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منظمة  
الأمم المتحدة  
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## LATIN AMERICAN AND THE CARIBBEAN COMMISSION FOR AGRICULTURAL STATISTICS

### Thirty-second Session

26-28 March 2025

### Response rates to FAO questionnaires

#### Executive summary

This paper focuses on the data reporting issue in the Latin America and the Caribbean based on a detailed analysis of response rates to annual FAO questionnaires dispatched to countries and territories. It first presents the status of responses rates to FAO questionnaires by data domain, and subdomain when applicable, across the subregions of the Latin America and the Caribbean. Then, recommendations are formulated based on the results of the analysis, highlighting the main issues for discussion with the distinguished LACCAS.

#### Suggested actions by LACCAS

The Commission is invited to provide its views and recommendations to FAO on the following points:

- ✓ FAO's efforts to liaise with institutions/national focal points responsible for the questionnaire and to follow-up actions.
- ✓ The underlying causes of the low and/or deteriorating response rates on Pesticides, Land use, Fertilizer, Plant genetic resources, AQUASTAT and DAD-IS questionnaires in the Latin America and the Caribbean.
- ✓ Ways to sustain improvements in response rates on some questionnaires and experience sharing to scale-up in-country/intraregional good practices.

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## I. Introduction

1. The institutional mandate of FAO on data and statistics stems from the Article I of its Constitution, which mandates the Organization to *collect, analyse, interpret, and disseminate information relating to nutrition, food, and agriculture*. FAO statistics are based on data supplied by national statistical authorities or by countries through FAO questionnaires. For these statistics to be useful for evidence-based policymaking, the availability and quality of the data provided by these actors are therefore essential. The response rates to FAO questionnaires are used in FAO result framework as a proxy measure for FAO's data quality and as an outcome measure of FAO's statistical capacity development work. Indeed, response rates provide an indication on the level of FAO's estimates that are based on official data. It is also assumed that adequate statistical capacity development programme will ultimately translate into greater data reporting to FAO.
2. This paper focuses on the data reporting issue in the Latin America and Caribbean based on a detailed analysis of response rates to annual FAO questionnaires dispatched to countries and territories. It first presents the status of responses rates to FAO questionnaires by domain, and subdomain when applicable, across the subregions of the Latin America and Caribbean. Then, recommendations are formulated based on the results of the analysis, highlighting the main issues for discussion with the LACCAS.

## II. Status of response rates to FAO questionnaires

3. This section describes response rates to FAO questionnaires, starting with subregional trends in the agriculture sector, followed by the other domains or systems, including commodity market developments, fisheries and aquaculture, forestry, AQUASTAT, Domestic Animal Diversity Information System (DAD-IS) and the World Information and Early Warning System (WIEWS) on Plant Genetic Resources for Food and Agriculture. The response rate is defined as the ratio of between the number of filled questionnaires by targeted territories and the number of questionnaires (domains) that were dispatched to these territories. This description includes detailed analyses of response rates by subdomains for the commodity market developments, fisheries, and forestry domains, provided in the annex.

### A. Subregional trends and data availability issue in the agriculture sector

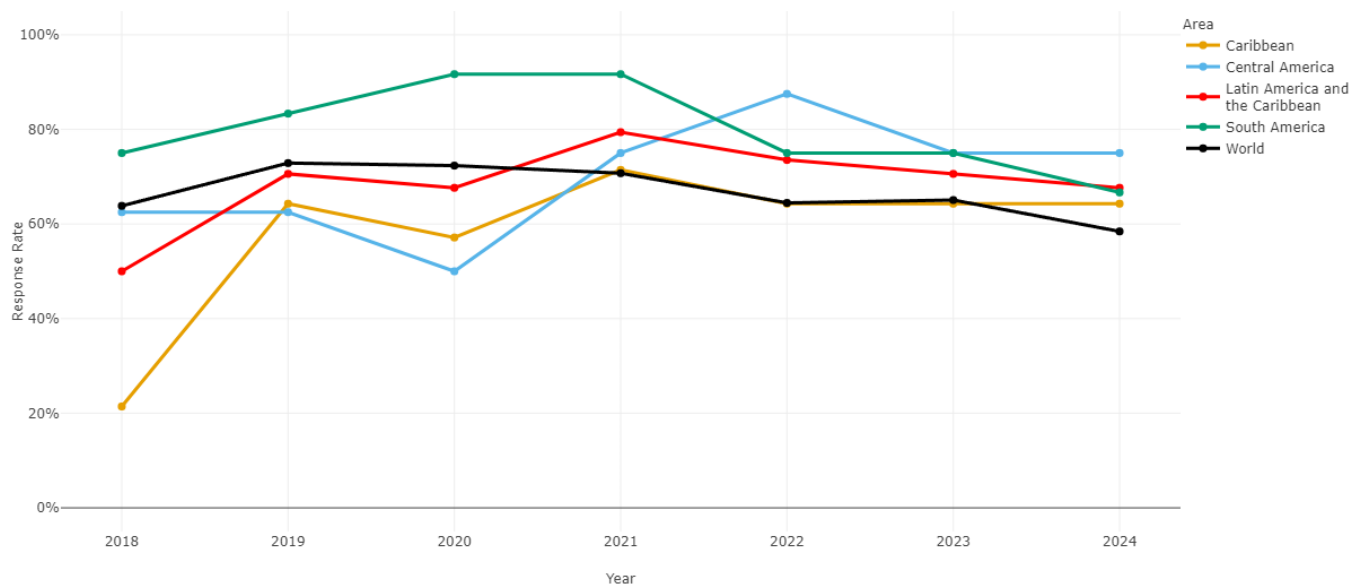
4. In this subsection, response rates to questionnaires on Crop and Livestock Production and Utilization, agricultural inputs (land use, pesticides, and fertilizers), agricultural producer prices and government expenditures in agriculture (GEA) are respectively analysed.

#### i. Crop and livestock production and utilization questionnaire

5. The Crop and Livestock Production and Utilization is a questionnaire sent by FAO to countries on an annual basis to collect national data on agriculture and livestock production and utilization, such as *primary livestock production, primary crop utilization data, live animals number data and areas harvested*.

The Latin America and Caribbean region has shown improvements in its response rate on the Crop and Livestock Production and Utilization questionnaire and has been above the world average since 2021. Indeed, the subregions of South America, Central America, and the Caribbean have also been either at or above the world average since 2021. This is a notable improvement with respect to the earlier period 2018–2020, when response rates for some of these regions were often below or even well below the world average. Currently, the Central America subregion shows the highest response rate of the region with 75 percent of countries that have responded to the FAO questionnaire in 2024.

Figure 1: Response rate on the crop and livestock production and utilization questionnaire across subregions (2018–2024)



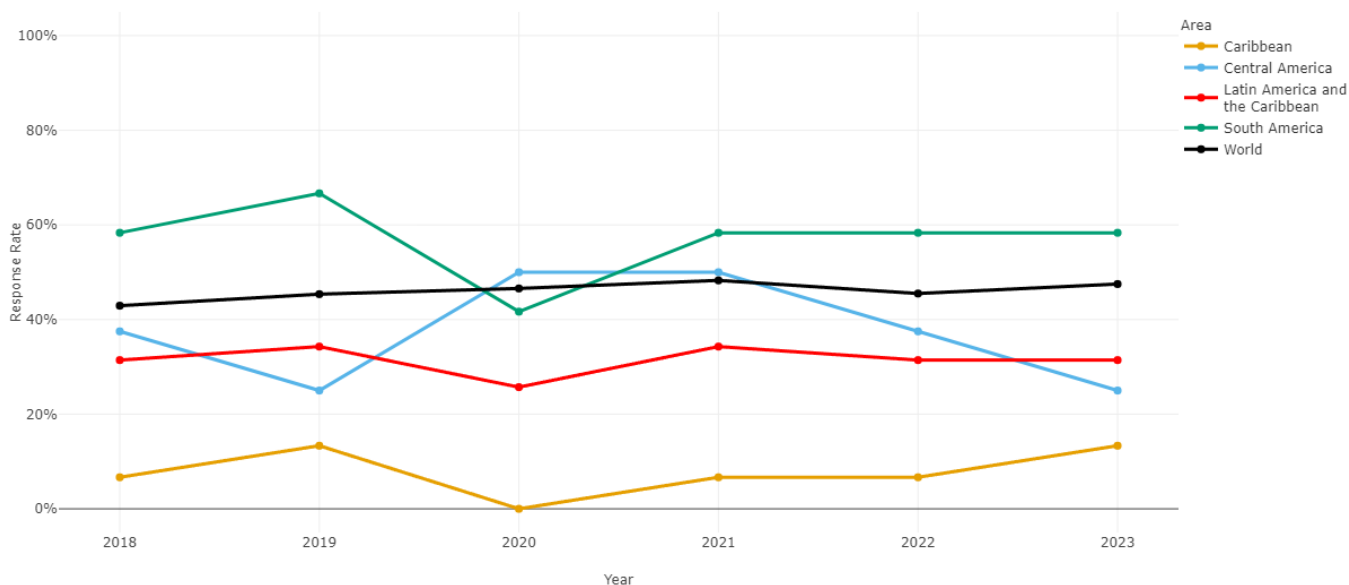
Source: Authors' own elaboration

ii. Agricultural Inputs questionnaires (land use, pesticide use and fertilizer)

5. The Agricultural Inputs questionnaires comprise three distinct questionnaires, namely *Land Use, Irrigation and Agricultural Practices*; *Pesticides Use* and *Fertilizers*. The questionnaires are conducted annually. The *Land use* questionnaire allows to collect data on land use focusing on agriculture, forestry, aquaculture and fisheries, irrigation and agricultural practices. The *Pesticides* questionnaire gathers data on the agricultural use of major pesticide groups and chemical families, and the *Fertilizers* questionnaire on the agricultural use of fertilizers.

On the Land Use questionnaire, the Latin America and the Caribbean region shows response rates consistently below the world average over the period 2018–2023. The same applies particularly to the Caribbean subregion, with response rates fluctuating between zero and 13 percent over the same period. By contrast, the response rate of South America has been fairly consistently above the world average (with the exception of a small dip in 2020). The response rate of Central America has been more erratic, fluctuating above and below the world average. Currently, South America has the highest response rate of the region in 2023 where close to 59 percent of countries responded to the Land use questionnaire, whereas only 13 percent and 25 percent of Caribbean and Central American countries respectively responded to the questionnaire, well below the global average.

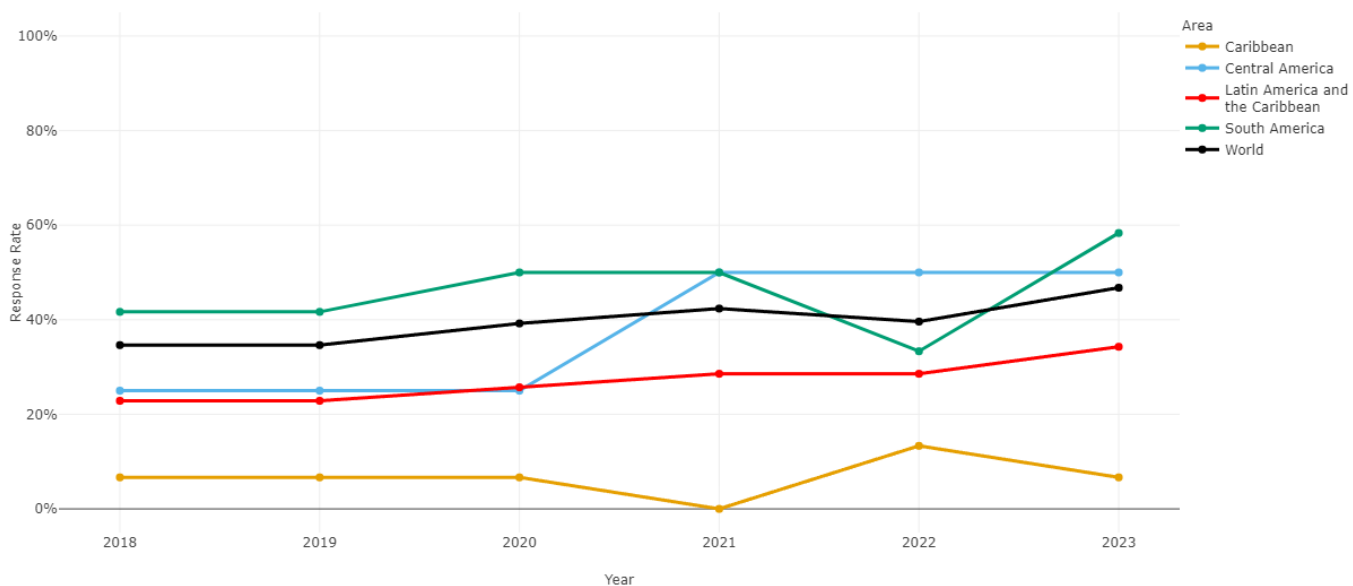
Figure 2: Response rate on land use, irrigation and agricultural practices questionnaire across the subregions (2018–2023)



Source: Authors' own elaboration

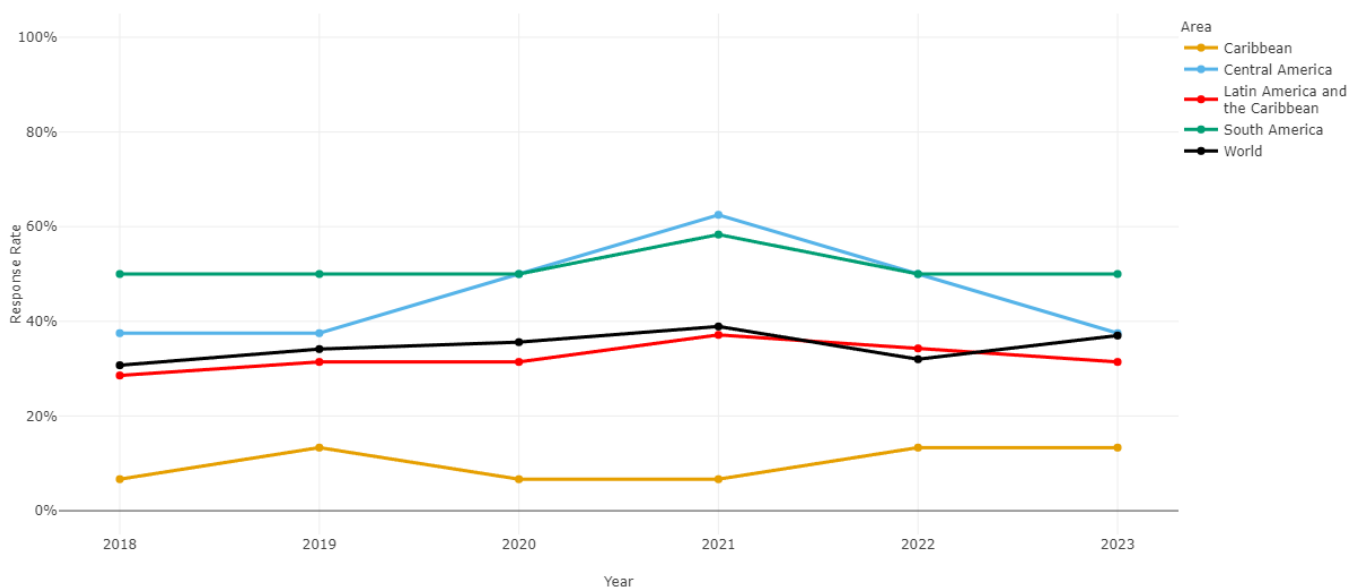
6. The response rates in the Latin America and Caribbean region to the *Fertilizers* and *Pesticide* questionnaires were below the world average throughout the period 2018–2023, with 34.3 percent of countries responding to the *Fertilizer* questionnaire and 31.1 percent to the *Pesticide* questionnaire in 2023. However, it is clear that the overall regional average is being driven down by the underperformance of the Caribbean region, where response rates have hovered between zero and 13 percent. By contrast, the other two subregions, i.e. Central and South America, have generally achieved response rates above the global average, especially for the pesticide questionnaire.

Figure 3: Response rates on fertilizer questionnaire across subregions (2018–2023)



Source: Authors' own elaboration

Figure 4: Response rates on pesticide use questionnaire across subregions (2018–2023)



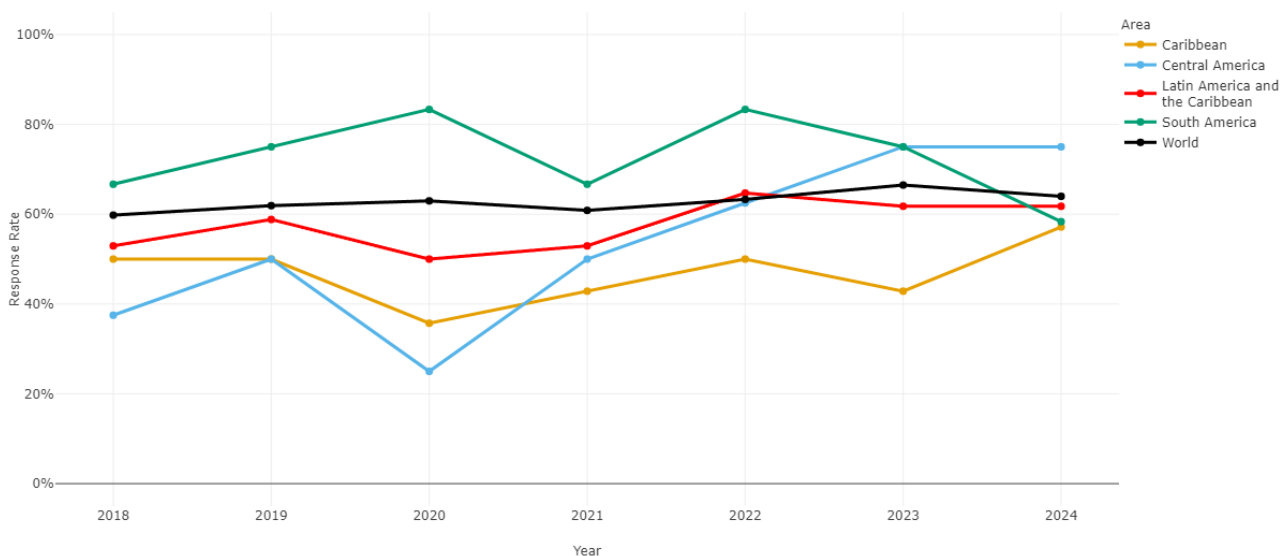
Source: Authors' own elaboration

### iii. Agricultural producer prices questionnaire

8. The *agricultural producer prices for primary crops and livestock* questionnaire collects producer price data on crops, livestock and derived products annually that are used to track and study issues related to price inflation, volatility and transmission, and food security.

The response rate to the questionnaire on agricultural producer prices in Latin America and the Caribbean has slightly increased over time from 52.9 percent in 2018 to 61.8 percent in 2024. Between 2018 and 2023, South America consistently recorded the highest response rates but fell just below the regional and global averages, in 2024. In contrast, Central America and the Caribbean initially had the lowest response rates over the period but increased from 2020. Central America's response rate rose from 25 percent in 2020 to 75 percent in 2024, while the Caribbean closed the gap with South America with its response rate increasing from 50 percent to 57 percent over the same period.

Figure 4: Response rate on producer prices questionnaire across subregions (2018–2024)



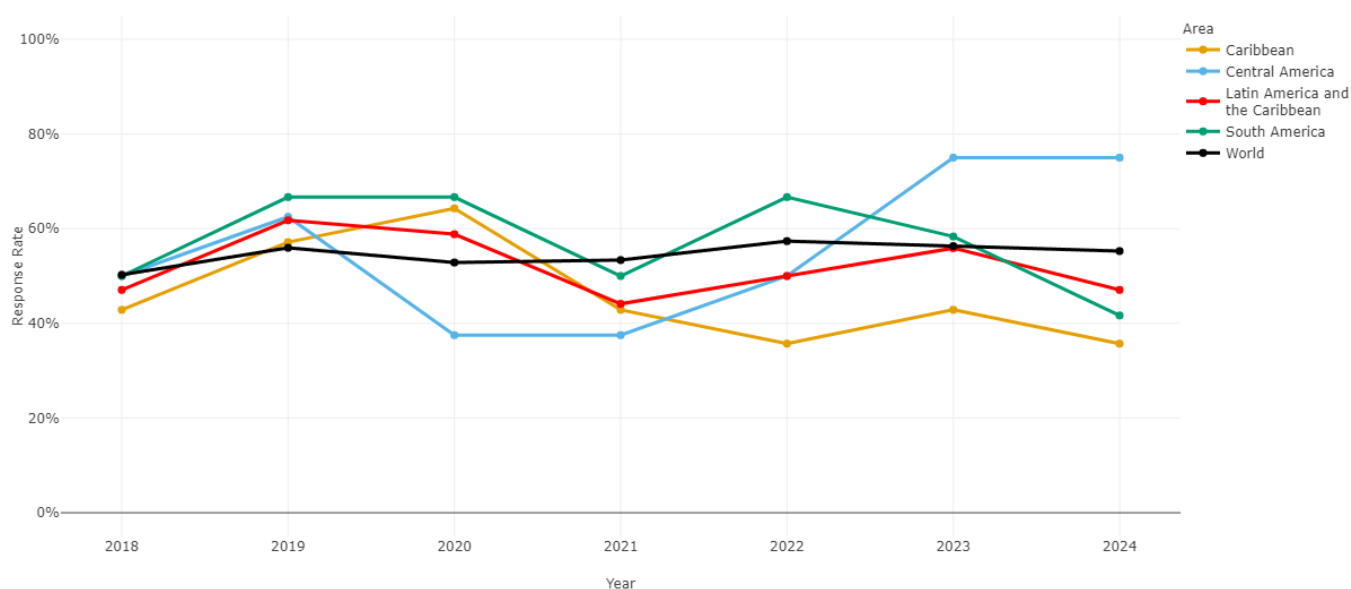
Source: Authors' own elaboration

## iv. Government expenditures in agriculture (GEA) questionnaire

9. The GEA questionnaire allows gathering information on countries' expenditures on agricultural activities. The responses to this questionnaire are crucial, as the information gathered enables the calculation of SDG Indicator 2.a.1 (the Agricultural Orientation Index for Government Expenditures).

On the GEA questionnaire, we observe that the gap between subregions, the regional average, and the global average is initially very small but gradually widens over time, with Central America and the Caribbean following distinct trends – an increase from 2021 for the former and a decline for the latter. Overall, the Latin America and the Caribbean region shows no improvements in 2024 compared to 2018. The Caribbean subregion has generally been below the global average, whereas, by contrast, South America has generally been above the world average but dropped below after a sharp decrease in 2024. Central America's response rate has fluctuated above and below the world average since 2018, and, most notably, has achieved significant gains since 2022, achieving a 75 percent response rate in 2024.

Figure 5: Response rate on the GEA questionnaire across subregions (2018–2024)



Source: Authors' own elaboration

## B. Regional and subregional trends and data availability issue in other domains or systems

10. This subsection describes regional trends of response rate to FAO questionnaires on other domains and systems, including commodity market developments, fisheries and aquaculture, forestry, AQUASTAT, DAD-IS and plant genetic resources.

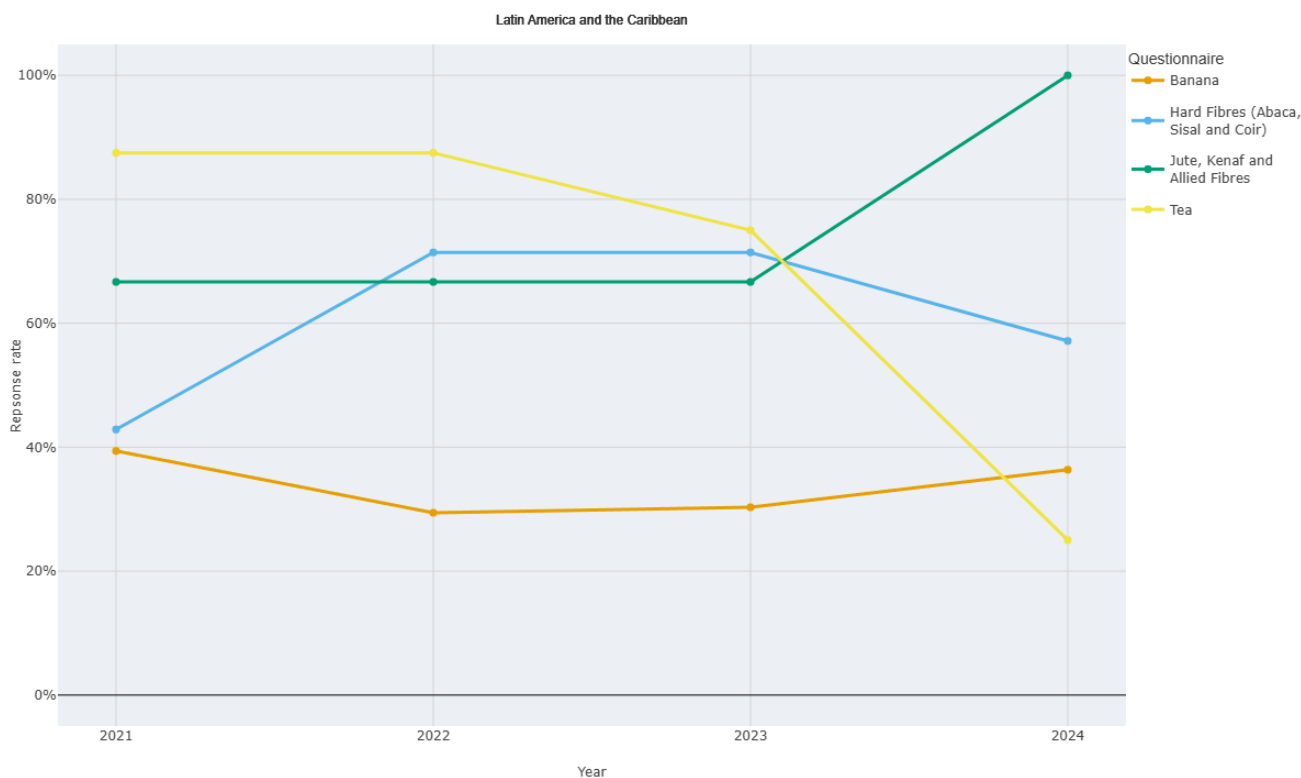
### i. Commodity market developments questionnaires

11. For the commodity market developments questionnaires, as well as the forestry and the fisheries questionnaires examined in the next section, the Latin America and the Caribbean region is analyzed without further breakdown into subregions. This is because some of these questionnaires are not sent to all countries in these regions and in some cases, the number of countries receiving the questionnaire is significantly less than half the countries in that region. In such cases, aggregate response rate could be over- or underestimated. This explains the choice to present the results only for the whole region for consistency and accuracy.

The commodity market developments questionnaires allow to collect national data, annually, on production, trade, processing and consumption of *Tea, Banana, Tropical fruits, Jute, Kenaf and Allied Fibres* and *Hard Fibres (Abaca, Sisal and Coir)*. The information is collected through one questionnaire for each commodity. The Hard Fibres questionnaire presented includes three separate questionnaires for each commodity: Abaca, Sisal and Coir.

Due to the specific nature of these questionnaires (focusing on just one or a handful of similar commodities) and the shorter time period under consideration (2021–2024), it is difficult to discern any overall trends for the response rate of the Latin America and Caribbean region. That being said, we can see that the *Banana/Tropical Fruits* questionnaire generally has the lowest response rate, fluctuating between 30 and 40 percent, whereas the Jute, Kenaf and Allied Fibres questionnaires has generally had a high response rate, which rose to 100 percent in 2024. The response rate to the Tea questionnaire was the highest in the period 2021–2023, but dropped sharply to below 30 percent in 2024. The response rate to the questionnaire on Hard Fibres (Abaca, Sisal and Coir) has fluctuated over time, and is now under 60 percent (down from a high point of above 70 percent).

Figure 6: Response rate on the commodity market developments questionnaire in the region (2021–2024)



Source: Authors' own elaboration

**Note:** The *Tropical Fruits* questionnaire follows the same trend as the *Banana* one. Therefore, in the narrative, they are mentioned together “*Banana/Tropical fruits*”. The *Banana* and *Tropical fruits* questionnaires were sent to 33/34 countries in Latin America and the Caribbean. The *Jute, Kenaf and Allied Fibres*, *Hard Fibres* and *Tea* questionnaires were sent to less countries – 3, 7 and 8 countries respectively.

## ii. Fisheries and aquaculture questionnaires

13. The fisheries and aquaculture questionnaires comprise eight questionnaires, namely (1) *Global Aquaculture production*, (2) *Global Capture production*, (3) *Regional Capture production*, (4) *Disposition of Fishery and Aquaculture production*, (5) *Production of preserved and processed fishery and aquaculture commodities*, (6) *Trade of fisheries and aquaculture commodities*, (7) *Fishers and fish farmers* and (8) *Fishery fleet*.

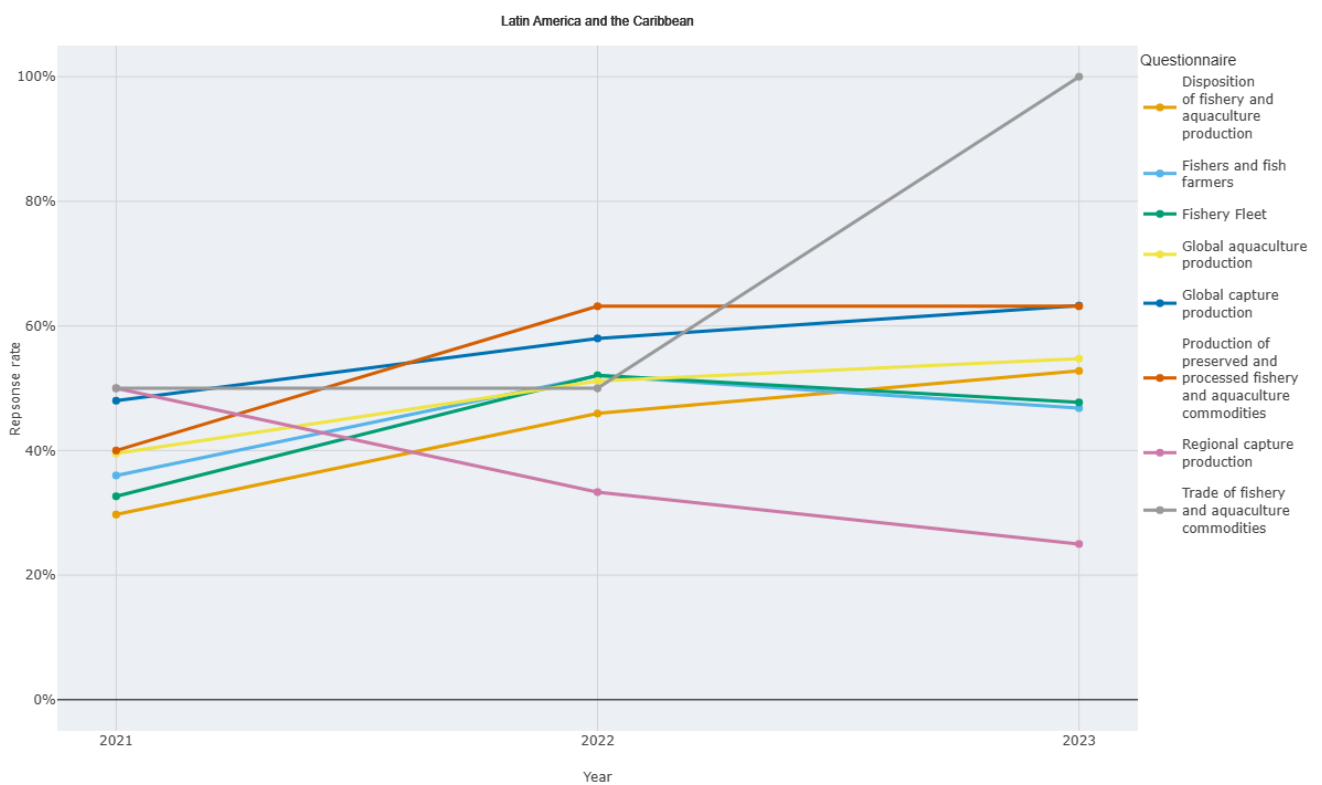
The three first questionnaires allow to collect annually data on aquaculture production and capture fisheries production, by country or area and by fishing area for selected regions (Eastern Central Atlantic, Mediterranean and Black Sea, Southeast Atlantic and Regional Commission for Fisheries). The *Disposition of Fishery and Aquaculture production questionnaire* collect information on the utilization of fishery and aquaculture production. The *Production of preserved and processed fishery and aquaculture commodities* gathers data on production of processed and preserved fishery and aquaculture commodities by countries or areas in terms of volume. The *Trade of fisheries and aquaculture commodities* and the *Fishers and fish farmers* questionnaires collect data on the trade of fishery and aquaculture

commodities and the primary employment in fisheries and aquaculture. Finally, the eight questionnaire - *Fishery fleet* – allow to gather information on fishery fleet.

Before analyzing the response rates to the fisheries and aquaculture questionnaire, it is important to note that describing regional trends for the *Regional Capture production* and the *Trade of fishery and aquaculture commodities* is not relevant, as these questionnaires were dispatched to less than four countries in the region. The questionnaires are still presented in figure 7 to cover all fishing and aquaculture questionnaires. The *Global capture production* questionnaire collects the same information as the *Regional capture production questionnaire*, by country or area instead of fishing area. Response rates to this questionnaire are described below.

Overall, the response rates to the fisheries and aquaculture questionnaires in Latin America and Caribbean countries improved between 2021 and 2023. The most important increased in response rates is to the *Production of preserved and processed fishery and aquaculture commodities* questionnaire that rose from 40 percent in 2021 to 63 percent in 2023. Currently, this questionnaire and the *Global capture production* have the highest response rate.

Figure 7: Response rate on the eight fisheries and aquaculture questionnaires across subregions (2020/21–2023)



Source: Authors' own elaboration

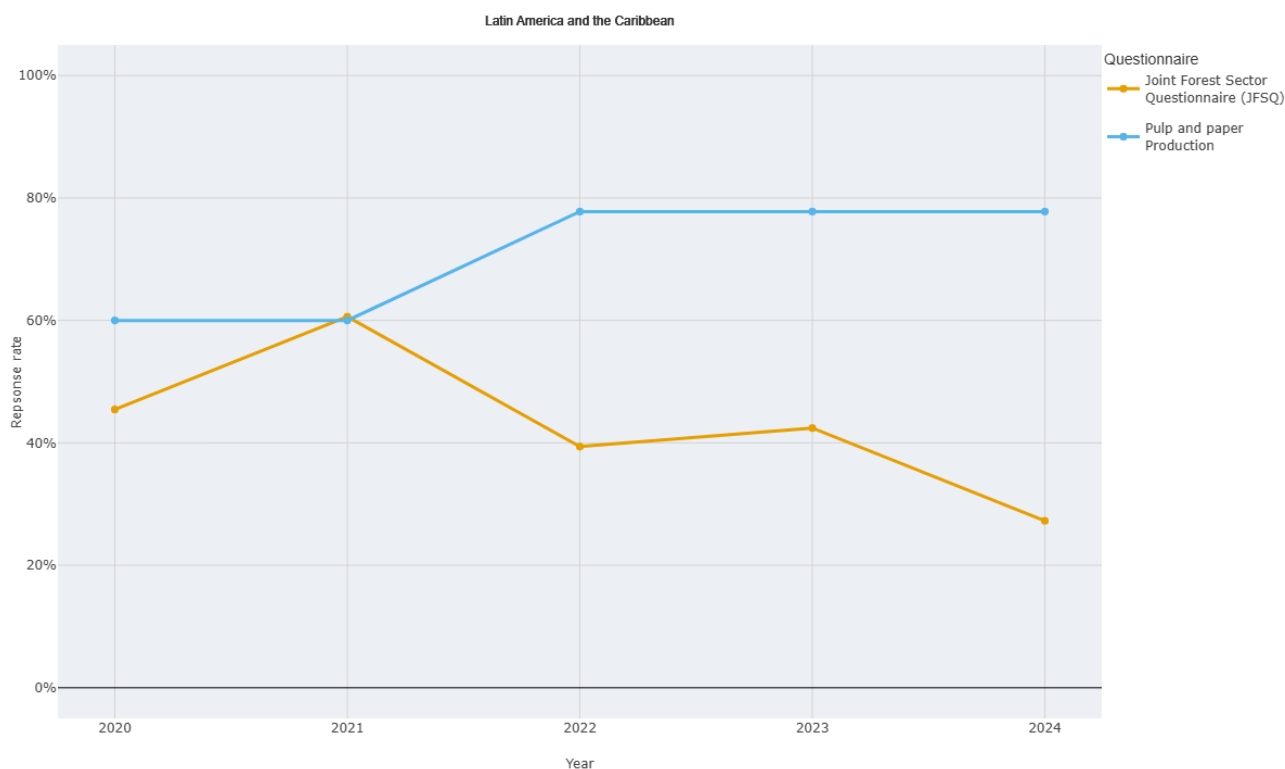
**Note:** Over the period, the *Global aquaculture production*, *Global capture production*, the *Fishers and fish farmers*, the *Fishery fleet* questionnaires were sent to between 43 and 50 countries and territories. The *Regional capture production* and the *Trade of fishery and aquaculture commodities* questionnaires were sent to less than 4 countries and territories. The *Disposition of fishery and aquaculture production* questionnaire was sent to 36-37 countries and territories and the *Production of preserved and processed fishery and aquaculture commodities* to 19-20 countries and territories.

### iii. Forestry questionnaires

15. The *Joint Forest sector* questionnaire collects data on production and trade of forest products annually. The *Pulp and Paper production* questionnaire gathers data on installed production capacities in pulp and paper industry, production of pulp and paper and utilization of recovered paper, also annually.

The Latin America and Caribbean region perform relatively well on response rates to the *Pulp and paper production* questionnaire. From 2021 to 2024, response rates increased from 60 percent to 77 percent (corresponding to, seven out of nine questionnaires sent to the countries in the region were completed). In contrast, response rates on the *Joint Forest sector* questionnaire declined from 60 percent to 27 percent over the same period (corresponding to 20 out of 33 countries and 9 out of 33 countries respectively).

Figure 8: Response rate on forestry questionnaires across subregions (2020/21–2024)



Source: Authors' own elaboration

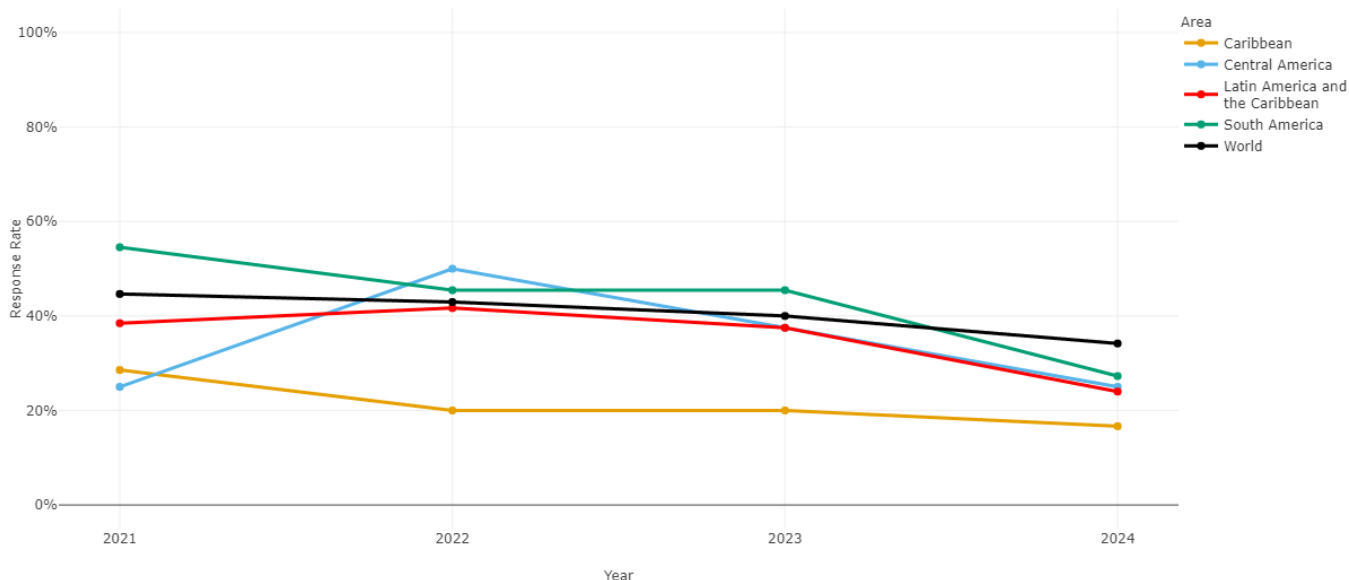
**Note:** The *Joint Forest sector* questionnaire was sent to 33 countries and territories and the *Pulp and paper production* questionnaire to 9-10 countries and territories over the period.

#### iv. AQUASTAT

17. AQUASTAT is the FAO Global information system on water resources and agricultural management. It collects, analyze and disseminates data by country, by region and for the world. It also plays a key role in the monitoring of SDG Target 6.4.

Since 2021, response rates to the AQUASTAT questionnaire have generally been low in the entire region, with some subregions registering further decline. The response rate declined in South America (from 54.5 percent to 27.8 percent in 2024) and the Caribbean (from 28.5 percent to 16.7 percent in 2024). In Central America, response rates have remained constant over the period, with 25 percent of countries that responded to the questionnaire. In 2024, the response rate in the Latin America and the Caribbean region is close to 24 percent, 10 percentage points below the world average. The Caribbean has the lowest response rate among the subregions.

Figure 9: Response rate on AQUASTAT questionnaire across subregions (2020/21–2024)



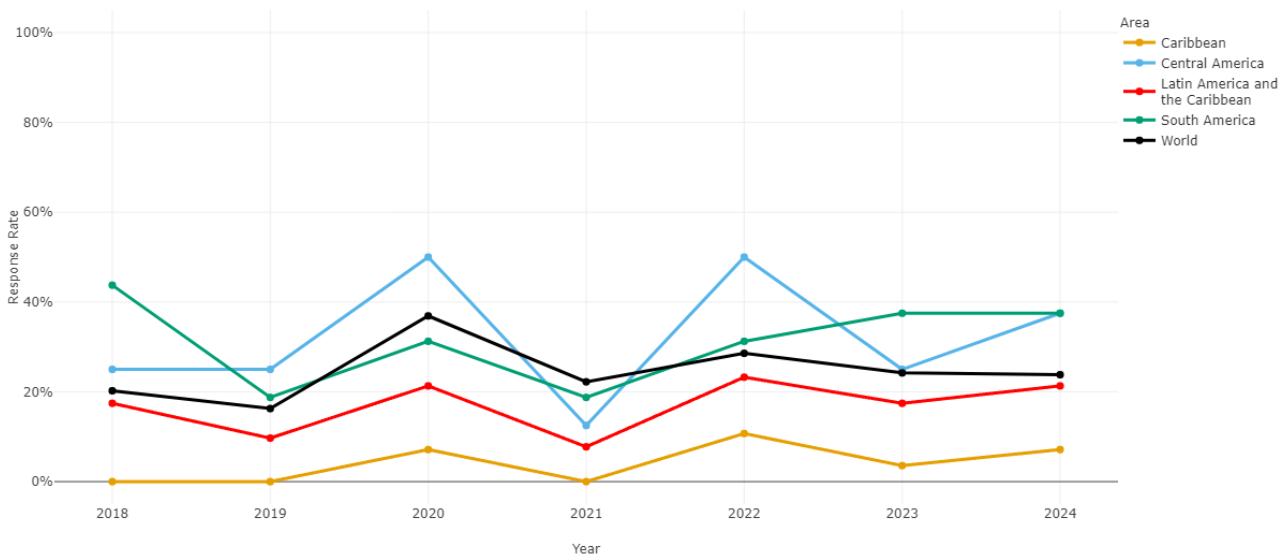
Source: Authors' own elaboration

v. DAD-IS questionnaire

18. The Domestic Animal Diversity Information System (DAD-IS) is a tool for the management of Animal Genetic Resources. It allows analyzing the diversity of livestock breeds on national, regional and global levels including the status of breeds regarding their risk of extinction. In addition, DAD-IS is the repository of data for SDG indicators 2.5.1.b and 2.5.2.

Response rates to this questionnaire are low across the world, and even lower in the Latin America and Caribbean region. Only the Central and South America subregions have occasionally outperformed global average. By contrast, the Caribbean is the lowest-performing subregion with response rates fluctuating between zero and close to zero.

Figure 10: Response rate on DAD-IS questionnaire across subregions (2021–2024)



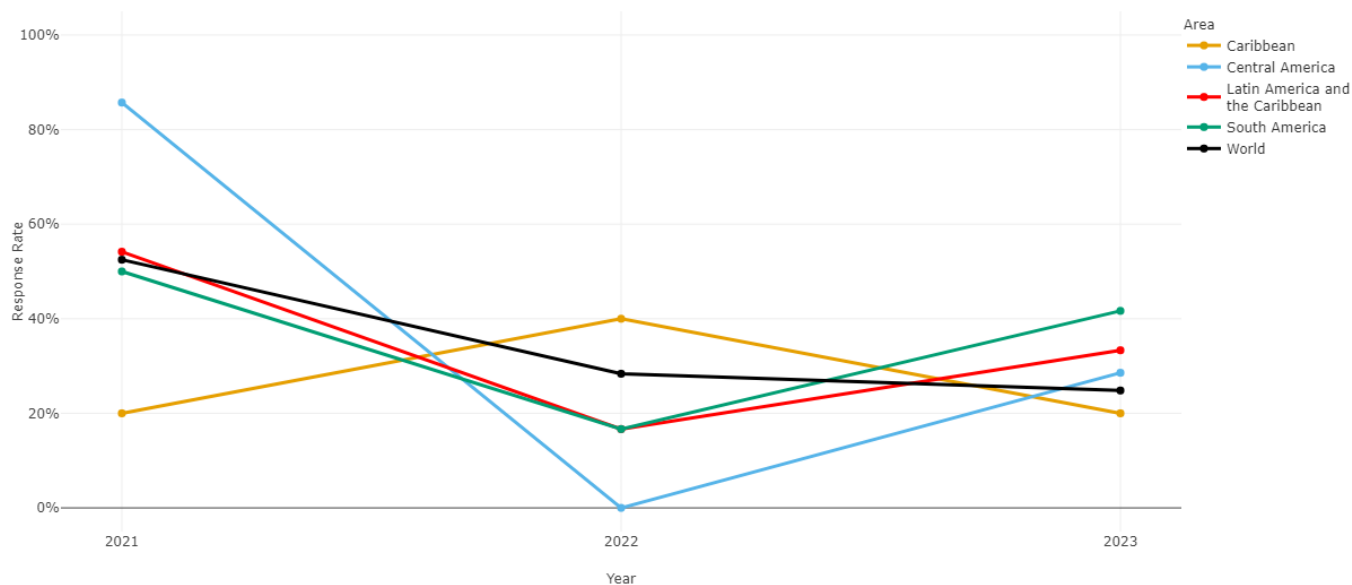
Source: Authors' own elaboration

## vi. Plant generic resources (Second GPA) questionnaire

19. The Plant generic resources (Second Global Plan of Action) questionnaire collect data that feeds the FAO-WIEWS database, which is the global information system on Plant Genetic Resources for Food and Agriculture. It provides access to official data on the implementation of the Second GPA and on the SDG Indicator 2.5.1.a.

Overall, the response rate of the Latin America and Caribbean region closely follows that of the world, dropping from 54 percent in 2021 to 16 percent in 2022, before rising to 33 percent in 2023. Currently, the Latin America and Caribbean region as a whole, as well as Central and South America in particular, have response rates higher than the world average. By contrast, the response rate of the Caribbean is slightly below the world average.

Figure 11: Response rate on Plant genetic resources questionnaire across subregions (2020/21–2023)



Source: Authors' own elaboration

### III. Conclusions and recommendations

21. The analysis of response rates to the FAO questionnaire in Latin America and the Caribbean presents a mixed picture. The region generally underperforms compared to the world average for the agriculture-related questionnaires and improved or deteriorated in other domains questionnaires. Regarding the agricultural sector, overall, the region shows slight to no improvements, remaining below the world average, except for the *Crop and Livestock Production and Utilization* questionnaire. For other domains/sectors, response rates in the region have generally declined over time, although a few questionnaires 'response rates show positive trends. A significant concern is the Caribbean subregion that is persistently lagging behind in most of the domains while Central and South America are showing improvements over the last few years.

22. In the agriculture sector, the Caribbean consistently shows the lowest response rates, with less than 13 percent of countries responding to the *Land use* and *Pesticides* questionnaires, and 7 percent to the *Fertilizer* questionnaire. Conversely, South and Central America have the highest response rates to the agricultural questionnaires. Three quarters of countries - the highest response rate of the Central America subregion - responded to the *Crop and Livestock Production and Utilization*, *Land use* and *GEA* questionnaire. South America is the best performing subregion, outperforming Central America on Agricultural inputs. The best relative improvement in response rate was observed in the Caribbean on the *Crop and Livestock Production and Utilization* questionnaire: it significantly increased from 21.5 to 64.3 percent between 2018 and 2024.

23. For the other domains/sectors, the AQUASTAT and DAD-IS questionnaires received the lowest responses in the Latin America and Caribbean region, with no improvement or a decline over time. As for the agricultural questionnaires, the Caribbean presents again a very low or no response rate in certain years to AQUASTAT, DAD-IS

and plant genetic resources. On the other hand, the response rate for Central America on the questionnaire on plant genetic resources went from 85 percent 2021 to zero percent in 2022 before rebounding to 28 percent in 2023. Response rates to the same questionnaire also decreased in South America and globally over the same period, though less pronouncedly. Notable year-on-year drops in response rates are also evident for the DAD-IS questionnaire, particularly in 2019, 2021, and 2023.

24. Response rates to the fisheries questionnaires improved over time with the highest response rates to the *Production of preserved and processed fishery and aquaculture commodities* and *Global capture production* questionnaires. On the forestry questionnaires, the region performs well on the *Pulp and paper production* questionnaire with a response rate close to 80 percent in 2024. On the other hand, response rate to the *Joint Forest sector* questionnaire declined over the period, from 20 countries out of 33 countries responding to the questionnaire in 2020 to only 9 countries in 2024. In the commodity sector, response rates in Latin America and the Caribbean have improved over the period 2021–2024 on the *Jute, Kenaf, and Allied Fibres* and the *Hard Fibres* questionnaire while performance on the *Tea* questionnaire has declined. Response rate to the *Banana/Tropical fruits* are the lowest among the commodity questionnaires.

25. The variation of response rates across the subregions of the Latin America and Caribbean region shows a mixed picture with improvements and deteriorations. A special attention should be given to the Caribbean subregion that persistently registers the lowest response rates for most of the domains.

26. LACCAS members are kindly reminded that more information about the scope and purpose of FAO's main statistical questionnaires, including their the frequency and periodicity, can be found in the following webpage: <https://www.fao.org/statistics/data-collection/general/en>