

National Green Export Review for Moldova

Discussion paper

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Important Notice and Disclaimer

This discussion paper was prepared by UNCTAD's Trade, Environment, Climate Change and Sustainable Development Branch in support of the National Green Export Review (NGER) project of Moldova. **This document has been prepared only to serve as a discussion paper during the NGER's 1st National Stakeholder Workshop scheduled for 07 September 2017 in Chisinau, Moldova.** The views expressed in this draft report do not necessarily reflect the views of the United Nations.

Through the NGER project, stakeholders are invited to express their views, select 2 products for the focus on the national project, and elaborate a national action plan to advance production and export capacities in the selected products.

More accurate, complete and definitive data and analysis will be introduced in the project by National Experts who will prepare Moldova's National Green Export Review Report which will be published.

Concrete recommendations and actions are NOT presented in this draft report, but rather, **will be presented in Moldova's National Green Export Review Report as proposed by National Experts and other National Stakeholders.**

Additional information regarding the project is available online at:

<http://unctad.org/nger>

INTRODUCTION

The transition to a greener and cleaner development path is a global imperative as recognized in Rio+20 Summit and United Nations Sustainable Development Goals (SDGs). The green economy is expected to make increasing contributions to economic growth and poverty alleviation while preserving and ensuring sustainability of the environment. But certainly, economic growth and jobs in a national green economy depends on national producers' access to domestic and more importantly international markets for the green goods and services that they produce. Trade thus plays a critical enabling role in a national green economy by providing a large market for producers of green goods and services. UNCTAD has launched a programme of National Green Exports Reviews (NGERs) to assist countries interested in developing a plan to increase production and exports of green products.

The present discussion paper examining possible green sectors of Moldova has been prepared by UNCTAD to support discussions at a national stakeholder workshop which will launch a **National Green Export Review (NGER)** for Moldova.¹ They will also explore strategic approaches to further the development of selected green goods and services sectors in a collaborative, inter-sectoral, strategic context. At the conclusion of the NGER's 1st National Stakeholder Workshop national stakeholders will select 2 green sectors as the focus of Moldova's NGER project.

This selection will be made from the green sectors covered in this paper. These sectors include some in which Moldova has already achieved considerable experience but further growth can be achieved, as well as others wherein Moldova's experience is limited but a strong potential exists for Moldova to become an even more competitive international exporter. Based on the sectors covered in this paper and the results of a national stakeholder workshop, national expert(s) will be engaged by UNCTAD to undertake research, and to consult with national stakeholders, in order to identify and select options for inclusion in action plan for the development of the selected green sectors. In a second national stakeholder workshop, the action plan will be reviewed, revised and adopted by national stakeholders – government policymakers, producers, academia and civil society – who will subsequently cooperate on the action plan's implementation.

¹ NGER are undertaken under UNCTAD's project on *Supporting Member States in developing and launching sustainable product export strategies through National Sustainable Product Export Reviews* made possible through support provided by the United Nations Development Account.

I. GREEN EXPORTS: OPPORTUNITIES AND BENEFITS

A: Transition to a Greener Economy and Trade

Across countries, transitions to a greener economy are expected to make increasing contributions to economic diversification, employment creation, export earnings, poverty alleviation and to environmental protection and social equity. A greener economy is driven by both domestic and foreign demand for green goods and services, including more efficient and low-carbon energy and transportation, organic food, ecotourism, solid waste and water recycling, environmental consulting, and emerging categories that include green construction, sustainable harvested timber products and natural fibers. It is also a pillar of strategies to mitigate climate change and promote sustainable development as underscored, inter alia, in the Rio+20 Summit outcomes and the United Nations Sustainable Development Goals (SDGs).

Many green categories represent just a small fraction of their 'brown' counterparts indicating a vast potential for growth. Whether in high-tech goods, commodities, basic manufactures or services, the export opportunities offered in a greening global economy are significant and expanding faster than overall world trade; a trend that is expected to continue.

There is a large un-tapped potential for developing countries to advance the development of green sectors. In this context international trade, through exports and imports of green goods and services, can facilitate the development of green sectors. There are formidable challenges, however, to undertaking the transitions successfully and engaging in international trade. Principal approaches towards this goal include the creation of an enabling environment through improved regulatory and institutional frameworks for the green economy, productive capacity building, investment and related financial services, and more open trade, with greater attention to social equity, in green goods and services to enhance market access and investment opportunities.

Renewable energy technologies such as solar panels and wind turbines, and energy efficient products such as compact fluorescent lamps are among the green technologies seeing the sharpest rise in exports. Developing countries have made significant progress in supplying global markets for these products. Although relatively few developing countries are participating in this trend, green technologies are often produced in developed and more industrialized developing countries using intermediate inputs originating from a wide variety of developing countries that are integrated in global supply chains. Trade in intermediate goods, which accounts for about 40 percent of world merchandise trade, is thus an important entry point for developing countries to supply green markets.² Participation in supply chains generates economy-wide gains, such as employment, improvement in technology and skills, productive capacity upgrading, and diversification into value-added exports.

While businesses in more industrialized developing countries are seizing new export opportunities for green technologies, businesses in less industrialized developing countries and countries with transition economies continue to build their export capacities in green products such as organic food and beverages, natural cosmetics and fibers, biofuels, and sustainably harvested timber and fisheries products, and for green services such as ecotourism. In each of these sectors developing country

² UNCTAD, 2011, Integration of developing countries in global supply chains, including through adding value to their exports.

exports are experiencing sharp growth, generating employment, advancing rural development and protecting the environment.

The global market for green products is very diverse, and although it remains relatively small, accounting for 15 to 20 per cent of the traditional market for any given product, it is growing rapidly and significantly faster than world trade. Estimates for the 2015 global market volumes for the products are impressive: 12 \$b for sustainable seafood; sustainable timber over 10 \$b; organic foods and beverages 100 \$b; natural cosmetics 17 \$b; and BioTrade products 5 \$b. Certainly, these figures demonstrate that consumers care about their health, their environment and about socially equitable production and trade.

In addition to green goods, green services, particularly in connection with tourism, provide a wide range of export opportunities for developing countries. Ecotourism captured 27 percent of global tourism revenues in 2015, with international tourists spending \$600 billion in ecotourism destinations.³

Dynamic green sectors can make important contributions towards the achievement of national development objectives relating to economic diversification, investment, poverty reduction, rural development, employment generation and an overall improvement of social welfare. As such, they can also make significant contributions to the UN SDGs that shape the UN 2030 Agenda for Sustainable Development.

B: UNCTAD's National Green Export Reviews

As green products hold considerable potential for developing countries and countries with transition economies, particularly countries with limited export diversification, UNCTAD assists interested countries to build production and export capacity of green products for which they have natural and comparative advantage. UNCTAD works in partnership with countries to collaboratively identify promising green products; explore opportunities and constraints; design policies and institutions; and define national action plans to deliver results.

UNCTAD's technical assistance projects help boost green exports, increase value added, and generate employment, while ensuring sustainable resource use, promoting equitable production and trade, and generating positive environmental impacts. **National Green Export Reviews (NGERs)** are among UNCTAD technical assistance projects related to the green economy. NGERs respond to emerging country demand for assessments of national potential to advance the development of national green sectors to generate new production, employment and export opportunities while promoting sustainable development.

Each UNCTAD NGER is centered on a national multi-stakeholder process in requesting countries. Using UNCTAD's green product space methodology, national stakeholders first identify green sectors with promising export prospects. The NGER subsequently guides stakeholders through an interactive review of the economic, regulatory, institutional and trade policy environments characterizing these sectors.

National teams including one or more experts work closely with national stakeholders to coordinate and conduct the NGER activities and prepare reports. Stakeholders, including national policymakers,

³ Balmford A, Green JMH, Anderson M, Beresford J, Huang C, Naidoo R, et al. (2015) Walk on the Wild Side: Estimating the Global Magnitude of Visits to Protected Areas. *PLoS Biol* 13(2): e1002074. doi:10.1371/journal.pbio.1002074

are involved through direct interviews and questionnaires, and through their participation in national stakeholder workshops that serve to define each NGER's objectives and review its findings and policy-relevant conclusions. Results of this review assist policymakers to design policy packages, and national producers to cooperate on private initiatives, that can support the development of productive capacity and boost exports in international markets for green products and services in which their country has a demonstrated comparative advantage. NGER reports are published and disseminated by UNCTAD and the government of beneficiary countries to interested parties, including potential investors. Through intergovernmental fora organized regionally and in Geneva, study results are also reviewed and discussed by researchers, national decision-makers and trade negotiators in the wider trade and development community. In these ways, national experiences and best practices are exchanged and lessons learnt are disseminated widely.

Specifically, NGERs assist developing countries to improve the capacity of public and private stakeholders to:

1. **Identify and select sectors for national production and export of green/sustainable products;**
2. **Assess the policy, regulatory and institutional requirements for supporting the development of selected green product sectors;**
3. **Prepare and adopt recommendations and an action plan for building productive and export capacity, and increase value addition and product diversification, in selected green product sectors.**
4. **Mobilize financial and technical support to implement the recommendations and action plan, including by incentivizing investment, and encouraging private sector involvement and support from international donors.**

In focusing on particular green sectors in a national economy, and assessing the impacts of economic and market trends, and of regulatory, institutional and trade reforms on their future performance, an NGER leads national policymakers and other stakeholders – particularly businesses and entrepreneurs – to examine a range of important issues for the green sector under study within the context of the overall policy framework for the sector. Issues examined include:

- National development objectives for the sector;
- Areas of effectiveness and weakness in the current policy framework for the sector;
- Regulatory and institutional challenges inhibiting sectoral development;
- Innovative approaches to strengthening backward and forward inter-sectoral linkages;
- Adding value to products to increase earnings;
- Diversifying export markets to increase exports;
- The role of businesses and entrepreneurs in the sector and how to improve cooperation and build synergies along the supply- and value-chains;
- Prospects for trade liberalization in green products to generate increased efficiency, employment and access to foreign markets, particularly among SMEs;
- Assessing and overcoming tariff and non-tariff measures (NTMs) in foreign markets;
- The overall impact of domestic reform and trade liberalization on sectoral development.

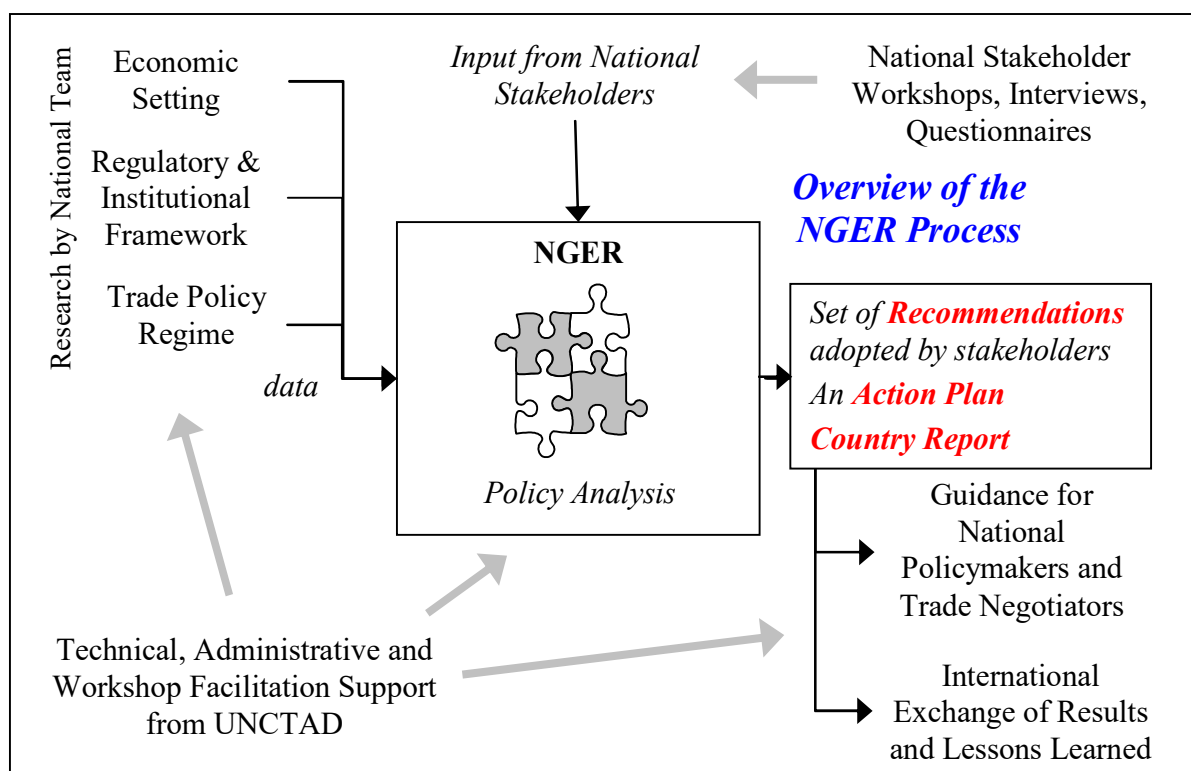


Figure 1: NGER process

C: Green Sectors in a National Economy

There is no internationally agreed definition of a green sector and product. And while governments continue to debate (for well over a decade now in the WTO Doha Round Negotiations) on what is a green product, and what is not, consumers and firms in global markets have already distinguished what green goods and services are through their consumption preferences. Certainly these products include renewable and energy efficient technologies. However, they also include sustainably produced agriculture, fisheries and forestry products; organic foods, beverages and healthcare products; BioTrade and other natural products; ecotourism services and a variety of other products.

It is generally agreed that environmental goods and services generally fall into one of two categories:

1. **Goods and services used to provide an environmental service** such as wastewater treatment, solid waste management, and air pollution control. Related goods include a wide variety of industrial products such as valves, pumps, compressors, etc. that can be specifically employed for environmental purposes.
2. **Goods and services whose production, end-use and/or disposal have “reduced negative”, or “positive”, environmental impacts relative a traditional substitute good providing similar function and utility.** This category includes goods are generally used for purposes other than environmental ones. For example, related goods may include items such as chlorine-free paper, renewable energy technologies, energy-efficient office machines, natural fiber packaging or floor covering materials, and a wide range of products associated with sustainable forestry and fisheries, organic agriculture, and ecotourism. Such goods, sometimes referred to as environmentally preferable products (EPPs), have inherent environmentally superior qualities that compared to

substitute goods. Related services include ecotourism services or renewable energy transport and electricity supply services.

Following the logic used to identify the second category of products above, virtually any product, whatever it may be, can have a non-green and green product variant. Why? Because green products are those that have less of a negative impact on the environment than traditional equivalents. The green product variant could for example be manufactured from recycled components, be manufactured using renewable energy, be supplied to the market with less wasteful packaging, or all three.

Broadly speaking, it is more practical to simply identify a green product by following the market.

After all, it is firms and consumers in the marketplace that will eventually purchase these goods and services, and thus their perceptions of what makes a product green should be heeded by suppliers seeking to meet market demand. For many consumers, a green product is any product made using natural ingredients, or any animal or plant product grown under natural conditions without artificial inputs. Typically, such products concern food, medicine, nutrition and cosmetic products made using natural or organically grown ingredients. For some consumers, products that have perceived lowered negative impacts on human health are sometimes considered as green, for example, foods without artificial coloring or preservatives. Consumers also perceive products produced by poor rural communities through fair trade schemes are considered green. This is because the income from the sale of these products generates employment in poor rural communities thereby reducing poverty and placing them in a better position to sustainably manage rural ecosystems and natural resources.

II. GREEN PRODUCTS IN MOLDOVA

A. Identifying Competitive Green Products

Applying product space methodology⁴ to the full set of Moldova's export data indicates those products in Moldova's export basket that have a revealed comparative advantage (RCA). When the product space methodology is applied to Moldova using 2012 through 2016 export data, several product groups with high levels of competitiveness can be identified. Figure 2⁵ shows the 2016 product space map of Moldova. The products depicted as colored dots in Figure 2 are identified as being competitive exports with RCA values greater than 1 (only some of these are potential green products). Circles contain Moldova's most competitive 'green' products. These are labeled in Figure 2 and they include: Oilseeds (Sunflower and Safflower); Grapes (including grapes, raisins and wine); Honey; Fruits (fresh, dried and juices); and Measuring Equipment (including gas, liquid and electric meters). The NGER study seeks to examine how these competitive green products could benefit from focused action by national stakeholders. Detailed RCA values and export data for these competitive products for the year 2016 are provided in Figure 3

⁴ Robert Hamwey, Henrique Pacini and Lucas Assunção, 2013, [Mapping Green Product Spaces of Nations](#), The Journal of Environment & Development, **22**, 2, 155-168, doi:10.1177/1070496513482837.

⁵ Generated using MIT Atlas of Economic Complexity, Reference: R Hausmann, CA Hidalgo, S Bustos, M Coscia, S Chung, J Jimenez, A Simoes, M Yildirim, 2011, The Atlas of Economic Complexity, Puritan Press. Cambridge MA, <http://atlas.media.mit.edu/>.

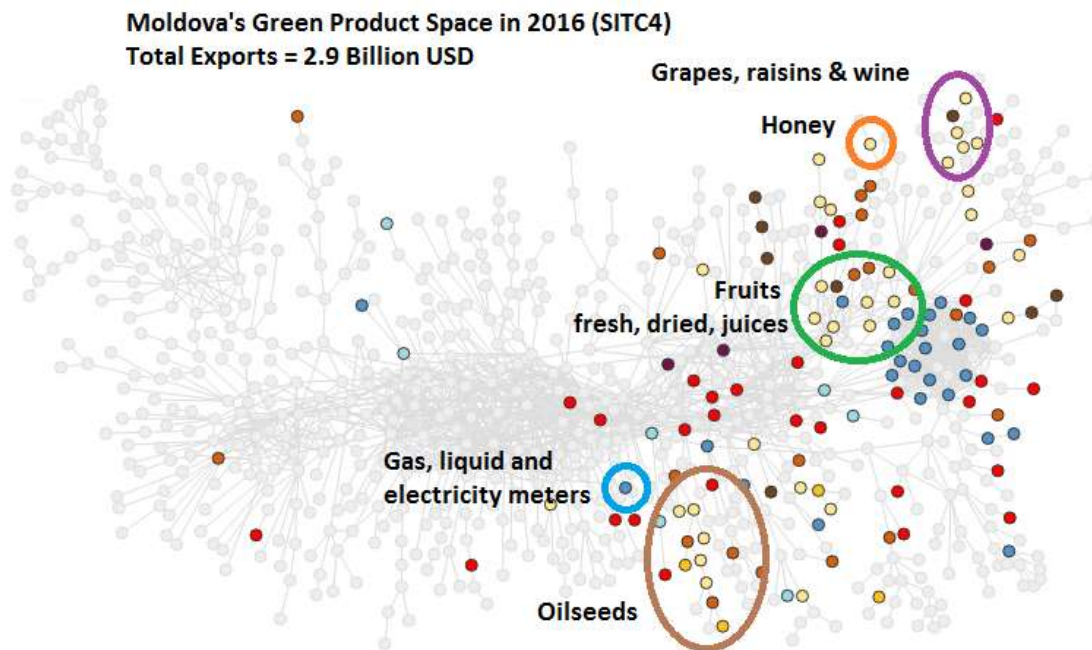


Figure 2: Product Space Map of Moldova in 2012-2016; SITC4 Classification

(Source: UNCTAD calculations and Harvard Atlas of Economic Complexity: <http://atlas.cid.harvard.edu/>)

The top 40 most competitive exports of Moldova based on trade data from recent years are presented in Figure 3. In this figure, RCA values (measured on left vertical axis) for each product on the horizontal axis are shown for 2012, 2013, 2014, 2015 and 2016 as different colored lines near the top of the graph. While the scatter in these lines for any given product indicates RCA variability over this period, for most products the scatter is minimal indicating that Moldova is maintaining its comparative advantage in these products over the entire period 2012-2016, and some products show signs of progressive RCA growth indicating increasing production and export competitiveness of Moldova in these products. The value of annual exports in 2016 (measured on the right vertical axis) for each product is indicated by the green (potential green product) and grey (non-green product) vertical bars. For most of the products in the top 40 RCA group, export values in 2016 are mostly in the range of 10 to 200 million USD.

All products in Figure 3 have RCA values that are very high and significantly greater than 1. Many potentially green food, grain, vegetable and fruit products are among these products. One which is of specific note (not initially included for analysis in the NGER) is the Edible Nuts product group, which would include walnuts, and stakeholders may wish to include Edible Nuts in NGER workshop discussions. Aside from these agricultural green products, industrial green products identified for further study in this NGER – gas, liquid and electric meters – are also among the top 40 RCA value exports of Moldova.

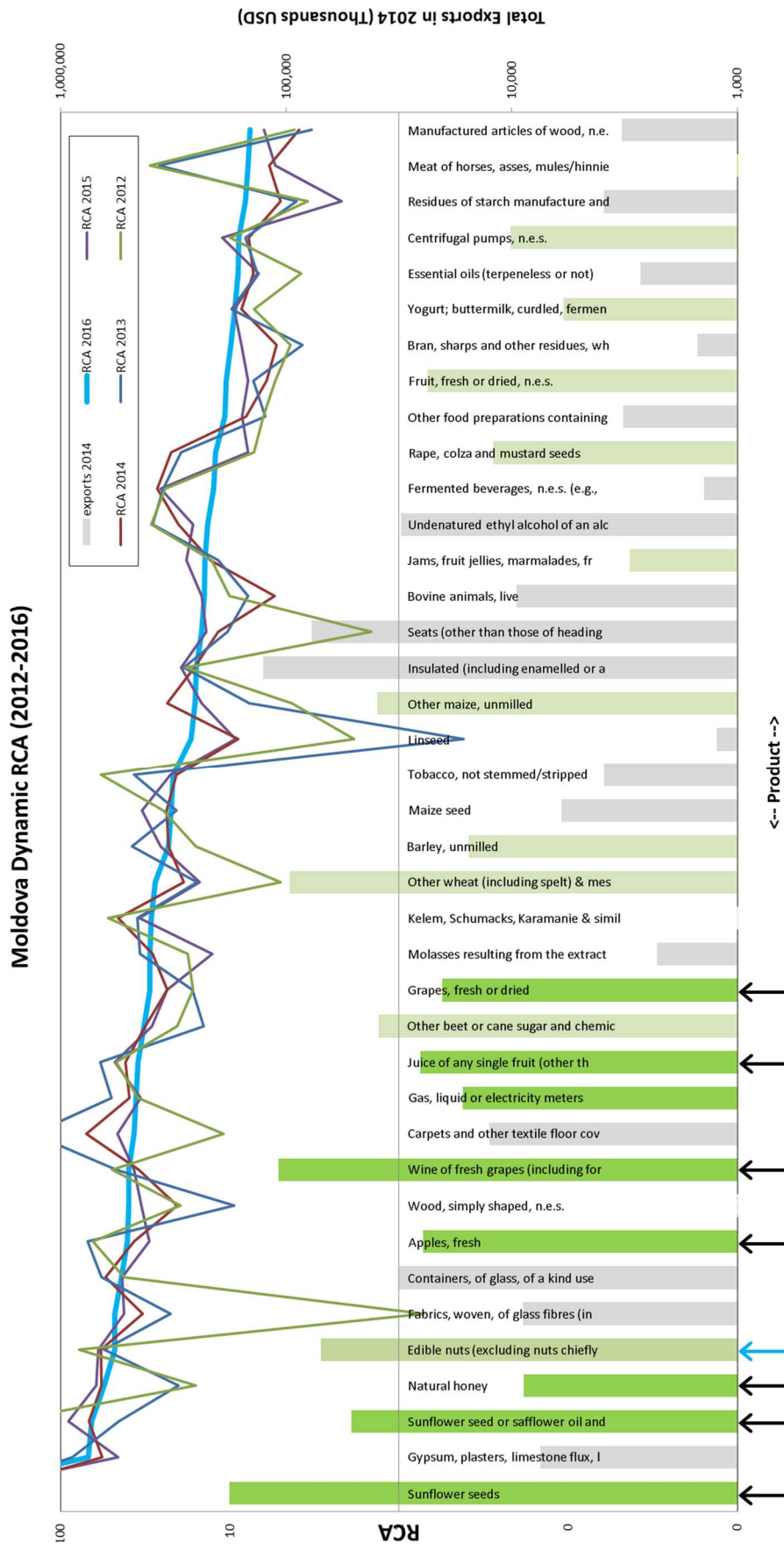


Figure 3: Composite chart of Moldova's exports in terms of the values of RCA from 2012-2016 and of export values in 2016 (Source UNCTAD calculation based on data from UN Comtrade)

Detailed trade data for Moldova's most competitively produced and exported products are provided in Figure 4.

SITC Code	Product Description	RCA (Moldova 2016)	Export Value (Moldova 2016)	Average Annual Growth Rate (2012-2016)		
				RCA (Moldova)	Exports (Moldova)	World Exports
2224	Sunflower seeds	663	178'678	13%	11%	-12%
4215	Safflower oil	119	51'483	5%	-4%	-18%
0616	Natural honey	46	8'845	39%	54%	-2%
0615	Molasses ex sugar refine	45	2'270	3%	3%	-11%
0599	Fruit juices nes/mixture	39	25'389	-4%	-5%	-12%
6546	Woven glass fibre fabric	37	8'930	408%	437%	-6%
6651	Glass containers/fitting	34	31'879	-9%	-3%	-4%
0612	Cane/beet sugar nes	33	38'829	32%	27%	-14%
0574	Apples fresh	32	24'687	-23%	-18%	-5%
0577	Nuts edible fresh/dried	30	69'994	-12%	1%	1%
0412	Wheat nes/meslin	27	96'423	43%	44%	-11%
6595	Carpets, woven	25	12'555	27%	39%	-3%
8731	Gas/liquid/electr. meters	25	16'475	-5%	3%	-3%
0430	Barley grain	24	15'554	3%	7%	-8%
1121	Wine of fresh grapes	23	107'755	-15%	-7%	-2%
0441	Maize seed ex sweet corn	21	6'001	-2%	4%	-5%
0575	Grapes fresh/dried	20	20'396	2%	12%	-2%
7731	Insulated wire/opt fibre	15	126'389	118%	126%	-7%
0449	Maize ex sweet corn nes	15	39'461	19%	20%	-10%
8211	Chairs and seats	13	77'209	59%	70%	-5%
2226	Rape/colza/mustard seeds	10	12'086	-13%	-10%	-8%
1124	Distilled alcoholic bev	9	30'872	-17%	-10%	-3%
7426	Centrifugal pumps nes	7	10'095	-9%	-3%	-5%
0579	Fruit fresh/dried nes	7	23'626	0%	12%	0%
0815	Starch/sugar waste foddr	7	3'898	12%	26%	0%
0567	Vegetables prep/pres nes	6	9'948	-23%	-19%	-6%
0732	Cocoa preps/choc.(bulk)	6	3'217	-1%	13%	2%
0230	Butter, milk fats	5	4'690	41%	50%	-5%

Figure 4: Additional trade data on Moldova's most competitive exports (Source UNCTAD calculation based on data from UN Comtrade)

B. Products under Preliminary Analysis

This discussion paper used green product space methodology to quantitatively identify green products for which Moldova has a revealed comparative advantage in production and export. **Oilseeds (Sunflower and Safflower); Grapes (including grapes, raisins and wine); Honey; Fruits (fresh, dried and juices); and Measuring Equipment (including gas, liquid and electric meters)** were thus identified.

The Moldova NGER project's 1st National Stakeholder Workshop will select 2 of the above 5 products for focused study.

III. QUESTIONS FOR DISCUSSION BY NATIONAL STAKEHOLDERS

For each product/sector above discussions of the following topics can help identify parameters for the NGER's overall direction, its final report and its proposed national action plan:

1. Is it necessary to raise producers' awareness of green market opportunities?
2. Which niche market opportunities exist for these products?
3. What are the institutional, financial and market constraints faced by producers?
4. What are the main factors preventing increased value added production in these sectors?
5. Can export markets be diversified to increase earnings?
6. What certification issues are relevant?
7. How can the national Government and regional/local authorities better support producers and intermediaries in getting products to export markets?
8. What can producers themselves do to improve cooperation and coordination?