



COMMITTEE ON COMMODITY PROBLEMS

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ISSUES AND PROSPECTS FOR INTERNATIONAL RAW MATERIALS AND TROPICAL COMMODITY MARKETS

Executive Summary

The production and exports of raw materials, horticulture and tropical products contribute to the economies of many developing countries, in particular the least-developed countries (LDCs), as a major source of livelihood, revenue and improved living standards for millions of rural smallholders, and thus to the achievement of the 2030 Agenda for Sustainable Development.

This document examines recent trends and medium-term prospects for a selection of raw materials and tropical products. It assesses the demand, supply, trade and price trends that are likely to shape these markets over the next decade. The findings indicate that real prices of the main raw materials and tropical products would decline slightly during the next 10 years. Declining rates of population growth would be the main factor behind the projected weakening of demand growth, and most additional demand is projected to originate in regions with robust population growth. Also, changes in consumer preferences and trends would support robust consumption growth in some markets. On the supply side, global production of raw materials and tropical products is projected to increase, driven essentially by efficiency gains and productivity, while area expansion is foreseen to play a relatively less significant role. On the other hand, trade in raw materials and tropical products is projected to continue to expand, thus contributing to export earnings and food security in many developing countries. However, a growing number of developing countries are becoming less dependent on cash crops for export earnings and increasingly dependent on non-agricultural products, a transition process that needs to be carefully assessed to understand its causes and implications.

Suggested action by the Committee

The Committee is invited to:

- Review the medium-term projections produced by the Secretariat and discuss their possible implications for food security and overall agricultural development;
- Express appreciation regarding the importance of FAO's market monitoring, assessment and outlook work for raw materials and tropical products in supporting the Members to make informed and evidence-based policy decisions;
- Provide guidance regarding FAO's market and policy work on raw materials and tropical products to make it more useful to serve the Members, and recommendations on ways to increase the use and uptake of the work by countries and policy makers.

¹ Rescheduled from 23-25 September 2020

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I. Introduction

1. At its seventy-second Session, the Committee on Commodity Problems (CCP) stressed the importance of medium-term commodity projections and their usefulness and relevance in informing policy decisions. The Committee also recommended the expansion of the commodity projection analysis to other commodities that are important for food security. In response to the CCP's request, the Secretariat produced this document examining recent trends and medium-term prospects for a selection of raw materials and tropical (RAMHOT) products². The Secretariat plans to expand the commodity coverage for this exercise in the future.

2. The document begins by reviewing some of the main characteristics of cash crop commodity markets and their implications. It then discusses the main assumptions underlying the medium-term prospects, and highlights the main results of the projections in terms of supply, demand and prices. A concluding section outlines the uncertainties and emerging issues associated with the outlook. This projection baseline is not a forecast, but it represents a plausible scenario based on several assumptions about the macroeconomic environment, weather conditions, productivity growth, and agricultural and trade policies.

II. The nature of cash crop commodity price behaviour

3. Many developing countries continue to rely on cash crop export earnings for economic and social development, and on the sector as a source of employment opportunities and improvements in living standards. Furthermore, proceeds collected through various taxes associated with imports and/or exports of cash crops contribute to governments' fiscal revenues. The overall share of tropical beverage crops, fruits, and sugar exports as a percentage of total merchandise exports remains relatively significant for a number of developing countries, although individual shares have declined for some products over the past two decades (Table 1).

4. Because demand for agricultural commodities is generally inelastic, a fall in international cash crop prices implies lower export earnings. Evidence shows that when prices decline, the income of rural labourers and smallholder producers is negatively affected, heightening the risks of food insecurity and greater poverty levels. Between 2008-2010, corresponding to a period of high commodity prices, and 2019, world prices of agricultural commodities fell by 14.5 percent, with beverages and raw materials declining by 15.3 percent and 14 percent, respectively. Coffee has probably been the most emblematic, with price quotations dropping by as much as 20 percent since 2016. As a result, export earnings for the top five largest coffee exporters fell by 6 percent.

² The selected commodities include: abaca, coffee, coir, jute, sisal and tea. Projections for sugar and cotton are covered in the OECD-FAO Medium-term, see document (CCP74/2021/4).

Table 1. The importance of cash crops in agriculture and trade

Countries	Tropical beverage crops ^{1/} and sugar as a percentage of total agricultural products			Tropical beverage crops ^{1/} and sugar as a percentage of total merchandise trade		
	1990	2000	2018	1990	2000	2018
Belize	44.7	24.0	35.9	32.5	13.7	12.6
Burundi	91.2	99.0	75.9	84.5	84.1	37.2
Cameroon	58.4	46.1	46.9	16.1	9.1	12.4
Côte d'Ivoire	59.9	58.4	44.0	30.9	28.7	27.6
Dominican Republic	65.9	22.0	13.9	34.3	13.0	2.4
Eswatini	49.6	33.0	64.5	31.1	10.8	17.0
Ethiopia	50.2	78.3	35.1	44.2	55.4	26.9
Guatemala	55.4	48.6	26.7	38.2	28.4	12.5
Honduras	30.5	60.4	48.0	24.0	26.7	13.5
Kenya	68.5	60.7	45.5	43.0	34.8	26.4
Malawi	22.4	16.6	16.3	20.3	15.7	12.1
Sri Lanka	66.4	68.2	52.8	25.9	12.6	12.2
Tanzania	42.8	34.4	5.7	28.9	23.4	1.4
Uganda	83.6	61.6	43.0	76.0	34.2	22.5

1/ Includes tea, coffee and cocoa

Source: FAO

5. Several explanations have been put forward for this precipitous decline in cash crop commodity prices, but essentially, the root cause can be traced back to frequent market imbalances between supply and demand. First, demand does not respond much in reaction to price changes, so it takes a drastic movement in prices to induce a significant effect on demand. Second, the perennial nature of many commodities (e.g. coffee, tea, cocoa) means that supply cannot adjust quickly in the short term. The net effect of inelastic demand and supply is the emergence of repeated boom and bust cycles of varying length and depth.

6. While the impact of some shocks can be limited in time (e.g. drought), the duration of others remains the subject of much debate. This is an important issue because long lasting shocks influence the long-term trend of commodity prices. Research is divided on this subject. On the one hand, they are those who argue for a secular decline in prices (Prebisch, 1950; Singer, 1956), driven by technological improvements, which enables an expansion of supply at a much faster pace than growth in population and per capita income, and those who do not find evidence of any long-term trend (Deaton and Laroque, 1992). Whether prices follow a trend is essentially an empirical question, but with profound implications. A variety of empirical work is available on the subject, but the results are ambiguous. Some studies confirm that commodity price series are nonstationary (i.e. presence of trend): Grilli and Yang (1988), Sapsford (1985), Leon and Soto (1997) and Cashin and McDermott (2001), while others find that the series are generally stationary (i.e. no trend): Cuddington and Urzua (1989), Perron (1989), Zanas (2005) and Yamada and Yoon (2013). Overall, results differ because of methods, the sample period, and the type of indices used in the analysis.

7. Understanding the properties of the price series, and the nature of the price shocks, is critical to the design of effective price policy measures and institutional setups. For a nonstationary price series, shocks to prices are permanent. Price or income stabilisation programmes that ignore the nonstationary property are unsustainable in the long run. This was the case for the various commodity agreements (ICAs) with “economic clauses”, which were designed to address price weakness and volatility. These agreements generally failed to achieve the intended outcomes because of the difficulty in reversing, or slowing, the downward trend in prices. Interventions in sugar markets ended

in 1984, while those for coffee and cocoa ceased in 1989 and 1993, respectively. Supply arrangements for jute and rubber were maintained up to 2000.

8. The medium-term projections for 2020-2029 are contingent on a number of assumptions, which are outlined in the next section. The developments of these projection numbers are based on simulations carried out using commodity specific trade models (tea, jute, coir, abaca and sisal) and a vector autoregressive with exogenous variable (VARX) system in the case of coffee. Information on the commodity balance sheets was sourced from the Markets and Trade Division's database, FAOSTAT, and the International Coffee Organization (ICO). Macroeconomic forecasts were collected from the World Bank's Global Economic Prospects and the International Monetary Fund's World Economic Outlook.

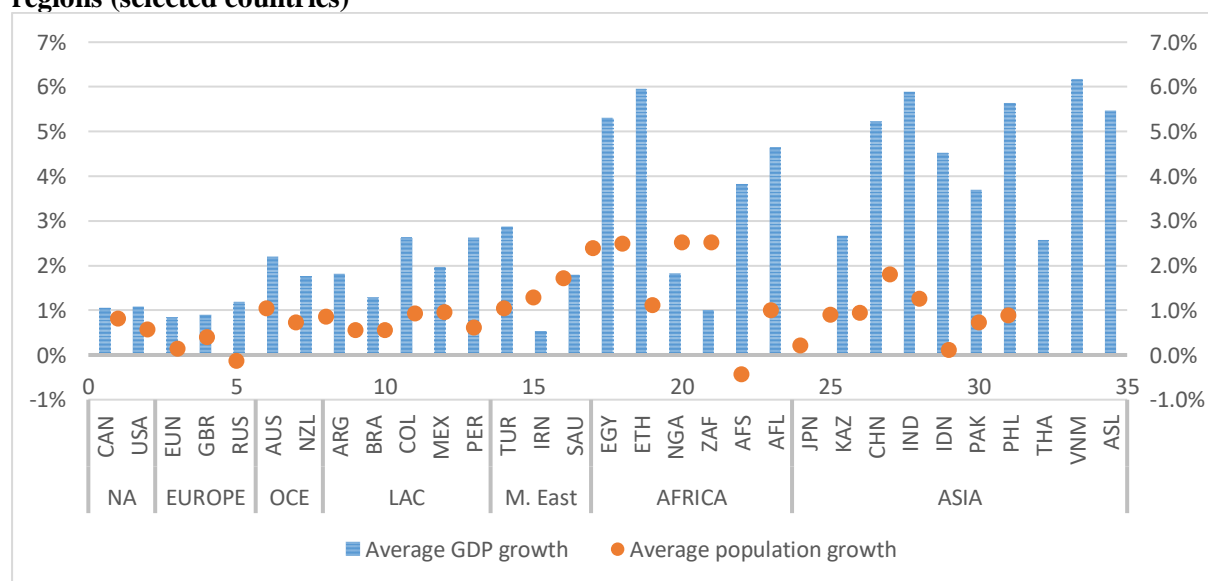
III. Main macroeconomic assumptions underlying the Outlook

9. The macroeconomic assumptions of this baseline projections take into account the effects of the COVID-19 pandemic on world economic prospects. Even though the prospects for 2021 remain quite uncertain, the global economy is projected to recover from the 2020 economic downturn, and to accelerate from 2022 to 2029, in line with the annual growth rates anticipated prior to the onset of the pandemic.

10. Over the projection period, the average gross domestic product (GDP) growth rate is projected to be lower in industrialised economies than in emerging and developing countries. Economic growth in Latin America and the Caribbean and the Middle East is predicted to range between 0.5 percent and 3.0 percent annually, while Africa and Asia are foreseen to expand at a stronger growth rate of up to 6 percent (Figure 1).

11. World population is expected to reach 8.5 billion people in 2029, a 0.95 percent growth per year over the projection period, compared to 1.16 percent growth rate recorded over the last decade. Marked population growth is expected in developing regions, particularly sub-Saharan Africa, which is expected to have the largest annual increase. Significant increases are also projected in Asia (excluding China and India), the Middle East and North Africa, and Latin America.

Figure 1. Average annual GDP and population growth in the projection period (2020-2029) by regions (selected countries)



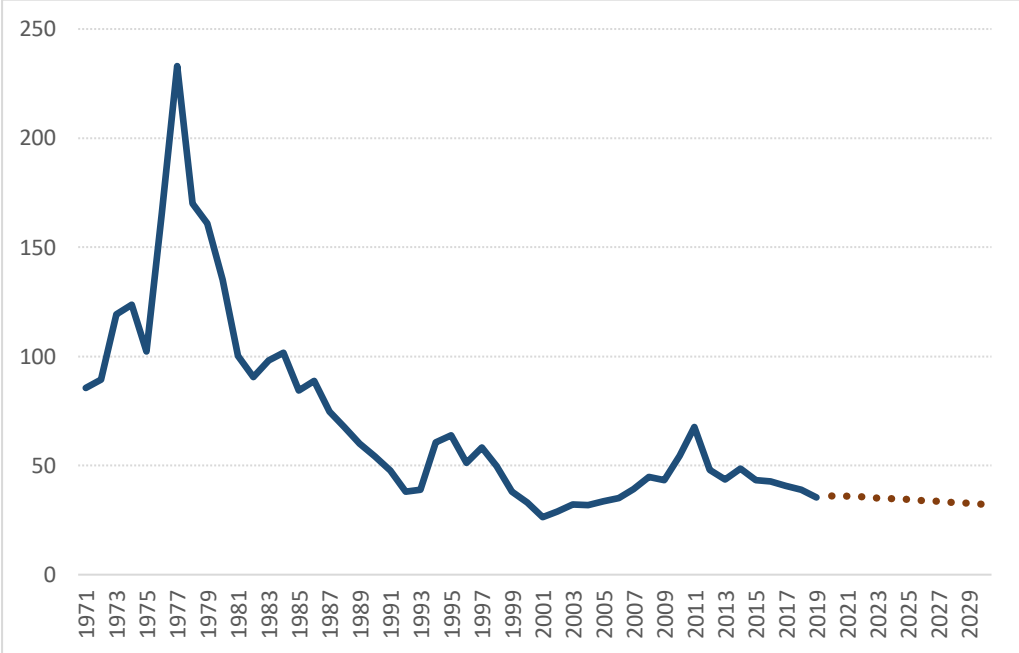
Note: NA: North America, OCE: Oceania, LAC: Latin America and the Caribbean, and M. East: Middle East.

Source: FAO/World Bank

12. The medium-term projections are also influenced by the current state of international cash crop markets and the policy settings. Clearly, the impact of COVID-19 dominates the start of the outlook, with effects from both the supply and demand sides of the market. Restrictive measures imposed by national authorities to contain the spread of the virus have had, for example, a significant impact on the consumption of tea, coffee and cocoa, particularly during the first quarter of 2020, which were not necessarily compensated by rises in in-home consumption. The supply side has been affected through labour shortages and disruptions to domestic and international logistics. The magnitude of the impact differs by commodity, but, generally, perishable products have been impacted the hardest.

13. The FAO cash crop price index (FCCPI)³ decreased between May 2018 and August 2019, before recovering to 100 points by December 2019, as coffee and cotton prices increased. The index fell again in January 2020, before rising between July and September 2020, as global lockdowns were progressively loosened. However, with the onset of the second wave of the virus infection, international cash crop prices declined in October 2020, underpinned by a reduction in global demand. Results of the projection exercise indicate that the FCCPI is expected to rise modestly over the next decade in nominal terms, but to decline in real terms (Figure 2).

Figure 2. Medium-term changes in the FAO Cash Crop Price Index, in real terms



Note: the United States CPI is used as a deflator

Source: FAO

IV. Projection highlights by commodity

A. Tea

14. Up to 2029, world black tea production is projected to increase annually by 2.1 percent, at a slightly slower pace than the previous decade when growth was at 2.5 percent. Production is expected to reach 4.17 million tonnes, reflecting increases in China, Kenya, India and Sri Lanka. China’s expansion is projected to be significant (4.1 percent), underpinned by strong growth in domestic demand for black teas such as pu’er, cultivated in the Yunnan Province in China. Output in the top two

³ The FCCPI is export-weighted index capturing changes in the international prices of coffee, black tea, cocoa and cotton.

exporters of black tea, Kenya and Sri Lanka, is expected to grow, respectively, by 2.1 percent and 0.6 percent annually, while output in India is projected to increase by 2.3 percent per year.

15. World green tea production is anticipated to increase at a faster rate of 6.3 percent annually to reach 4.02 million tonnes in 2029, reflecting an expansion in China, where green tea output is projected to nearly double from 1.92 million tonnes in 2019 to 3.7 million tonnes in 2029. The expansion is expected to result from increased productivity rather than an expansion in area, through replanting of higher yielding varieties and better agricultural practices. Viet Nam is also expected to substantially increase its production of green tea with an average annual growth rate of 4.0 percent.

16. Black tea consumption is projected to grow by 2.0 percent annually over the next decade, to reach 4.1 million tonnes in 2029. The largest expansion within the top five producing countries is forecast in China, where black tea consumption is expected to reach 397 227 tonnes in 2029, an annual growth of 4.9 percent, as black tea, pu'er tea and dark tea are enjoying great popularity due to increasing awareness of the health benefits linked to drinking tea. Strong growth is also expected in many producing countries in Africa and Asia, such as Uganda (8.1 percent), Rwanda (5.1 percent), Kenya (4.3 percent), Malawi (4.0 percent), Zimbabwe (3.8 percent), Bangladesh (2.8 percent), Nepal (2.4), India (2.1 percent), Indonesia (1.5 percent) and Sri Lanka (1.4 percent).

17. Over the next decade, exports of black tea are projected to expand annually by 1.4 percent, to reach 1.41 million tonnes in 2029, owing to increases in Kenya, which is expected to remain the largest exporter, followed by Sri Lanka, India, Argentina, Viet Nam, Uganda, Tanzania, China, Nepal and Zimbabwe. World green tea exports are predicted to grow at a faster rate over the medium-term, reaching 616 527 tonnes by 2029, an increase of 4.0 percent per year, driven by sharp increases of sales by the top three green tea exporters. China is expected to continue to lead the green tea export market, accounting for over 70 percent of exports, an annual increase of 3.6 percent, followed by Viet Nam and Japan, with 7.0 percent and 6.5 percent growth, respectively.

B. Coffee

18. World coffee production increased annually by 1.9 percent to 10 million tonnes over the decade to 2019, reflecting major increases in Viet Nam, a key producer, after an expansion in the cultivated area and the adoption of new farming practices. By 2029, world coffee production is projected to increase by an annual growth rate of 1.8 percent to reach 11.73 million tonnes. In Brazil, the world's largest coffee producer, output is projected to expand by 1.3 percent annually on the back of increasing use of clonal seedlings and mechanization in pruning and harvesting, as well as implementation of new irrigation systems. Production is also predicted to expand in Asia, notably in Viet Nam, driven by policy incentives to strengthen the sector. Similarly, higher outturns are projected in the key African producers, Ethiopia (+1.6 percent p.a.) and Uganda (+4 percent p.a.). By contrast, in Oceania, where the industry has declined in recent years, production will likely contract (-0.5 percent p.a.) due to structural inefficiencies affecting the sector.

19. Coffee Production is witnessing an increasing trend in the application of Climate Smart Agriculture (CSA) strategies, particularly with the adoption of improved crop varieties, the spread of intercropping practices and the use of productivity enhancing technologies. Smart farming technologies include robotics and precision agriculture, with geostatistical applications, Machine Learning (ML) and Internet of Things (IoT), among the main emerging technologies in the coffee sector. In general, however, only large-scale farms have the financial means to exploit the advantages of new technologies, which require large investments. Low international prices and rising input costs, notably labour, coupled with reduced investment capacity, are foreseen to limit further production gains in the next decade, in comparison to the previous 10 years.

20. World consumption of coffee is projected to increase by 1.9 percent annually from 9.76 million tonnes in 2019 to 11 million tonnes in 2029, slightly down compared to the past decade. Europe would continue to be the largest consumer market, with a share of 30 percent in the total world consumption followed by Asia, North America, and Latin America and the Caribbean. The annual

growth rates projected in traditional consumers, Europe (+1.7 percent) and North America (2.2 percent), rest on the recent growth of the market for specialty coffee and product innovations like coffee pods and capsules, or Ready-To-Drink (RTD) coffee products. The continuous growth of out-of-home consumption has led to an increased number of specialized coffee shops, also supported by a stronger interest among consumers in high-quality coffee, produced in compliance with sustainable and ethical standards. Although the COVID-19 pandemic severely affected out-of-home consumption in 2020, a strong rebound in the medium-term is expected. In the past decade, Asia recorded the sharpest growth rate in consumption (+5.3 percent p.a.) compared to the rest of the world, mainly reflecting higher per capita incomes and a growing population, particularly in China.

21. Coffee culture is growing rapidly throughout the world and is expected to fuel consumption also in the next decade, although at a slower pace than in the past ten years, with large branded chains of coffee shops and specialty coffee shops expanding quickly. In Latin America and the Caribbean, consumption of coffee is projected to grow by 1.5 percent annually and reach 2.2 million tonnes in 2029, up from the 1.3 percent growth rate of the past decade. This mainly reflects improving economic conditions and stronger coffee demand in Brazil, the major consumer in the region and the second largest at global level after the United States of America. The increasing demand and growth in the specialty coffee market in the country has recently led to large investments in both the at-home and out-of-home segments.

22. World coffee trade is projected to expand by 1.8 percent annually during the projection period to reach 12 million tonnes by 2029. This would be slightly down from the growth observed over the past decade. Purchases by traditional importers, North America and Europe, are foreseen to grow annually by 1.8 percent and 1.2 percent, respectively. This is moderately lower than in the past decade, reflecting a relative saturation of the market. However, the recent growth in the demand for specialty coffee and product innovations, coupled with the stronger utilization in developing countries, is expected to sustain the overall growth in imports in the next years. Coffee sales are projected to expand for Brazil (+2.1 percent p.a.), Colombia (+2.5 percent p.a.) and Viet Nam (+3.2 percent p.a.), although at a slower pace than in the past decade. Both Colombia and Viet Nam are foreseen to boost their exports of processed coffee, but much of the value addition would still remain in the importing countries.

C. Jute

23. In addition to tea and coffee, the outlook includes projections for jute, abaca, coir and sisal fibres. These products are relatively concentrated in a few developing countries, where they contribute to economic development and provide a source of income to many smallholder farmers, particularly in India, Bangladesh, Sri Lanka, China, the Philippines, Brazil, Tanzania and Kenya. Value-added products derived from these fibres help create jobs, strengthen backward and forward economic linkages and contribute to foreign currency reserves.

24. Overall, demand for natural fibres is projected to remain strong over the next decade, underpinned by their environmental and biodegradable characteristics, but also because of their wide application in the industrial sectors. Their use in innovative industrial applications is expected to expand over the medium-term, along with the traditional uses in fabrics, yarn, twine, cordage, ropes, carpets, mats and rugs.

25. Jute production is concentrated in two countries, namely India and Bangladesh, which together account for more than 95 percent of global output. Jute fibre production in Bangladesh increased by 3.9 percent annually over the last decade, surpassing output in India, as the implementation of the Mandatory Jute Packaging Act in 2010 has boosted local consumption. In the medium-term, production in Bangladesh is projected to increase further, but at a slower pace (1.5 percent per annum). On the other hand, output in India declined by 1.8 percent annually over the last

decade due to a reduced planted area, lower productivity and high input costs. In the medium-term, however, production is foreseen to recover by 2029, increasing annually by 1.2 percent.

26. Global exports of jute fibre dropped sharply over the previous decade due to declining shipments from the two largest jute exporting countries, Bangladesh and India. Exports of jute fibre are projected to recover over the medium-term, with an annual increase of 1.3 percent, as Bangladesh expands shipments. Exports of jute goods are also projected to increase over the next decade, but at a slower rate compared to the previous 10 years, driven by higher sales by Bangladesh. This increase would more than offset projected declining exports by India, the second largest exporter, where exports are expected to decline by 1.5 percent annually, due to rising domestic use.

27. While exports of jute are highly concentrated, imports are widely diffused. Imports of raw jute are projected to increase by 1.2 percent over the medium-term, underpinned by increasing demand from the top four importing countries, Pakistan, India, Nepal and China, which together account for over 80.0 percent of global imports. Moreover, demand for jute products is expected to remain firm in developing countries, while continuing to stagnate in developed countries.

D. Abaca

28. The abaca market continues to remain robust, driven by the product's increasing application in ropes and twines, pulp and paper, textiles, handicrafts and "soft" applications in the automotive industry. Global abaca production is concentrated in two countries, the Philippines and Ecuador. World output is expected to grow further in the medium-term (2.0 percent per year), owing to increasing supplies by the Philippines, and despite stagnant production in Ecuador.

29. World abaca exports over the next 10 years are projected to increase at a slower pace than the previous decade, reflecting stable demand from Europe and China. In the Philippines, over three quarters of production are consumed domestically, while Ecuador exports all of its production. Exports of abaca manufactures are expected to expand marginally (0.3 percent p.a.), as rising imports by the United States of America, China and India would offset declines in traditional importing markets, such as Europe and Japan, where imports are projected to drop respectively by 0.7 percent and 0.3 percent.

E. Sisal

30. World sisal production is projected to increase by 1.3 percent annually over the outlook period, as output in Brazil, the world's largest producer, is expected to recover following a sharp decline of 3.3 percent over the last decade. Growth is also anticipated in the other major producing countries, such as Tanzania, Kenya and China, where output is projected to increase respectively by 2.4 percent, 1.5 percent and 1.0 percent annually, while output in Madagascar is expected to decline.

31. Global sisal fibre exports are projected to grow by 1.0 percent annually over the next decade, with increasing sales by producers in Africa. Exports from Tanzania are anticipated to surpass those of Brazil, while shipments by Brazil would decline by 0.2 percent annually. Trade in sisal manufactures is expected to recover over the medium-term, with Brazil remaining the world's lead supplier, accounting for over 50 percent of global exports. Purchases by Saudi Arabia, Egypt, Algeria and Morocco are anticipated to rise as well, as demand by the construction industry for natural fibre composites is foreseen to increase further over the medium-term.

F. Coir

32. The world coir market has registered a significant growth in recent years, boosted by increasing demand for coir pith, which is used in horticulture farming, and coir products. Output over the last decade has nearly doubled and is projected to increase further in the next 10 years, but at a slower pace (1.8 percent p.a.). Coir is mostly produced in Asia, and like the other fibres, production is highly concentrated in a few countries. The expansion of the coir market is driven by India, which is by far the world's largest supplier, accounting for over 75 percent of global output. However, strong

growth is also predicted in the other major producing countries, Viet Nam, Sri Lanka, Thailand and Indonesia.

33. Global coir fibre exports have expanded significantly over the last decade, growing by 11.3 percent per year, owing to increasing exports of coir pith from India. This trend is anticipated to continue in the coming decade, but at a much slower rate (1.4 percent per year). India is expected to lead the expansion, maintaining a 70-percent share of global shipments. World imports of coir fibre will be led by China, accounting for nearly 65 percent of total imports. Increasing demand is also foreseen in Europe, the Republic of Korea and the United States of America. Trade in coir products dropped by 2.9 percent over the last decade, but is projected to recover by 2029, with expanding shipments from India.

V. Issues and uncertainties

34. One of the characteristics of the RAMHOT crops is that they are mainly grown under rain-fed mono-cropping systems. The rising number of extreme weather events and increases in global temperatures highlight the vulnerability of these crops to climate change. Therefore, global and national efforts should focus on investing in sustainable and resilient agricultural systems, for example through addressing the infrastructure and knowledge gaps, promoting agricultural digitization and the use of technologies and risk management tools. The resilience of the sector can also be strengthened by encouraging the participation of women and youth along the entire value chains, and supporting enhanced involvement in sustainable initiatives and programmes.

35. Many developing countries are becoming less dependent on cash crops for export earnings and increasingly dependent on non-agricultural products. Trade data shows that between 2000 and 2017, exports shares for precious metals, mostly gold, and mineral products (e.g. petroleum) have increased significantly at the expense of agricultural exports for many developing countries. The nature of this diversification process induces a few observations. First, shifting resources into sectors that face relatively higher demand elasticity implies increased vulnerability to volatile export earnings and exposes countries to significant balance of payment shocks. Second, mineral products and precious metals sectors are capital intensive, which can imply less job opportunities than in the agricultural sector, at least in the short term. Third, the decline in the overall level of dependency on cash crops has contributed, in some cases, to an increase in the concentration of export markets. Greater concentration means that supply disturbances in a major exporting country can trigger significant price volatility in the world market. Ultimately, the success of this transition from primary agricultural commodity production and exports to other non-agricultural primary commodities will depend on the return to society in terms of reduction in poverty levels, improvements in food security and nutrition and increases in per capita incomes.

36. The relatively higher returns on investment are the driving forces underlying the shift into non-agricultural sectors in many cash crop exporting developing countries, despite the greater level of volatility. Nevertheless, the cash crop sector should remain a priority in the concerned countries given its importance in terms of job creation, income generation and rural development. In many instances, smallholders play a central role in cash crops. For example, an estimated 60 percent of the world tea output is produced by smallholders. Hence, measures and adequate policies to enhance the performance of the cash crop sector can have a direct impact on economic development. Actions that can help in that direction include: 1) creating an enabling policy environment for the development of the sector; 2) enhancing the participation of smallholders in global value chains; 3) facilitating market access for cash crop products, for example by reducing the prevalence of tariff escalation; 4) harmonizing standards and addressing differences over non-tariff measures (e.g. maximum residues levels in pesticides); and 5) investing in research and development, innovation and the adoption of new technologies.

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