



CLICC - Technical Guidelines and Templates (REVISED)

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1 CLICC Technical Guidelines

1.1 Introduction

Guidance for reporting adaptation-related information under the Paris Agreement was adopted at the Katowice Climate Change Conference (COP 24) in December 2018¹. However, there is no international process for harmonised presentation of information about climate impacts at the national level. Currently, countries have many differing approaches and their methods and assumptions can lack transparency.

The aims of the Country Level Impacts of Climate Change (CLICC) initiative are:

- To create a common process to enable countries to communicate climate impacts at the national level in a harmonised way
- To facilitate global understanding of country-level climate impacts and thereby support action on climate change by informing national mitigation and adaptation planning, and international dialogue
- To promote good practice and collective learning in assessing climate impacts.

CLICC's core principles are:

- **Serving a clear purpose:** presenting country-level climate impacts internationally in a harmonised way, as a vital source of information for climate action
- **Maximising country control:** enabling countries to select which climate impacts they present, the level of detail presented and how often they update it
- **Maximising inclusivity:** enabling all countries to participate and present information
- **Minimising burdens:** only requiring presentation of existing data and minimal further analysis
- **Promoting good practice:** providing guidance and templates to ensure harmonised presentation of climate impacts.



This document provides technical guidelines and templates for harmonised presentation of country-level climate impacts (observed and projected). It builds upon a range of countries' experiences during two phases of developing pilot outputs for CLICC.

Key to harmonised and transparent presentation of country-level climate impacts is common use of:

- Sectors
- Thresholds for rating country-level impacts in a global context
- Units for establishing thresholds for rating country-level impacts in a national context
- Data-quality ratings
- Confidence ratings
- Approaches to presenting metadata (i.e. information about data sources).

¹ Decision 9/CMA.1, FCCC/PA/CMA/2018/3/Add.1, pages 25-26, and Decision 18/CMA., FCCC/PA/CMA/2018/3/Add.2, pages 18-52

CLICC enables countries to present observed impacts in one table and projected impacts in a second table using the same template (see Section 2: CLICC Templates). This template has the following column headers:

- Sector
- Climate impacts
- Global impact rating
- National impact rating
- Time period
- Data quality rating
- Confidence rating
- Metadata identifier(s)

Table 1 (next page) provides summary instructions for how to complete these tables (and worked examples can be found at Appendix 1). The subsequent sections provide more detailed explanations for each of the columns.

Table 1: Summary instructions for completing tables of observed and projected climate impacts

Sector	Description of climate impact	<u>Time period</u>	Global impact rating	National impact rating	Metadata identifier(s)	Data quality rating	Confidence rating
Name of sector selected from Table 2	<p><i>EITHER a bullet point list of the most important classes of observed or projected climate impacts for the sector</i></p> <p><i>OR a single summary bullet point if rows are also included for sub-sectors.</i></p> <p><i>Each bullet point maximum 150 characters (including spaces)</i></p> <p><i>Highlight any bullet point in italics if it is exceptional (i.e. it is not reflected by the aggregate global or national rating). Then include an explanation in italics (maximum 150 characters, including spaces) aligned with that bullet point in any of the subsequent columns</i></p>	<p><i>An aggregate time period over which all described climate impacts on the sector have been observed or projected (i.e. 20xx - 20xx)</i></p>	<p><i>An aggregate rating or rating range for the sector</i></p>	<p><i>An aggregate rating or rating range for the sector (according to thresholds set nationally - Table 4)</i></p>	<p><i>Simple reference number(s) to completed metadata table(s) (see Table 5) for each source of information used to substantiate each bullet point description of a climate impact. Align each number with the relevant bullet point(s)</i></p>	<p><i>Data quality ratings taken from completed data quality tables (Table 6) for each primary dataset on which a bullet point description of a climate impact is based. Align each rating with the relevant bullet point(s)</i></p>	<p><i>An aggregate confidence rating for the sector (according to Table 7) for the aggregate global and national impact ratings</i></p>
Name of selected sub-sector selected from Table 2 (optional)	<p><i>A bullet point list of the most important classes of observed or projected climate impacts for the sub-sector</i></p> <p><i>Highlight any bullet point in bold if it is exceptional, i.e. it is not reflected by the aggregate global or national rating.</i></p>	<p><i>Time period over which all described climate impacts on the sub-sector have been observed or projected</i></p>	<p><i>An aggregate rating or rating range for the sub-sector according to thresholds in Table 2</i></p>	<p><i>An aggregate rating or rating range for the sector according to thresholds set nationally (Table 3)</i></p>	<p><i>Instructions are the same as for the sectoral level</i></p>	<p><i>Instructions are the same as for the sectoral level</i></p>	<p><i>An aggregate confidence rating for the sub-sector (according to Table 5) for the aggregate global and national impact ratings</i></p>
Name of selected sub-sector (optional)							
Name of selected sector							

1.2 Sector

The Intergovernmental Panel on Climate Change (IPCC) has not developed a standard classification of impact categories. While the United Nations has developed, and maintains, an agreed range of standard classification systems of sectors (with comprehensive definitions) for harmonising data to aid international comparison, they have not been developed with climate impacts in mind. In addition, national assessments of climate impacts have used a wide range of categories that are most relevant to each country's economy and environment. The common sectors used by CLICC draw upon all these various classification systems but have been determined to aid harmonised presentation of country-level climate impacts.

Countries should only present observed and projected impacts in relation to the sectors listed in Table 2¹. It is not expected that every country will present impacts in relation to all sectors or in relation to both observed and projected impacts. Instead, each country's selection of sectors and observed or projected impacts should reflect factors at a national level, such as the availability of data, resources required to collate and synthesise data, and priorities. Countries may also present impacts in relation to the sub-sectors listed in Table 2, if they wish.

Countries should complete one row of the template for observed impacts and one row of the template for projected impacts regarding each of the selected sectors (plus one additional row for each sub-sector, if desired).

Table 2: CLICC sectors and sub-sectors

Sectors	Sector definition	Sub-sectors	What is not included
Agriculture	Production of crops and livestock	Crops	For grasslands see "Terrestrial ecosystems" under "Ecosystems"
		Livestock	
Built infrastructure	Physical infrastructure	Buildings	
		Pipelines	
		Roads	
		Airports	
		Railways	
		Waterways	
		Telecommunications network	

¹ In future, the list of CLICC sectors could perhaps be revised to comprise the standard list of adaptation sectors used by the Global Covenant of Mayors Common Reporting Framework (<https://www.globalcovenantofmayors.org/our-initiatives/data4cities/common-global-reporting-framework/>):

- Transport
- Energy
- ICT (Information and Communications technology)
- Water supply and sanitation
- Waste management
- Public Health
- Law & Order
- Emergency Services
- Land use planning
- Education
- Food & Agriculture
- Environment, Biodiversity, Forestry
- Commercial
- Industrial
- Tourism
- Residential
- Society/community & culture

Sectors	Sector definition	Sub-sectors	What is not included
Business	Business services provided by the private sector	Financial	
		Retail	
		Sales and services	
		Tourism	
		Maritime	
Ecosystems	Dynamic complex of plant, animal and micro-organism communities and their non-living environment interacting as a functional unit	Terrestrial ecosystems	
		Freshwater ecosystems	
		Coastal ecosystems	
		Marine ecosystems	
Energy	Supply and distribution of energy sources	Electricity	
		Gas	
Fisheries	Fishing and aquaculture	Freshwater fishing	For fish see "Freshwater, Coastal or Marine ecosystems" under "Ecosystems" as appropriate
		Marine fishing	
		Aquaculture	
Forestry	Growth and production of trees	Forest management	For trees see "Terrestrial ecosystems" under "Ecosystems"
		Timber production	
Health	Provision and delivery of health care	Physical health	
		Mental health	
Manufacturing	Manufacture of products	Food products	
		Timber products	
		Electrical products	
		Chemicals and chemical products	
		Metals and metal products	
		Plastics and plastic products	

Sectors	Sector definition	Sub-sectors	What is not included
Mining and quarrying	Extraction of raw minerals and geological material	Mining	
		Quarrying	
Transport	The logistics of moving people, animals and goods by different modes	Air	For physical transport infrastructure see "Built infrastructure"
		Rail	
		Road	
		Water	
Water	Supply, treatment, collection and management of water	Water supply	
		Water treatment	
		Water collection	
		Surface water management	
		Ground water management	

1.3 Description of climate impact

Drawing only upon existing observations, projections and expert knowledge, each row of this column should include a bullet point list of the most important classes of observed or projected climate impacts:

- EITHER for each selected sector
- OR, if desired, for each selected sub-sector with an overarching row for the sector comprising a single summary bullet point.

These impacts may be:

- Negative or positive, and
- Economic and/or social and/or environmental.

As the intent of CLICC is for each country to provide a national summary, each bullet point should be no more than 150 characters (including spaces).

Each bullet point should explain:

1. The direct impact on the sector, insofar as possible, quantified in terms of estimated economic losses/gains (USD) and/or number of people affected and/or extent of internationally important habitats lost/gained (terrestrial hectares, kilometres of river or marine square kilometres)
2. Secondly, the climate change responsible for the direct impact, insofar as possible, quantified in terms of climate variables.

It is appreciated that lack of baseline data and detailed monitoring may prevent quantification of climate impacts or the climate variables responsible in many countries and/or sectors. Hence, two examples of appropriate bullet points from the second phase of CLICC pilots that provide contrasting levels of detail are:

- Olive production reduced by 20% (USD12 million) due to a heatwave during the flowering season

- Reduced crop yield associated with heat and drought stress.

Any bullet point summarising an individual class of observed or projected impact should be highlighted in italics if it is exceptional, i.e. it is not reflected by the aggregate global or national rating or rating range of impacts across the sector or sub-sector (see Sections 1.5 and 1.6). Where it is necessary or desirable to draw attention to individual classes of impacts in this way, an explanation should be inserted in italics (maximum 150 characters, including spaces) in any of the subsequent columns and aligned with that bullet point.

Top tips: describing climate impacts

The bullet point summary of the most important classes of impacts should not:

- Describe impacts where climate is only indirectly responsible
- Describe climate impacts where other factors may be implicated without making clear the extent to which climate is responsible
- Describe climate changes without also explaining their impact on the sector
- Describe climate impacts on resources (e.g. water) without explaining their impact on the sector (i.e. on supply, treatment, collection or management of water).

1.4 Time period

This column should provide for each selected sector (and sub-sector, if desired):

- EITHER the combined time period over which all the described climate impacts have been observed
- OR the combined time period for which all the described climate impacts have been projected.

1.5 Global impact rating

This column should provide an aggregate rating at the country level of the magnitude of the economic and/or social and/or environmental impacts observed or projected for each sector (and for each sub-sector, if so desired) in a global context through use of the definitions of ratings in エラー! 参照元が見つかりません。³². Global impact ratings for each individual bullet point that describes a climate impact should only be recorded in the metadata table (see Section 1.7).

To embrace experts' differing views, regional complexity, or other uncertainties, a rating range can be recorded (i.e. Minor-Moderate, Moderate-Major, Minor-Major). Recording a range can be as informative as recording a definitive rating of Minor, Moderate or Major.

Table 3: Thresholds for global impact ratings

Impact	Economic	Social	Environmental
Major	> USD 100 million	> 1 million people affected and/or > 1,000 injured and/or > 100 deaths	Internationally important habitats lost/gained > 5,000 ha terrestrial and/or 1,000 km of river and/or 500 km ² of marine habitats
Moderate	USD 10 to 100 million	10,000 to 1 million people affected and/or 100 to 1,000 injured and/or 10 to 100 deaths	Internationally important habitats lost/gained 500 to 5,000 ha terrestrial and/or 100 to 1,000 km of river and/or 50 to 500 km ² of marine habitats

² Once many countries are involved in CLICC, the thresholds for global impact ratings could be revised using a Delphi process involving national experts from each country.

Impact	Economic	Social	Environmental
Minor	< USD 10 million	< 10,000 people affected, < 100 injured, < 10 deaths	Internationally important habitats lost/gained < 500 ha terrestrial and/or 100 km of river and/or 50 km ² of marine habitats

1.6 National impact rating

To account for countries' differing economic, social and environmental characteristics and, thus, the relative importance of climate impacts at a national level, this column should provide an aggregate rating of the magnitude of economic and/or social and/or environmental impacts observed or projected for each sector (and for each sub-sector, if so desired) in accordance with thresholds set nationally using common units (Table 4)³. As with global impact ratings, a rating range may be recorded, wherever necessary. National impact ratings for each individual bullet point that describes a climate impact should only be recorded in the metadata table (see Section 1.7).

The national thresholds set by each country (and any associated rationale) should be documented as metadata (see Section 2 for the template).

Table 4: Common units for setting thresholds for national impact ratings

Impact	Economic	Social	Environmental
Major	> USD xx million	> xxx,xxx affected and/or > xxx injured and/or > xx deaths	Internationally important habitats lost/gained > x,xxx ha terrestrial and/or xxx km of river and/or xxx km ² of marine habitats
Moderate	USD x to xx million	x,xxx to xxx,xxx affected and/or xx to xxx injured and/or x to xx deaths	Internationally important habitats lost/gained xxx to x,xxx ha terrestrial and/or xx to xxx km of river and/or xx to xxx km ² of marine habitats
Minor	< USD x million	< x,xxx affected, < xx injured, < x deaths	Internationally important habitats lost/gained < xxx ha terrestrial and/or xx km of river and/or xx km ² of marine habitats

Top tips: setting thresholds for national impact ratings

The thresholds for national impact ratings set by each country:

- Should not be greater than those for the global impact ratings (Table 3) but can be the same, e.g. for the largest and/or most vulnerable countries
- Should be less than those for the global impact ratings for most countries, e.g. for the smallest and/or least vulnerable countries
- Should be the same for all sectors and sub-sectors.

³ Once many countries have set thresholds for national impact ratings using the common units in Table 3, it may be possible to establish a finite number of groupings of national thresholds that might then replace the thresholds for global impact ratings.

Top tips: achieving national consensus

Setting thresholds for national impact ratings or determining global impact ratings and national impact ratings may be challenging for a range of reasons. For example:

- Some large countries may have a wealth of data for some sectors demonstrating very different magnitudes of impacts in different regions
- Many countries may lack any empirical data across many sectors and in some cases across all sectors
- Competing interests may make it difficult to reach consensus.

To achieve consensus, it may be simplest to undertake a Delphi process:

1. National sectoral experts can each be asked independently to provide thresholds for national impact ratings and/or to provide global impact ratings and or national impact ratings with a short explanation of their reasons for each threshold value or rating provided, if they so wish.
2. The individual experts' inputs can be collated, averages and ranges calculated and then shared anonymously with all experts who contributed.
3. The individual experts can then be given an opportunity to change their own rating based on this information.
4. The threshold values or ratings can then be collated and the process repeated a second or more times, as desired or until there is no further substantial change in individual experts' threshold values or ratings.
5. The definitive threshold value, rating or rating range resulting from the Delphi process can then be recorded.

1.7 Metadata identifier(s)

This column should provide a simple reference number to a completed metadata table (see Table 5 for instructions and see Section 2 for the template) for each source of information used to substantiate each bullet point description of a climate impact (i.e. listed for each sector or sub-sector).

The purpose of providing completed metadata tables is to ensure transparency. Hence, wherever possible, the sources of information to which they refer should be publicly available and accessible. These may include primary datasets, peer-reviewed papers, government reports, other documents or expert knowledge.

Table 5: Metadata table

Metadata identifier	<i>Number used as identifier</i>
Source	<i>Name of source with full reference and/or weblink</i>
Primary datasets used by the source	<i>Name of each relevant primary dataset used by the source with full reference and/or weblink</i>
Climate projections, emissions scenarios, or models used by the source	<i>Only relevant to presentation of projected climate impacts</i>
Description of climate impact	<i>Wording copied from the individual bullet point description(s) in the table of observed impacts or projected impacts</i>
Global impact rating	<i>Rating(s) of the individual bullet point description(s) in the table of observed impacts or projected impacts</i>
National impact rating	<i>Rating(s) of the individual bullet point description(s) in the table of observed impacts or projected impacts</i>
Explanation for impact ratings	<i>Explanations of how the source information justifies the global and</i>

Metadata identifier	Number used as identifier
	<i>national impact ratings</i>
Time period	<i>The time period over which the described climate impact(s) has/have been observed and/or projected</i>
Confidence rating	<i>Rating(s) for the individual bullet point description(s) in the table(s) of observed impacts or projected impacts</i>
Explanation for confidence rating	<i>Explanations of how the source information justifies the confidence rating(s)</i>

Top tips: metadata

- Where individual bullet point summary descriptions of a climate impact rely on more than one source of information, more than one metadata identifier and associated metadata table can be provided.
- Where different individual bullet point summary descriptions of climate impacts within a sector (or sub-sector) or across sectors rely on the same source of information, the same metadata identifier should be provided referring to the same metadata table.
- Each metadata table can be as long and detailed as necessary. The tables should provide all information needed to understand how the country reached conclusions about the nature and magnitude of impacts, confidence and data quality. Data tables, charts and illustrations can all be provided to improve transparency and understanding of the conclusions presented in the tables of observed and projected climate impacts.

1.8 Data quality rating

This column should provide a data quality rating for each primary dataset on which a bullet point description of a climate impact is based. Each dataset should be rated in relation to criteria⁴ by selecting the most relevant of three statements, which score 1, 2 or 3 in accordance with their numbering (see Table 6 for an example see Section 2 for the template). The sum of these scores for each dataset should be rated as follows: 5 to 8 (**Low**); 9 to 12 (**Medium**); 13 to 15 (**High**). A new data quality table (see Section 2: CLICC Templates) should be completed for each dataset.

Table 6: Data quality table (with example)

Metadata identifier	Number used as identifier
Primary dataset	<i>Name of primary dataset</i>
Data quality criteria	Levels Score
1. Transparency and auditability	1. Data unavailable to public 1
	2. Limited summary data available
	3. Full raw/primary data set and metadata available
2. Verification	1. Unverified data 1
	2. Limited verification checks in place
	3. Detailed verification in place and documented
3. Frequency of updates	1. Sporadic 1
	2. Every 3-5 years

⁴Based on: UN ENVIRONMENT/CBD/SBSTTA/9/10 (2003). Monitoring and indicators: designing national-level monitoring programmes and indicators. UN Environment Programme. <http://www.cbd.int/doc/meetings/sbstta/sbstta-09/official/sbstta-09-10-en.pdf>

4. Security	3. Annual or biennial	2
	1. Future data collection discontinued	
	2. Future data collection uncertain	
5. Spatial coverage	3. Future data collection secure	1
	1. Partial national coverage	
	2. National coverage, some bias	
	3. Full national coverage, including adjacent marine areas, if and where appropriate	
TOTAL SCORE		Low
RATING		Low

Top tips: data quality

- Where individual bullet point summary descriptions of a climate impact are not based on a primary dataset but on secondary sources (e.g. peer-reviewed papers, government reports, other documents or expert knowledge) then a data quality table does not need to be completed and a data quality rating should not be provided.
- Where individual bullet point summary descriptions of a climate impact rely on more than one primary dataset, more than one data quality rating and associated data quality table should be provided.
- Where different individual bullet point summary descriptions of climate impacts within a sector (or sub-sector) or across sectors rely on the same primary dataset, the same data quality rating should be provided referring to the same data quality table.

1.9 Confidence rating

This column should provide one aggregate confidence rating for the aggregate global and national impact ratings of observed and projected impacts for each sector (and for each sub-sector, if so desired). Countries should use expert judgement to assign confidence ratings (as defined in Table 7). The definitions of terms are consistent with the methodology used in the IPCC's Fifth Assessment Report⁵. Confidence ratings for each individual bullet point that describes a climate impact should only be recorded in the metadata table (see Section 1.7).

Table 7: Confidence ratings

Confidence rating	Definition
Very low	Very low – Very small amount of evidence and/or low-quality analysis and/or with little agreement between studies or experts.
Low	Varying amounts and/or quality of evidence, but still with little agreement between studies or experts.
Medium	Higher quality and/or amount of evidence, and some degree of agreement between studies or experts.
High	Large amount of evidence based on reliable analysis and methods, with a strong theoretical basis, and with widespread agreement between studies and experts.

⁵ Mastrandrea, M.D., C.B. Field, T.F. Stocker, O. Edenhofer, K.L. Ebi, D.J. Frame, H. Held, E. Kriegler, K.J. Mach, P.R. Matschoss, G.-K. Plattner, G.W. Yohe, and F.W. Zwiers, 2010. Guidance note for Lead Authors of the IPCC Fifth Assessment Report on consistent treatment of uncertainties. Intergovernmental Panel on Climate Change (IPCC). Available at: <http://www.ipcc.ch/pdf/supporting-material/uncertainty-guidance-note.pdf>

2 CLICC Templates

These templates should be completed in accordance with the instructions in Section 1.

Observed climate impacts

Sector	Description of climate impact	Time period	Global impact rating	National impact rating	Metadata identifier(s)	Data quality rating	Confidence rating

Projected climate impacts

Sector	Description of climate impact	Time period	Global impact rating	National impact rating	Metadata identifier(s)	Data quality rating	Confidence rating

Thresholds for global impact ratings

Observed impacts	Economic	Social	Environmental
Major	> USD 100 million	> 1 million people affected and/or > 1,000 injured and/or > 100 deaths	Internationally important habitats lost/gained > 5,000 ha terrestrial and/or 1,000 km of river and/or 500 km ² of marine habitats
Moderate	USD 10 to 100 million	10,000 to 1 million people affected and/or 100 to 1,000 injured and/or 10 to 100 deaths	Internationally important habitats lost/gained 500 to 5,000 ha terrestrial and/or 100 to 1,000 km of river and/or 50 to 500 km ² of marine habitats
Minor	< USD 10 million	< 10,000 people affected, < 100 injured, < 10 deaths	Internationally important habitats lost/gained < 500 ha terrestrial and/or 100 km of river and/or 50 km ² of marine habitats

Thresholds for national impact ratings

Observed impacts	Economic	Social	Environmental
Major	> USD xx million	> xxx,xxx affected and/or > xxx injured and/or > xx deaths	Internationally important habitats lost/gained > x,xxx ha terrestrial and/or xxx km of river and/or xxx km ² of marine habitats
Moderate	USD x to xx million	x,xxx to xxx,xxx affected and/or xx to xxx injured and/or x to xx deaths	Internationally important habitats lost/gained xxx to x,xxx ha terrestrial and/or xx to xxx km of river and/or xx to xxx km ² of marine habitats
Minor	< USD x million	< x,xxx affected, < xx injured, < x deaths	Internationally important habitats lost/gained < xxx ha terrestrial and/or xx km of river and/or xx km ² of marine habitats

Metadata tables

Metadata identifier	
Source	
Primary datasets used by the source	
Climate projections, emissions scenarios, or models used by the source	
Description of climate impact	
Global impact rating	
National impact rating	
Explanation for impact ratings	
Time period	
Data quality rating	
Confidence rating	
Explanation for confidence rating	

Data quality tables

Metadata identifier		
Name of primary dataset		
Data quality criteria	Levels	Score
1. Transparency and auditability	1. Data unavailable to public	
	2. Limited summary data available	
	3. Full raw/primary data set and metadata available	
2. Verification	1. Unverified data	
	2. Limited verification checks in place	
	3. Detailed verification in place and documented	
3. Frequency of updates	1. Sporadic	
	2. Every 3-5 years	
	3. Annual or biennial	
4. Security	1. Future data collection discontinued	
	2. Future data collection uncertain	
	3. Future data collection secure	
5. Spatial coverage	1. Partial national coverage	
	2. National coverage, some bias	
	3. Full national coverage, including adjacent marine areas, if and where appropriate	
TOTAL SCORE		
RATING (5 to 8, Low; 9 to 12, Medium; 13 to 15, High)		

Appendix 1: Worked examples

Observed climate impacts

Sector	Description of climate impact	Time period	Global impact rating	National impact rating	Metadata identifier(s)	Data quality rating	Confidence rating
Agriculture	<ul style="list-style-type: none"> Reduced crop yields and increased mortality of livestock associated with intense heatwaves. 	2008-2019	Minor	Minor-Moderate	1-4	Medium	High
Crops	<ul style="list-style-type: none"> Olive production reduced by 20% (USD12 million) due to an intense heatwave during the flowering season. <i>Changes in crop suitability due to shifts in agroecological zones.</i> 	2008	Minor	Moderate	1, 2	High	High
		2013			3		<i>Expert opinion only</i>
Livestock	<ul style="list-style-type: none"> 15% of chickens died due to a heat wave (12 °C above the annual average). 	2013	Minor	Minor	1, 4	High	High

Projected climate impacts

Sector	Description of climate impact	Time period	Global impact rating	National impact rating	Metadata identifier(s)	Data quality rating	Confidence rating
Agriculture	<ul style="list-style-type: none"> Declining yield of all crops and increasing livestock mortality due to substantial reductions in annual rainfall, except in the west of the country. 	2020-2050	Moderate	Major	5	Medium	Medium



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