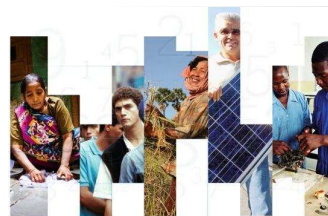


GREEN JOBS:

Draft guidelines for the statistical definition and measurement of employment in environmental sector

General report- Ch.4
Room document 5 & Appendix 1



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Outline

1. Introduction
2. International/national efforts to define and measure the green economy and green jobs
3. Objectives and potential uses of statistics on green jobs
4. Proposals for the operational definition of employment in environmental sector and green jobs
5. Measurement methods
6. Data collection issues and methods
7. Points for discussion

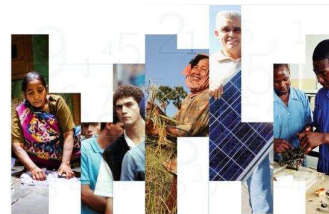


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Introduction



- Concepts of the green economy and green jobs are relatively new concepts
 - Climate change, environmental degradation
 - Current financial, economic and food crises

➔ United Nations Conference on Sustainable Development (Rio+20) considers green economy as one of the important tools available for achieving sustainable development

➔ ILC (2013) requested the ILO to carry out research aiming to assist countries and social partners to **assess the impact of greening the economy** on job creation, job transition and the quality of work, including through the compilation and wide dissemination of reliable statistics

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Why statistics on green jobs?



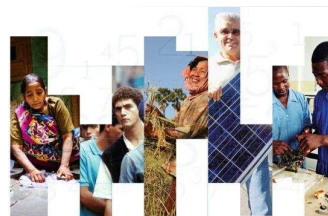
A growing demand for both statistical data and for conceptual guidelines on the measurement of green jobs (in terms of the size, composition and contribution of the specific groups of workers and economic units to the green economy)

- a) To gain a better understanding of the impact of various “green” policy initiatives on the labour market,
- b) To ensure that effective policy measures and tools are formulated to respond to this shift to a greener economy

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Definitions used in the employment and environment policy contexts



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- The concept of green economy and green jobs have not been precisely defined and universally agreed as yet.
- Variety of definitions: A common theme is preserving or restoring the environment.
- Need to agree on the method to accurately measure the green economy's size and rate of growth, and to identify the jobs associated with it.

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Green economy

Low carbon economy

Circular economy

Greening economy

Transition to greener economies

Sustainable development

Green investments

Green skills

Green workplace

Green labour market

Green growth

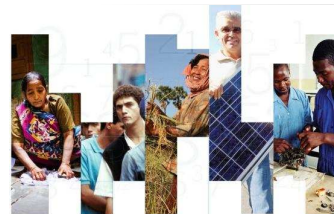
Environmental sustainability

Green collar workers

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National and international efforts to define and measure the green economy and green jobs



- UNSC (2012) : *System of Environmental-Economic Accounting (SEEA)-Central Framework*
- Eurostat (2009): *Data Collection Handbook on Environmental Goods and Services Sector*
- UNECE/Eurostat/OECD Task Force on Measuring Sustainable Development (2013): *Framework and suggested indicators to measure sustainable development*
- OECD (2012) *Towards green growth: Monitoring progress*
- ILO/UNEP (2008) *Green jobs: Towards decent work in a sustainable, low-carbon world*
- National definitions and estimates in US, Canada, France, Netherlands, Denmark, Sweden, Australia, Germany, UK, Australia and New Zealand, etc.

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Use of statistics on green job

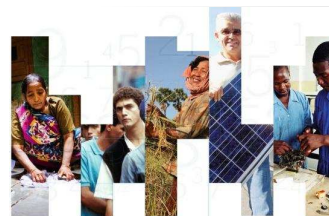


- **Wide variety of users** concerned with policies on economic growth, job creation, environmental protection, climate change and sustainability
- **Main interest** - the contribution of the green economy to economic growth, especially to turnover, employment, value added, investments, exports, etc.
- **Volume of employment in green jobs** is seen as an important indicator of overall progress towards a greener, more environmentally sustainable economy.

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Uses of statistics



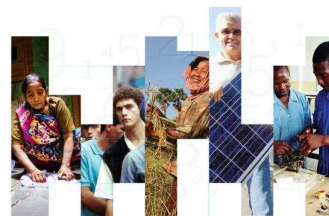
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- Facilitate the assessment of the contribution of the transition towards a green economy to employment, including the number of people employed and their skill levels;
- Provide information on various aspects of sustainable development (together with statistics on production, value added, turnover, export and import, innovation, investments, fiscal schemes and subsidies);
- Inform the design and monitoring of specific support policies and assistance programmes (subsidies, access to credit and some level of protection) for the environmental sector;
- Facilitate analysis of the economic and social situation of particular groups of workers in this sector such as women, rural and urban populations, youth and the elderly.
- *Minimize the risk and uncertainty for training providers*
- *Promote public interest and information on sustainable development*

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Need for comprehensive, detailed and reliable statistics



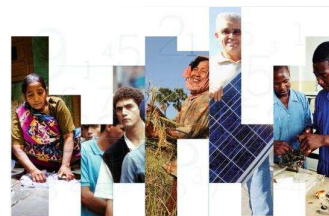
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- all economic units with environmental activities (classified by various characteristics to provide information on the composition of the environmental sector and identify its subsectors);
 - employment in such units, including information on the number of persons engaged by socio-demographic and other characteristics and on the conditions of their employment and work;
 - production and incomes generated through environmental activities.
- Statistics should be compiled at regular intervals

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ILO definition of green jobs for policy purposes



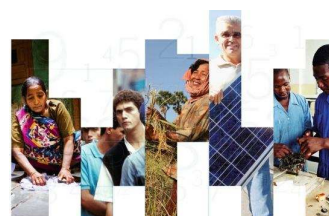
Jobs are green when they help reduce negative environmental impact ultimately leading to environmentally, economically and socially sustainable enterprises and economies. More precisely green jobs are **decent jobs** that:

- Reduce consumption of energy and raw materials
- Limit greenhouse gas emissions
- Minimize waste and pollution
- Protect and restore ecosystems

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Proposal for the operational definition of **employment in environmental sector** and **green jobs**



- Proposal provides separate definitions pertaining to employment in environmental sector and to decent work
- Proposal will facilitate the production of datasets that include separate statistics on both 'employment in environmental sector' and decent work.

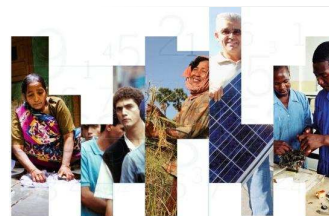
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Guiding principles

- Practical measurement aspects
- Consistency with existing standards (labour statistics and environmental statistics)
- Deferent users need different type of statistics for different purposes (the *functioning* of establishments vs *outputs* of establishments)
- The relevance of green jobs and the diversity of green practices vary among countries and over time - a decision to develop statistics on them is determined by national circumstances and priorities
- The framework should assist in identifying the gaps in data, and allow for progressive construction of a more complete and coherent family of indicators on “green jobs”.

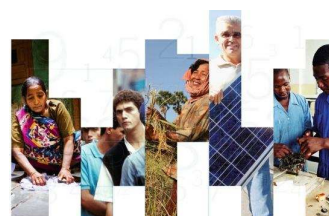
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Proposals for the operational definition of employment in environmental sector and green jobs (paras 7-12 of DG)

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Concept and domain of environmental sector (based on SEEA definitions) paras 7-10

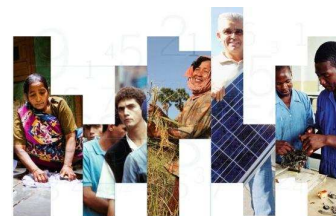


- Environmental sector consists of all economic units that carry out environmental activities
- Environmental activities are those activities whose primary purpose is to reduce or eliminate pressures on the environment or to make more efficient use of natural resources
 - ❖ *Environmental protection activities*
 - primary purpose is the prevention, reduction and elimination of pollution and other forms of degradation of the environment
 - ❖ *Resource management activities*
 - primary purpose is preserving and maintaining the stock of natural resources and hence safeguarding against depletion.

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Concept and domain of environmental sector (based on SEEA definitions)



- Environmental activities can be carried out by all economic units, as main, secondary or ancillary activities
- Distinction between specialist producers, non-specialist producers, own-account producers .
 - ❖ These units produce, design, and manufacture at least some goods and services for purposes of environmental protection and resource management
 - ❖ Environmental goods and services could be produced by economic units for consumption by others or for own-use.
- Type of environmental goods and services:
 - environmental specific services,
 - environmental sole-purpose products,
 - adapted goods,
 - environmental technologies.

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Activities in agriculture, fisheries and forestry as environmental activities



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- The produce must be organic by intent and not by default (non-sustainable production systems that do not use synthetic inputs are not considered organic)
- the produce must mainly be for sale, not for own-consumption
- the produce must be labelled or otherwise recognized by consumers as organic (where relevant) (?)

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Employment in the environmental sector (paras 11-14)



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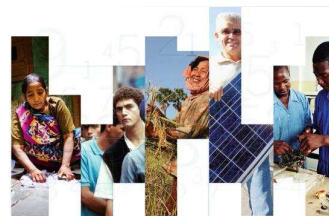
..comprise all persons who, during a set reference period, were employed in the production of environmental goods and services.

In addition to persons involved in the production of environmental goods and services, this includes workers whose duties involve making their establishment's production processes more environmentally friendly or make more efficient use of natural resources.

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Employment in environmental sector



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Two components that refer to different aspects of the 'greening' :

(A) *Employment in production of environmental outputs* - employment in the production of environmental goods and services for consumption outside the producing unit.

- exist in specialist environmental establishments or in non-specialist establishments (economic units with environmental output)

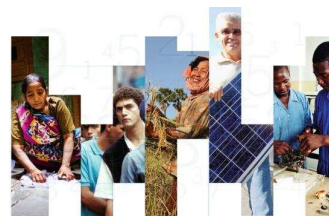
(B) *Employment in environmental processes* - employment in the production of environmental goods and services for consumption by the producing unit.

-exist in specialist environmental establishments and in economic units that are not environmental in nature

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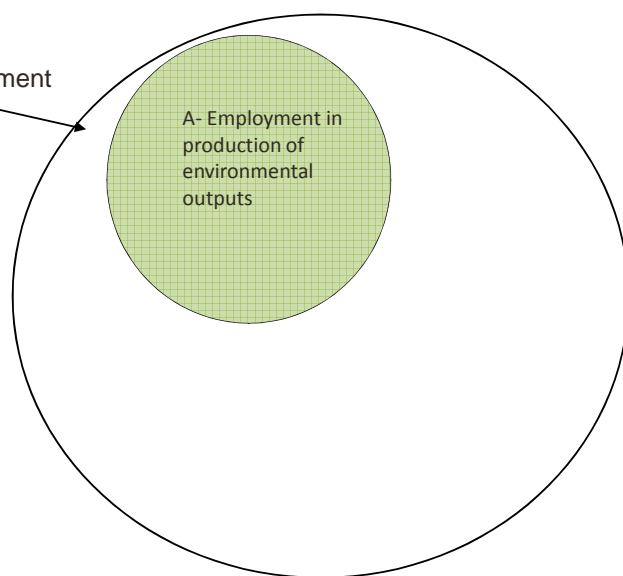
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Employment in environmental sector



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Total
employment



Employment in environmental sector = $A \cup B$

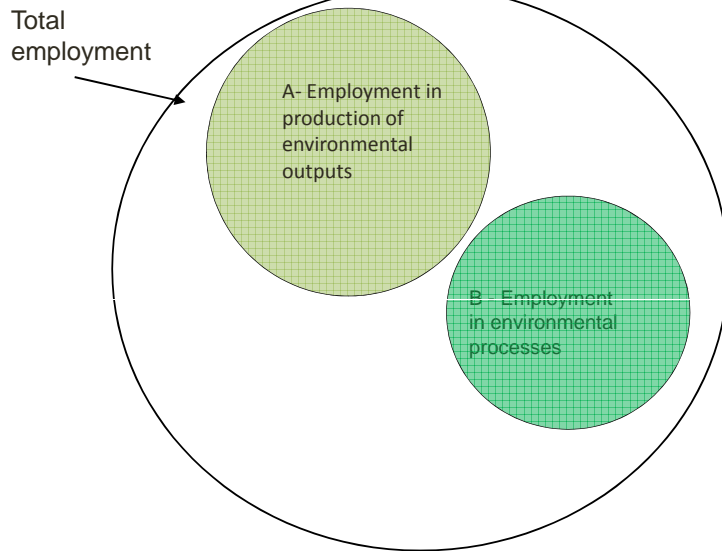
Employment created thanks to greening = $A \cup B \cup D$

Green jobs (Employment in Environmental Sector that is decent) = $(A \cup B) \cap C$

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Employment in environmental sector



Employment in environmental sector = $A \cup B$
Employment created thanks to greening = $A \cup B \cup D$
Green jobs (Employment in Environmental Sector that is decent) = $(A \cup B) \cap C$

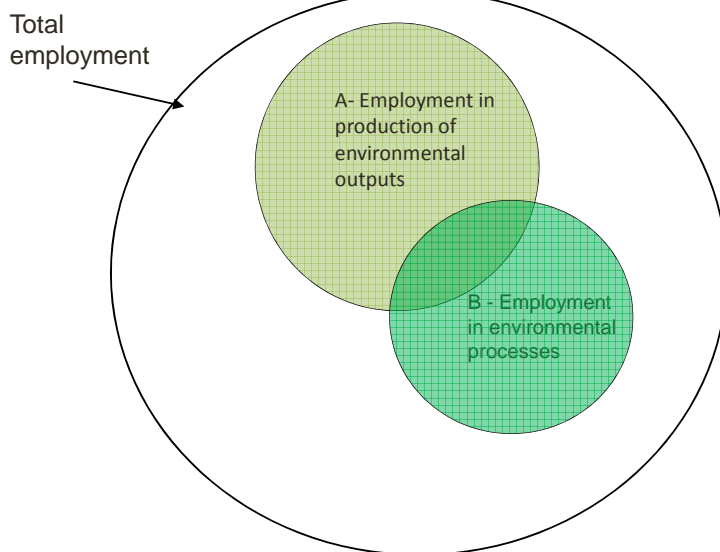
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Employment in environmental sector



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Employment created thanks to greening = $A \cup B \cup D$
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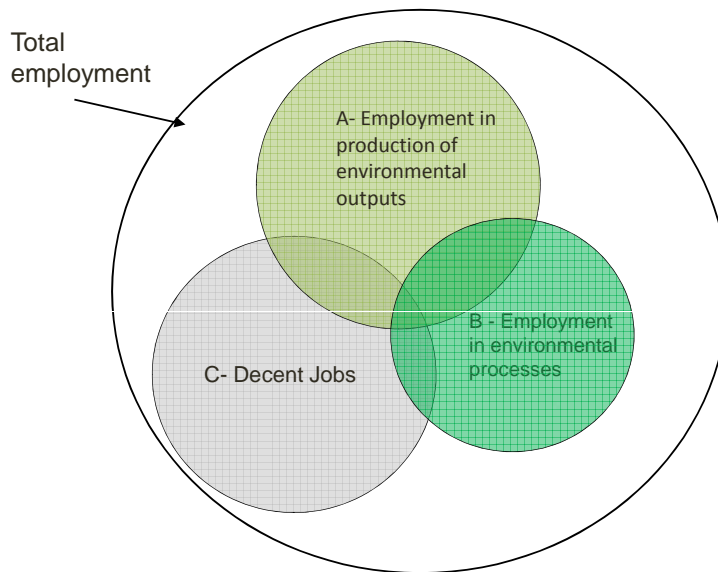
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Employment in environmental sector



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Employment in environmental sector= $A \cup B$

Employment created thanks to greening = $A \cup B \cup D$

Green jobs (Employment in Environmental Sector that is decent)= $(A \cup B) \cap C$

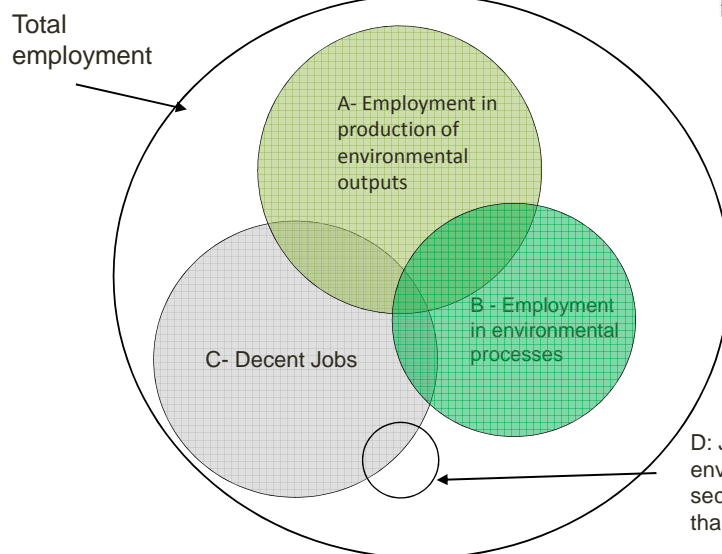
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Employment in environmental sector



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D: Jobs in non-environmental sector created thanks to greening

Employment in environmental sector= $A \cup B$

Employment created thanks to greening = $A \cup B \cup D$

Green jobs (Employment in Environmental Sector that is decent)= $(A \cup B) \cap C$

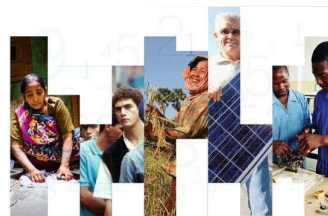
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Employment in

(A) production of environmental output

(B) environmental processes



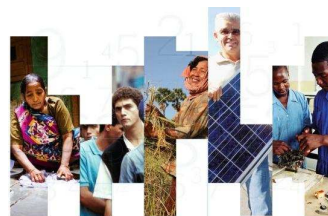
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- Two distinct concepts that refer
 - to different aspects of the 'greening' of employment
 - to different targets for policy-making.
- Measurement requires different methods
- Separate statistics should be produced for each component
- The two components cannot be aggregated (double counting)

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Measurement: A- Employment in production of environmental outputs



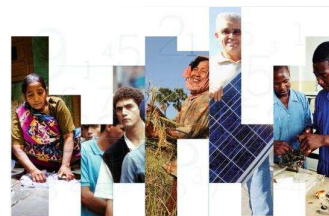
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- Can be measured directly only in **specialist producers** (establishments whose output is 100% environmental).
- In **non-specialist producers** (establishments that produce both environmental and non-environmental goods and services), it cannot be measured directly unless the jobs are linked with type of products produced (costly)
 - ✓ Can be approximated, using, the data on the value of environmental goods and services produced as a proportion of the value of the total production of the establishment.
- It does not exist in **own-account producers** .

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Measurement: A-Employment in production of environmental outputs (not in the DG)



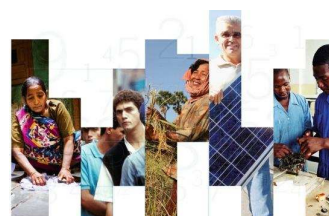
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- **Producers that do not generate revenue** (e.g. non-profit organizations, government agencies, research organizations, and new businesses that provide environmental goods and services without generating income)
 - information about the proportion of their employment contributing to the production of environmental goods and services
- **Households as production units** undertaking environmental protection and resource management activities
 - if production for sale (Employment in production of environmental outputs)
 - if production for own consumption (work in environmental processes but not employment)

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Measurement: B-Employment in environmental processes



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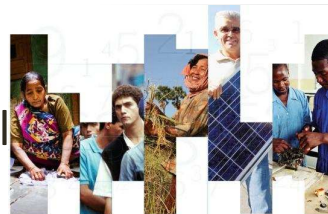
- Employment in production of environmental output does not include green-related jobs at establishment that do not produce environmental output but do make their production process greener.
- Exist in specialist environmental establishments and in economic units that are not environmental in nature (i.e. **non-specialist or own-account producer establishments**).
- Includes jobs in which workers' duties include production of environmental goods and services for use **within** the establishment, but also use methods, procedures, practices, or technologies that make their establishment's production processes more environmentally sustainable .
- Where possible a distinction between those that spend more/less than 50% of their time on environmental processes.

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Other related concepts

D-Jobs (employment) in non-environmental sector created thanks to greening



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- Employment in economic units that supply goods and services to the environmental sector .
 - **→ Outside the scope because environmental protection/resource saving is not a primary purpose.**

Employment may be estimated using input-output tables and environmental expenditure data

(SA are not usually responsible for making these types of analysis and judgements about cause-and-effect relationships?)

- .

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Green jobs (Employment in environmental sector that is decent) = $(A \cup B) \cap C$



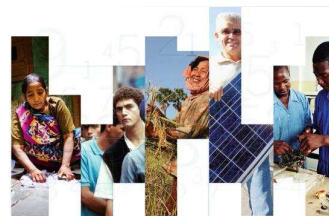
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- A subset of employment in the environmental sector that meets the requirements of decent work – adequate wages, safe conditions, workers' rights, social dialogue and social protection (*no thresholds*).
- Decent work dimension of green jobs may be measured according to relevant indicators selected from the ILO manual on Decent Work Indicators.

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Data collection programme and methods



- Data collection activities should be established (adapted to countries' national circumstances?)
- Should preferably be based on existing economic and agricultural censuses (comprehensive sources of data)
- Establishment surveys, household surveys, NA- supplementary sources
- For employment in specialist environmental establishments- existing surveys and ISIC
- For employment in non-specialized and own-account producers- specialized surveys or expanding the existing surveys
- Countries with limited capacity and restricted resources may limit the measurement of employment in the environmental sector to some of its components

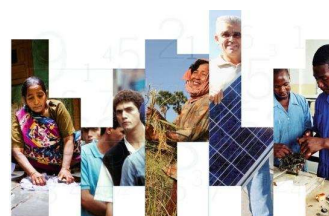
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Optimising resources

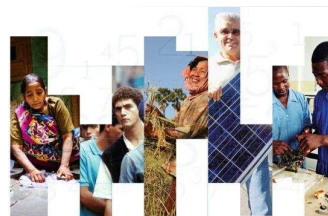
- Focus on key economic activities and industries
 - the largest in terms of their contribution to the production of environmental goods and services, and/or
 - those that have the greatest potential to change.
- Surveys limited to some producers and not to the entire population (e.g. renewable energy, organic agriculture, ecotourism or sustainable forestry).

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Points for discussion



- the importance and feasibility of measuring employment in environmental sector and green jobs;
- the suitability and relevance of the proposed statistical definition of employment in environmental sector and green jobs;
- the possibility of adopting the draft text as a set of international statistical guidelines;
- future steps in developing relevant international statistical standards on this topic.