of small businesses: Achieving and going beyond environmental requirements*, OECD Environmental Working Paper No. 47 (Paris, 2012).

⁴⁴ The importance of a stable policy framework is underlined by the experience of the renewable energy industry in recent years, which has been affected by a high degree of policy fluctuation and uncertainty in a number of countries. IRENA: *Renewable energy and jobs* (Abu Dhabi, 2013) and IRENA: *Renewable energy and jobs: Annual review 2015*, op. cit.

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- the use of **economic benefits** as a selling point;
 - **partnerships** between regulatory and enforcement bodies with trade associations;
 - ensuring that green **public procurement** is accessible to MSMEs;

Non-regulatory instruments:

- in addition to price signals, stimulation of **market demand** through the introduction of eco-labels, sector-specific certifications and green business awards and through green public procurement;
- offering financial and technical support to enterprises for **research and development** and innovation in green technologies;⁴⁶
- **industry clusters** (industry, universities, research institutes and government institutions) bundle economic assets, strengths and competencies and innovative activities, and can support sustainable regional development;⁴⁷
- **incubation** to help MSMEs to capture fast-growing markets for environmental goods and services;⁴⁸
- support to improve **management capability** for better environmental performance, to establish environmental management and compliance systems and to conduct energy and material audits;⁴⁹

⁴⁵ In Thailand, the 2011–30 Energy Efficiency Development Plan provides financial and technical assistance measures to MSMEs to improve skills and make available the financial resources needed to meet environmental standards and regulations. N. Ngernbumroong: “Policy & regulatory framework for energy efficiency and potential for energy efficiency measures in Thailand’s industrial sector”, ENSOL Company (2012).

⁴⁶ Brazil’s small enterprise development service, SEBRAE, has supported innovative enterprise activities since 2005. O. Marcuzzo do Canto: “Incentives to support innovation in the private sector: The Brazilian experience”, Inter-American Development Bank, undated.

⁴⁷ A large number of wind and bioenergy clusters have emerged in European countries. IRENA: *Renewable energy and jobs*, op. cit.; C. Martínez-Fernández et al.: “Green growth in the Benelux: Indicators of local transition to a low-carbon economy in cross-border regions”, OECD Local Economic and Employment Development (LEED) Working Papers, No. 2013/09. One example outside of Europe is Mexico’s ClusterGEO (Cluster on Geothermal and Renewable Energies), International Geothermal Association: IGA News, No. 87 (Jan.–Mar. 2012).

⁴⁸ Of an expected US\$6.4 trillion in clean technology investments in developing countries over the next decade, MSMEs might capture \$1.6 trillion. infoDev: “6.4 trillion reasons to fight climate change”, 17 Mar. 2015. The World Bank’s infoDev Climate Technology Programme is facilitating the emergence of new green enterprises through a network of climate innovation centres in the Caribbean, Ethiopia, Ghana, India, Kenya, Morocco, South Africa and Viet Nam. infoDev: “Climate Technology Program eUpdate”, undated.

⁴⁹ Intelligent Energy Europe’s ENGINE project (Energy Efficiency in Small and Medium-Sized Enterprises, 2003–06) focused on helping firms in the metal processing, automotive, wood and food industries become more energy-efficient through energy audit services (including training auditors, setting up a knowledge pool, and creating expert networks).

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- **access to technology** to facilitate links to green buyers and suppliers in value chains⁵⁰ and to provide advice and services to enable technology transfer and support diversification strategies;
 - **labour–management cooperation** for cleaner and more eco-efficient production, which has led to significant and often cost-effective improvements in eco-efficiency;⁵¹
 - providing **financial incentives**, funds, grants, green credit lines, low-interest loans and tax incentives for businesses adopting green practices and investing in green technologies (see section 3.4, Macroeconomic and growth policies);
 - providing management and staff of enterprises with **continuous learning**, training and retraining opportunities in green business practices and restructuring practices in green technology and innovation (see section 3.7, Skills policies);
 - providing enterprises and their workers – notably those exposed to risks of climate change or overuse of natural resources and those having to move away from high-carbon, highly polluting and resource-intensive operations – with targeted **transitioning plans** and **social protection** schemes based on social dialogue (see section 3.9, Social protection policies);
 - **entrepreneurship and management training** for women and men in existing enterprises, for new business start-ups and for cooperatives, combining access to finance and business skills; this can also provide new opportunities for unemployed and displaced workers;⁵²
 - **formalization** of enterprises and workers in key sectors, including agriculture, forestry, fisheries, waste management and recycling, and construction.⁵³

⁵⁰ Brazil’s SEBRAE service facilitates links to buyers in value chains which put a premium on social and environmental performance of their suppliers. SEBRAE: *Produção e consumo sustentáveis – oportunidade e diferencial competitivo a partir do empreendedorismo sustentável* [Sustainable production and consumption: Opportunity and competitive advantage based on sustainable entrepreneurship] (Brasília, 2012).

⁵¹ ILO: “SCORE – Sustaining Competitive and Responsible Enterprises”, at: <http://www.ilo.org/score>. One very successful case of workplace cooperation for eco-efficient innovation is that of the 3M conglomerate. The company’s Pollution Prevention Pays programme, initiated in 1975, relies on voluntary employee participation, and has cumulatively prevented some 1.4 billion kilograms of pollutants. 3M Company: *2011 Sustainability Report* (St. Paul, Minnesota, 2011).

⁵² Women entrepreneurs account for up to a third of all businesses operating in the formal economy worldwide, although the majority of those operating in developing and transitioning economies are very small and micro-enterprises: For specific measures to support women entrepreneurs, see ILO: *Women’s entrepreneurship development: Encouraging women entrepreneurs for jobs and development* (Geneva, 2014).

⁵³ Particularly in agriculture and waste management, the formation of cooperatives can be a tool to facilitate formalization (by helping to secure fairer prices and providing improved access to know-how, equipment, inputs and financing for members, among other factors). Examples of successful organic farming cooperatives are discussed in ILO and ILS: *Working towards sustainable development*, op. cit.

(iii) Principles, including relevance of international labour standards

- 103.** The 2007 ILO conclusions concerning the promotion of sustainable enterprises underline the need to ensure that human, financial and natural resources are combined equitably in order to achieve sustainable innovation, enhanced productivity and other development needs of the enterprise. The conclusions call for new forms of cooperation to ensure that the quality of present and future life and employment is maximized, while safeguarding the sustainability of the planet.
- 104.** Responsible stewardship of the environment is one of the 17 conditions for a conducive environment for sustainable enterprises set out in the 2007 conclusions. They recommend the use of tax incentives and regulations, including public procurement procedures, to promote consumption and production patterns that are compatible with the requirements of sustainable development. At the enterprise level, sustainability also means recognition of the impact on the natural environment. Therefore, sustainable enterprises should innovate and adopt appropriate environmentally friendly technologies.
- 105.** The 2015 ILO conclusions concerning small and medium-sized enterprises and decent and productive employment creation also stress the importance of the environmental sustainability of MSMEs and of a just transition to a low-carbon economy for MSMEs and their workers.
- 106.** The Transition from the Informal to the Formal Economy Recommendation, 2015 (No. 204), is directly relevant for the formalization of enterprises producing environmental goods and services or those with significant environmental impacts.
- 107.** ILO Conventions dealing with, inter alia, labour inspection, labour clauses and workers' representation can be instrumental in addressing, more generally, both the environmental conditions in the workplace and the effects on the workforce of the introduction of technology and measures to increase resource efficiency and change business models.

(iv) Recommended course of action

- 108.** Governments and social partners should:
- (a) enhance the resilience of businesses, in particular MSMEs, to avoid disruption of economic activity and loss of assets, jobs and incomes. National policies and plans for adaptation to climate change and disaster preparedness should work closely with business associations to climate-proof infrastructure and promote disaster preparedness information and insurance;
 - (b) provide regulatory and non-regulatory frameworks and an enabling environment that pay special attention to assisting MSMEs, including cooperatives and entrepreneurs, in making the transition; the regulatory environment should be based on assessments and social dialogue in line with the 2007 conclusions;
 - (c) provide targeted business information and advice on green business practices, eco-innovation and regulatory systems and on how to achieve compliance, with particular attention to MSMEs and in easily accessible formats such as user-friendly toolkits;

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- (d) for existing enterprises, provide technical support, advice and services to establish environmental management and compliance systems; and for green technology start-ups, conduct awareness and education campaigns to foster a culture of eco-entrepreneurship and provide technical support, advice and services;
 - (e) provide assistance to management and workers in restructuring business operations away from high-carbon, high-polluting and resource-intensive operations; such support should include technology transfer mechanisms;
 - (f) provide financial incentives (grants, low-interest loans and tax incentives) for businesses adopting green practices and energy efficiency measures, as well as for investment in green technologies; and make full use of public procurement to promote sustainable products and services and enable access for MSMEs to become suppliers;
 - (g) establish targeted programmes in sectors where a significant proportion of enterprises and workers are informal; in this context, the use of the cooperative model can be an effective tool for formalization.⁵⁴

109. In alignment with the other policies for a just transition, governments and social partners should:

- (a) provide training opportunities for up- and reskilling (including for workers affected by restructuring) and initial learning in green business practices and environmentally friendly technology and innovation;
- (b) provide clear and stable market signals through prices, the introduction of eco-labels, sector-specific certifications and other green business awards, and green public procurement;
- (c) provide financial and technical support to enterprises undertaking research and development in green technologies, and support cluster development and incubation;
- (d) consider support measures for enterprises facing restructuring;
- (e) promote institutionalized workplace cooperation by fostering a culture of dialogue, knowledge sharing and mutual advice aimed at improving resource efficiency, reducing waste, and applying safe and clean technologies and working methods that improve job quality.

3.7. Skills policies

(i) Purpose and objectives for a just transition

110. In order to succeed, the greening of the economy must focus on skills development. Skills shortages are a major impediment to the transition.⁵⁵ In the transition to sustainable energy, inadequate skills contribute to cost overruns, project delays, cancellations and

⁵⁴ S.M. Dias: *Overview of the legal framework for inclusion of informal recyclers in solid waste management in Brazil*, WIEGO Policy Brief No. 6 (Cambridge, MA, 2011).

⁵⁵ O. Strietska-Ilina et al.: *op. cit.*

faulty installations.⁵⁶ Without skilled workers and competent enterprises, the shift to a greener economy will be neither technically feasible nor economically viable. It is therefore important to anticipate needs and avoid skills shortages, and ensure skills development as part of comprehensive pro-employment strategies.

111. Measures to develop skills that support entrepreneurship, resilience, innovation in enterprises, including MSMEs, and the transition to sustainable practices are critical factors for success.
112. Access to adequate technical and vocational training helps workers to develop the skills needed to transition to new types of jobs or to work with new materials, processes and technologies in their existing jobs.
113. Education and training systems should be designed to meet the needs of different groups, including young people, women, vulnerable workers and workers in rural areas, enabling them to contribute to, and benefit from, economic diversification and rural economic empowerment. Furthermore, training programmes need to target displaced workers who became unemployed due to greening to ensure their swift re-entry into the labour market.
114. In sum, the main objectives of an enabling framework that links skills development to productivity, employment, development and decent work targets are:
 - to match training to demand for skills in the labour market;
 - to help workers and enterprises adjust to changes, making it easier to move from declining or low productivity activities to growing and higher-productivity activities through reskilling and lifelong learning; and
 - to build and sustain competencies for future labour market needs, focusing on the strategic role of education and training policies in triggering and continuously fuelling innovation, enterprise development, technological change and competitiveness.⁵⁷

(ii) Nature of policy instruments

115. While a greener economy will see the emergence of some new occupations, it will mostly require new competencies in existing jobs and entail shifts in demand for occupations.
116. In order to avoid skills shortages, it is necessary to anticipate needs and to integrate skills development into general environmental, sectoral, industrial, technology, development and employment policies.⁵⁸

⁵⁶ IRENA: *Renewable energy and jobs*, op. cit.; Institute for Research on Labor and Employment: *California workforce education and training needs assessment for energy efficiency, distributed generation, and demand response* (University of California, Berkeley, 2011).

⁵⁷ ILO: *Skills for improved productivity, employment growth and development*, Report V, International Labour Conference, 97th Session, Geneva, 2008.

⁵⁸ To this end, businesses, trade unions and public authorities in Brussels jointly established the Professional Reference Centre for Construction with reference to eco-construction, renovation and retrofitting. Centre de Référence Professionnel de la Construction at: <http://www.cdr-brc.be/fr/default.asp>.

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117. Education and training for green jobs presupposes an approach based on comprehensive lifelong learning. National skills development and employment policies need to incorporate education for environmental awareness with coherent skills strategies to prepare workers, particularly those vulnerable to displacement.
 118. Comprehensive, coherent and coordinated policy design is essential to avoid periods of serious skills shortages, to make future demand for skills more predictable for providers of training and education and their trainees, to ensure retention of skilled workers by providing stable employment, and to mitigate the potentially severe adjustment costs, both economic and social.^{59, 60}
 119. Coordination, not only at the national level but also at the industry level, is important. There must be strong interaction between the world of work and the world of education and training.⁶¹ Solid technical and vocational education and training systems need to involve industry and trade unions.⁶²
 120. Countries need to strengthen their local expertise and skills building in sectors critical to the green economy.⁶³ This is particularly critical if rural communities are to take advantage of greening options.⁶⁴ In addition to national-level efforts, international cooperation can also play an important role.⁶⁵

⁵⁹ ILO: *Greening the global economy: The skills challenge*, Skills for Employment Policy Brief (Geneva, 2011).

⁶⁰ A good example of coordinated action is found in France, where top-down policy approaches (the central Government's *Plan Bâtiment Grenelle*) were combined with bottom-up policy approaches (local authorities' *Alliance Villes Emploi* network) in 2008. M. Establie D'Argencé, S. Herold and H. Le Marois: "Lessons from the project 'Employment Centres and Sustainable Development' in France", in OECD and CEDEFOP: op. cit.

⁶¹ In India, the Sector Skill Council for Green Jobs was launched in May 2015 by Government and industry. Its immediate tasks are to provide training and accredit training organizations in the solar sector, and to draw up a comprehensive skills development plan for the next ten years. *The Economic Times* (India): "Government to train 50,000 people to become solar professionals", 28 May 2015.

⁶² In Spain, the National Renewable Energy Centre (CENER) and the Training Centre for Renewable Energy (CENIFER) pursue research and development and offer training for workers. ILO and ILS: *Working towards sustainable development*, op. cit.

⁶³ This is one of the objectives of Malaysia's National Renewable Energy Policy and Action Plan of April 2010. See IRENA: *Renewable energy and jobs*, op. cit. South Africa's intent to create a domestic renewable energy industry relies on the skills-building efforts at the new South African Renewable Energy Technology Centre (SARETEC). C. Early: "South Africa: Investing in people to make wind work", in *Wind Power Monthly*, 23 Aug. 2012.

⁶⁴ In Bangladesh, vocational skills training has been a key aspect of a microcredit programme for solar home systems in rural areas. D.C. Barua: "Financial and social benefits of building energy lending program: Bangladesh success story", Zayed Future Energy Prize presentation, Abu Dhabi, 20 Jan. 2014.

⁶⁵ The Training Centre for Renewable Energy (BZEE) in Germany offers several standardized modules for wind energy technicians. Of an estimated 3,500–4,000 people who received training since 2000, about 30 per cent were from outside Germany. The BZEE's Global Training Partnership encompasses 29 training facilities in 12 countries.

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- 121.** Training programmes need to target displaced workers and disadvantaged groups in the labour market, with assistance and preferential treatment to ensure their access to new and good-quality green jobs. Particular attention should also be paid to low-skilled workers who can be re-engaged, to facilitate their effective participation in training.
- 122.** Core skills for employability are those of broad relevance rather than those linked to specific occupations or technologies. They include competencies in literacy, numeracy, leadership, teamwork, communication and systemic thinking as well as in science, technology, engineering and mathematics. Such general competencies are linked to workers' ability to learn, and thus affect their adaptability and occupational mobility. Opportunities to gain competencies in these areas can be provided through both initial and continuing training.
- 123.** Short and tailor-made courses linked directly to specific occupations have been found to be a useful approach to retraining workers and upgrading skills in the context of restructuring measures. The ability of workers to take advantage of such training opportunities not only hinges on how willing they are to learn new skills, but also on their ability to dedicate time to training.
- 124.** However, training is not the only activity needed to smooth transitions in the face of structural adjustments. Ideally, mechanisms for workforce restructuring should be supported by a well-functioning labour market information system, delivered through efficient public employment services, and bolstered by social protection mechanisms and institutional mechanisms for social dialogue.

(iii) *Principles, including the relevance of international labour standards*

- 125.** Skills development policies are part of comprehensive pro-employment strategies that address industrial, sectoral, trade and investment policies and transition to sustainable development.
- 126.** The provisions of the following ILO instruments and policy documents cover various aspects of skills development:

International labour standards:

- Human Resources Development Convention, 1975 (No. 142), and Recommendation, 2004 (No. 195)
- Paid Educational Leave Convention, 1974 (No. 140)

Policy documents:

- Conclusions on skills for improved productivity, employment growth and development⁶⁶
- A Skilled Workforce for Strong, Sustainable and Balanced Growth: A G20 Training Strategy

⁶⁶ ILO: *Conclusions on skills for improved productivity, employment growth and development*, adopted by the International Labour Conference at its 97th Session, Geneva, 2008.

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- Conclusions concerning the second recurrent discussion on employment⁶⁷

127. These instruments and documents recognize the importance of skills development in effectively managing the many drivers of change in economies and labour markets, that is, addressing the capacities needed to take advantage of opportunities and mitigating the negative impacts to facilitate adjustment.

128. One global driver of change is climate change and the transition to the green economy.⁶⁸ The 2008 conclusions state that “[g]overnments and social partners need to work in the framework of social dialogue for shaping national, regional and international skills development programmes that can promote the integration of the economic, social and environmental dimensions of sustainable development”.

(iv) Recommended course of action

129. Governments and social partners should:

- (a) coordinate green economy investments with skills development policies, financing and teacher training;
- (b) match supply and demand for skills through skills needs anticipation, labour market information and core skills development;
- (c) give high policy priority and allocate resources to the continued identification and anticipation of evolving skills needs and the review of occupational skills profiles and training programmes;
- (d) engage in social dialogue for responsive labour market institutions and training systems, and coordinate stakeholder needs at all stages of education and skills policy development and implementation;
- (e) ensure equal access to opportunities for skills acquisition for groups such as young people, women, workers who need to be redeployed, including across borders, and for owners and workers of MSMEs by offering specific training services, ensuring suitable timing and duration and providing access to childcare facilities to assist trainees with parental responsibilities;
- (f) encourage acquisition of both generic skills and skills in science, technology, engineering and mathematics in curricula for basic training and lifelong learning;
- (g) provide hands-on training and practical experience as part of the training process in order to increase the employability of graduates and the relevance of training to the world of work;
- (h) promote generic skills through certification of competency profiles for green jobs;
- (i) foster peer learning among enterprises and workers to spread sustainable practices and the use of new green technologies;

⁶⁷ ILO: *Conclusions concerning the second recurrent discussion on employment*, adopted by the International Labour Conference at its 103rd Session, Geneva, 2014.

⁶⁸ UNEP et al.: *Green jobs: Towards decent work in a sustainable, low-carbon world* (Nairobi, 2008); O. Strietska-Ilina et al.: op. cit.

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- (j) assist businesses, particularly MSMEs, in their engagement with governments and training providers with regard to management and skills upgrading of their current workforce, anticipation of future occupational profiles and skills needs, and workers' acquisition of portable and employable skills.

3.8. Occupational safety and health policies

(i) Purpose and objectives for a just transition

- 130.** Guaranteeing that jobs in a green economy are safe and healthy for workers and the communities they live in presents both challenges and opportunities, with multiple dimensions to consider. For example, climate change and growing resource scarcity lead to increases in occupational hazards for large groups of workers; rising temperatures cause increased levels of heat stress in agricultural and other outdoors occupations; and the decline of coastal fisheries forces fishers into more hazardous ocean fishing.
- 131.** Furthermore, efforts to redress the impacts of harmful materials widely used in earlier technological phases may lead to increased risks for workers, such as exposure to asbestos or to harmful organic chemicals in cooling systems and electrical installations during building renovation.
- 132.** At the same time, the transition to green jobs also brings benefits in terms of OSH. For instance, the switch from coal power to renewable energy leads to less coalmining and thus reduced exposure to a wide range of hazards, including the risk of fires and explosions, and dangerous materials such as silica dust and mercury.
- 133.** In general, green jobs share some of the same OSH risks as conventional workplaces. In a sector such as construction, both conventional and green buildings entail very similar work activities. The electrical, electronics and semiconductor industries – which provide critical components for renewable energy products such as solar panels and for energy efficiency equipment – are known for their use of hazardous substances (and, in some cases, for dangerous working conditions). Some types of green jobs require combinations of traditional skills, resulting in new OSH risk profiles. The installation of solar water heaters, for instance, requires the combined skills of roofers, plumbers and electricians.⁶⁹
- 134.** In addition, awareness and anticipation of new and emerging risks is necessary. Changes in the work environment in support of a greener economy may generate new risks associated with the introduction of new technologies, the use of new materials and work processes or changes in work organization itself.
- 135.** An accelerating pace of technological change in the move towards a greener economy gives rise to difficult-to-anticipate challenges, as new materials and processes are scaled up before the appropriate OSH standards are in place. Skills training needs to keep pace with the expansion of the green economy, to prevent skills gaps translating into safety and health risks for inexperienced workers.⁷⁰ A combination of political, administrative, technical and regulatory approaches can ensure adequate levels of safety and health at work.

⁶⁹ European Agency for Safety and Health at Work (EU–OSHA): “Workers’ safety and health in green jobs”, at: <https://osha.europa.eu/en/emerging-risks/green-jobs>.

⁷⁰ *ibid.*

(ii) Nature of policy instruments

- 136.** To avoid or mitigate possible conflicts between greening objectives and OSH concerns, and uncertainty about the life-cycle impacts of occupational exposure to new, potentially hazardous materials, it is essential to assess and anticipate occupational hazards and risks in the green economy.
- 137.** At the level of national policy-making, one central challenge lies in the need to continuously improve and update OSH standards, and provide adequate labour inspections to ensure compliance. To improve working conditions, labour inspection and enforcement must go hand in hand with suitable information and guidance on safe, healthy and environmentally sound workplace practices. Health and safety instructions are an essential component of all skills training.
- 138.** While the greening of the economy could bring an opportunity to create synergies between environmental aspects on the one hand, and labour, health and safety on the other, there are also challenges in monitoring dispersed green workplaces. These include the increase in subcontracted work, especially among micro- and small enterprises, the need for adequate worker training in new green technologies and work processes, and challenges and opportunities inherent in increased automation.⁷¹
- 139.** Preventative measures, hazard control and risk assessments typically need to be adopted at the enterprise level.⁷²
- 140.** The formalization of workers in the informal economy is a critical policy objective. In sectors such as waste management or construction, for example, workers who are not unionized or otherwise organized, and who may lack recognition, are likely to be exposed to higher workplace risks. Policies to formalize workers and enterprises should include OSH improvements.⁷³
- 141.** Safety and health should be integrated into product design, procurement, operations, maintenance, use, reuse and recycling. A first step could be to integrate safety and health aspects into existing green certification systems and to enforce job quality standards in green sectors.
- 142.** Enterprise-level safety and health systems that include elected representatives of workers are key to improved performance and offer potential for major synergies with environmental management.

⁷¹ A 2013 study by the EU–OSHA’s European Risk Observatory: *Green jobs and occupational safety and health: Foresight on new and emerging risks associated with new technologies in green jobs by 2020*, assessed key contextual drivers and developed a number of green jobs scenarios in order to explore OSH challenges up to 2020. An assessment was undertaken of: renewable energy; electricity transmission, distribution and storage; building construction and retrofitting; transportation; waste processing; a variety of manufacturing technologies; and nanotechnologies and nanomaterials.

⁷² ILO: *Promoting safety and health in a green economy* (Geneva, 2012).

⁷³ See, for example, Sri Lanka’s National Vocational Qualification (NVQ) certification. ILO: *Sustainable development, decent work and green jobs*, op. cit.

143. The numerous ILO standards on health and safety and governance are particularly important in showing how green jobs can become examples of more secure and decent workplaces. Attention to safety and health in the transformation of economies and workplaces can become a major driver for the broader application of international labour standards through a combination of awareness raising, regulation, social dialogue and collective bargaining, labour inspection and corporate social responsibility.

(iii) Principles, including relevance of international labour standards

144. ILO standards on OSH provide essential guidance for governments, employers and workers to establish a safe and healthy working environment. Key ILO standards are highly pertinent to the anticipation, identification, assessment and control of hazards and risks – whether known or new – arising from green technologies and jobs.⁷⁴ They are applicable both to the greening of existing industries and jobs, and to new ones.

145. While OSH Conventions are primarily used to protect human health, some also serve to protect the environment. These have a preventative aspect and are guided by the precautionary principle in cases where human actions have an impact on the environment and on human health, particularly where the consequences of such actions may be unpredictable.

146. The ILO labour standards, codes of practice and guidelines that are of particular relevance to occupational hazards and risks arising from green technologies and jobs include:⁷⁵

- Occupational Safety and Health Convention, 1981 (No. 155), and Recommendation, 1981 (No. 164)
- Protocol of 2002 to the Occupational Safety and Health Convention, 1981
- List of Occupational Diseases Recommendation, 2002 (No. 194)
- Occupational Health Services Convention, 1985 (No. 161), and Recommendation, 1985 (No. 171)
- Promotional Framework for Occupational Safety and Health Convention, 2006 (No. 187), and Recommendation, 2006 (No. 197)
- Chemicals Convention, 1990 (No. 170), and Recommendation, 1990 (No. 177)
- Prevention of Major Industrial Accidents Convention, 1993 (No. 174), and Recommendation, 1993 (No. 181)
- ILO code of practice on safety and health in the use of chemicals at work (1993)
- *Guidelines on occupational safety and health management systems (ILO–OSH 2001)*

⁷⁴ ILO: *Promoting safety and health in a green economy*, op. cit.

⁷⁵ *ibid.*

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- 147.** For specific sectors, additional standards and guidance are relevant. For shipbreaking, they are: the Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships (International Maritime Organization, 2009) and *Safety and health in shipbreaking: Guidelines for Asian countries and Turkey* (ILO, 2004). For agriculture, relevant tools include the Safety and Health in Agriculture Convention, 2001 (No. 184), and Recommendation, 2001 (No. 192), and *Ergonomic checkpoints in agriculture* (ILO, 2012). In the forestry sector, the code of practice *Safety and health in forestry work* (ILO, 1998) and the *Guidelines for labour inspection in forestry* (ILO, 2005) are applicable. ILO standards relevant to the construction sector include the Safety and Health in Construction Convention, 1988 (No. 167), and Recommendation, 1988 (No. 175); the code of practice *Safety and health in construction* (ILO, 1992); the Asbestos Convention, 1986 (No. 162), and Recommendation, 1986 (No. 172); and the code of practice *Safety in the use of asbestos* (ILO, 1984).
- 148.** On air pollution, Article 3 of the Working Environment (Air Pollution, Noise and Vibration) Convention, 1977 (No. 148), specifically addresses contamination by substances which are harmful to health or are “otherwise dangerous”. Another Convention dealing directly with environmental issues is the Chemicals Convention, 1990 (No. 170). Article 14, in particular, covers the handling and disposal of hazardous chemicals and containers to minimize risk to the environment.
- 149.** The Prevention of Major Industrial Accidents Convention, 1993 (No. 174), and its accompanying Recommendation, 1993 (No. 181), aim to protect workers, the public and the environment against the risk of major industrial accidents, in particular through the prevention of major accidents involving hazardous substances and the limitation of the consequences of such accidents.⁷⁶
- 150.** Additionally, OSH concerns could be integrated into various green certification systems. Trade unions have successfully advocated for the inclusion of international labour standards, in particular those concerning OSH, in certification systems for sustainable forestry to protect workers’ rights.
- 151.** Effective labour inspections are critical to ensure the implementation of, and adherence to, labour legislation, including in relation to OSH. The importance of labour inspections has been recognized in two labour inspection Conventions: the Labour Inspection Convention, 1947 (No. 81), which has been ratified by more than 130 countries, and the Labour Inspection (Agriculture) Convention, 1969 (No. 129), which has more than 40 ratifications.⁷⁷

⁷⁶ L. Olsen: *The employment effects of climate change and climate change responses: A role for international labour standards?*, Global Union Research Network Discussion Paper No. 12 (Geneva, ILO, 2009).

⁷⁷ ILO: “International labour standards on labour inspection”, at: <http://ilo.org/global/standards/subjects-covered-by-international-labour-standards/labour-inspection>.

(iv) Recommended course of action

152. Governments and social partners should:⁷⁸

- (a) assess new or increased OSH hazards resulting from climate change, resource scarcity or green technologies and investments, and identify preventative measures;
- (b) adapt or, where necessary, develop OSH standards for green technologies, work processes and new materials, through a mix of legislation, industry-led good practice, and awareness-raising campaigns;
- (c) adopt and implement applicable labour and environmental standards, and monitor compliance through labour inspections, among other means;
- (d) work towards greater policy coherence and cooperation among occupational health and environmental agencies with regard to regulation and enforcement;
- (e) formulate, implement and periodically review a coherent national policy concerning the protection of workers, the public and the environment against the risk of major accidents, in consultation with the most representative organizations of employers and workers;
- (f) use the best available safety technologies and provide the competent national authority with the right to suspend any operation which poses an imminent threat of a major accident;⁷⁹
- (g) incentivize companies to conduct research to better understand the range of OSH risks across the life cycle of products, technologies and jobs, and use this knowledge to create more transparency at the workplace about such risks;
- (h) establish OSH committees in the workplace;
- (i) regulate and incentivize companies to reduce, minimize and eliminate hazardous materials from the supply chain of green products and production processes;
- (j) introduce extended producer responsibility legislation to ensure that companies take appropriate responsibility for the OSH impacts of green products and processes, from the design stage to the end of the life cycle;⁸⁰
- (k) include OSH aspects in certification programmes for sustainability, such as in agriculture, forestry and buildings;

⁷⁸ Adapted from EU–OSHA: *Green jobs and occupational safety and health: Foresight on new and emerging risks associated with new technologies by 2020* (Luxembourg, 2013); and from Silicon Valley Toxics Coalition (SVTC): *2014 Solar Scorecard* (San Francisco, 2014).

⁷⁹ L. Olsen: op. cit.

⁸⁰ Extended producer responsibility (EPR) is a concept that has been implemented for a range of consumer products in Europe and a variety of other countries, although not specifically targeted at products relevant to the green economy. Most solar PV panels sold in Europe are covered by an EPR scheme. SVTC: op. cit.

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- (l) promote adequate OSH training in green jobs for workers (vocational training schemes and programmes of lifelong education and training in health and safety) and for employers, members of OSH committees and labour inspectors;
 - (m) address the OSH impacts of informality, and facilitate the transition towards the formal economy, in activities related to the green economy, such as materials recovery and recycling, through training, capacity building, certification and legislation. In this context, governments should also consider facilitating the establishment of cooperatives and other forms of worker organization through legal frameworks based on the ILO's Promotion of Cooperatives Recommendation, 2002 (No. 193).⁸¹

3.9. Social protection policies

(i) *Purpose and objectives for a just transition*

- 153.** Only 27 per cent of the world's population have access to adequate social protection coverage, while more than half lack any coverage at all.⁸² This means that many communities and individuals are highly vulnerable to external shocks, including those increasingly caused by climate change and environmental degradation. Populations not covered include many highly exposed groups with limited capacity to cope and adapt to the impacts.
- 154.** In the transition towards more environmentally friendly economies, not all industries and workers will benefit. Climate change and resource scarcity, as well as structural change driven by economic policies, will lead to loss of jobs and livelihoods in certain areas. Policies to address these problems seek to limit carbon emissions and the overuse of natural resources such as forests or fisheries, or may ban outright certain economic activities deemed detrimental to the environment. If the transition is to be fair, or even possible, those people negatively impacted will need protection in order to maintain or adapt their livelihoods, including in situations of cross-border displacement.
- 155.** Social protection for a just transition can protect people not only from the impacts of environmental deterioration and climate change, but also from adverse effects of policies designed to mitigate the increasing pressures of human activity on the planet's ecosystems. Synergies between protecting livelihoods and protecting the environment can be realized through four types of interventions:
- **Protecting and restoring livelihoods:** In building resilience to climate change, insurance against loss of income and assets, such as weather index insurance for agricultural crops, can play a vital role as a complement to a broader social protection floor, in particular for self-employed workers and those in MSMEs.
 - **Income replacement in times of transition:** This category includes initiatives designed to mitigate the adverse effects on people of efforts to facilitate the transition to more sustainable consumption and production methods. Where jobs and livelihoods among workers in heavily polluting, carbon- or resource-intensive industries are at risk,

⁸¹ In the context of electronic waste, see ILO: *Tackling informality in e-waste management: The potential of cooperative enterprises* (Geneva, 2014).

⁸² ILO: *World Social Protection Report 2014/15: Building economic recovery, inclusive development and social justice* (Geneva, 2014).

unemployment protection can provide financial assistance to those affected, while education and training can assist workers in entering new industries or opening their own businesses.

- **Compensation for income foregone or for environmental services rendered:** The sustainable management or rehabilitation of natural resources such as forests, wildlife or fish may require periods during which the resource may not be utilized in order for it to recover. Such periods may be part of an annual cycle, such as hatching periods for fish; extend over multiple years, as in logging or hunting bans; or may be permanent. In order to protect the resource, income replacement may be needed for workers who cannot afford to forego earnings.
- **Compensation for price increases** for energy or resources due to fiscal or other market-based environmental policies. Low-income households spend a significantly higher proportion of their income on energy and on goods and services that have large amounts of energy embedded in them, such as food or transport. They are therefore disproportionately affected by energy price increases. Compensation for such impacts on low-income segments of the population can be readily integrated into social protection schemes.

156. In all cases, the existence of a social protection floor provides registered beneficiaries with established channels for the payment of benefits, and provides an excellent basis for dealing with economic shocks related to the environment or to environmental policy.

157. Social protection benefits are important not only for individual workers and their families but also for communities as a whole. By providing health care, income security and social services, social protection systems enhance productivity and contribute to human dignity and the full realization of human rights. Social protection systems also promote gender equality through the adoption of measures to ensure a more equal sharing of care responsibilities and equal opportunities in the labour market. For employers and enterprises, social protection systems help maintain a qualified and productive workforce that is adaptable to change. Finally, by providing support in the wake of an economic crisis, social protection systems serve as an economic and social stabilizer, thereby helping to ensure social harmony and more equitable globalization and economic development patterns.⁸³

158. Social protection measures are especially important in the context of informal work. Some workers who carry out functions critical to a more sustainable economy, such as waste pickers who salvage and recycle materials, labour under precarious and hazardous working conditions. Formalization can create significant opportunities for social inclusion, higher and more stable incomes, improved working conditions, and access to health care and social welfare.⁸⁴

⁸³ Several examples of successful social protection policies (in the logging, fishing, and coalmining sectors) are discussed in ILO: *Sustainable development, decent work and green jobs*, op. cit.

⁸⁴ For example, Brazil has put in place an effective mix of policies, including legally recognizing waste picker cooperatives and including them in municipal waste management policies. See also ILO and ILS: *Working towards sustainable development*, op. cit.

(ii) Nature of policy instruments

159. Social protection floors are nationally defined sets of basic social security guarantees aimed at preventing or alleviating poverty, vulnerability and social exclusion. At a minimum, these guarantees should ensure that all people in need have access to essential health care and basic income security. National social protection floors should thus comprise at least the following guarantees:⁸⁵

- access to essential health care, including maternity care;
- basic income security for children, providing access to nutrition, education, care and any other necessary goods and services;
- basic income security for people of working age who are unable to earn sufficient income, in particular in cases of sickness, unemployment, maternity and disability;
- basic income security for older people.

160. Access can be provided in a variety of ways, including contributory and non-contributory systems, income transfers or employment guarantee schemes. Targeted public works programmes and disaster risk insurance can complement these measures,⁸⁶ including in situations of population displacement due to climate change impacts, which increase in complexity under cross-border conditions.

(iii) Principles, including relevance of international labour standards

161. ILO standards on social security provide for different forms and degrees of social protection coverage under different economic systems and stages of development. In a globalizing world, where people are increasingly exposed to global economic risks, environmental and natural disasters and resource scarcity, a broad-based national social protection policy can provide a strong buffer against many of the negative social effects of crises and disasters.

162. A number of ILO instruments are relevant to social protection in the transition to greener economies:

- The Social Protection Floors Recommendation, 2012 (No. 202), provides guidance on building protection floors in accordance with other ILO social security standards.
- The Social Security (Minimum Standards) Convention, 1952 (No. 102), lays down the minimum standard for the level of (contributory or non-contributory) social security benefits and the conditions under which they are granted. It covers the nine principal branches of social security, namely: medical care, sickness, unemployment, old age, employment injury, family, maternity, invalidity and survivors' benefits.

⁸⁵ ILO: "Social protection floor", at: <http://www.ilo.org/secsoc/areas-of-work/policy-development-and-applied-research/social-protection-floor>.

⁸⁶ The Productive Safety Net Programme in Ethiopia is an employment-based social transfer programme whose beneficiaries, faced with food security threats, receive payments in return for participating in public works projects, such as terracing, tree planting, water collection and irrigation. ILO: *Sustainable development, decent work and green jobs*, op. cit.; Foreign Affairs, Trade and Development Canada: "Project profile: Productive Safety Net Program 2013–2017", at: <http://www.acdi-cida.gc.ca/cidaweb%5Ccpo.nsf/projEn/A035155001>.

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- The Employment Promotion and Protection against Unemployment Convention, 1988 (No. 168), alongside the aforementioned Convention No. 102, provides for protection when persons who are capable of, and available for, work are not able to obtain suitable employment. The provisions guarantee an income that allows both workers and their family members sustained living conditions until employment is found.⁸⁷
 - The Maintenance of Social Security Rights Convention, 1982 (No. 157), provides for certain social security rights and benefits for migrant workers, who face the problem of losing entitlements to social security benefits which they enjoyed in their country of origin.
 - The Transition from the Informal to the Formal Economy Recommendation, 2015 (No. 204), recognizes the lack of protection of workers in the informal economy, and provides guidance for improving their protection and facilitating the transition to the formal economy, including with regard to social protection.

(iv) Recommended course of action

163. Government and social partners should:

- (a) establish adequate social protection systems providing health care, income security and social services, in line with ILO standards, also with a view to increasing resilience and safeguarding populations against the impacts of economic and environmental vulnerabilities and shocks;
- (b) integrate social protection into policy measures and responses to environmental challenges for those likely to be negatively affected, in particular industries and workers largely dependent on natural resources and facing major structural changes;
- (c) promote the development and expansion of innovative social protection mechanisms that can contribute to offsetting the impacts of climate change on livelihoods, incomes and jobs;
- (d) in particular, make use of employment guarantee schemes and public works that enhance resilience to climate change;
- (e) integrate adequate social protection measures into national contributions in response to climate change, as an essential part of climate change adaptation and mitigation policies;
- (f) facilitate bilateral discussions on the portability of social protection entitlements in situations of cross-border displacement due to climate change impacts;
- (g) consider the role and use of insurance against climate-related disasters, in particular for farmers and MSMEs;
- (h) foster tripartite mechanisms that help to identify and understand the challenges posed by climate change and to formulate social protection measures in response.

⁸⁷ L. Olsen: op. cit.

3.10. Labour market policies

(i) *Purpose and objectives for a just transition*

- 164.** In many ways, the green transition will pose challenges similar to those of earlier transitions caused by technological revolutions, globalization and rapid changes in world markets.
- 165.** The transition to a greener economy entails both job creation and the transformation of many jobs and occupations, as well as displacement as some workers change job, company or economic sector.⁸⁸ In this context, labour market policies are critical for smoothing the adjustment and ensuring just transitions for workers negatively affected by restructuring, for communities exposed to climate change (such as small farmers) and for population groups disadvantaged by green policies.⁸⁹ These policies should ensure that phasing out environmentally harmful activities is not only a step forward for the environment, but also provides people with new opportunities for their livelihoods and careers, including in situations of forced migration.⁹⁰
- 166.** In this context, it is essential to anticipate changing demand and the associated occupational and skills profiles through adequate labour market information and data collection systems and social dialogue.
- 167.** Employment services are important for brokering workforce transitions to greener occupations and improving the match between labour demand and supply. Public works and job placement programmes also play a role in this context.
- 168.** Effective employment services also contribute to addressing gender inequalities by providing advice and information that take into account gender-specific preferences and constraints.
- 169.** Where employment services are underfunded and lack sufficient staff to carry out interventions or are mostly found in urban areas, the matching of jobseekers and vacancies typically happens informally through family and friends and social networks. It is thus important to invest in building effective public employment services,⁹¹ and to improve the quantity and quality of services offered, including orientation of the workforce towards green occupations and skills. Given their limited resources and capacity, effective collaboration with, and regulation of, private employment agencies is necessary to ensure a just transition.
- 170.** Public employment programmes and employment guarantees can offer additional policy instruments to tackle the problem of unemployment and underemployment during transitions. These schemes can restore and protect the productive capacity of lands, build resilient infrastructure capable of adapting to climate change and natural disasters, and create livelihood and income security for the most vulnerable.

⁸⁸ ILO: *Sustainable development, decent work and green jobs*, op. cit., para. 289.

⁸⁹ *ibid.*, para. 306.

⁹⁰ European Commission, Employment Committee: *Towards a greener labour market: The employment dimension of tackling environmental challenges* (Brussels, 2010).

⁹¹ S. Verick: “Labour market policies for development”, in S. Cazes and S. Verick (eds): *Perspectives on labour economics for development* (Geneva, ILO, 2013).

171. Wage subsidies can be considered as a measure to smooth the transition to green sectors. Subsidies lower labour costs and can be used to encourage the hiring of vulnerable or displaced workers and the long-term unemployed. A subsidy can buy time, so that subsidized employees can gain a niche in the labour market and adapt to changing labour market conditions.⁹² However, experience shows that employment subsidies need to be properly targeted with a clear exit strategy to avoid inefficiency, dependency and displacement effects. Wage subsidies also require appropriate institutional and legal structures.

172. Active labour market policies need to be well integrated with skills policies, sectoral policies for diversification and social protection. The latter should provide adequate income security to those in transition between jobs or those becoming unemployed, with a special focus on the most vulnerable workers.⁹³ In cases where workers face great difficulty in adjusting to structural change, because of old age or disability for instance, adequate benefits should be provided for those workers within the framework of the social security system.

(ii) Nature of policy instruments

173. Labour market policies comprise a range of policies that influence labour demand and supply, and the interaction between the two.⁹⁴ They include:

- **job search assistance** and other employment services that are provided by public employment services and private agencies, including for workers displaced internally and across borders;⁹⁵
- **training schemes** that consist of vocational and on-the-job programmes that may target long-term unemployed workers, laid-off workers, young people and other vulnerable groups, along with special incentives for apprenticeships;⁹⁶
- **job/wage subsidies**, which include measures to protect jobs, such as work-sharing schemes, and interventions that promote hiring, such as social security exemptions and one-off payments for hiring long-term unemployed workers;⁹⁷

⁹² H. Robertson: *Wage subsidies to encourage the hiring of unemployment insurance claimants*, Research papers, Human Resources Development Canada, Strategic Policy, Applied Research Branch (1994).

⁹³ European Commission, Employment Committee: op. cit.

⁹⁴ S. Verick: op. cit.

⁹⁵ As part of its “Green Employment Initiative”, the European Commission pledged to increase the quality of labour market data, enhance monitoring efforts and support green job creation. European Commission: *Green Employment Initiative: Tapping into the job creation potential of the green economy*, op. cit.

⁹⁶ South Africa’s Extended Public Works Programme offers youth employment opportunities. Government of South Africa, Department of Public Works: “Expanded Public Works Programme (EPWP): Phase 3”, presentation at the Green Jobs Summit, 9 Apr. 2014.

⁹⁷ Bulgaria launched a programme in 2011 to subsidize companies offering green jobs with decent salaries to persons who had been unemployed for six months or longer. An allocation of 3 million Bulgarian levs (BGN) (€1.5 million) secured a total of 1,243 green jobs. European Foundation for

- **public employment programmes** that include traditional public works programmes as well as a new generation of public employment schemes and employment guarantees;⁹⁸
- initiatives linking **poverty reduction and ecosystem protection** objectives, which typically provide payments to local communities in return for actions to protect forests, manage water resources, and so on, or offer work opportunities in pursuit of these objectives;⁹⁹
- support for **entrepreneurship**, which typically consists of a combination of entrepreneurship training and credit, including microcredit;¹⁰⁰
- **income replacement**, typically in the form of unemployment benefits from contributory insurance schemes or assistance programmes from general revenues that are not conditional on contributions.

(iii) Principles, including relevance of international labour standards

174. The greening of the economy entails long-term and substantial shifts in demand and the emergence of new sources of supply for techniques of production. The following Conventions and Recommendations provide guidance on measures to address employment problems arising from such structural change:

- The Employment Policy Convention, 1964 (No. 122), and Recommendation, 1964 (No. 122), provide guidance on measures to address employment problems arising from such structural change. They are fully relevant to policies for a just transition. In addition to general measures of economic policy, they contemplate measures regarding the employment of individual workers or categories of workers.

the Improvement of Living and Working Conditions: “Promotion of employment in ‘green workplaces’”, at: <https://www.eurofound.europa.eu/observatories/emcc/erm/support-instrument/promotion-of-employment-in-green-workplaces>.

⁹⁸ One example is India’s Mahatma Gandhi National Rural Employment Guarantee Act, 2005. See ILO: *Sustainable development, decent work and green jobs*, op. cit.; S. Sanghi and J. Sharma: “Local development strategy, green jobs and skills in the Indian context”, in OECD and CEDEFOP: op. cit.

⁹⁹ According to the World Bank, more than 300 schemes to pay for ecosystem service operate worldwide. Some, such as the “Working for Water” programme in South Africa or Bolsa Verde in Brazil, have explicit social goals. See G. Preston: “South Africa’s working for ... programmes” and M. Muchagata: “Taking inclusiveness as the starting point for green growth: Brazil’s Bolsa Verde Programme”, presentations at the OECD Forum on Green Growth and Sustainable Development, Paris, 13 November 2014. Another example is Ecuador’s Socio Bosque programme, which pays land users for the conservation of natural forests. Among the challenges of such initiatives are determining the most effective level of compensation and the limited national funds available. World Bank: *Decarbonizing development*, op. cit.

¹⁰⁰ See, for example, K.A. Rouf: “Green microfinance promoting green enterprise development”, in *International Journal of Research Studies in Management*, 2012, Vol. 1, No. 1, Apr. (for Bangladeshi and Canadian experiences). D. Forcella: *European green microfinance: A first look* (Brussels, European Microfinance Network, 2013) provides an overview of the European microfinance sector and of green microfinance trends throughout the world.

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- The Employment Service Convention, 1948 (No. 88), and the Private Employment Agencies Convention, 1997 (No. 181), and Recommendation, 1997 (No. 188), provide guidance on the operation of an effective employment service in order to avoid delays in filling vacancies and to help workers affected by structural change to train for and find new jobs quickly.
 - The Human Resources Development Convention, 1975 (No. 142), and Recommendation, 2004 (No. 195), govern the provision of training and retraining facilities designed to enable workers to acquire the qualifications needed for lasting employment in expanding occupations. Moreover, disadvantaged groups may need targeted assistance and preferential treatment to ensure that they have access to good-quality green jobs.
 - The Job Creation in Small and Medium-Sized Enterprises Recommendation, 1998 (No. 189), addresses various entrepreneurship support measures that can be offered by public employment services to prepare and support jobseekers in setting up their own business, such as long-term unemployed workers or those affected by structural adjustment.

175. Relevant international labour standards also provide guidance on a rights-based approach to labour migration, particularly for populations in situations of cross-border displacement due to climate change impacts.

(iv) Recommended course of action

176. Government and social partners should:

- (a) develop and support, through public and other employment service providers, short and tailor-made courses directly linked to specific occupations and entrepreneurship opportunities in the green economy;
- (b) strengthen public employment services to further develop their role as transition agents. They should provide information, guidance, matching services and training for new opportunities in a greening labour market for unemployed and inactive workers, and workers displaced by climate change, resource degradation or structural change, including those displaced across borders. These services can be improved by expanding innovative ways of reaching out to jobseekers, for example with the use of information and communications technologies on and off job sites;
- (c) promote collaboration between public and private employment agencies to ensure an efficient and effective delivery of services, targeted to the needs of clients, and extend outreach to those who are further away from the formal labour market;
- (d) support public works, employment programmes and employment guarantees where jobs are created directly by the government, either to re-employ and train workers who have been laid off due to structural or technological change or to build green climate-resilient infrastructure. Such programmes can be designed to increase resilience to climate change, rehabilitate natural resources and create new productive assets;
- (e) consider introducing well-targeted wage subsidies, including in developing countries, that allow workers to acquire skills that improve their employability through work experience and on-the-job training.