▶ Policy Brief
Green Jobs Assessment Model (GJAM)

December 2023

What is the GJAM and what is it used for?
A tool for evidence-based policy advice to achieve better jobs outcomes and a Just Transition for All

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Key points

The Policy Brief describes the structure and functioning of the Green Jobs Assessment Model (GJAM). It is a methodological approach, not a prefabricated model, to provide national, quantitative estimates of the social, employment, environmental and economic impacts of alternative policy options. It offers following answers and evidence-based policy recommendations to maximise job creation, minimize social disruption and ensure a Just Transition for All:

▶ How many direct, indirect and induced jobs for men and women are created and/or lost in alternative policy scenarios?

▶ Which economic sectors benefit from the polices, which will require restructuring?

▶ What is the impact on aggregate GDP and Value Added at Industry level?

▶ How many technicians, professionals, non-skilled and other occupational profiles are required?

▶ What is the distributional income effect for poorer segments of the population?

▶ What is the impact on informal workers and decent working conditions?

▶ What is the impact on the environment in terms of GHG emissions, deforestation, water and other natural resources?

▶ What kind of Just Transition policies, notably Skills and Social Protection, are required to enable the policies to become effective?

▶ Why to build and use a national Green Jobs Assessment Model?

Countries across the globe are in search of policies and strategies which advance and reconcile multiple social, economic and environmental goals. In designing such policies employment and labor market outcomes play a central role.

Countries are particularly interested in knowing about the direct, indirect or induced, the gross and net effect on jobs. What options are available to maximize job gains and minimize losses? How to ensure more gender and income equality and provide social protection for those losing their jobs?

In most cases, such information cannot be made available in the absence of empirical assessments and economic models. The Green Jobs Assessment Model was developed to fill this gap and provide a methodology which countries can use to answer multi-dimensional policy questions.

Countries may use the model for research, analysis and evidence-based policy making, financial and national development planning. Notably, the model is perfectly suited to inform climate policies and the National Determined Contributions (NDCs). Countries have a tool at their disposal to analyze and design climate policies which maximize job creation, minimize and protect job losses.

▶ How are countries assisted to build Green Jobs Assessment Models?

Together with Governments and national partners tailored work programs of 1-2 years are developed. A technical research team and steering committee is set up to guide the process. It is composed of a national research institution, the national statistics office and government ministries, often led by economy, finance and/or planning, labor or environment. Institutional capacity is built at all levels. The intended outcome at the end of the process is a GJAM built, owned and used by countries (see graph, own illustration).
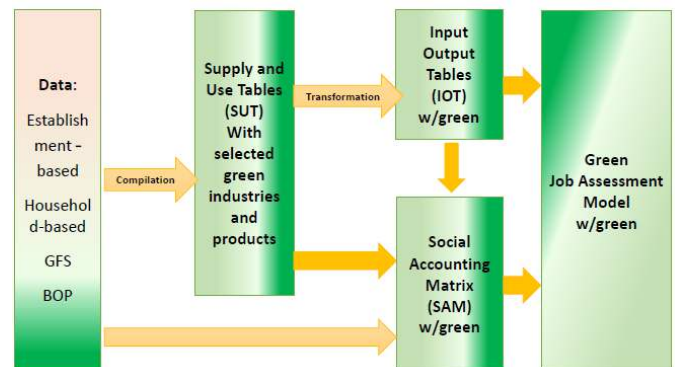
The entire process of capacity building and policy advice is supported through the Green Jobs Assessment Institutions Network (GAIN). GAIN is a global network of research institutions and international organizations which secretariat is hosted by the ILO GAIN has two main supporting functions:

First, to maintain and share knowledge on the standardized, open source methodology. The methodology is described in the GAIN Training Guidebook and is publically available. It is an introduction to the analysis and modelling of social and employment outcomes of climate and sustainable development policies. Regional 'Training-hubs' are established to institutionalize learning. The first regional hubs for English and French speaking Africa were launched jointly with Universities in South Africa, Cote Ivoire and Senegal in 2019 and 2023.

And second, to build capacity of national government and research institutions to develop, build and use economic models to measure and model social and employment outcomes of national development polices.

▶ What is the Green Jobs Assessment Model (GJAM)?

The Green Jobs Assessment Model or GJAM is a macro-economic modelling framework. It is based on the official data from the national accounts statistics offices. Alternative policy scenarios are modelled to compare effects on jobs, skills, gender, growth, income distribution, household groups and other job characteristics of interest. A particular highlight of the model is the detailed sector representation which also allows for the

comparison of green versus conventional industries. The GJAM is not a prefab model but it is calibrated to every individual economy. The GJAM modelling framework is adapted to the country's needs and policy questions. National stakeholders are guided and supported in producing the database and designing the model structure.

The GJAM is based on national accounting frameworks set out by international standards. That is the System of National Accounts (SNA) and the International Standard Industry Classification (ISIC). It expands the industries to the Environmental Goods and Service Sector (EGSS) based on System of Environmental and Economic Accounts (SEEA). Classifications on employment status (ICSE) and occupation (ISCO) are used to provide accurate information on employment characteristics in the conventional and green industries. Environmental statistics, such as carbon emissions (CO2), energy and water use, are added in physical quantities to the conventional and green industries (see SEEA 2012).
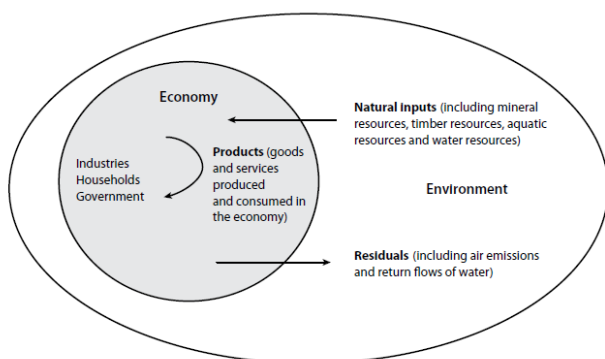
The model integrates the statistical data in a single and consistent framework of the Supply and Use Tables (SUT), Input Output Tables (IOT) and Social Accounting Matrixes (SAM). Thereby, it combines economic data (from SNA and SEEA) with employment and other social data (from labour force surveys (LFS), household budget surveys (HBS), and environmental data (from emission inventories). This enables the model to simultaneously provide evidence based policy advice on economic, social and environment questions at the industry level.

Finally, the modelling framework allows for a step-by-step approach building simple to more complex models. Alternative policy scenarios can be analysed by simpler IOT, SUT and SAM based multiplier models or more complex structural econometric simulation models.

The GJAM addresses the following questions: How many direct, indirect and induced jobs are created, by age, gender and in which sector? How many jobs will be lost? What about the quality and decency of jobs? What is the impact on sectoral GDP, household income, poverty and inequality? What are the effects on occupations and informality? What is the role of environmental sectors in generating incomes and jobs? In which sectors will emissions grow or decline?