United Nations Convention to Combat Desertification Performance review and assessment of implementation system Seventh reporting process

Report from Jamaica



United Nations

Convention to Combat Desertification



This report has been submitted by the government of Jamaica to the United Nations Convention to Combat Desertification (UNCCD).

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- AL. Female drought exposure in the reporting period
- AM. Male drought exposure in the reporting period

SO1-1 Trends in land cover

Land area

SO1-1.T1: National estimates of the total land area, the area covered by water bodies and total country area

| Year | Total land area (km²) | Water bodies (km²) | Total country area (km²) | Comments |
|-------|-----------------------|--------------------|--------------------------|----------|
| 2 001 | 10 868 | 157 | 11 025 | |
| 2 005 | 10 868 | 157 | 11 025 | |
| 2 010 | 10 871 | 154 | 11 025 | |
| 2 015 | 10 872 | 153 | 11 025 | |
| 2 019 | 10 872 | 153 | 11 025 | |

Land cover legend and transition matrix

SO1-1.T2: Key Degradation Processes

| Degradation Process | Starting Land Cover | Ending Land Cover |
|--|---------------------|---------------------|
| Urban Expansion | Wetlands | Artificial surfaces |
| Urban Expansion | Croplands | Artificial surfaces |
| Other Sea level rise/ coastal erosion | Wetlands | Water bodies |
| Deforestation | Tree-covered areas | Croplands |
| Vegetation Loss | Tree-covered areas | Grasslands |

Are the seven UNCCD land cover classes sufficient to monitor the key degradation processes in your country?

Yes

🔿 No

SO1-1.T4: UNCCD land cover legend transition matrix

| Original/ Final | Tree-covered areas | Grasslands | Croplands | Wetlands | Artificial surfaces | Other Lands | Water bodies |
|-----------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|-----------------|
| Tree-covered areas | 0 | - | - | - | - | - | 0 |
| Grasslands | + | 0 | + | - | - | - | 0 |
| Croplands | + | - | 0 | - | - | - | 0 |
| Wetlands | - | - | Unlikely Transition | 0 | - | - | 0 |
| Artificial surfaces | Unlikely Transition | Unlikely Transition | Unlikely Transition | Unlikely Transition | 0 | Unlikely Transition | 0 |
| Other Lands | + | + | + | + | - | 0 | 0 |
| Water bodies | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Land cover

SO1-1.T5: National estimates of land cover (km²) for the baseline and reporting period

| | Tree-covered areas (km²) | Grasslands (km²) | Croplands (km²) | Wetlands (km²) | Artificial surfaces (km²) | Other Lands (km²) | Water bodies (km²) | No data (km²) |
|------|-----------------------------|---------------------|--------------------|-------------------|------------------------------|-------------------------|-----------------------|------------------|
| 2000 | 8 017 | 698 | 1 767 | 167 | 217 | 0 | 159 | |

| | Tree-covered areas (km²) | Grasslands (km²) | Croplands (km²) | Wetlands (km²) | Artificial surfaces (km²) | Other Lands (km²) | Water bodies (km²) | No data (km²) |
|------|-----------------------------|---------------------|--------------------|-------------------|------------------------------|----------------------|-----------------------|------------------|
| 2001 | 7 892 | 729 | 1 856 | 170 | 221 | 0 | 157 | |
| 2002 | 7 884 | 735 | 1 854 | 170 | 225 | 0 | 157 | |
| 2003 | 7 956 | 726 | 1 787 | 172 | 228 | 0 | 157 | |
| 2004 | 7 933 | 734 | 1 800 | 172 | 230 | 0 | 157 | |
| 2005 | 7 910 | 751 | 1 801 | 172 | 234 | 0 | 157 | |
| 2006 | 7 902 | 752 | 1 803 | 173 | 238 | 0 | 157 | |
| 2007 | 7 906 | 757 | 1 792 | 172 | 243 | 0 | 156 | |
| 2008 | 7 887 | 767 | 1 795 | 173 | 247 | 0 | 156 | |
| 2009 | 7 868 | 770 | 1 808 | 173 | 251 | 0 | 156 | |
| 2010 | 7 830 | 784 | 1 827 | 173 | 256 | 0 | 155 | |
| 2011 | 7 821 | 787 | 1 827 | 174 | 263 | 0 | 155 | |
| 2012 | 7 786 | 797 | 1 845 | 174 | 269 | 0 | 155 | |
| 2013 | 7 767 | 803 | 1 849 | 174 | 278 | 0 | 154 | |
| 2014 | 7 673 | 832 | 1 903 | 174 | 290 | 0 | 154 | |
| 2015 | 7 673 | 830 | 1 893 | 174 | 302 | 0 | 154 | |
| 2016 | 7 660 | 832 | 1 904 | 173 | 302 | 0 | 154 | |
| 2017 | 7 651 | 832 | 1 913 | 173 | 303 | 0 | 154 | |
| 2018 | 7 630 | 838 | 1 929 | 172 | 304 | 0 | 154 | |
| 2019 | 7 607 | 841 | 1 947 | 172 | 305 | 0 | 154 | |
| 2020 | | | | | | | | |

Land cover change

SO1-1.T6: National estimates of land cover change (km²) for the baseline period

| | Tree-covered areas (km²) | Grasslands (km²) | Croplands (km²) | Wetlands (km²) | Artificial surfaces (km²) | Other Lands (km²) | Water bodies (km²) | Total (km²) |
|------------------------------|-----------------------------|---------------------|--------------------|-------------------|---------------------------------|-------------------------|--------------------------|----------------|
| Tree-covered areas (km²) | 7 547 | 152 | 303 | 7 | 8 | 0 | 0 | 8 017 |
| Grasslands (km²) | 9 | 677 | 0 | 1 | 10 | 0 | 0 | 697 |
| Croplands (km²) | 113 | 1 | 1 589 | 2 | 62 | 0 | 0 | 1 767 |
| Wetlands (km²) | 1 | 0 | 1 | 162 | 3 | 0 | 0 | 167 |
| Artificial surfaces (km²) | 0 | 0 | 0 | 0 | 217 | 0 | 0 | 217 |
| Other Lands (km²) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Water bodies (km²) | 2 | 0 | 0 | 2 | 1 | 0 | 154 | 159 |
| Total | 7 672 | 830 | 1 893 | 174 | 301 | 0 | 154 | |

SO1-1.T7: National estimates of land cover change (km²) for the reporting period

| | Tree-covered areas (km²) | Grasslands (km²) | Croplands (km²) | Wetlands (km²) | Artificial surfaces (km²) | Other Lands (km²) | Water bodies (km²) | Total land area (km²) |
|------------------------------|-----------------------------|---------------------|--------------------|-------------------|---------------------------------|-------------------------|--------------------------|--------------------------|
| Tree-covered areas (km²) | 7 604 | 12 | 56 | 0 | 1 | 0 | 0 | 7 673 |
| Grasslands (km²) | 0 | 829 | 0 | 0 | 1 | 0 | 0 | 830 |
| Croplands (km²) | 3 | 0 | 1 889 | 0 | 2 | 0 | 0 | 1 894 |
| Wetlands (km²) | 0 | 0 | 3 | 171 | 0 | 0 | 0 | 174 |
| Artificial surfaces (km²) | 0 | 0 | 0 | 0 | 302 | 0 | 0 | 302 |
| Other Lands (km²) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Water bodies (km²) | 0 | 0 | 0 | 0 | 0 | 0 | 154 | 154 |
| Total | 7 607 | 841 | 1 948 | 171 | 306 | 0 | 154 | |

Land cover degradation

SO1-1.T8: National estimates of land cover degradation (km²) in the baseline period

| | Area (km²) | Percent of total land area (%) |
|--|------------|--------------------------------|
| Land area with degraded land cover | 553 | 5.0 |
| Land area with non-degraded land cover | 10 471 | 95.0 |
| Land area with no land cover data | 0 | 0.0 |

SO1-1.T9: National estimates of land cover degradation (km²) in the reporting period

| | Area (km²) | Percent of total land area (%) |
|------------------------------------|------------|--------------------------------|
| Land area with improved land cover | 3 | 0.0 |
| Land area with stable land cover | 10 947 | 99.3 |
| Land area with degraded land cover | 74 | 0.7 |
| Land area with no land cover data | 0 | 0.0 |

General comments

When compared to the 2018 PRAIS Report there is a marginal increase in the total land area for Jamaica, that is the total land area displays a negligible increased from 10.83km2 to 10.868km2. The change is likely the result of using updated satellite imagery. Due to the implications for information regarding the three parameters for SO1, the country has opted to once again accept the default data provided. As it relates to land degradation in Jamaica the process is overall fairly stable. Land degradation is however more evident in the southern portion of the island in the parishes of St. Catherine, Clarendon, Manchester and St. Elizabeth. The primary factors driving degradation are, urban expansion, coastal erosion, deforestation and vegetation loss. Urban expansion is particularly noticeable in St. Catherine where agricultural lands are being converted to housing and the associated amenities as well as along the northern coast in the parishes of St. James and Trelawny where wetlands are being drained for development. Coastal erosion and sea level rise resulting in loss of wetlands is also observed along the southwestern coast, specifically in the parish of St. Elizabeth. The loss of tree cover to croplands is observed in the parishes of St. Catherine and Clarendon while tree cover loss to grasslands is observed in St. Elizabeth and Manchester. Converse to the degradation which is predominately observed in the southern section of the island, sections of the northern portions have displayed slight improvements. Particularly, in St. Ann where land cover change from croplands to tree cover has been observed. Unlikely changes of artificial surfaces to other land cover classes are also noted in the land cover transition matrix. The observed trends indicate that, given the rapid rate urbanization and urban expansion, the demand for housing and other amenities has increased. The current display on the matrix is not supporting this position. Of note, the default data was accepted as in general, it gives support to the observed national trends in land cover changes.

SO1-2 Trends in land productivity or functioning of the land

Land productivity dynamics

SO1-2.T1: National estimates of land productivity dynamics (in km²) within each land cover class for the baseline period

| | | Net land productivity dynamics (km ²) for the baseline period | | | | | | | |
|---------------------|------------------------------|---|-----------------------------|--------------|------------------|---------------|--|--|--|
| Land cover class | Declining (km ²) | Moderate Decline (km ²) | Stressed (km ²) | Stable (km²) | Increasing (km²) | No Data (km²) | | | |
| Tree-covered areas | 1 | 10 | 658 | 1 843 | 5 035 | 0 | | | |
| Grasslands | 0 | 2 | 104 | 455 | 114 | 1 | | | |
| Croplands | 0 | 2 | 511 | 597 | 479 | 0 | | | |
| Wetlands | 0 | 1 | 33 | 63 | 65 | 0 | | | |
| Artificial surfaces | 0 | 0 | 124 | 82 | 11 | 0 | | | |
| Other Lands | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| Water bodies | 0 | 0 | 83 | 41 | 22 | 8 | | | |

SO1-2.T2: National estimates of land productivity dynamics (in km²) within each land cover class for the reporting period.

| | | Net land productivity dynamics (km ²) for the reporting period | | | | | | | | |
|---------------------|------------------------------|--|-----------------------------|--------------|------------------|---------------|--|--|--|--|
| Land cover class | Declining (km ²) | Moderate Decline (km ²) | Stressed (km ²) | Stable (km²) | Increasing (km²) | No Data (km²) | | | | |
| Tree-covered areas | 3 | 55 | 583 | 353 | 6 575 | 1 | | | | |
| Grasslands | 0 | 28 | 144 | 126 | 445 | 0 | | | | |
| Croplands | 0 | 73 | 379 | 81 | 1 180 | 0 | | | | |
| Wetlands | 0 | 12 | 30 | 8 | 116 | 0 | | | | |
| Artificial surfaces | 0 | 42 | 115 | 7 | 69 | 0 | | | | |
| Other Lands | 0 | 0 | 0 | 0 | 0 | 0 | | | | |
| Water bodies | 1 | 18 | 64 | 7 | 56 | 8 | | | | |

SO1-2.T3: National estimates of land productivity dynamics for areas where a land conversion to a new land cover class has taken place (in km²) for the baseline period.

| Land Co | onversion | Net land productivity dynamics (km ²) for the baseline period | | | | | | | |
|-----------------------|------------------------|---|--------------------|---------------------------|-------------------|-----------------|---------------------|--|--|
| From | То | Net area change (km²) | Declining (km²) | Moderate Decline (km²) | Stressed (km²) | Stable (km²) | Increasing (km²) | | |
| Tree-covered areas | Croplands | 303 | 0 | 1 | 142 | 108 | 53 | | |
| Tree-covered areas | Grasslands | 152 | 0 | 1 | 52 | 82 | 17 | | |
| Croplands | Tree-covered areas | 113 | 0 | 0 | 8 | 38 | 66 | | |
| Croplands | Artificial surfaces | 62 | 0 | 0 | 31 | 26 | 5 | | |

SO1-2.T4: National estimates of land productivity dynamics for areas where a land conversion to a new land cover class has taken place (in km²) for the reporting period.

| Land Co | onversion | Net land productivity dynamics (km ²) for the reporting period | | | | | | | |
|-----------------------|------------------------|--|--------------------|---------------------------|-------------------|-----------------|---------------------|--|--|
| From | То | Net area change (km²) | Declining (km²) | Moderate Decline (km²) | Stressed (km²) | Stable (km²) | Increasing (km²) | | |
| Tree-covered areas | Croplands | 231 | 0 | 1 | 76 | 14 | 141 | | |
| Tree-covered areas | Grasslands | 97 | 0 | 1 | 28 | 5 | 64 | | |
| Croplands | Artificial surfaces | 54 | 0 | 11 | 24 | 1 | 19 | | |
| Croplands | Tree-covered areas | 33 | 0 | 2 | 4 | 0 | 27 | | |

Land Productivity degradation

SO1-2.T5: National estimates of land productivity degradation in the baseline period

| | Area (km²) | Percent of total land area (%) |
|---|------------|--------------------------------|
| Land area with degraded land productivity | 17 | 0.2 |
| Land area with non-degraded land productivity | 10 847 | 99.8 |
| Land area with no land productivity data | 1 | 0.0 |

SO1-2.T6: National estimates of land productivity degradation in the reporting period

| | Area (km²) | Percent of total land area (%) |
|---|------------|--------------------------------|
| Land area with improved land productivity | 8 651 | 79 .6 |
| Land area with stable land productivity | 1 988 | 18 .3 |
| Land area with degraded land productivity | 230 | 2.1 |
| Land area with no land productivity data | 1 | 0.0 |

General comments

Based on observed trends at the national level the default data is accepted. A comparison of the data on land cover productivity between the baseline period and the reporting period shows a reduction in productivity for the net area change in the land cover classes observed. However, change from cropland to artificial surfaces show the greatest negative change, i.e. moderate decline in productivity per Km2. This is particular evident in the southern portion of the island where conversation to artificial surface is more prominent. Overall, land cover productivity has mostly remained stable over the period or shows slight increase in some instances. The increase is particularly evident in the western portion of the island while productivity in the eastern and central parts of the island remains mostly stable, this includes productivity in the islands two largest forest areas (Blue & John Crow Mts and Cockpit Country). The use and application of land productivity data for a 16-year window may have possibly skewed the results by not representing the impact of more recent and local climate changes on a smaller scale which may have likely had a negative impact on land productivity.

SO1-3 Trends in carbon stocks above and below ground

Soil organic carbon stocks

SO1-3.T1: National estimates of the soil organic carbon stock in topsoil (0-30 cm) within each land cover class (in tonnes per hectare).

| Veer | Soil organic carbon stock in topsoil (t/ha) | | | | | | | | | | |
|------|---|------------|-----------|----------|---------------------|-------------|--------------|--|--|--|--|
| rear | Tree-covered areas | Grasslands | Croplands | Wetlands | Artificial surfaces | Other Lands | Water bodies | | | | |
| 2000 | 120 | 106 | 100 | 132 | 111 | 0 | 24 | | | | |
| 2001 | 122 | 102 | 95 | 130 | 109 | 0 | 24 | | | | |
| 2002 | 122 | 101 | 95 | 130 | 107 | 0 | 24 | | | | |
| 2003 | 121 | 102 | 99 | 128 | 105 | 0 | 24 | | | | |
| 2004 | 122 | 101 | 98 | 128 | 104 | 0 | 24 | | | | |
| 2005 | 122 | 99 | 98 | 128 | 103 | 0 | 24 | | | | |
| 2006 | 122 | 99 | 98 | 128 | 101 | 0 | 24 | | | | |
| 2007 | 122 | 98 | 98 | 128 | 99 | 0 | 24 | | | | |
| 2008 | 122 | 97 | 98 | 128 | 97 | 0 | 24 | | | | |
| 2009 | 123 | 96 | 97 | 127 | 96 | 0 | 24 | | | | |
| 2010 | 123 | 95 | 96 | 127 | 94 | 0 | 25 | | | | |
| 2011 | 123 | 94 | 96 | 127 | 91 | 0 | 25 | | | | |
| 2012 | 124 | 93 | 96 | 126 | 89 | 0 | 25 | | | | |
| 2013 | 124 | 93 | 95 | 126 | 86 | 0 | 25 | | | | |
| 2014 | 126 | 89 | 93 | 126 | 83 | 0 | 25 | | | | |
| 2015 | 125 | 91 | 96 | 124 | 76 | 0 | 25 | | | | |
| 2016 | 125 | 91 | 95 | 125 | 76 | 0 | 25 | | | | |
| 2017 | 125 | 91 | 95 | 126 | 76 | 0 | 25 | | | | |
| 2018 | 126 | 90 | 94 | 126 | 75 | 0 | 25 | | | | |
| 2019 | 126 | 90 | 93 | 127 | 75 | 0 | 25 | | | | |
| 2020 | | | | | | | | | | | |

If you opted not to use default Tier 1 data, what did you use to calculate the estimates above? Modified Tier 1 methods and data

Tier 2 (additional use of country-specific data)

Tier 3 (more complex methods involving ground measurements and modelling)

SO1-3.T2: National estimates of the change in soil organic carbon stock in soil due to land conversion to a new land cover class in the baseline period

| Land Conversion | | Soil organic carbon (SOC) stock change in the baseline period | | | | | | | |
|-----------------|--------------------|---|-----------------------------|---------------------------|--------------------------------|------------------------------|----------------------|--|--|
| From | То | Net area change (km²) | Initial SOC stock (t/ha) | Final SOC stock (t/ha) | Initial SOC stock total (t) | Final SOC stock total (t) | SOC stock change (t) | | |
| Croplands | Tree-covered areas | 113 | 105.6 | 120 .7 | 1 192 769 | 1 364 214 | 171 445 | | |

| Land Conversion | | Soil organic carbon (SOC) stock change in the baseline period | | | | | | | | |
|--------------------|---------------------|---|-----------------------------|---------------------------|--------------------------------|------------------------------|----------------------|--|--|--|
| From | То | Net area change (km²) | Initial SOC stock (t/ha) | Final SOC stock (t/ha) | Initial SOC stock total (t) | Final SOC stock total (t) | SOC stock change (t) | | | |
| Tree-covered areas | Grasslands | 152 | 92.2 | 92.2 | 1 401 899 | 1 401 899 | 0 | | | |
| Croplands | Artificial surfaces | 62 | 86 .1 | 63 .6 | 533 850 | 394 220 | -139 630 | | | |
| Tree-covered areas | Croplands | 303 | 90.3 | 82 .1 | 2 734 593 | 2 487 375 | -247 218 | | | |

SO1-3.T3: National estimates of the change in soil organic carbon stock in soil due to land conversion to a new land cover class in the reporting period

| Land Conversion | | Soil organic carbon (SOC) stock change in the reporting period | | | | | | | | |
|--------------------|-----------------------|--|-----------------------------|---------------------------|--------------------------------|------------------------------|----------------------|--|--|--|
| From | То | Net area change (km²) | Initial SOC stock (t/ha) | Final SOC stock (t/ha) | Initial SOC stock total (t) | Final SOC stock total (t) | SOC stock change (t) | | | |
| Tree-covered areas | Grasslands | 12 | 104 .9 | 105.2 | 125 871 | 126 229 | 358 | | | |
| Croplands | Tree-covered areas | 3 | 80 .3 | 80.9 | 24 078 | 24 269 | 191 | | | |
| Wetlands | Croplands | 3 | 103 .0 | 98 .7 | 30 913 | 29 611 | -1 302 | | | |
| Tree-covered areas | Croplands | 56 | 110 .4 | 107 .6 | 618 036 | 602 721 | -15 315 | | | |

Soil organic carbon stock degradation

SO1-3.T4: National estimates of soil organic carbon stock degradation in the baseline period

| | Area (km²) | Percent of total land area (%) |
|---|------------|--------------------------------|
| Land area with degraded soil organic carbon (SOC) | 194 | 1 .8 |
| Land area with non-degraded SOC | 10 656 | 98.0 |
| Land area with no SOC data | 14 | 0.1 |

SO1-3.T5: National estimates of SOC stock degradation in the reporting period

| | Area (km²) | Percent of total land area (%) |
|-----------------------------|------------|--------------------------------|
| Land area with improved SOC | 0 | 0.0 |
| Land area with stable SOC | 10 771 | 99.1 |
| Land area with degraded SOC | 84 | 8. 0 |
| Land area with no SOC data | 15 | 0.1 |

General comments

Jamaica has little to no available data on Soil Organic Carbon (SOC) for the reporting period and as such accepts the default data presented. The data indicates that SOC is predominately stable across the island for the reporting period. Minor variations are however observed in the northern parishes of St. James, Trelawny and St. Ann where some improvement is observed. On the other hand, Clarendon and St. Catherine shows areas of degraded SOC. For both the baseline and reporting period conversions to croplands account for the greatest loss of SOC. This is attributed to the traditional methods of farming which requires the tilling or breaking of the soil. Such practices results in the release and therefore loss of stored carbon. This is furthered compounded by poor farming practices such as slash and burn as well as the intensity of farming activities and poor soil management practices which results in soil erosion and landslides.

SO1-4 Proportion of degraded land over the total land area

Proportion of degraded land over the total land area (Sustainable Development Goal Indicator 15.3.1)

SO1-4.T1: National estimates of the total area of degraded land (in km²), and the proportion of degraded land relative to the total land area

| | Total area of degraded land (km ²) | Proportion of degraded land over the total land area (%) |
|---------------------------|--|--|
| Baseline Period | 568 | 5.2 |
| Reporting Period | 838 | 7.7 |
| Change in degraded extent | 270 | |

Method

Did you use the SO1-1, SO1-2 and SO1-3 indicators (i.e. land cover, land productivity dynamics and soil organic carbon stock) to compute the proportion of degraded land?

Which indicators did you use?

 \boxtimes Land Cover

☑ Land Productivity Dynamics

 \boxtimes SOC Stock

Did you apply the one-out, all-out principle to compute the proportion of degraded land?

Yes

🔿 No

Level of Confidence

Indicate your country's level of confidence in the assessment of the proportion of degraded land:

High (based on comprehensive evidence)

• Medium (based on partial evidence)

Low (based on limited evidence)

Describe why the assessment has been given the level of confidence selected above:

The default data which is gathered from the global dataset provided is overall comparative, particularly in instances where some data is available for specific indicators at the national level (land cover data). It is however possible that some changes in indicators such as land productivity may have been recorded based on a generalized approach due to the scale and resolution at which the data was captured. As a result, though comparative, it may not be a completely accurate representation of changes at the local or national level/smaller scale or where greater detail is required for specific locations.

False positives/ False negatives

SO1-4.T3: Justify why any area identified as degraded or non-degraded in the SO1-1, SO1-2 or SO1-3 indicator data should or should not be included in the overall Sustainable Development Goal indicator 15.3.1 calculation.

| Location Name | Туре | Recode Options | Area (km²) | Process driving false +/- outcome | Basis for Judgement | Edit Polygon | |
|---------------|------|----------------|------------|-----------------------------------|---------------------|--------------|--|
| | | | | | | | |

Perform qualitative assessments of areas identified as degraded or improved

SO1-4.T4: Degradation hotspots

| Hotspots | Location | Area (km²) | Assessment Process | Direct drivers of land degradation hotspots | Action(s) taken to redress degradation in terms of Land Degradation Neutrality response hierarchy | Remediating action(s) (both forward-looking and current) | Edit Polygon |
|----------|----------|---------------|-----------------------|---|--|---|-----------------|
|----------|----------|---------------|-----------------------|---|--|---|-----------------|

| Hotspots | Location | Area (km²) | Assessment Process | Direct drivers of land degradation hotspots | Action(s) taken to redress degradation in terms of Land Degradation Neutrality response hierarchy | Remediating action(s) (both forward-looking and current) | Edit Polygon |
|--------------------------|------------------------|---------------|-----------------------|--|--|---|-----------------|
| St. Catherine | Bernard Lodge | | Site-based data | Infrastructure, industry and urbanization 3. 4. 5. 6. 7. 8. 9. 10. 11. | □ Avoid ⊠ Reduce □ Reverse | General instrument (e.g. policies, economic incentives) | |
| St. Catherine | Hellshire | | Site-based data | Deforestation and clearance of other native vegetation 3. 4. 5. 6. 7. 8. 9. 10. 11. | ⊠ Avoid ⊠ Reduce □ Reverse | General instrument (e.g. policies, economic incentives) | |
| Manchester | Southern Manchester | | Site-based data | 1. 2. 3. 4. 5. 6. Mineral resource extraction 7. 8. 9. 10. 11. | □ Avoid □ Reduce ⊠ Reverse | General instrument (e.g. policies, economic incentives) | |
| Total no. of hotspots | 3 | | · | · | | · | |
| Total hotspot area | 0 | | | | | | |

What is/are the indirect driver(s) of land degradation at the national level?

- 1. Demographic
- 2. Economic
- 3.
- 4.
- 5.

SO1-4.T5: Improvement brightspots

| Brightspots | Location | Area (km²) | Assessment Process | What action(s) led to the brightspot in terms of the Land Degradation Neutrality hierarchy? | Implementing action(s) (both forward-looking and current) | Edit Polygon |
|-------------|----------|---------------|-----------------------|--|---|-----------------|
|-------------|----------|---------------|-----------------------|--|---|-----------------|

| Brightspots | Location | Area (km²) | Assessment Process | What action(s) led to the brightspot in terms of the Land Degradation Neutrality hierarchy? | Implementing action(s) (both forward-looking and current) | Edit Polygon |
|-------------------------|----------------------------|---------------|-----------------------|--|--|-----------------|
| St. Ann | Claremont/ Monegue area | | Site-based data | □ Avoid □ Reduce ⊠ Reverse | General instrument (e.g. policies, economic incentives) Restore/improve tree-covered areas Restore tree-covered area extent Increase tree-covered area extent Increase tree covered land (net gain) e.g. plantations Increase soil fertility and carbon stock | |
| Total no. of brightpots | | 1 | | | | |
| Total brightspot area | | 0 | | | | |

What are the enabling and instrumental responses at the national level driving the occurrence of brightspots?

- 1. Climate change adaptation planning
- 2. Legal and regulatory instruments
- 3.
- 4.
- 5.
- 6. 7.
- 8.
- 9.
- 10.

General comments

There is a noticeable discrepancy in the baseline data indicated in the previous 2018 PRAIS Report and the baseline presented in the current data. Of note, data for both reports was obtained from the default data presented by UNCCD. This discrepancy is being queried through the UNCCD's help desk. Nonetheless, analysis of the default data presented for the current report indicates that the portion of degraded lands has a 2.5% increase from the baseline period (2000 - 2015) to the reporting period (2016 - 2019). Main hotspot areas identified are the Bernard Lodge area of St. Catherine where croplands are being lost as a result of urban expansion, particularly housing development. However, in Hellshire Hills of the same parish there is observed tree cover loss due to conversion to croplands on the periphery of forested areas/ areas of tree cover. In both areas, steps to avoid and reduce said changes are being taken by means of Development Orders effected to guide land use activities. Specifically, for the Hellshire Hills, this complements existing protection under the Forest Act, 1996 and the Ramsar Convention, as the area is a Forest Reserve as well as it forms apart of the Portland Bight Protected Area. A third hot spot area observed in southern section of Manchester where tree cover conversion to grass land is noted. This is believed to be attributed to bauxite mining activity where tree cover is lost in the mining process after which grass becomes the prominent land cover following the reclamation or rehabilitation process which is regulated by the Ministry of Transport and Mining. Areas of bright spots are observed in the interior section of St. Ann where croplands are converted to tree cover. These areas also reflect an increase in soil organic carbon which can be attributed to the associate increase biomass from tree cover. These areas are generally rural and as such it is believed that change in demographics associated with rural urban migration may have attributed to the noted improvements. It is observed that the younger demographic is less inclined to follow agricultural pursuits which is labour intensive. In some instances, deliberate and on-going efforts towards reforestation may have contributed to the improvement as well as land reclamation and restoration of bauxite mined areas.

SO1 Voluntary Targets

SO1-VT.T1: Voluntary Land Degradation Neutrality targets and other targets relevant to strategic objective 1

| Target | Year | Location(s) | Total Target Area (km²) | Overarching type of Land Degradation Neutrality (LDN) intervention | Targeted action(s) | Status of target achievement | Is this an LDN target? If so, under which process was it defined/adopted? | Which other important goals are also being addressed by this target? | Edit Polygon |
|---|------|---|----------------------------------|--|--|------------------------------------|--|---|-----------------|
| To achieve LDN in Manchester through the improved ability of the parish to increase biomass production. | 2030 | Manchester | 830 | □ Avoid □ Reduce ⊠ Reverse | Increase soil fertility and carbon stock Increase carbon stock and reduce soil/land degradation | Ongoing | Yes No Participation in the LDN Target Setting Programme | | |
| 10% improvement in productivity and SOC stocks in cropland and grasslands for the entire country, as well, as reduce soil erosion by 15%. | 2030 | Jamaica | | □ Avoid ⊠ Reduce ⊠ Reverse | Restore productivity and soil organic carbon stock in croplands and grasslands | Ongoing | Yes No Participation in the LDN Target Setting Programme | | |
| Increase forest cover by 5% through reforestation activities across the country. | 2030 | Jamaica | 200 | □ Avoid □ Reduce ⊠ Reverse | | Ongoing | Yes No Participation in the LDN Target Setting Programme | United Nations Framework Convention on Climate Change – Nationally Determined Contributions | |
| Coordinate with the Forest Department and others to increase by at least 50% reforestation efforts in the specific parishes. | 2030 | Hanover, Portland, St. Andrew, St. James and St. Mary | | □ Avoid □ Reduce ⊠ Reverse | Restore/improve tree- covered areas Restore tree- covered areas | Ongoing | Yes No Participation in the LDN Target Setting Programme | | |
| Develop policy framework to assess the implications of urban expansion on agricultural lands in the parishes of St. James, St. Catherine, Clarendon, St. Andrew and St. Thomas. | 2030 | St. James, St. Catherine, Clarendon, St. Andrew and St. Thomas. | | □ Avoid ⊠ Reduce □ Reverse | • General instrument (e.g. policies, economic incentives) | Ongoing | Yes No Participation in the LDN Target Setting Programme | | |
| Total | | | Sum of 1 543 .0 | um of all targeted areas 543 .06 | | | | | |

| Target | Year | Location(s) | Total Target Area (km²) | Overarching type of Land Degradation Neutrality (LDN) intervention | Targeted action(s) | Status of target achievement | Is this an LDN target? If so, under which process was it defined/adopted? | Which other important goals are also being addressed by this target? | Edit Polygon |
|--|------|---|----------------------------------|---|--|------------------------------------|--|---|-----------------|
| Incorporate LDN measures within Local Sustainable Plans for all parishes | 2030 | Jamaica | | ⊠ Avoid ⊠ Reduce □ Reverse | General instrument (e.g. policies, economic incentives) | Ongoing | Yes No Participation in the LDN Target Setting Programme | | |
| Increase efforts to rehabilitate and replant mangroves in South Clarendon, St Elizabeth and St. Catherine. | 2030 | South Clarendon, St. Elizabeth and St. Catherine | | □ Avoid ⊠ Reduce ⊠ Reverse | Restore/improve wetlands Restore/preserve wetlands and reduce degradation of wetlands Improve coastal management Reduce coastal erosion | Ongoing | Yes No Participation in the LDN Target Setting Programme | | |
| To rehabilitate 25% of degraded lands in Manchester and an additional 4500 ha (45 km2) in other parts of the country through the introduction of sustainable crop production. | 2030 | Manchester and other selected areas in other parts of the country | 45 | □ Avoid ⊠ Reduce ⊠ Reverse | Other/general /unspecified Improve land productivity (unspecified land use) Avoid/prevent/halt degradation (of degraded lands) | Ongoing | Yes No Participation in the LDN Target Setting Programme | | |
| To improve productivity of the land by restoring 10% of degraded areas with 6806 ha (68.06 km2) of cropland in the country through sustainable land management practices. | 2030 | 10% degraded areas on the country | 68.06 | □ Avoid □ Reduce ⊠ Reverse | Other/general /unspecified Improve land productivity (unspecified land use) Avoid/prevent/halt degradation (of degraded lands) | Ongoing | Yes No Participation in the LDN Target Setting Programme | | |
| Reduce forest conversion by implementing restoration and rehabilitation projects. | 2030 | Jamaica | 400 | ⊠ Avoid ⊠ Reduce ⊠ Reverse | Restore/improve tree- covered areas Reduce/halt deforestation and conversion of tree cover to other land cover types (e.g. conserving forest land) Restore tree- covered areas Improve tree cover management e.g. fire management | Ongoing | YesNo | United Nations Framework Convention on Climate Change – Nationally Determined Contributions | |
| Total | | | Sum of all targeted areas | | | | | | |

| Target | Year | Location(s) | Total Target Area (km²) | Overarching type of Land Degradation Neutrality (LDN) intervention | Targeted action(s) | Status of target achievement | Is this an LDN target? If so, under which process was it defined/adopted? | Which other important goals are also being addressed by this target? | Edit Polygon |
|--|------|-------------|--|---|---|------------------------------------|---|--|-----------------|
| Promote and adopt sustainable soil management practices and soil loss prevention methods. | 2030 | Jamaica | | ⊠ Avoid □ Reduce □ Reverse | General instrument (e.g. policies, economic incentives) Other/general /unspecified Other/general /unspecified | Ongoing | Yes No Participation in the LDN Target Setting Programme | | |
| Strengthen the monitoring and enforcement regime of the Land Development and Utilization Act through financial and human resources. | 2030 | Jamaica | | ⊠ Avoid □ Reduce □ Reverse | • General instrument (e.g. policies, economic incentives) | Ongoing | ● Yes ○ No | | |
| Total | | 1 | Sum of all targeted areas 1 543 .06 | | | | | | |

SO1.IA.T1: Areas of implemented action related to the targets (projects and initiatives on the ground).

| Relevant Target | Implemented Action | Location (placename) | Action start date | Extent of action | Total Area Implemented So Far (km²) | Edit Polygon |
|---|--|---|----------------------|------------------------|-------------------------------------|-----------------|
| Increase efforts to rehabilitate and replant mangroves in South Clarendon, St Elizabeth and St. Catherine. | Other Mangrove Restoration Project- IBD Funded \mangrove restoration project | Clarendon, Palisadoes, St. James, Portland & St. Elizabeth | 2019-08-01 | | 0.00 | |
| Increase forest cover by 5% through reforestation activities across the country. | Other National Tree Planting Initiative | Island wide | 2019-10-04 | | 0.00 | |
| Increase forest cover by 5% through reforestation activities across the country. | Other EU Budget support Programme | Island wide | 2018-04-01 | | 0.00 | |
| Reduce forest conversion by implementing restoration and rehabilitation projects. | Other REDD+ Project | Island wide | 2019-07-01 | | 0.00 | |
| 10% improvement in productivity and SOC stocks in cropland and grasslands for the entire country, as well, as reduce soil erosion by 15%. | Other Soil Care Project | St. Elizabeth | 2020-03-06 | | 0.00 | |
| Increase forest cover by 5% through reforestation activities across the country. | Other Upper Yallahs River Watershed Protection Project | Upper Yallahs Watershed | 2015-04-06 | | 0.00 | |

| Relevant Target | Implemented Action | Location (placename) | Action start date | Extent of action | Total Area Implemented So Far (km²) | Edit Polygon |
|-----------------|--------------------|-------------------------|----------------------|------------------------|--|-----------------|
| | | | | | Sum of all areas relevant to actions under the same target | |
| | | | | | To achieve LDN in Manchester through the improved ability of the parish to increase biomass production. : | 00 |
| | | | | | 10% improvement in productivity and SOC stocks in cropland and grasslands for the entire country, as well, as reduce soil erosion by 15%. : | 00 |
| | | | | | Increase forest cover by 5% through reforestation activities across the country. : | 0 |
| | | | | | Coordinate with the Forest Department and others to increase by at least 50% reforestation efforts in the specific parishes.: | 00 |
| | | | | | Develop policy framework to assess the implications of urban expansion on agricultural lands in the parishes of St. James, St. Catherine, Clarendon, St. Andrew and St. Thomas.: | 00 |
| | | | | | Incorporate LDN measures within Local Sustainable Plans for all parishes: | 0 |
| | | | | | Increase efforts to rehabilitate and replant mangroves in South Clarendon, St Elizabeth and St. Catherine.: | 10 |
| | | | | | To rehabilitate 25% of degraded lands in Manchester and an additional 4500 ha (45 km2) in other parts of the country through the introduction of sustainable crop production. : |)0 |
| | | | | | To improve productivity of the land by restoring 10% of degraded areas with 6806 ha (68.06 km2) of cropland in the country through sustainable land management practices. : | 00 |
| | | | | | Reduce forest conversion by implementing restoration and rehabilitation projects. : | 0 |
| | | | | | Promote and adopt sustainable soil management practices and soil loss prevention methods.: | 10 |
| | | | | | Strengthen the monitoring and enforcement regime of the Land Development and Utilization Act through financial and human resources.: | 00 |

General comments

The overall aim, is for Jamaica to achieve LDN targets by 2030 in keeping with the National Development Plan (Vision 2030). That is, for the country to achieve no net loss for all its land cover and land use classes. The country intends to attain this through interventions to counterbalance losses in land degradation with gains from the reversal of land degradation. It is anticipated that the achievement of all the LDN sub-targets outlined above will collectively contribute to this goal. Of note, the LDN sub-targets are outlined in the LDN Target Setting Programme Country Report, Jamaica (2019/2020). The efforts to achieve these targets are ongoing, such as those related to the use of sustainable land management practices in agriculture and reforestation activities, led by the Rural Agricultural Development Authority (RADA) and the Forestry Department respectively, as well as other government and non government organizations. Under the Three in Three Initiate, as at the end of October 2022, the Forestry Department distributed over 2.2 million trees. In addition as at the end of the same period the Forestry Department reforested approximately 0.08 km2 of denuded lands. Additionally, the inclusion of LDN measures in Development Orders along with other policies and regulations, some of which are being amended/updated, for example, the Forest Act 1996, will seek to further strengthen efforts towards achieving LDN.

SO2-1 Trends in population living below the relative poverty line and/or income inequality in affected areas

Relevant metric

Choose the metric that is relevant to your country:

- Proportion of population below the
- international poverty line
- Income inequality (Gini Index)

Proportion of population below the international poverty line

SO2-1.T1: National estimates of the proportion of population below the international poverty line

| Year | Proportion of population below international poverty line (%) |
|---------|---|
| 2 000 | |
| 2 001 | |
| 2 002 | |
| 2 003 | |
| 2 004 | |
| 2 005 | 21.2 |
| 2 006 | |
| 2 007 | 9.9 |
| 2 008 | 12.3 |
| 2 009 | 16.5 |
| 2 010 | 17.6 |
| 2 011 | |
| 2 012 | 19.9 |
| 2 013 | 24.6 |
| 2 014 | 20.0 |
| 2 015 | 21.2 |
| 2 016 | 17.1 |
| 2 017 | 19.3 |
| 2 018 | 12.6 |
| 2 019 | 11.0 |
| 2 0 2 0 | |

Qualitative assessment

SO2-1.T3: Interpretation of the indicator

| Indicator metric |
|------------------|
|------------------|

| Indicator metric | Change in the indicator | Comments |
|--|-------------------------------|---|
| Proportion of population below the international poverty line | Increase | For the years 2012 to 2013 the data reflects an increase in the number of persons living below the poverty line . This negative change from 19.9 % to 24.6 % in the is likely attributed to the passage of Hurricane Sandy which caused severe losses and disruption to lives and livelihoods . Of note, the greatest change in poverty was observed outside of the Kingston Metropolitan Area (KMA). These areas are usually more reliant on the environment through tourism and agriculture for economical gains. Therefore the passage of hurricane Sandy would have caused significant setback and loss of income. |
| Proportion of population below the international poverty line | Decrease | A reduction in the rate of poverty from 24.6% to 20% is observed for the years 2013 to 2014. This positive change in the number of persons living below the poverty line is likely associated with the implementation of government reforms which were supported by the World Bank, the International Monetary Fund and the Investment Banking Division. Additionally, improvement in the agriculture and tourism sectors due to hurricane recovery efforts may have possible contributed to the decline in poverty reflected. Again, the greatest change occurred outside of the Kingston Metropolitan Area (KMA), for example in rural areas, where the percentage of the population living below the poverty line was reduced from 31.3% to 24.9%. |
| Proportion of population below the international poverty line | Decrease | The 4.1 % reduction in poverty observed between 2015 to 2016 is likely the continued impact of reforms implemented. Particularly, those involving the IMF and the need for the country to meet requirements set out in the agreement. That is for the Government to continue to pass its quarterly reviews under the IMF programme. Additionally general elections held in February, 2016 would have contributed to an increase in employment and by extension stimulated increased consumption. The country also experienced a 4% reduction in the number of unemployed persons for the same period. A similar occurrence was observed in 2007, also a year in which general election was held. |

General comments

The percentage of the population living below the poverty line is also influenced by various social factors which have implication for the rate of economic growth. These factors include corruption ranking and the prevalence of crime which sometimes dissuade perspective investors. Additionally, the distribution of person living below the poverty line is often polarized, where a greater percent of these individuals below the poverty line, live in rural areas where the economy is less diversified and relies heavily on the environment.

SO2-2 Trends in access to safe drinking water in affected areas

Proportion of population using safely managed drinking water services

SO2-2.T1: National estimates of the proportion of population using safely managed drinking water services

| Year | Urban (%) | Rural (%) | Total (%) |
|------|-----------|-----------|-----------|
| 2000 | | | |
| 2001 | | | |
| 2002 | | | |
| 2003 | | | |
| 2004 | | | 95.9 |
| 2005 | | | |
| 2006 | | | 96.1 |
| 2007 | | | 96 |
| 2008 | | | 98 |
| 2009 | | | 96.8 |
| 2010 | | | 96.6 |
| 2011 | | | |
| 2012 | | | 97.5 |
| 2013 | | | 97.2 |
| 2014 | | | |
| 2015 | | | |
| 2016 | | | |
| 2017 | | | |
| 2018 | | | |
| 2019 | | | |
| 2020 | | | |

Qualitative assessment

SO2-2.T2: Interpretation of the indicator

Change in the indicator Comments

General comments

The available data for the period between 2000 and 2020, indicates the proportion of the population having access to safely managed drinking water remained fairly consistent. For all the years highlighted over 95% of the population had access. No significant changes were observed throughout the period. The data was obtained for The Survey of Living Conditions conducted by the Planning Institute of Jamaica for the corresponding years mentioned above.

SO2-3 Trends in the proportion of population exposed to land degradation disaggregated by sex

Proportion of the population exposed to land degradation disaggregated by sex

SO2-3.T1: National estimates of the proportion of population exposed to land degradation disaggregated by sex.

| Time period | Population exposed (count) | Percentage of total population exposed (%) | Female population exposed (count) | Percentage of total female population exposed (%) | Male population exposed (count) | Percentage of total male population exposed (%) |
|--------------------|----------------------------------|--|---|---|--|---|
| Baseline period | 253108 | 9.5 | 128186 | 9.5 | 124922 | 9.5 |
| Reporting period | 386608 | 14 .3 | 197523 | 14.4 | 189085 | 14 .1 |

Qualitative assessment

SO2-3.T2: Interpretation of the indicator

| Change in the indicator | Comments |
|-------------------------------|--|
| Increase | The number of persons exposed to land degradation has increased by 4.8% between the baseline period (2000 - 2015) and the reporting period (2016 - 2019). This increase is likely associated with rural urban migration as the majority of Jamaica's population is distributed across the Kingston Metropolitan Area (KMA), Montego Bay, Jamaica's second city and other town centres within the island. These are also the areas of the highest levels of degradation, and they attract persons due to the prospect of job opportunities as well as access to various social amenities. This added demand for land in these areas therefore, places added stress and increase the need for the conversion of various land covers to artificial surfaces in order to provide the infrastructure required by the population. Of note, the proportion of the population exposed to land degradation benefits the lease from ecosystem services such as those associated with improved air quality and food security. In these areas with the greatest levels of degradation, land cover class crops land, is often converted to artificial surfaces as in the case of the KMA. |

General comments

Despite the noticeable increase in the number of persons exposed to land degradation, particularly females, the ratio of the population exposed, that is, the number of males verse the number of females has shown little change between the baseline and the reporting period. Keen to note, the impacts of land degradation not only affect the population living in these specific areas but also has implications for the wider population through economic, environmental and social linkages. Based on local information on the distribution of Jamaica's population and the land degradation data provided, the country accepts the default data on the proportion of the population exposed to land degradation and the disaggregation of same by sex.

SO2 Voluntary Targets

S02-VT.T1

| Target | Year | Level of application | Status of target achievement | Comments |
|---|------|----------------------|------------------------------|---|
| To achieve 100 percent access to safe drinking water for all Jamaicans | 2030 | National | Ongoing | The proportion of the population with access to safe drinking water has been increasing incrementally over the last decade. |
| To reduce national poverty to less than 10 percent | 2030 | National | Ongoing | The population living below poverty line up to 2019 has reflected a gradual decline. |
| To reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management | 2030 | National | Ongoing | As at January 1, 2019 the government implemented a ban on single use plastics. Subsequently, bans on Styrofoam and plastic straws have been implemented. |

General comments

Jamaica is committed to enhancing the lives of its citizens by means improved standard of living and increased access to basic social amenities. It is recognized that the health and wellbeing of the population is paramount for economic development. One project implemented to improve urban spaces and the lives of the population living in these areas is the City Adapt Project. Through this project, the urban population's exposure to land degradation should be reduced over time as well as it should enable the urban population to capitalize on ecosystem services. The overall focus of the City Adapt Project was towards the building of climate resilient urban systems. The project was completed in 2022 and included the rehabilitation of 2.3 hectares of land. The project was funded by United Nations Environment Programme (UNEP) at a total of 24 million USD. Additional information on the project may be found on the Forestry Department's website. As is reflected in the previous sections of SO2, strides have also been made in reducing the number of person living below the poverty line and in increasing the proportion of the population having access to safe drinking water.

SO3-1 Trends in the proportion of land under drought over the total land area

Drought hazard indicator

SO3-1.T1: National estimates of the land area in each drought intensity class as defined by the Standardized Precipitation Index (SPI) or other nationally relevant drought indices

| | Drought intensity classes | | | | | | | | |
|------|---------------------------------|------------------------|-----------------------------------|------------------------------------|--------------------------------|--|--|--|--|
| | Mild drought (km ²) | Moderate drought (km²) | Severe drought (km ²) | Extreme drought (km ²) | Non-drought (km ²) | | | | |
| 2000 | 11 026 | 0 | 0 | 0 | 0 | | | | |
| 2001 | 5 390 | 0 | 0 | 0 | 5 636 | | | | |
| 2002 | 594 | 0 | 0 | 0 | 10 432 | | | | |
| 2003 | 0 | 0 | 0 | 0 | 11 026 | | | | |
| 2004 | 8 926 | 594 | 0 | 0 | 1 506 | | | | |
| 2005 | 0 | 0 | 0 | 0 | 11 026 | | | | |
| 2006 | 11 026 | 0 | 0 | 0 | 0 | | | | |
| 2007 | 0 | 0 | 0 | 0 | 11 026 | | | | |
| 2008 | 1 667 | 0 | 0 | 0 | 9 358 | | | | |
| 2009 | 11 026 | 0 | 0 | 0 | 0 | | | | |
| 2010 | 0 | 0 | 0 | 0 | 11 026 | | | | |
| 2011 | 0 | 0 | 0 | 0 | 11 026 | | | | |
| 2012 | 5 636 | 0 | 0 | 0 | 5 390 | | | | |
| 2013 | 6 244 | 1 667 | 0 | 0 | 3 114 | | | | |
| 2014 | 5 784 | 2 221 | 0 | 0 | 3 020 | | | | |
| 2015 | 1 418 | 5 701 | 3 907 | 0 | 0 | | | | |
| 2016 | 11 026 | 0 | 0 | 0 | 0 | | | | |
| 2017 | 0 | 0 | 0 | 0 | 11 026 | | | | |
| 2018 | 4 886 | 6 140 | 0 | 0 | 0 | | | | |
| 2019 | 7 474 | 3 551 | 0 | 0 | 0 | | | | |
| 2020 | | | | | | | | | |
| 2021 | | | | | | | | | |

SO3-1.T2: Summary table for land area under drought without class break down

| | Total area under drought (km²) | Proportion of land under drought (%) |
|------|--------------------------------|--------------------------------------|
| 2000 | 11 026 | 101 .5 |
| 2001 | 5 390 | 49.6 |
| 2002 | 594 | 5.5 |
| 2003 | 0 | 0.0 |
| 2004 | 9 520 | 87 .6 |
| 2005 | 0 | 0.0 |

SO-3: To mitigate, adapt to, and manage the effects of drought in order to enhance resilience of vulnerable populations and ecosystems.

| | Total area under drought (km²) | Proportion of land under drought (%) |
|------|--------------------------------|--------------------------------------|
| 2006 | 11 026 | 101 .5 |
| 2007 | 0 | 0.0 |
| 2008 | 1 667 | 15.3 |
| 2009 | 11 026 | 101.4 |
| 2010 | 0 | 0.0 |
| 2011 | 0 | 0.0 |
| 2012 | 5 636 | 51 .8 |
| 2013 | 7 912 | 72.8 |
| 2014 | 8 005 | 73.6 |
| 2015 | 11 026 | 101.4 |
| 2016 | 11 026 | 101.4 |
| 2017 | 0 | 0.0 |
| 2018 | 11 026 | 101.4 |
| 2019 | 11 026 | 101.4 |
| 2020 | | - |
| 2021 | | - |

Qualitative assessment:

Between the years 2000 to 2019, the default data reflects that Jamaica has been predominately affected by mild and moderate drought conditions. Notably, for some of the affected years, the intensity of the drought period experienced, not only affected the total land area but also the country area which is the sum total of the land area and water bodies. The spatial extent of the drought impact is likely the combined effect of the intensity as well as the duration of the drought experienced. Therefore, the possible prolonged drought experienced in these years likely led to the drying of some water bodies. Keen to note also, the data for year 2015 indicates that the country experienced severe drought event. Said drought period was presumably influenced not only be the intensity of the drought conditions but also the extent of the affected areas and the duration of the drought experienced. The severity of the 2015 drought is supported by local knowledge. The country accepts the default data presented on the drought intensity classes.

General comments

Drought events have implications for land degradation as it affects land productivity and by extension food security. It also has implications for access to potable water supply, the lack of which can affect the health and well being of the population as drought events not only impact the available quantity of water but also the quality. The negative effect on the quantity and quality of water occurs as reduced flows of freshwater during droughts cause stagnation and increase the concentration of pollutants, which can result in ill health when consumed. Additionally, the likelihood of saline intrusion which also affects water quality is increased during drought events particularly given that Jamaica is a small island state. Drought conditions also increases the likelihood of wildfires which negatively affect biodiversity, livelihood and the soil organic carbon which is released in incidents of fire and therefore exacerbates the issue of land degradation. Drought conditions experienced in Jamaica during 2015 resulted in numerous wild fires and disruption in access to water supply.

SO3-2 Trends in the proportion of the population exposed to drought

Drought exposure indicator

Exposure is defined in terms of the number of people who are exposed to drought as calculated from the SO3-1 indicator data.

SO3-2.T1: National estimates of the percentage of the total population within each drought intensity class as well as the total population count and the proportion of the national population exposed to drought regardless of intensity.

| | Non-expos | sed | Mild drou | ght | Moderate dro | ought | Severe drou | ght | Extreme drou | ight | Exposed popu | ulation |
|-------------------|------------------|-----------|------------------|-----------|------------------|----------|------------------|----------|------------------|---------|------------------|-----------|
| Reporting year | Population count | % | Population count | % | Population count | % | Population count | % | Population count | % | Population count | % |
| 2000 | 0 | 0.0 | 2495106 | 100 .0 | 0 | 0 .0 | 0 | 0 .0 | 0 | 0 .0 | 2 495 106 | 100 .0 |
| 2001 | 870519 | 34 .8 | 1631871 | 65 .2 | 0 | 0 .0 | 0 | 0 .0 | 0 | 0 .0 | 1 631 871 | 65 .2 |
| 2002 | 2418599 | 96 .2 | 95563 | 3 .8 | 0 | 0 .0 | 0 | 0 .0 | 0 | 0 .0 | 95 563 | 3 .8 |
| 2003 | 2514162 | 100 .0 | 0 | 0.0 | 0 | 0 .0 | 0 | 0 .0 | 0 | 0 .0 | 0 | 0.0 |
| 2004 | 199709 | 7 .9 | 2232235 | 88 .3 | 96660 | 3 .8 | 0 | 0 .0 | 0 | 0 .0 | 2 328 895 | 92 .1 |
| 2005 | 2537677 | 100 .0 | 0 | 0.0 | 0 | 0 .0 | 0 | 0 .0 | 0 | 0 .0 | 0 | 0.0 |
| 2006 | 0 | 0.0 | 2545133 | 100 .0 | 0 | 0 .0 | 0 | 0 .0 | 0 | 0 .0 | 2 545 133 | 100 .0 |
| 2007 | 2556030 | 100 .0 | 0 | 0.0 | 0 | 0 .0 | 0 | 0 .0 | 0 | 0 .0 | 0 | 0.0 |
| 2008 | 2208691 | 86 .2 | 355029 | 13 .8 | 0 | 0 .0 | 0 | 0 .0 | 0 | 0 .0 | 355 029 | 13 .8 |
| 2009 | 0 | 0.0 | 2577686 | 100 .0 | 0 | 0 .0 | 0 | 0 .0 | 0 | 0 .0 | 2 577 686 | 100 .0 |
| 2010 | 2582687 | 100 .0 | 0 | 0.0 | 0 | 0 .0 | 0 | 0 .0 | 0 | 0 .0 | 0 | 0.0 |
| 2011 | 2589759 | 100 .0 | 0 | 0.0 | 0 | 0 .0 | 0 | 0 .0 | 0 | 0 .0 | 0 | 0.0 |
| 2012 | 1702394 | 65 .6 | 893534 | 34 .4 | 0 | 0 .0 | 0 | 0 .0 | 0 | 0 .0 | 893 534 | 34 .4 |
| 2013 | 1172662 | 45 .1 | 1069814 | 41 .1 | 359661 | 13 .8 | 0 | 0 .0 | 0 | 0 .0 | 1 429 475 | 54 .9 |
| 2014 | 493149 | 18 .9 | 931164 | 35 .6 | 1188138 | 45 .5 | 0 | 0 .0 | 0 | 0 .0 | 2 119 302 | 81 .1 |
| 2015 | 0 | 0.0 | 199571 | 7 .6 | 1387326 | 52 .9 | 1035470 | 39 .5 | 0 | 0 .0 | 2 622 367 | 100 .0 |
| 2016 | 0 | 0.0 | 2631079 | 100 .0 | 0 | 0 .0 | 0 | 0 .0 | 0 | 0 .0 | 2 631 079 | 100 .0 |
| 2017 | 2640173 | 100 .0 | 0 | 0.0 | 0 | 0 .0 | 0 | 0 .0 | 0 | 0 .0 | 0 | 0.0 |
| 2018 | 0 | 0.0 | 1644965 | 62 .1 | 1005587 | 37 .9 | 0 | 0 .0 | 0 | 0 .0 | 2 650 552 | 100 .0 |
| 2019 | 0 | 0.0 | 2014062 | 75 .7 | 647240 | 24 .3 | 0 | 0 .0 | 0 | 0 .0 | 2 661 302 | 100 .0 |
| 2020 | | - | | - | | - | | - | | - | - | - |
| 2021 | | - | | - | | - | | - | | - | - | - |

SO3-2.T2: National estimates of the percentage of the female population within each drought intensity class.

| | Non-expos | sed | Mild droug | ght | Moderate drought Severe of | | Severe drought | | vere drought Extreme drought | | Exposed female population | |
|-------------------|------------------|-----|------------------|-----------|----------------------------|---------|------------------|---------|------------------------------|---------|------------------------------|-----------|
| Reporting year | Population count | % | Population count | % | Population count | % | Population count | % | Population count | % | Population count | % |
| 2000 | 0 | 0.0 | 1259837 | 100 .0 | 0 | 0 .0 | 0 | 0 .0 | 0 | 0 .0 | 1 259 837 | 100 .0 |

SO-3: To mitigate, adapt to, and manage the effects of drought in order to enhance resilience of vulnerable populations and ecosystems.

| | Non-expo | sed | Mild drou | ght | Moderate dro | ought | Severe drou | ught | Extreme dro | ught | Exposed fe population | male on |
|-------------------|------------------|-----------|------------------|-----------|------------------|----------|------------------|----------|------------------|---------|--------------------------|------------|
| Reporting year | Population count | % | Population count | % | Population count | % | Population count | % | Population count | % | Population count | % |
| 2001 | 432609 | 34 .2 | 830985 | 65 .8 | 0 | 0 .0 | 0 | 0 .0 | 0 | 0 .0 | 830 985 | 65 .8 |
| 2002 | 1222515 | 96 .3 | 47125 | 3 .7 | 0 | 0 .0 | 0 | 0 .0 | 0 | 0 .0 | 47 125 | 3 .7 |
| 2003 | 1269640 | 100 .0 | 0 | 0.0 | 0 | 0 .0 | 0 | 0 .0 | 0 | 0 .0 | 0 | 0.0 |
| 2004 | 100687 | 7 .9 | 1128717 | 88 .4 | 47646 | 3 .7 | 0 | 0 .0 | 0 | 0 .0 | 1 176 363 | 92 .1 |
| 2005 | 1281588 | 100 .0 | 0 | 0.0 | 0 | 0 .0 | 0 | 0 .0 | 0 | 0 .0 | 0 | 0.0 |
| 2006 | 0 | 0.0 | 1285542 | 100 .0 | 0 | 0 .0 | 0 | 0 .0 | 0 | 0 .0 | 1 285 542 | 100 .0 |
| 2007 | 1290973 | 100 .0 | 0 | 0.0 | 0 | 0 .0 | 0 | 0 .0 | 0 | 0 .0 | 0 | 0.0 |
| 2008 | 1117879 | 86 .3 | 177244 | 13 .7 | 0 | 0 .0 | 0 | 0 .0 | 0 | 0 .0 | 177 244 | 13 .7 |
| 2009 | 0 | 0.0 | 1302369 | 100 .0 | 0 | 0 .0 | 0 | 0 .0 | 0 | 0 .0 | 1 302 369 | 100 .0 |
| 2010 | 1305068 | 100 .0 | 0 | 0.0 | 0 | 0 .0 | 0 | 0 .0 | 0 | 0 .0 | 0 | 0.0 |
| 2011 | 1308934 | 100 .0 | 0 | 0.0 | 0 | 0 .0 | 0 | 0 .0 | 0 | 0 .0 | 0 | 0.0 |
| 2012 | 868879 | 66 .2 | 443593 | 33 .8 | 0 | 0 .0 | 0 | 0 .0 | 0 | 0 .0 | 443 593 | 33 .8 |
| 2013 | 602445 | 45 .8 | 533979 | 40 .6 | 179593 | 13 .6 | 0 | 0 .0 | 0 | 0 .0 | 713 572 | 54 .2 |
| 2014 | 245339 | 18 .6 | 465642 | 35 .2 | 610753 | 46 .2 | 0 | 0 .0 | 0 | 0 .0 | 1 076 395 | 81 .4 |
| 2015 | 0 | 0.0 | 100552 | 7 .6 | 705382 | 53 .1 | 521308 | 39 .3 | 0 | 0 .0 | 1 327 242 | 100 .0 |
| 2016 | 0 | 0.0 | 1332069 | 100 .0 | 0 | 0 .0 | 0 | 0 .0 | 0 | 0 .0 | 1 332 069 | 100 .0 |
| 2017 | 1337264 | 100 .0 | 0 | 0.0 | 0 | 0 .0 | 0 | 0 .0 | 0 | 0 .0 | 0 | 0.0 |
| 2018 | 0 | 0.0 | 842922 | 62 .8 | 499804 | 37 .2 | 0 | 0 .0 | 0 | 0 .0 | 1 342 726 | 100 .0 |
| 2019 | 0 | 0.0 | 1026565 | 76 .1 | 322060 | 23 .9 | 0 | 0 .0 | 0 | 0 .0 | 1 348 625 | 100 .0 |
| 2020 | | - | | - | | - | | - | | - | - | - |
| 2021 | | - | | - | | - | | - | | - | - | - |

SO3-2.T3: National estimates of the percentage of the male population within each drought intensity class.

| | Non-expos | sed | Mild droug | ght | Moderate dro | ought | Severe drou | ight | Extreme drou | ught | Exposed m populatio | nale on |
|-------------------|------------------|-----------|------------------|-----------|------------------|---------|------------------|---------|------------------|---------|------------------------|------------|
| Reporting year | Population count | % | Population count | % | Population count | % | Population count | % | Population count | % | Population count | % |
| 2000 | 0 | 0.0 | 1235269 | 100 .0 | 0 | 0 .0 | 0 | 0 .0 | 0 | 0 .0 | 1 235 269 | 100 .0 |
| 2001 | 437910 | 35 .3 | 800886 | 64 .7 | 0 | 0 .0 | 0 | 0 .0 | 0 | 0 .0 | 800 886 | 64 .7 |
| 2002 | 1196084 | 96 .1 | 48438 | 3 .9 | 0 | 0 .0 | 0 | 0 .0 | 0 | 0 .0 | 48 438 | 3 .9 |
| 2003 | 1244522 | 100 .0 | 0 | 0.0 | 0 | 0 .0 | 0 | 0 .0 | 0 | 0 .0 | 0 | 0.0 |
| 2004 | 99022 | 7.9 | 1103518 | 88 .2 | 49014 | 3 .9 | 0 | 0 .0 | 0 | 0 .0 | 1 152 532 | 92 .1 |
| 2005 | 1256089 | 100 .0 | 0 | 0.0 | 0 | 0 .0 | 0 | 0 .0 | 0 | 0 .0 | 0 | 0.0 |

SO-3: To mitigate, adapt to, and manage the effects of drought in order to enhance resilience of vulnerable populations and ecosystems.

| | Non-expo | sed | Mild drou | ght | Moderate dro | ought | Severe drou | ıght | Extreme dro | ught | Exposed n population | nale on |
|-------------------|------------------|-----------|------------------|-----------|------------------|----------|------------------|----------|------------------|---------|-------------------------|------------|
| Reporting year | Population count | % | Population count | % | Population count | % | Population count | % | Population count | % | Population count | % |
| 2006 | 0 | 0.0 | 1259591 | 100 .0 | 0 | 0 .0 | 0 | 0 .0 | 0 | 0 .0 | 1 259 591 | 100 .0 |
| 2007 | 1265057 | 100 .0 | 0 | 0.0 | 0 | 0 .0 | 0 | 0 .0 | 0 | 0 .0 | 0 | 0.0 |
| 2008 | 1090812 | 86 .0 | 177785 | 14 .0 | 0 | 0 .0 | 0 | 0 .0 | 0 | 0 .0 | 177 785 | 14 .0 |
| 2009 | 0 | 0.0 | 1275317 | 100 .0 | 0 | 0 .0 | 0 | 0 .0 | 0 | 0 .0 | 1 275 317 | 100 .0 |
| 2010 | 1277619 | 100 .0 | 0 | 0.0 | 0 | 0 .0 | 0 | 0 .0 | 0 | 0 .0 | 0 | 0.0 |
| 2011 | 1280825 | 100 .0 | 0 | 0.0 | 0 | 0 .0 | 0 | 0 .0 | 0 | 0 .0 | 0 | 0.0 |
| 2012 | 833515 | 64 .9 | 449941 | 35 .1 | 0 | 0 .0 | 0 | 0 .0 | 0 | 0 .0 | 449 941 | 35 .1 |
| 2013 | 570217 | 44 .3 | 535835 | 41 .7 | 180068 | 14 .0 | 0 | 0 .0 | 0 | 0 .0 | 715 903 | 55 .7 |
| 2014 | 247810 | 19 .2 | 465522 | 36 .1 | 577385 | 44 .7 | 0 | 0 .0 | 0 | 0 .0 | 1 042 907 | 80 .8 |
| 2015 | 0 | 0.0 | 99019 | 7 .6 | 681944 | 52 .7 | 514162 | 39 .7 | 0 | 0 .0 | 1 295 125 | 100 .0 |
| 2016 | 0 | 0.0 | 1299010 | 100 .0 | 0 | 0 .0 | 0 | 0 .0 | 0 | 0 .0 | 1 299 010 | 100 .0 |
| 2017 | 1302909 | 100 .0 | 0 | 0.0 | 0 | 0 .0 | 0 | 0 .0 | 0 | 0 .0 | 0 | 0.0 |
| 2018 | 0 | 0.0 | 802043 | 61 .3 | 505783 | 38 .7 | 0 | 0 .0 | 0 | 0 .0 | 1 307 826 | 100 .0 |
| 2019 | 0 | 0.0 | 987497 | 75 .2 | 325180 | 24 .8 | 0 | 0 .0 | 0 | 0 .0 | 1 312 677 | 100 .0 |
| 2020 | | - | | - | | - | | - | | - | - | - |
| 2021 | | - | | - | | - | | - | | - | - | - |

Qualitative assessment

Interpretation of the indicator

As indicated by the default data for the period 2000 to 2019, the ratio of males to females exposed to drought conditions is fairly proportionate with only negligible variances recorded in some of the years indicated. As it relates to the 2015 drought, severe drought conditions were experienced by just over a million persons (39.5%), the ratio of which is relatively proportionate between males and females. For the years listed majority of the population was affected annually by mild drought condition. Based on the limited data available particularly as it relates to the disaggregation of population experiencing drought conditions, Jamaica accepts the default data presented.

General comments

The overall drought conditions experienced are linked mainly to climate change. That is, the bimodal rainfall pattern of the island is being impacted by dryer and wetter season than per normal as well as extended wet and dry seasons. Of note, longer and or dryer periods experienced in one year have a negative impact on the subsequent year. This occurs, as it limits the availability of water in aquifers and aquicludes to allow for the recharge of surface water supplies as well as the yield available for extraction. Given this situation, Jamaica remains committed to the National Determined Contribution (NCD) in the reduction of green house gas emission while it strives for economic growth and development and to build climate resilience. In an effort toward achieving climate resilience, Jamaica in 2015 developed the Climate Change Policy Framework. One of the sectors identified by the policy as being of critical importance for both mitigation and adaptation is the agricultural sector. The strategic aim of the policy towards this sector is to facilitate the use of water efficient agricultural methods, improve food storage systems and diversify food production techniques (Jamaica's Updated National Determined Contribution, 2020). .

SO3-3 Trends in the degree of drought vulnerability

Drought Vulnerability Index

SO3-3.T1: National estimates of the Drought Vulnerability Index

| Year | Total country-level DVI value (tier 1) | Male DVI value (tiers 2 and 3 only) | Female DVI value (tiers 2 and 3 only) |
|------|--|-------------------------------------|---------------------------------------|
| 2000 | | | |
| 2001 | | | |
| 2002 | | | |
| 2003 | | | |
| 2004 | | | |
| 2005 | | | |
| 2006 | | | |
| 2007 | | | |
| 2008 | | | |
| 2009 | | | |
| 2010 | | | |
| 2011 | | | |
| 2012 | | | |
| 2013 | | | |
| 2014 | | | |
| 2015 | | | |
| 2016 | | | |
| 2017 | | | |
| 2018 | 0.57 | | |
| 2019 | | | |
| 2020 | | | |
| 2021 | | | |

Method

Which tier level did you use to compute the DVI?

 \boxtimes Tier 1 Vulnerability Assessment i

 \Box Tier 2 Vulnerability Assessment (i)

 \Box Tier 3 Vulnerability Assessment (i)

Qualitative assessment

SO3-3.T2: Interpretation of the indicator

Change in the indicator Comments

General comments

Information on Jamaica's drought data is not disaggregated in similar categories as the default data, therefore the default data presented is accepted. The tier 1 vulnerability selected above is based of the default data presented for 2018.

SO-3: To mitigate, adapt to, and manage the effects of drought in order to enhance resilience of vulnerable populations and ecosystems.

SO3 Voluntary Targets

SO3-VT.T1

| Target | Year | Level of application | Status of target achievement | Comments |
|---|------|----------------------|------------------------------|--|
| To enhance resilience to the impacts of climate change at all levels .in the country | 2030 | National | Ongoing | Although this target does not speak directly to addressing drought, the impact of this target would positively contribute to efforts to mitigate against and adopt to climate change where possible and therefore build drought resilience. |

General comments

As a small island developing state, Jamaica's vulnerability to climate change has implications for various ecological services such water resources. Additionally, the impact of climate change on food security, infrastructure, health and the economy has placed tremendous need for interventions to alleviate its associates effects.

SO4-1 Trends in carbon stocks above and below ground

Soil organic carbon stocks

Trends in carbon stock above and below ground is a multi-purpose indicator used to measure progress towards both strategic objectives 1 and 4. Quantitative data and a qualitative assessment of trends in this indicator are reported under strategic objective 1, progress indicator SO1-3.

SO4-2 Trends in abundance and distribution of selected species

SO4-2.T1: National estimates of the Red List Index of species survival

| Year | Red List Index | Lower Bound | Upper Bound | Comment |
|------|----------------|-------------|-------------|---------|
| 2000 | 0 .69854 | 0 .6907 | 0.70584 | |
| 2001 | 0.69657 | 0 .68889 | 0.70355 | |
| 2002 | 0 .69545 | 0 .68719 | 0.70308 | |
| 2003 | 0 .69327 | 0 .68514 | 0.70054 | |
| 2004 | 0.69205 | 0 .68383 | 0 .69984 | |
| 2005 | 0 .68996 | 0 .68011 | 0.69818 | |
| 2006 | 0 .68844 | 0 .67795 | 0.69667 | |
| 2007 | 0 .68679 | 0 .67627 | 0.69604 | |
| 2008 | 0 .68542 | 0 .67328 | 0.69518 | |
| 2009 | 0 .68309 | 0 .67067 | 0.69382 | |
| 2010 | 0.68204 | 0 .66849 | 0 .6921 | |
| 2011 | 0 .68051 | 0 .66558 | 0 .69103 | |
| 2012 | 0 .67867 | 0 .66209 | 0.69143 | |
| 2013 | 0 .6771 | 0 .65917 | 0.69012 | |
| 2014 | 0 .67578 | 0 .65552 | 0.68953 | |
| 2015 | 0 .67387 | 0 .65187 | 0.68918 | |
| 2016 | 0 .67221 | 0 .6476 | 0.68902 | |
| 2017 | 0 .67045 | 0 .64412 | 0 .6876 | |
| 2018 | 0 .66851 | 0 .63916 | 0 .6872 | |
| 2019 | 0.66683 | 0 .63584 | 0.68675 | |
| 2020 | 0.66541 | 0 .63108 | 0.68583 | |

Qualitative assessment

SO4-2.T2: Interpretation of the indicator

| the indicator more items) more items) transformative change? trends | Change in the indicator | Drivers: Direct (Choose one or more items) | Drivers: Indirect (Choose one or more items) | Which levers are being used to reverse negative trends and enable transformative change? | Responses that led to positive RLI trends | Comments |
|---|----------------------------|--|--|--|---|----------|
|---|----------------------------|--|--|--|---|----------|

General comments

When compared to indicator 15.5.1 Redlist Index, the default data for Jamaica contains minor discrepancies in the indices listed for each year from 2000 to 2020. That is, the default data presents slightly higher values, in most cases the difference is 0.001 or less. However, between the years 2000 and 2020 the valves indicate minute changes for the period. The changes detected represents a decreasing value from 0.69854 in 2000 to 0.66541 in 2020 which would indicate a negative trend towards the loss of biodiversity. However, it should be noted that based on the IUCN Redlist website such marginal changes cannot be used to determine meaningful trends in the status of biodiversity, as the changes maybe a reflection of improved knowledge and revised taxonomy. Therefore, it is recommended that Jamaica continues the close monitoring of biodiversity, particularly those that are considered to be endangered or threatened. By so doing, the country will be able to determine if the trends detected are actual change or if the change is related to improved knowledge or revised taxonomy.

SO4-3 Proportion of important sites for terrestrial and freshwater biodiversity that are covered by protected areas, by ecosystem type

| Year | Protected Areas Coverage(%) | Lower Bound | Upper Bound | Comments |
|------|-----------------------------|-------------|-------------|----------|
| 2000 | 21.66 | 21 .66 | 21 .66 | |
| 2001 | 21.66 | 21 .66 | 21 .66 | |
| 2002 | 21.68 | 21 .68 | 21 .68 | |
| 2003 | 21.68 | 21 .68 | 21 .68 | |
| 2004 | 21.68 | 21 .68 | 21 .68 | |
| 2005 | 21.92 | 21 .92 | 21 .92 | |
| 2006 | 21.92 | 21 .92 | 21 .92 | |
| 2007 | 21.92 | 21 .92 | 21 .92 | |
| 2008 | 21.92 | 21 .92 | 21 .92 | |
| 2009 | 21.92 | 21 .92 | 21 .92 | |
| 2010 | 21.92 | 21 .92 | 21 .92 | |
| 2011 | 21.92 | 21 .92 | 21 .92 | |
| 2012 | 21.92 | 21 .92 | 21 .92 | |
| 2013 | 21.92 | 21 .92 | 21 .92 | |
| 2014 | 21.92 | 21 .92 | 21 .92 | |
| 2015 | 21.92 | 21 .92 | 21 .92 | |
| 2016 | 21.92 | 21 .92 | 21 .92 | |
| 2017 | 21.92 | 21 .92 | 21 .92 | |
| 2018 | 21.92 | 21 .92 | 21 .92 | |
| 2019 | 21.92 | 21 .92 | 21 .92 | |
| 2020 | 21.92 | 21 .92 | 21 .92 | |

SO4-3.T1: National estimates of the average proportion of Terrestrial KBAs covered by protected areas (%)

Qualitative assessment

SO4-3.T2: Interpretation of the indicator

Qualitative Assessment Comment

General comments

Jamaica's protected area coverage from 2000 to 2020 has marginally increased for the period (0.26%). It is expected that with the future designation of crown lands, including some mangroves forest, over time will increase the protected area coverage. The default data is accepted however when compared against the same data obtained from the SDG database a noticeable difference in the figures we observed. The data obtained directly from the SDG database indicated a 29% coverage for protected areas. However similar to the pre-filled data the percentage coverage throughout the years 2000 to 2020 remains almost unchanged.

SO4 Voluntary Targets

S04-VT.T1

| Target | Year | Level of application | Status of target achievement | Comments |
|---|------|----------------------|------------------------------------|--|
| Jamaicans are aware of the values of biodiversity and the steps they can take to conserve and use it sustainably | 2021 | National | Ongoing | Assessment regarding the achievement of this target in 2019 revealed that the target was on track for achievement. |
| Integrate biodiversity values into national and local development and poverty reduction and planning processes are being incorporated into national accounting as appropriate, and reporting system | 2021 | National | Ongoing | A 2019 assessment of the target revealed that progress have been made towards achieving the target but at an insufficient rate for achievement by the target year. |
| To eliminated, phased out or reformed incentives, including subsidies, harmful to biodiversity n order to minimize or avoid negative impacts, and positive incentives for the conservation and sustainable use of biodiversity are developed and applied, consistent and in harmony with the Convention and other relevant obligations, taking into account national socio- economic condition. | 2021 | National | Ongoing | A 2019 assessment revealed tat the target is on track for achievement . |
| To have Governments, business and stakeholders at all levels have taken steps to achieve or have implemented plans for sustainable production and consumption and have kept the impacts of use of natural resources well within safe ecological limits. | 2021 | National | Ongoing | Based on 2019 assessment the target was on track for achievement. |
| To have the rate of loss of natural habitats, including forests, is at least halved and where feasible, brought close to zero, and degradation and fragmentation are significantly reduced | 2021 | National | Ongoing | As at 2019 the target was on track for achievement. |
| All fish and invertebrate stocks and aquatic plants are managed and harvested sustainably, legally and applying ecosystem-based approaches, so that overfishing is avoided, recovery plans and measures are in place for all depleted species, fisheries have no significant adverse impacts on threatened species and vulnerable ecosystems and the impacts of fisheries on stocks, species and ecosystems are within safe ecological limits. | 2021 | National | Ongoing | A 2019 assessment indicate that progress in on track to exceed the target. |
| Areas under agriculture, aquaculture and forestry are managed sustainably, ensuring conservation of biodiversity | 2021 | National | Ongoing | Based on 2019 assessment the target is on track for achievement. |
| Pollution, including from excess nutrients and solid waste, has been brought to levels that are not detrimental to ecosystem function and biodiversity. | 2021 | National | Ongoing | On track to be exceeded based on 2019 assessment |
| The extinction of known threatened species has been prevented and their conservation status, particularly of those most in decline, has been improved and sustained. | 2021 | National | Ongoing | As at 2019 the target was on track for achievement. |
| The genetic diversity of cultivated plants and farmed and domesticated animals and of wild relatives, including other socio-economically as well as culturally valuable species, is maintained, and strategies have been developed and implemented for minimizing genetic erosion and safeguarding their genetic diversity. | 2021 | National | Ongoing | As at 2019 there was progress towards achieving the target, however at an insufficient rate. |

SO-4: To generate global environmental benefits through effective implementation of the United Nations Convention to Combat Desertification.

| Target | Year | Level of application | Status of target achievement | Comments |
|--|------|----------------------|------------------------------------|--|
| Ecosystem resilience and the contribution of biodiversity to carbon stocks have been enhanced, through conservation and restoration, including restoration of at least 15 per cent of degraded ecosystems, hereby contributing to climate change mitigation and adaptation and to combating desertification. | 2020 | National | Ongoing | On track for achievement based on 2019 assessment. |
| The Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization is in force and operational consistent with national legislation. | 2020 | National | Ongoing | As at 2019 there was progress towards achieving the target, however at an insufficient rate. |
| Jamaica has developed, adopted as a policy instrument, and has commenced implementing an effective, participatory and updated national biodiversity strategy and action plan. | 2019 | National | Ongoing | At the time of assessment in 2019 the target was on track. |
| The knowledge, the science base and technologies relating to biodiversity, its values, functioning, status, and trends, the consequences of its loss, are improved, widely shared and transferred and applied. | 2020 | National | Ongoing | 2019 assessment has determined that the target is on track for achievement. |
| The mobilization of financial resources for effectively implementing the Strategic Plan for Biodiversity 2016–2021 from all sources, and in accordance with the consolidated and agreed process in the Strategy for Resource Mobilization, should increase substantially from the current levels. This target will be subject to changes contingent to resource needs assessments to be developed and reported by Parties. | 2019 | National | Ongoing | Progress towards achievement has been made but at an insufficient rate as determined in 2019 assessment. |

Complementary information

Jamaica has setout a number of targets geared towards the fulfillment of SDG 15. The 2019 Report for the Convention on Biological Diversity has assessed the progress of a number of targets and determined that majority of the targets are on track for achievement.
SO5-1 Bilateral and multilateral public resources

Tier 1: Please provide information on the international public resources provided and received for the implementation of the Convention, including information on trends.

Trends in international bilateral and multilateral public resources provided

◯ Up↑

 \bigcirc Stable $\leftarrow \rightarrow$

- 🔵 Down ↓
- Unknown ∾

Trends in international bilateral and multilateral public resources received

- ◯ Up↑
- $\textcircled{\bullet} \text{ Stable} \leftarrow \rightarrow$
- ◯ Down↓
- Unknown ∾

As Jamaica seeks to fulfill its contributions to the SDG Indicators, the country taps into various bilateral and multilateral funding sources available. Funds provided are used to effect various programmes and projects aimed at the achievement of specific SDG indicators. During the reporting period some of the more prominent programmes and projects for which funding was obtained include REDD+ Project which received funds through Green Climate Fund and was launched in 2019. There was also the EU Budget Support Programme, launched in 2017 it focused on a number of key areas such as Alternative Livelihood Programme as a means of countering forest degradation. The Global Environmental Facility and its partners has also provided funding for Jamaica's participation in Soil Care Project.

Under the EU Budget Support Programme, funds have been made available in tranches based on the fulfillment of various agreed milestones. Some of the milestone achieve include the assessment of 7000 hectares of mangrove forest, boundary verification for 10,000 hectares of forest, the tabling of amendments to the Forest Act, 1996 in parliament and the promotion and training of persons in alternative forest livelihood activities.

Tier 2: Table 1 Financial resources provided and received

| | | Total Amount USD | | | |
|---------------------|---------|----------------------------|----------------------|--|--|
| Provided / Received | Year | Committed | Disbursed / Received | | |
| Provided | 2016 | Committed 0 | Disbursed 0 | | |
| Provided | 2017 | Committed 0 | Disbursed 0 | | |
| Provided | 2018 | Committed 0 | Disbursed 0 | | |
| Provided | 2019 | Committed 0 | Disbursed 0 | | |
| Received | 2016 | Committed 6 259 .04 | Received 332 .7 | | |
| Received | 2017 | Committed 7 878 000 .00 | Received 787 .2 | | |
| Received | 2018 | Committed 817 892 .00 | Received 220.7 | | |
| Received | 2019 | Committed 1 000 000 .00 | Received 140 .9 | | |
| Total resources pro | ovided: | 0 | 0 | | |
| Total resources rec | ceived: | 9 702 151 .04 | 1 481 .5 | | |

Documentation box

| | Explanation |
|----------------------|-------------|
| Year | |
| Recipient / Provider | |

SO-5: To mobilize substantial and additional financial and non-financial resources to support the implementation of the Convention by building effective partnerships at global and national level

| | Explanation |
|--|-------------|
| Title of project, programme, activity or other | |
| Total Amount USD | |
| Sector | |
| Capacity Building | |
| Technology Transfer | |
| Gender Equality | |
| Channel | |
| Type of flow | |
| Financial Instrument | |
| Type of support | |
| Amount mobilised through public interventions | |
| Additional Information | |

General comments

The amount of funds committed has not been verified and the default data was accepted. However, as it relates to the total sums received for each year 2016 to 2019, the information was obtained from national data provided in the respective Annual Reports prepared by the Planning Institute of Jamaica (PIOJ).

SO5-2 Domestic public resources

Tier 1: Please provide information on the domestic public expenditures, including subsidies, and revenues, including taxes, directly and indirectly related to the implementation of the Convention, including information on trends.

Trends in domestic public expenditures and national level financing for activities relevant to the implementation of the Convention

- ◯ Up↑
- \bigcirc Stable $\leftarrow \rightarrow$
- ◯ Down ↓
- Unknown ∾

Trends in domestic public revenues from activities related to the implementation of the Convention

- ◯ Up↑
- \bigcirc Stable $\leftarrow \rightarrow$
- ◯ Down↓
- 💿 Unknown ∾

Tier 2: Table 2 Domestic public resources

| | Year | Amounts | Additional Information |
|-------------------------------------|------|---------|------------------------|
| Government expenditures | | | |
| Directly related to combat DLDD | | | |
| Indirectly related to combat DLDD | | | |
| Subsidies | | | |
| Subsidies related to combat DLDD | | | |
| Total expenditures / total per year | | | |

| | Year | Amounts | Additional Information |
|---|------|---------|---------------------------|
| Government revenues | | | |
| Environmental taxes for the conservation of land resources and taxes related to combat DLDD | | | |
| Total revenues / total per year | | | |

Documentation box

| | Explanation |
|--|-------------|
| Government expenditures | |
| Subsidies | |
| Government revenues | |
| Domestic resources directly or indirectly related to combat DLDD | |

Has your country set a target for increasing and mobilizing domestic resources for the implementation of the Convention?

O Yes

O No

General comments

Jamaica is unable to provide the date requested on domestic public resources at this time.

SO5-3 International and domestic private resources

Tier 1: Please provide information on the international and domestic private resources mobilized by the private sector of your country for the implementation of the Convention, including information on trends. Trends in international private resources

| ○Up↑ |
|--|
| \bigcirc Stable $\leftarrow \rightarrow$ |
| ◯ Down↓ |
| ● Unknown ∾ |
| Trends in domestic private resources |
| ○ Up↑ |
| \bigcirc Stable $\leftarrow \rightarrow$ |
| ◯ Down↓ |
| ● Unknown ∾ |
| Tier 2: Table 3 International and domestic private resources |

| Year | Title of project, programme, activity or other | Total Amount USD | Financial Instrument | Type of institution | Recipient | Additional Information |
|------|---|---------------------|-------------------------|---------------------|-----------|---------------------------|
| | Total | 0 | | | | |

Please provide methodological information relevant to data presented in table 3

Has your country taken measures to encourage the private sector as well as non-governmental organizations, foundations and academia to provide international and domestic resources for the implementation of the Convention?

General comments

Having conducted extensive research at main government entities no data was available to support this request.

SO5-4 Technology transfer

Tier 1: Please provide information relevant to the resources provided, received for the transfer of technology for the implementation of the Convention, including information on trends. Trends in international bilateral and multilateral public resources provided

⊖Up↑

- O Stable ←→
- ◯ Down ↓
- Unknown ∾

Trends in international bilateral and multilateral public resources received

- ◯Up↑
- O Stable ←-
- ◯ Down↓
- Unknown ∾

Tier 2: Table 4 Resources provided and received for technology transfer measures or activities

| Provided Received | Year | Title of project, programme, activity or other | Amount | Recipient Provider | Description and objectives | Sector | Type of technology | Activities undertaken by | Status of measure or activity | Timeframe of measure or activity | Use, impact and estimated results | Additional Information |
|----------------------|------|--|--------|-----------------------|----------------------------------|--------|-----------------------|--------------------------------|---|---|---|---------------------------|
| Total provided: | | 0 | | Tot | tal receive | d: | 0 | | | | | |

Please provide methodological information relevant to data presented in table 4

Include information on underlying assumptions, definitions and methodologies used to identify and report on technology transfer support provided and/or received and/or required. Please include links to relevant documentation.

Please provide information on the types of new or current technologies required by your country to address desertification, land degradation and drought (DLDD), and the challenges encountered in acquiring or developing such technologies.

GIS and remote sensing technology has proven to useful for mapping and in determining spatial parametres and changes in an area. Also, drone technology is currently being employed to aid various assessments including land use and land cover assessments and forest quality assessments. However, additional drone technology would enhance the capacity to conduct these assessments. Various technologies such as those with acoustic and visual capabilities would also be beneficial to forest monitoring as well as aid in responding to and mitigate against illicit activities contributing the land degradation. The overall challenges encountered are often related to the cost for acquiring these available technology. Cost include the actual cost for the equipment as as well as those associated with maintenance and in some instances licensing.

General comments

In some instances, the capacity to operate and maintain the technology would be required. This deficit could be addressed through training.

SO5-5 Future support for activities related to the implementation of the Convention

SO5-5.1: Planned provision and mobilization of domestic public and private resources

Please provide information relevant to the planned provision and mobilization of domestic resources for the implementation of the Convention, including information relevant to indicator SO5-2, as well as information on projected levels of public financial resources, target sectors and planned domestic policies.

SO5-5.2: Planned provision and mobilization of international public and private resources

Please provide information relevant to the planned provision and mobilization of international resources for the implementation of the Convention, including information on projected levels of public financial resources and support to capacity building and transfer of technology, target regions or countries, and planned programmes, policies and priorities.

SO5-5.3: Resources needed

Please provide information relevant to the financial resources needed for the implementation of the Convention, including on the projects and regions which needs most support and on which your country has focused to the greatest extent.

General comments

In working towards the achievement of the Sustainable Development Goals, Jamaica continues to engage and garner support from its multilateral and bilateral as well as its domestic and international partners. The country will continue to seek funding through loans and grants in addition to developing local capacity and implementing the required institutional framework to support the efforts.

Financial and Non-Financial Sources

Increasing the mobilization of resources:

Would you like to share an experience on how your country has increased the mobilization of resources within the reporting period?

O Yes

No

Using Land Degradation Neutrality as a framework to increase investment:

From your perspective, would you consider that you have taken advantage of the LDN concept to enhance the coherence, effectiveness and multiple benefits of investments?

O Yes

🔿 No

Improving existing and/or innovative financial processes and institutions

From your perspective, do you consider that your country has improved the use of existing and/or innovative financial processes and institutions?

O Yes

🔿 No

Policy and Planning

Action Programmes:

Has your country developed or helped develop, implement, revise or regularly monitor your national action programme?

O Yes

🔿 No

Policies and enabling environment:

During the reporting period, has your country established or helped establish policies and enabling environments to promote and/or implement solutions to combat desertification/land degradation and mitigate the effects of drought?

O Yes

🔿 No

Synergies:

From your perspective, has your country leveraged synergies and integrated DLDD into national plans related to other MEAs, particularly the other Rio Conventions and other international commitments?

O Yes

O No

Mainstreaming desertification, land degradation and drought:

From your perspective, did your country take specific actions to mainstream, DLDD in economic, environmental and social policies, with a view to increasing the impact and effectiveness of the implementation of the Convention?

O Yes

O No

Drought-related policies:

Has your country established or is your country establishing national policies, measures and governance for drought preparedness and management?

O Yes

🔘 No

Has your country supported other countries in establishing policies, measures and governance for drought preparedness and management, in accordance with the mandate of the Convention?

O Yes

🔿 No

Action on the Ground

Sustainable land management practices:

Has your country implemented or is your country implementing sustainable land management (SLM) practices to address DLDD?

O Yes

🔿 No

Has your country supported other countries in the implementation of SLM practices?

O Yes

🔿 No

Restoration and Rehabilitation:

Has your country implemented or is your country implementing restoration and rehabilitation practices in order to assist with the recovery of ecosystem functions and services?

O Yes

🔿 No

Drought risk management and early warning systems:

Is your country developing a drought risk management plan, monitoring or early warning systems and safety net programmes to address DLDD?

O Yes

🔿 No

Has your country supported other countries in developing drought risk management, monitoring and early warning systems and safety net programmes to address DLDD?

O Yes

No

Alternative livelihoods:

Does your country promote alternative livelihoods practice in the context of DLDD?

O Yes

🔿 No

Do you consider your country to be taking special measures to engage women and youth in promoting alternative livelihoods?

Yes

🔵 No

Please elaborate

Establishing knowledge sharing systems:

Has your country established systems for sharing information and knowledge and facilitating networking on best practices and

approaches to drought management?

O Yes

🔿 No

Do you consider that your country has implemented specific actions that promote women's access to knowledge and technology?

O Yes

🔿 No

Other files for Reporting

| Jamaica - SO5-1 recipient | Download | 9.9 KB |
|---------------------------|----------|--------|
|---------------------------|----------|--------|

Jamaica – SO1-1.M1 Land cover in the initial year of the baseline period



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- United Nations Clear Map, United Nations Geospatial.
- European Space Agency Climate Change Initiative Land Cover (ESA CCI-LC) product, 1992-2019. URL: https://www.esa-landcover-cci.org/

Jamaica – SO1-1.M2 Land cover in the baseline year



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Jamaica – SO1-1.M3 Land cover in the latest reporting year



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Jamaica – SO1-1.M4 Land cover change in the baseline period



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Jamaica – SO1-1.M5 Land cover change in the reporting period



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Jamaica – SO1-1.M6 Land cover degradation in the baseline period



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Jamaica – SO1-1.M7 Land cover degradation in the reporting period



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Jamaica – SO1-2.M1 Land productivity dynamics in the baseline period



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- EC-JRC, 2021, based on Xavier Rotllan-Puig, Eva Ivits, Michael Cherlet, LPDynR: A new tool to calculate the land productivity dynamics indicator, Ecological Indicators, Volume 133, 2021, 108386, ISSN 1470-160X. URL: https://doi.org/10.1016/j.ecolind.2021.108386

Jamaica – SO1-2.M2 Land productivity dynamics in the reporting period



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Jamaica – SO1-2.M3 Land productivity degradation in the baseline period



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Jamaica – SO1-2.M4 Land productivity degradation in the reporting period



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Jamaica – SO1-3.M1 Soil organic carbon stock in the initial year of the baseline period



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- United Nations Clear Map, United Nations Geospatial.
- International Soil Reference and Information Centre (ISRIC) SoilGrids250m dataset. URL: https://www.isric.org/explore/soilgrids

Jamaica – SO1-3.M2 Soil organic carbon stock in the baseline year



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Jamaica – SO1-3.M3 Soil organic carbon stock in the latest reporting year



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Jamaica – SO1-3.M4 Change in soil organic carbon stock in the baseline period



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Jamaica – SO1-3.M5 Change in soil organic carbon stock in the reporting period



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Jamaica – SO1-3.M6 Soil organic carbon degradation in the baseline period



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Jamaica – SO1-3.M7 Soil organic carbon degradation in the reporting period



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-78°

25 km

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50 km

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• Derived based on the methodology in the Good Practice Guidance Version 2 for Sustainable Development Goal (SDG) indicator 15.3.1 - Proportion of land that is degraded over total land area. URL: https://www.unccd.int/publications/good-practice-guidance-sdg-indicator-1531-proportion-land-degraded-over-total-land

Jamaica – SO1-4.M2 Proportion of land that is degraded over total land area (SDG Indicator 15.3.1) in the reporting period



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Jamaica – SO1-4.M3 Progress towards Land Degradation Neutrality (LDN) in the reporting period



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Jamaica – SO2-3.M1 Total Population exposed to land degradation (baseline)



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- United Nations Clear Map, United Nations Geospatial.
- WorldPop project URL: https://www.worldpop.org

Jamaica – SO2-3.M2 Female Population exposed to land degradation (baseline)



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- WorldPop project URL: https://www.worldpop.org

Jamaica – SO2-3.M3 Male Population exposed to land degradation (baseline)



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- WorldPop project URL: https://www.worldpop.org

Jamaica – SO2-3.M4 Total Population exposed to land degradation (reporting)



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Jamaica – SO2-3.M5 Female Population exposed to land degradation (reporting)



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Jamaica – SO2-3.M6 Male Population exposed to land degradation (reporting)



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Jamaica – SO3-1.M1 Drought hazard in first epoch of baseline period



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- United Nations Clear Map, United Nations Geospatial.
- Global Precipitation Climatology Centre (GPCC) monthly precipitation products, 1982-present. URL: https://opendata.dwd.de/climate_environment/GPCC/html/gpcc_monitoring_v6_doi_download.html

Jamaica – SO3-1.M2 Drought hazard in second epoch of baseline period



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Jamaica – SO3-1.M3 Drought hazard in third epoch of baseline period



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Jamaica – SO3-1.M4 Drought hazard in fourth epoch of baseline period



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Jamaica – SO3-1.M5 Drought hazard in the reporting period



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Jamaica – SO3-2.M1 Drought exposure in first epoch of baseline period



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Jamaica – SO3-2.M2 Drought exposure in second epoch of baseline period



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- Global Precipitation Climatology Centre (GPCC) monthly precipitation products, 1982-present. URL: https://opendata.dwd.de/climate_environment/GPCC/html/gpcc_monitoring_v6_doi_download.html

Jamaica – SO3-2.M3 Drought exposure in third epoch of baseline period



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Jamaica – SO3-2.M4 Drought exposure in fourth epoch of baseline period



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Jamaica – SO3-2.M5 Drought exposure in the reporting period



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Jamaica – SO3-2.M6 Female drought exposure in the reporting period



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Jamaica – SO3-2.M7 Male drought exposure in the reporting period



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