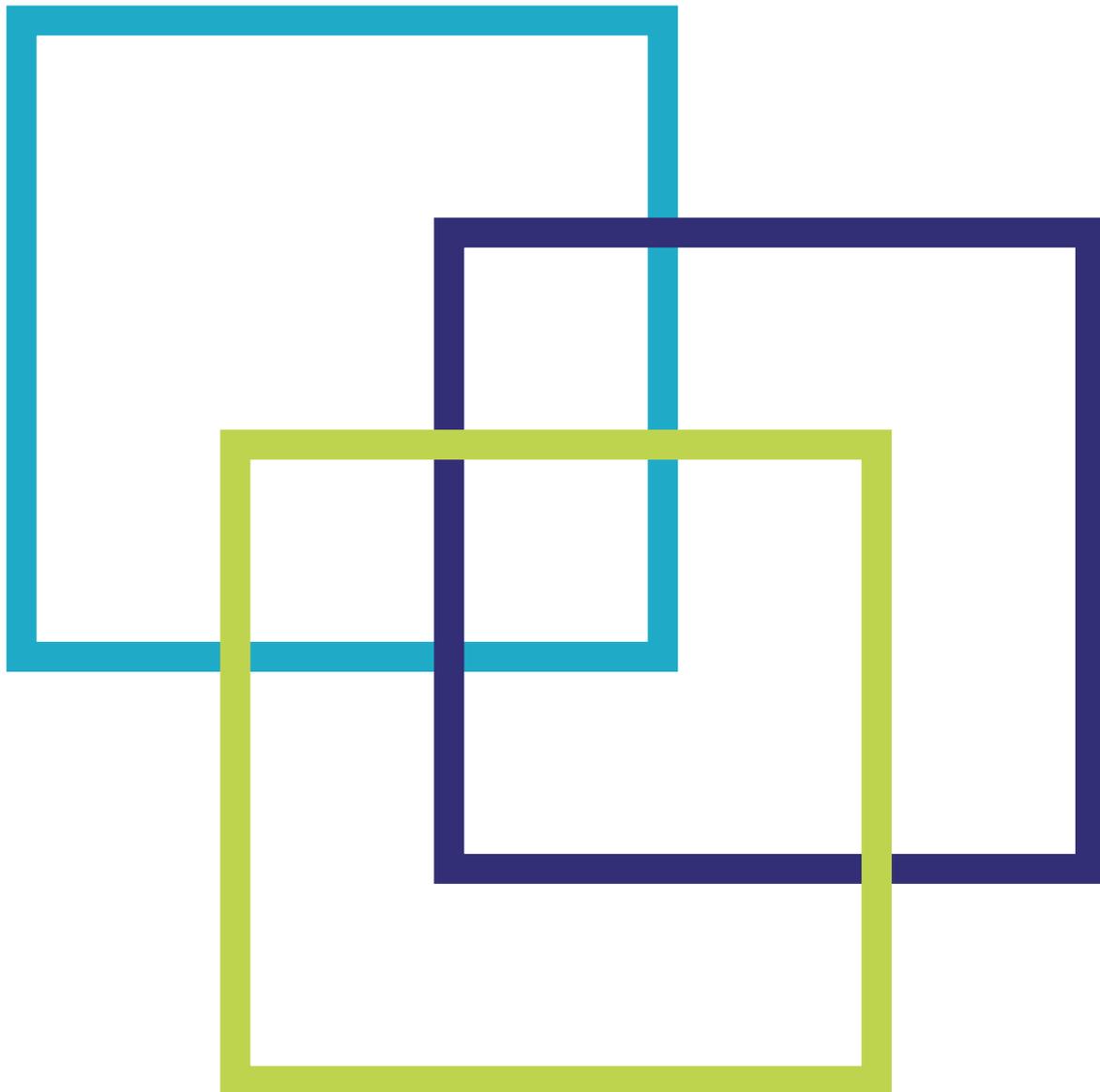# Green Jobs Assessment Institutions Network (GAIN) 3rd International Conference

Just Transition

Report and conclusions

Geneva, 6 - 7 December 2017

Content

Introduction

The third International Conference of the Green Jobs Assessment Institutions Network (GAIN) took place in December 2017. The conference was structured in the format of workshop with three sessions and invited its participants to reflect on the subject of "just transition" by asking the following question: while a just transition towards green societies has the potential to create millions of jobs, what are the key needs on employment losses, skills and social protection in region falling into long term unemployment and economic decline?

The conference offered GAIN the opportunity to present both positive and negative social and employment related outcomes of green economy and climate change policies trough quantitative and qualitative focused international research.

In this framework the GAIN *Training Guidebook: How to Measure and Model Social and Employment Outcomes of Climate and Sustainable Development Policies* (2017) was launched at the conference. The main intended audiences of the training Guidebook are policy-makers, statisticians, analysts and researchers in ministries, national statistics offices, employers' and workers' organizations, research institutions and universities, and international organizations. Through the GAIN network and the training guidebook, countries can establish, in partnership with the ILO, national technical working groups able to guide the building of the models and the analysis of alternative policy scenarios.

This summary of the conference aims in a first part to highlight the main results of the conference, and in a second time to present the submitted papers on Just Transition after GAIN's call for papers in partnership with the Input-Output Association (IOA).

GAIN in today's context: The role of assessments in the implementation of the Paris Agreement on climate change, SDGs, and ILO Centenary & Future of Work

The GAIN Network is a means to help countries identify the many opportunities in green jobs. By enhancing the capacity of their research and national institutions, countries will acquire the ability to develop statistical database, economic model and knowledge necessary to use their own employment projections for

national development planning centred on promoting decent work. Furthermore Sangheon Lee, the ILO Acting Director for the Research department, said that the *GAIN Training Guidebook* can be used in parallel with the upcoming ILO World Employment and Social Outlook (WESO) flagship report on *Greening with jobs (May 2018),* which will show how green policies impact the labour market in the framework of the ILO Centenary Green and Future of Work Initiatives.

Assessing the impact of climate policies on jobs is essential in order to define the future actions required, explained William Kojo Agyemang-Bonsu, Manager, Mitigation and Transparency Support, Mitigation, Data and Analysis Programme, UNFCCC, pointing out that to advance such work many countries might need assistance.

Ulrike Lehr, chair of GAIN and Senior Economist at the Institute of Economic Structures Research in Germany (GWS), said GAIN could be understood as a group of economists who think numbers and empirical results matter in the decision-making process in order to ensure a transition towards greener economies. Each estimation or model should be solidly obtained with a method relating to the economic theory used to conduct the application of the theory. The guidebook provides methodologies for a variety of assessments and different modelling approaches. Indeed, assessment tools should clearly indicate their data requirements, assumptions used and limitations. The launching of the guidebook is also especially relevant as this year GAIN has established a new partnership with the International Inputs-Outputs Association (IOA).

Session One
Launch of GAIN Training Guidebook – Assessing labour market outcomes of climate and sustainable development policies

During the first session, Marek Harsdorff, Economist, ILO Green Jobs Programme, introduced the guidebook and explained its structure. While the first module is geared to policy-makers and social partners, the rest of the guidebook is focusing on statistics and economic models based oninput-output tables and social accounting matrix. It is therefore rather designed for statisticians, researchers and economic modellers.

A) Modules 1-2: Policy and Statistics

The Module 1 introduces the concepts and definitions around green economy and green jobs, and the rationale for a transition to greener economies as well as the nature and scale of the major structural, macroeconomic and labour-market implications of the greening of economies, as it discusses country strategies and policies. It also considers the implications of greener economy policies over employment, the use of

assessment to inform policy decisions and reviews the assessment tools and methods. A green economy is one equipped with the tools for achieving sustainable social, economic and environmental development. Finally it also stresses the importance of quantitative assessment in relation to green economy policies and outlines the use of assessment tools and methods to inform policy decisions.

To better understand the concept and definitions of a green economy and a low carbon economy, it is essential to ask some guiding questions, such as what are the impacts and implications of mitigation and adaptation response policies? Moustapha Kamal Gueye, Coordinator, Green Jobs Programme, ILO, explained that green jobs are one of the tools for achieving sustainable social development and referred to the SDGs in a broader way. In fact green jobs not only contribute to preserving or restoring environmental quality but also must be decent based on the four pillars of the Decent Work Agenda of the ILO.

A number of economic, social and environmental factors act as drivers in the shift to greener economies. These drivers include changing consumer preferences that reflect a growing awareness about environmental sustainability and protection, the degradation of the environment and ecosystems, and changes in public and private investments, among others. Yet those policies for greening economies will not produce adequate jobs by default but by being part of the design, and taking in consideration the employment and social dimensions of green jobs. Modelling tools enable to better understand and foresee the impacts of greener economies on a wide spectrum of areas. However, quantitative analysis does not answer everything, and other methodologies remain necessary.

The Module 2 of the guidebook introduces statistical definitions and measurement of employment in environmental sectors and green jobs, and describes different sources of data on green. Valentina Stoevska, Senior Statistician, ILO Statistics, emphasised the need to translate the policy definition of green jobs into statistical concepts that are measurable. She pointed out that green jobs may exists in all industries, including the very brown industries, such as mining industries; and that environmental activities can be carried out by all out by all economic units, as main, secondary or ancillary activities.. On one hand, there are units that produce environmental goods and services for the market, as their main or secondary activity. For example, collecting used appliances and preparing them for recycling. On the other hand, there are units that do not produce environmental goods and services for the market but use environmentally friendly technologies and processes that make their establishment's production processes more environmentally friendly or make more efficient use of natural resources.

B) Modules 3-4: Green Input Output and Social Accounting Matrix

To introduce the module 3, Margaret Chitiga, Professor University of Pretoria and Marek Harsdorff debated on how to expand conventional Input-Output Tables (IOT), which do not feature in most green activities,

so than green industries can be distinguished. The module introduces how to build simple Employment Projection Models (Green EPM), and how to classify green industries according to the System of Environmental and Economic Accounts (SEEA). A basic IOT shows inter-industry transactions, with an equal number of industries in the columns and the rows. It features the following four major entry blocks: first, intermediate demand, industry-by-industry; second, gross value added; third, imports; and fourth, total final demand.

In a second time, Massimiliano La Marca, Economist, Multilaterals ILO, noted that Supply and Use Tables (SUTS) and Social Accounting Matrices (SAMS) represent the economy and provide the basis for multiplier analysis and more complex simulation modelling. The SUTS framework can include "green industries" and "green goods and services". A green SUT can be transformed into a "green IOT" following standard SUTS to IOT transformation methods. The model is aimed at helping countries to understand their Nationally Determined Contributions and see the cross-border effects.

Session Two: Presentation of conference papers

The second session of the conference offered a tribune for GAIN and other researchers to present their studies and results on the subject of just transition towards greener economies and societies for all.

A) Country studies

A paper on the *Philippine Employment Projection Model (Green PEPM)* was presented by Danica Aisa Ortiz, Research Specialist for the Philippine Institute for Development Studies. The paper projects the demand for green jobs, sectors and outputs. It also highlights the importance of dialogue and consultation, by presenting in terms of policy the Philippine *Green Jobs Act of 2016* as a springboard and regulatory mechanism to facilitate the promotion and shift to green activities. To avoid jobs displacement, guiding and assessing businesses and industries is needed.

From his side, Mwala Lubinda, Namibia University of Science and Technology, noted in his paper titled *Green Jobs and Green Economy Assessment – Namibia,* that the country has a population of 2.1 million, a GDP of 20 per cent, while youth unemployment stands at 47 per cent, unemployment at 29.5 per cent, and poverty at 19.5 per cent. Furthermore he pointed out that quantitative statistics and more general data on the green economy, which are vital to crafting, integrating and evaluating "Going Green" policies, did not exist previously in Namibia. He outlined the need for the country to also focus on the creation of quality jobs following decent work standards, as there is a danger of transitioning to green economy without addressing the impact on poverty.

The case of *Just transition in Argentina* was introduced by Christoph Ernst, ILO Employment and Productive Development Specialist. His paper showcases the reality of climate change is in Argentina, as phenomena such as flooding, storms, extreme temperature and fire have occurred with increasing frequency. The transition to a green economy in Argentina can generate net positive impacts on the economy, employment and society as long as inclusiveness is promoted and social costs are limited. Yet the challenge remain social in Argentina, where there is 33 per cent of informality rate, with many people trapped in non-decent jobs. Without a national strategy and a comprehensive and integrated policy package, the potential of such a shift may not be reached and social adjustment costs could be high. Policy packages have to be framed at the macro and micro levels.

Ms Kirsten Svenja Wiebe, Norwegian University of Science and Technology, presented a global model *Estimating the labour market impact up to 2030 of the transition to a green economy*. The transition to a green economy involves significant changes in the structure of economic production. Not only energy intensive industries are affected, but also other industries with close relationships to the natural environment, such as agriculture, have to undergo significant changes. The results regarding the impact of a transition to a green economy on the labour market are presented using the newly developed projection of a Multi-Regional Input-Output System (MRIO). The model is driven by exogenous GDP growth rates and exogenous technological change as per scenario specification.

B) Sector studies

For the first presentation on sector studies, Guillermo Montt, Work Income and Equity Unit, Research Department, ILO, presented a paper on *Employment in the electricity sector: Evidence of an employment friendly transition*. This paper analyses the employment effects on a global scale of electricity generation by different sources since 2000. It finds that the additional generation from renewable, non-hydro, energy sources has been linked to higher job creation in the electricity sector compared to other energy sources, notably fossil fuel-based technologies. As predicted, renewable energy also help reduce greenhouse gas (GHG) emissions. Besides, estimating the economy-wide effects through employment multipliers provides more evidence that developing renewable energy has positive environmental and employment impacts on the entire economy.

In his paper titled *Mobility - modelling the economic impact of decarbonizing car travel,* Richard Lewney, Cambridge Econometrics, explained that Europe could improve its growth prospects and increase overall employment by supporting auto sector innovation to curb its dependence on imported oil. There are currently concerns that the transition to a low-carbon economy will be too costly to embark upon during the economic crisis. But improving auto efficiency and switching to domestic energy sources for vehicles could contribute to

Europe's key objectives of stimulating economic growth and mitigating climate change.

Joaquim Bento de Souza Ferreira Filho, University of São Paulo, examined in his paper on the *Economic impacts of deforestation in Brazil* the employment and income impacts of deforestation control in Brazil. Deforestation reduction is a principal target for Brazil, and is probably the most important green policy under discussion in the country. While it shows that Brazilian economy would not suffer much from stopping deforestation, people should however be protected from the collateral impacts of the transition, which would disproportionately hurt poorer workers.

Ulrike Lehr talked about Egypt's challenges in the energy sector as a result of rising energy demand, decreasing domestic shares and energy subsidies. In her paper titled, *The socio-economic impacts of renewable energy and energy efficiency in Egypt*, she further explained that population growth in the country has put a strain on the job market, in particular from young adults seeking to enter the labor market for the first time. Renewable and energy efficiency expansion can help to mitigate both these challenges.. Scenarios for future expansion could lead to almost 40,000 jobs in Egypt in renewable and efficient energy sectors. Ms Lehr outlined that Egypt has the opportunities and the capacity for extensive green development, and could become a regional hub for renewable energy and energy efficiency.

C) Methods and models

Litia Simbangala, Senior Statistician & Head National Accounts Branch, Central Statistical Office of Zambia, presented *Supply and Use Tables*. The SUTS is a key framework in in national economic accounting.

Mr Simbangala explained that SUTS show how goods and services are made available in the economy and how they are used. The environmental (green) activities are defined as the economic activities, whose primary purpose is to reduce or eliminate pressures on the environment or to make more efficient use of natural resources. He noted that challenges faced during compilation included a lack of data, inadequate data, classification mix-match, poor data quality and vertically integrated industries – mining example.

A paper on *Assessing employment impacts of deep decarbonization: an alternative method between input-output analysis and CGE modeling,* was presented by Boris Thurm, Doctoral Assistant, EPFL, who introduced the European Calculator modelling approach. This approach aims to provide decision makers with a user-friendly solution to quantify sectorial energy demand, GHG trajectories, and the social implications of lifestyles and energy technology choices in Europe. The model relates emission reduction with human lifestyles, the exploitation and/or conservation of natural resources, job creation, energy production, agriculture, costs, etc., in one approach and tool.

Massimiliano La Marca, talked about the paper on *Green growth in Zambia: from SUT to green employment model.* He introduced Supply and Use tables for Zambia which are expanded to include green industries in addition to the standard conventional industries. Build on the Green SUT and Social Accounting Matric, an Employment projection model was presented comparing a conventional and green growth scenario. The employment projection model will enable the comparison of conventional and green growth policies and identify their employment impact over time. Such policy tools are not available to date and have been expressly requested by the Zambian Government to support its economic planning activity.

Ronal Gainza, Programme Officer, Economic and Fiscal Policy Unit, Economy Division, UN Environment, concluded with a paper titled *Do green investments boost climate change mitigation and adaptation benefits while delivering positive social and employment related outcomes? A meta-analysis of 17 green economy country studies.* Top- priority green investments aim at reducing GHG emissions and increasing its sequestration and storage; followed by climate-oriented investments related to adaptation, and increase country readiness to address more severe climate change scenarios. A green economy is a vehicle for building climate resilience as well as country development priority issues such as energy and food security. Investments within green economy are climate-oriented (i.e., climate-oriented green investment) and deliver sustainable development benefits, such as a positive balance on economic growth and on the most important social indicators including employment creation.

Finally Mr Gainza emphasised the importance of going to the local think tank to explain how they can use the data. You need to have good local networks, for example, with the Minister of Economy. Two years is required for a good assessment if every stakeholder is involved. This is why it is important to develop in the country.

Session Three
Way forward: connect research to policy - How can GAIN support country needs in climate policy making?

Tomasz Chruszczow, Special Envoy for Climate Change, Poland's High Level Champion for COP24, said there is a growing understanding of the social impact of climate change, which should be taken into account when negotiating policies. However, more awareness amongst negotiators and governments is required.

It was noted by Angelina Ama Tutuah Mensah, Director Environmental Protection Agency, Ghana, that there is more quantitative than qualitative data, and there is a need for bridging. GAIN should link to national statistic offices and include scenario analysis based on climate policies as stipulated by National Determi-

ned Constributions and The Paris Climate Agreement. Countries want to acquire the capacity to build their own models but need capacity building and financial support.

Furthermore south-south cooperation in climate change has an important role. Vicente Yu, Deputy Executive Director, South Centre, underlined that research institutions are trying to build up in this regard by using holistic reality-based approaches. Capacity building is important but assistance in building institutions in developing countries is essential. The science community must understand the specific and respective context in which new policies are applied. There are often misunderstandings due to a developed country-European-North American based approach. In consequence a one–size–fits–all approach to modelling is a challenge for researching adequately.

Mr Gueye, underlined the need to build capacity locally, in order to let countries do the work autonomously. It also important to develop a compelling narrative that politicians and the public can understand.

It was suggested by Ms Chitiga, to implement the training guidebook content step-by-step with people involved in policy making. South Africa could be one of the training hubs in this regard.

The conference was concluded on the words from Alice Vozza, ITCILO Green Jobs, who stressed that capacity building demand is evolving and requires a multi-faceted approach. Indeed, knowledge is increasingly coming from participants and not only from trainers.