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**Conference of the Parties  
Committee on Science and Technology  
Tenth session**

Changwon, Republic of Korea, 11–13 October 2011

Item 4 (a) of the provisional agenda

**Advice on how best to measure progress on strategic objectives 1, 2 and 3 of The Strategy**

**The development and implementation of impact indicators relating to the measurement of strategic objectives 1, 2 and 3 of The Strategy**

**Template and reporting guidelines on strategic objectives 1, 2  
and 3 for affected country Parties**

**Note by the secretariat**

*Summary*

The present document was prepared in response to decision 17/COP.9, by which the Conference of the Parties (COP) decided to provisionally accept the set of impact indicators attached to the same decision in order to assist measurement, at the national and global levels, of the progress made under national action programmes in implementing strategic objectives 1, 2 and 3 of the 10-year strategic plan and framework to enhance the implementation of the Convention (2008–2018) (The Strategy). This document contains reporting templates for the subset of two impact indicators that are mandatory from 2012 for reporting by affected country Parties.

At its tenth session, the Committee on Science and Technology may wish to review the structure and content of the proposed reporting templates and to recommend their adoption to the COP. Parties may also wish to refer to document ICCD/COP(10)/CST/INF.6, which contains the methodological guide to reporting on the two mandatory impact indicators and their associated metrics, as well as to the glossary contained in document ICCD/COP(10)/INF.9, which, among other things, includes the terminology and definitions used in the formulation of the subset of impact indicators.

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## I. Introduction

1. In its decision 17/COP.9, the Conference of the Parties (COP) decided to provisionally accept the set of impact indicators attached to the same decision to assist with the measurement, at the national and global levels, of progress made under national action programmes in implementing strategic objectives 1, 2 and 3 of the 10-year strategic plan and framework to enhance the implementation of the Convention (2008–2018) (The Strategy). A subset of impact indicators was identified as the minimum required for reporting by affected countries, beginning in 2012:

- (a) Proportion of the population in affected areas living above the poverty line;
- (b) Land cover status.

2. The remaining impact indicators in the list attached to the above-mentioned decision, although recommended, are considered optional for inclusion in reports by affected countries.

3. In the same decision, the COP requested the Committee on Science and Technology (CST), with the support of the secretariat, to continue work on methodologies for collecting data and baselines, and on the effective use of the agreed set of impact indicators, and to prepare a glossary for consideration at the tenth session of the COP (COP 10) in order to clarify the terminology and definitions used in the formulation of the set of impact indicators.

4. The work on methodologies has been carried out in the framework of the iterative process and scientific peer review for the refinement of the set of impact indicators. A progress report on this process is contained in document ICCD/COP(10)/CST/2.

5. The present document contains reporting templates for the subset of two impact indicators that are mandatory for reporting by affected country Parties. In particular, this document presents detailed reporting templates for the metrics associated with the two mandatory impact indicators (see table 1). One of the critical outputs of the scientific peer review was the refinement of the structure of the indicator set into a hierarchy, making it possible to distinguish what to measure (general indicators) and how it should be measured (metrics/proxies). The rural poverty rate and land cover/land productivity were recommended by the experts involved in the scientific peer review as metrics to measure the proportion of the population living above the poverty line and the land cover status, respectively.

6. Based on the preliminary findings of the scientific peer review, this document also contains a separate reporting template for the definition of affected areas (see chapter II, section A below).

7. This document should be read in conjunction with document ICCD/COP(10)/CST/INF.6, which contains the methodological guide to reporting on the two mandatory impact indicators and their associated metrics. The reporting guidelines contain the relevant background information pertaining to each of the two mandatory impact indicators, including, among other things, the relevance of the indicators, the data needed, sources and limitations, computation methods, and the presentation and interpretation of the indicators.

8. The terminology and definitions used in the formulation of the subset of impact indicators are contained in document ICCD/COP(10)/INF.9.

9. A draft template and reporting guidelines for the remaining impact indicators are being developed and tested in the framework of the pilot impact indicator tracking exercise.<sup>1</sup>

Table 1

**The subset of impact indicators and related metrics/proxies**

(adapted from table 1 of document ICCD/COP(10)/CST/2)

Strategic Objectives	Core Indicators	General indicators	Metrics/Proxies
S.O.1: To improve the living conditions of affected populations	S-(1/2/3): Improvement in the livelihoods of people potentially impacted by the process of desertification/land degradation and drought	<u>III. Proportion of the population living above the relative poverty line</u>	Rural poverty rate
S.O.2: To improve the condition of ecosystems	S-5: Maintenance of or increases in ecosystem function, including net primary productivity	<u>IX. Land cover status</u>	Land cover Land productivity

## II. Reporting templates

10. In line with decision 3/COP.8, impact indicators are used to measure progress with strategic objectives 1, 2 and 3 of The Strategy. Reporting on the impact indicators is guided by means of templates, one for each indicator metric/proxy, and a separate reporting template for the definition of affected areas.

11. The year 2008 was the first year of The Strategy and thus serves as the baseline year for assessing progress. However, in cases where a country has information on years that do not fall within the timeframe of The Strategy, the templates have been designed to allow Parties to input information for other years.

12. Within the templates, the shaded areas contain information and explanatory texts and the white areas are for reporting purposes and must be filled in by affected country Parties with relevant quantitative data, selection of multiple choice boxes or narrative information.

### A. Affected area definition

#### 1. Background

13. Based on the findings of the scientific peer review process,<sup>2</sup> the provisional set of 11 impact indicators approved by the COP in its decision 17/COP.9 has been subject to several adjustments in order to facilitate their application at country level. One of the most

<sup>1</sup> Document ICCD/COP(10)/CST/INF.2.

<sup>2</sup> ICCD/CST(S-2)/INF.1, “Scientific review of the UNCCD provisionally accepted set of impact indicators to measure the implementation of strategic objectives 1, 2 and 3”.

significant adjustments relates to the exclusion of the term “in affected areas” from the definition of several indicators.

14. The rationale for narrowing the scale of the reporting for the original set of selected indicators only to those areas that are affected by desertification, land degradation and drought (DLDD) is clear. The mapping and monitoring of the spatial extent of land degradation and desertification is necessary to understand the phenomenon and to elaborate sustainable national strategy and programmes to combat it and to mitigate its impact. Article 16 of the Convention specifically calls on country Parties “...to integrate and coordinate the collection, analysis and exchange of relevant short term and long term data and information to ensure systematic observation of land degradation in affected areas”. There are significant differences in the extent and severity of DLDD issues in the various affected country Parties to the Convention. While in certain country Parties, DLDD may be a localized problem affecting only certain areas, for other country Parties DLDD is a widespread issue that can affect virtually the entire national territory. Depending on the specific national circumstances, statistics at the national level may hide significant regional disparities and, more importantly, differences in trends between those areas that are affected by DLDD and those that are not. Therefore, a rigorous demarcation of the areas affected by DLDD within each country is indispensable to enable a full understanding of the impacts of DLDD in any given country. Affected areas are not, however, fixed in place and time. It is arguable that all areas are “potentially affected” areas regardless of origin, especially under conditions of climate change.

15. Furthermore, according to article 1 of the Convention, affected areas are “arid, semi-arid and/or dry sub-humid areas affected or threatened by desertification”, while affected countries are countries with territory that, in whole or in part, is an affected area. Unfortunately, such definitions are generic and do not provide country Parties with prescriptive criteria for the demarcation of affected areas at the national level. As a result, the Convention still lacks an agreed set of criteria for the operational identification of DLDD affected areas at the subnational level, and different countries may use very different criteria for their delineation.

16. Recognizing that the lack of an operational definition of the term affected areas may add complexity and, ultimately, compromise early efforts in reporting on impact indicators, the CST at its second special session accepted the recommendation from the expert review to measure all the proposed indicators “in affected country Parties”, while the operational use of the term “in affected areas” would be refined through input from the scientific community and used to interpret the impact indicator measurements. Taking this approach makes the related but different challenges of: (a) defining, measuring and monitoring the indicators; and (b) defining and delineating affected areas distinct and therefore more operationally viable.

17. Measurement by affected area is therefore not a practical way forward at this stage. Instead, all affected countries should assess their lands for the impact indicators using a more flexible approach with inputs from the scientific community. It should be remembered that all major land degradation assessments have been conducted using expert assessment.

18. The next step is identifying the best scientific approach to delineating affected areas and creating a basic map on which the impact indicators can then be referred. At the global level, the most affected and most vulnerable ecosystems and populations can be derived from a global assessment such as the Global Land Degradation Information System. (GLADIS). National and subnational level methodologies are being employed by the country Parties, but these are not necessarily comparable.

19. Addressing this need is one of the proposed tasks of the ad hoc Advisory Group of Technical Experts (AGTE). This group will be asked to continue the iterative, participatory contribution from the scientific community on indicator refinement and the monitoring and assessment of impacts. Its establishment is recommended for consideration and adoption by the COP in document ICCD/COP(10)/CST/2.

**2. Reporting template for affected areas**

**GENERAL INFORMATION ON THE REPORTING ENTITY**

Reporting country	
Name and surname of the person submitting the report	
Institutional affiliation	
Address	
Email	
Telephone	

**DEFINITION OF AFFECTED AREAS**

*Does your National Action Programme (NAP) identify areas of the country which are affected by Desertification, Land Degradation and Drought (DLDD)?*

	Yes
	No

*If Not, does any other national planning document identify areas of the country which are affected by DLDD?*

	Yes
	No

*If Yes, on either of the above questions, please provide summary information on:*

**Demarcation**

*Please specify which areas of the country are considered as affected (e.g. name of relevant provinces, states and districts)*

**Criteria for identification of Affected Areas**

*What method(s)/ criteria did you use to identify areas of the country which are affected by DLDD?*

**Extension of Affected Areas**

<i>Please specify the percentage of the national land area occupied by areas affected by DLDD</i>	
<i>Please specify the estimated total number of hectares of the national territory occupied by areas affected by DLDD</i>	

***If available, please include a graph, map or any additional relevant document showing the areas of the country which are affected by DLDD***

(Enter the title of the graph, map, document attached in the box below and annex the original)

***Please provide in the box below an interpretation of the significance for addressing DLDD of the figures, graphs or maps mentioned above***

**B. Proportion of the population living above the poverty line**

20. For the reasons explained in chapter II, section A, the experts involved in the scientific peer review suggested the elimination of repeated references to affected areas in the definition of general indicators, in conjunction with a recommendation that the context of the application of the indicators should be defined and clarified as a separate, parallel task, in order to avoid possible confusion and different interpretations by the different interpretations by affected country Parties and other United Nations Convention to Combat Desertification (UNCCD) stakeholders. The title of the mandatory indicator “Proportion of the population in affected areas living above the poverty line” was therefore amended to “Proportion of the population living above the poverty line”.

21. The recommended metric to measure this general indicator is the “rural poverty rate”, which is defined as the percentage of the rural population living below the national rural poverty line.

22. In order to avoid possible confusion over the use of the terms “above” (contained in the general indicator’s name) and “below” (contained in the metric’s definition), it is recommended that the COP consider further amending the general indicator for use in the reporting process to “Proportion of the population living below the poverty line”.

23. A detailed methodological guide to reporting on this indicator is contained in document ICCD/COP(10)/CST/INF.6.

**Reporting template for the indicator: Proportion of the population living above the poverty line**

**GENERAL INFORMATION ON THE REPORTING ENTITY**

Reporting country

Name and surname of the person submitting the report

Affiliation and contact details

**Convention Strategic Objective(s) for which the indicator applies:**

Strategic Objective 1: To improve the living conditions of affected populations

**UNCCD Core indicator S- (1/2/3):**

Improvement in the livelihoods of people potentially impacted by the process of desertification/land degradation and drought

**Name of the indicator**

**III. Proportion of population living above the poverty line**

**Metric:**

**Rural Poverty Rate**

*Understanding of the Indicator (Definition):* Rural poverty rate is the percentage of the rural population living above the national rural poverty line.

*Data needed:*

population size, an estimate of the individual economic welfare and the poverty line; where possible, disaggregated to rural areas

*Data sources:*

World Bank's Poverty Assessments

*Relevant terms in the glossary:* 'absolute poverty line', 'consumption', 'data', 'data analysis', 'data source', 'desertification/land degradation and drought (DLDD)', 'ecosystem services', 'income', 'indicator', 'indicator metadata', 'lead agency', 'metric', 'population census', 'poverty gap', 'poverty gap index', 'poverty line', 'poverty severity', 'purchasing power parity', 'relative poverty lines'.



**SECTION 1 – Indicator methodology and data profile**

*Could you provide the following population data about your country:*

*What are the estimates of national and rural population in your country?*

Population estimates (Absolute values)		
Year	National	Rural
2008		
2009		
2010		
2011		
2012		
2013		
2014		
2015		
2016		
2017		
2018		
Sources of information and dates	<i>Specify the sources used to extract the information provided above (add as many rows as necessary).</i>	
	1.	
	2.	
	3.	

*If information is not available for the table above, please provide the most recent population estimates*

Population estimates (Absolute values)		
Year	National	Rural
2000		
2001		
2002		
2003		
2004		
2005		
2006		
2007		
Sources of information and dates	<i>Specify the sources used to extract the information provided above (add as many rows as necessary).</i>	
	1.	
	2.	
	3.	

*Does your country have a national rural poverty line?*

	Yes
	No

*Does your country have a national poverty line?*

	<i>Yes</i>
	<i>No</i>

*If yes, what is the national and rural poverty line in your country? If no national poverty line is available, please refer to the World Bank international poverty line of USD1.25/day?*

National and Rural Poverty Line		
Year	National	Rural
2008		
2009		
2010		
2011		
2012		
2013		
2014		
2015		
2016		
2017		
2018		
Sources of information and dates	<i>Specify the sources used to extract the information provided above (add as many rows as necessary).</i>	
	1.	
	2.	
	3.	

*Please specify how the national and rural poverty line in your country is determined (i.e. income, consumption or other well-being measure or absolute or relative poverty line)*

*Does your country assess the rural poverty rate (i.e. the percentage of the rural population living above the national rural poverty line)?*

	<i>Yes</i>
	<i>No</i>

*If No, does your country assess the national poverty rate (i.e. the percentage of the national population living above the national poverty line or in cases where a separate, rural poverty line is used, the rural poverty line)?*

	<i>Yes</i>
	<i>No</i>

*On the basis of the information you have provided above, if your country has a rural poverty line, what is the percentage of the rural population living above the rural poverty line?*

<i>Absolute number and percentage of the rural population living above the rural poverty line</i>	
<b>Year</b>	<b>Absolute</b>
2008	
2009	
2010	
2011	
2012	
2013	
2014	
2015	
2016	
2017	
2018	
Sources of information and dates	<i>Specify the sources used to extract the information provided above (add as many rows as necessary).</i>
	1.
	2.
	3.

*On the basis of the information you have provided above, if your country has a national poverty line, what is the percentage of the national and rural population living above the national poverty line?*

<i>What is the absolute value and percentage of the national and rural population living above the national poverty line</i>				
<b>Year</b>	<b>National</b>		<b>Rural</b>	
	Absolute	Percentage of total national population	Absolute value	Percentage of total rural population
2008				
2009				
2010				
2011				
2012				
2013				
2014				
2015				
2016				
2017				
2018				
Sources of information and dates	<i>Specify the sources used to extract the information provided above (add as many rows as necessary).</i>			
	1.			
	2.			
	3.			

*On the basis of the information you have provided above, if your country DOES NOT have a national poverty line, what is the absolute value and percentage of the national and rural population living above the international poverty line of USD 1.25/day?*

*What is the absolute value and percentage of the rural population living above the World Bank international poverty line*

Year	National		Rural	
	Absolute	Percentage of total national population	Absolute value	Percentage of total rural population
2008				
2009				
2010				
2011				
2012				
2013				
2014				
2015				
2016				
2017				
2018				
Sources of information and dates	Specify the sources used to extract the information provided above (add as many rows as necessary).			
	1.			
	2.			
	3.			

*Please describe the methods used to calculate the national poverty rate and /or rural poverty rate. (Please specify in particular whether the poverty line is determined on income, consumption or other well-being estimates; what are the methodologies and frequency used for estimating household incomes, etc.)*

Dataset/Variable	Method of calculation
Total population	
Rural population	
Poverty line	
Rural Poverty Rate	
National Poverty Rate	

*What are the quality assurance procedures for the data (i.e. what measures and checks have been performed to guarantee the quality of the data?)*

**Section 2 – Indicator results/values**

*If available, please upload a graph and a map, and so on, showing the national poverty rate and /or the rural poverty rate*

Rural poverty rate	
National poverty rate	

**Geographic coverage:**

*For the purpose of the UNCCD national reporting, the indicator RPR shall be reported for affected areas. Please specify whether the information provided for this indicator is based on*

	National-level statistics: The entire national territory or a vast portion of it (more than 70%) is affected by DLDD
	National-level statistics: Only parts of the national territory are affected by DLDD but disaggregated data for affected areas is not available
	Areas affected by DLDD only: Disaggregated data are available

*If “Areas affected by DLDD only”, please specify demarcation (i.e. provinces, states and districts) and criteria used to identify affected areas (if different from those described in the template for the definition of affected areas)*

*Provide the smallest geographic scale at which the data are relevant*

**Section 3 – Indicator interpretation**

*Provide an interpretation of the figures, graphs, maps (storylines)*

*What are the implications for policy and management of the indicator? Please refer to national policy and reporting priorities related Desertification, Land Degradation and Drought (DLDD)*

**Could you please clarify whether in your opinion the observed trend in the indicator is:**

- directly linked to DLDD
- partially linked to DLDD
- marginally linked to DLDD
- independent from DLDD

*What are the implications for policy and management of the indicator? [Up to 500 characters]*

*Who are the users of the indicator? [Up to 500 characters]*

*Please explain the nature of the link between the indicator and DLDD in your national context [Up to 500 characters]*

*What are the limitations of the indicator used above? [Up to 500 characters]*

*Please provide details of key lessons learned during this reporting exercise [Up to 1500 characters]*

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**C. Land cover status**

24. Based on the work conducted on methodologies for the effective use of the subset of impact indicators (see document ICCD/CST(S-2)/7) as well as on the preliminary findings of the scientific peer review on the refinement of the set of impact indicators (see document ICCD/CST(S-2)/INF.1), the CST at its second special session (CST S-2) noted that two main alternatives had been identified for reporting on land cover status: (a) those based on indicators derived from land cover/land use maps; and (b) those that use biophysical indicators, which are also known as ecosystemic indicators. The use of biophysical indicators was recommended. Nevertheless, taking into account the different levels of technical capacity in affected country Parties and that the deadline for compliance by 2012 was very tight, the provisional adoption of a stratified approach to reporting on land cover status was recommended. This approach would allow a start to be made using readily available data on land cover. As technical capacity improves, countries can provide more detailed reports and mapping, reflecting the other classifiers, such as land utilization types and vegetation cover measurements along with production and biomass data, as appropriate to the type of cover.

25. Therefore, where possible, according to their capacities, countries should report on both suggested metrics: land cover and land productivity/production. Where capacity is more limited, reporting could be limited to the core metric: land cover.

**1. Reporting template for the core metric, land cover**

GENERAL INFORMATION ON THE REPORTING ENTITY	
Reporting country	
Name and surname of the person submitting the report	
Affiliation and contact details	
<b>Convention Strategic Objective(s) for which the indicator applies:</b>	
Strategic Objective 2: To improve the condition of ecosystems	
<b>UNCCD core indicator S-5:</b>	
Maintenance of or increases in ecosystem function, including net primary productivity/production	
<b>Name of the indicator</b>	
<b><u>IX. Land cover status</u></b>	
<b>Metrics:</b>	

**Land Cover*****Understanding of the Indicator***

Land cover is defined as the observed (bio)-physical cover on the Earth's surface, and is usually summarized in terms of classes that reflect this (e.g. bare ground, water, grassland, shrubland, forest, cropland). It is distinct from, but often confused with, land use, which is concerned with how people utilize the land, i.e. the socio-economic function (agriculture, environmental protection, urban), which may or may not be associated with a specific land cover at any given time. For example, the land cover of an agricultural area may be bare ground at one time and annual crop cover at another; similarly an area designated as forestland may have no tree cover if it has recently been harvested. Land cover is amenable to assessment using remote sensing, but many forms of land use and change in land use are not. Sustainable agricultural or other land management is an aspect of land use that may affect land cover, but it is not in itself a land cover.

***Data needed:***

An initial assessment of land cover can be implemented using time series of either statistical or mapped data on the location and extent of different land cover classes. Such data may come from a variety of sources, including traditional cartography, aerial photography and various forms of remote sensing. However, assessing the maintenance of ecosystem condition requires evaluating change in land cover over time, and therefore requires time series of comparable data. As data from different sources are processed using different methods to identify land cover classes and may also use different classes and definitions, they are rarely directly comparable. Therefore, compiling valid and comparable time series data that can be used to assess land cover change can be a major challenge.

***Data sources:*****Satellite sensors**

NOAA KLM/AVHRR Spatial resolution: 1.1 km; image coverage: 3000 km wide; repeat frequency: 1 day; launch date: 1978

SPOT VEGETATION Spatial resolution: 1.15km at nadir; repeat frequency: 1 day; launch date: 1986

Terra/MODIS Spatial resolution: Bands 1 and 2: 250m, Bands 3–7: 500m and Bands 8–36: 1km; repeat frequency: near daily; launch date: 2000

Landsat/TM and ETM+ Spatial resolution: 15m (Panchromatic) or 30m (Multispectral); repeat frequency: 16 days; launch dates: Landsat TM 4 and 5 1982 and 1984, Landsat ETM+ 1999

Landsat/MSS Spatial resolution: Landsat 1–3: 56m x 79m, Landsat 4–5: 68m x 82m; repeat frequency: Landsat 1–3: 18 days, Landsat 4–5: 16 days; Launch dates: 1972, 1975, 1978, 1982, 1984

ENVISAT-1/MERIS Spatial resolution: Land and coast: 260m x 300m; repeat frequency: 3 days; launch date: 2002

IKONOS-2 Spatial resolution: 1m (Panchromatic) or 4m (Multispectral); image coverage: 11.3 km swath width; repeat frequency: 1–3 days; launch date: 1999

**Databases:**

The GLC2000 database: <http://bioval.jrc.ec.europa.eu/products/glc2000/glc2000.php>

Global Land Cover Facility: <http://glcf.umiacs.umd.edu/>

MODIS Land Cover: <http://www-modis.bu.edu/landcover/>

NASA Global Land Use database [http://gcmd.nasa.gov/records/GCMD\\_SAGE\\_IAMDATA.html](http://gcmd.nasa.gov/records/GCMD_SAGE_IAMDATA.html)

The Global Land Cover Characterization (GLCC) database,; <http://landcover.usgs.gov/landcoverdata.php>

The Pan- European Land Cover Monitoring project (PELCOM): <http://afoludata.jrc.ec.europa.eu/index.php/dataset/detail/6>

FAO Global Forest Resources Assessment (<http://www.fao.org/forestry/fra/remotesensingsurvey/en/>).

Earth Resources Observation System (EROS) Data Center (EDC) (<http://edcsns17.cr.usgs.gov/EarthExplorer/>).

The Global Terrestrial Observing System (GTOS, [www.fao.org/gtos/](http://www.fao.org/gtos/))

<http://www.fao.org/nr/lada/>

[http://apdrc.soest.hawaii.edu/datadoc/gpcc\\_1.htm](http://apdrc.soest.hawaii.edu/datadoc/gpcc_1.htm);

<http://www.landcover.org/data/gimms/>



**Check the glossary for:** ‘accuracy’, ‘Advanced Very High Resolution Radiometer (AVHRR)’, ‘aggregation’, ‘agricultural land’, ‘data’, ‘data analysis’, ‘data source’, ‘dataset’, ‘deforestation’, ‘desertification’, ‘desertification, land degradation and drought (DLDD)’, ‘Enhanced Vegetation Index’, ‘ground truth’, ‘indicator’, ‘indicator metadata’, ‘land cover’, ‘Land Cover Classification System (LCCS)’ (developed by FAO), ‘Land Degradation Assessment in Drylands (LADA)’, ‘land use’, ‘lead agency’, ‘method of collection’, ‘metric’, ‘Normalized Difference Vegetation Index (NDVI)’, ‘Remote sensing’, ‘Spatial resolution’, ‘The Global Forest Resources Assessments (FRA)’, ‘time scale’.

**SECTION 1 – Indicator methodology and data profile**

**What method was used to classify land cover classes? [Up to 500 characters]**

**What data were used to compile the indicator?**

Sources of information and dates	<i>Specify the sources used to extract the information provided (add as many rows as necessary)</i>
	1.
	2.
	3.

**Please provide the length of the data series (i.e. beginning and end date and/or time (years, months, days))**

**Which monitoring or surveying methods and calculations were used?**

*How often are the data recorded? (hourly, daily, monthly, yearly, etc.)*

**Geographic coverage**

*What is the geographic area covered by the data? For the purpose of the national reporting, the indicator land cover shall be reported for affected areas. Please specify whether the information provided for this indicator is based on:*

	National-level statistics: The entire national territory or a vast portion of it (more than 70%) is affected by DLDD;
	National-level statistics: Only parts of the national territory are affected by DLDD but disaggregated data for affected areas are not available
	Areas affected by DLDD only: Disaggregated data are available

*If areas affected by DLDD only, please specify demarcation (i.e. provinces, states and districts) and criteria used to identify affected areas (if different from those described in the template for the definition of affected areas)*

*Provide the smallest geographic scale at which the data are relevant*

*If using remote-sensed data, are the observations repeatedly ground-truthed and revised, based on the findings of the ground-truthing? Please provide details of ground-truthing [Up to 500 characters]*

**What are the quality assurance procedures for the data (i.e. what measures and checks have been performed to guarantee the quality of the data?) [Up to 500 characters]**

**Please specify the agency responsible for collecting the data and/or an appropriate contact person**

**Section 2 – Indicator results/values**

***What are the land cover classes in your country? If different from the Land Cover Classification System (LCCS) developed by the FAO, please provide as much information as possible about how these classes relate to classes specified in the LCCS. See guidance document for further information on land cover classes.***

***What is the approximate extent of each land cover class? Land cover refers to the observed physical and biological cover of the Earth's surface and includes natural and/or artificial vegetation and abiotic surfaces. Land cover is usually summarized in terms of classes such as bare ground, water, grassland, shrubland, forest and cropland, although national datasets may include more specific nationally relevant classes. Please provide data for those years where available, filling in the class names according to the land cover classes used under each column. Insert additional columns as required.***

Year	Land cover class 1 <i>(please specify name according to the system used in your country)</i>		Land cover class 2		Land cover class 3		Land cover class 4		Land cover class 5		Land cover class 6		Total	
	ha	%	ha	%	ha	%	ha	%	ha	%	ha	%	ha	%
2008														
2009														
2010														
2011														
2012														
2013														
2014														
2015														
2016														
2017														
2018														

*If information is not available for the table above, please provide the most recent data on the extent of each land cover class*

Year	Land cover class 1 <i>(please specify name according to the system used in your country)</i>		Land cover class 2		Land cover class 3		Land cover class 4		Land cover class 5		Land cover class 6		Total	
	ha	%	ha	%	ha	%	ha	%	ha	%	ha	%	ha	%
2000														
2001														
2002														
2003														
2004														
2005														
2006														
2007														

*If available, please provide a map or graphics showing the extent of each land cover type. If possible, include a shape file (low resolution e.g. >1:250 000) or a very high resolution map of the extent with subclasses (e.g.<1:250 000)*

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**Section 3 – Indicator interpretation**

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*Please provide an interpretation of the figures, graphs and maps (a storyline)*

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*Please provide possible reasons for upward or downward trends*

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*What are the limitations of the indicator used above?*

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*Please provide details of key lessons learned during this exercise (maximum 500 words)*

**2. Reporting template for the additional metric: Land productivity/production**

GENERAL INFORMATION ON THE REPORTING ENTITY	
Reporting country	
Name and surname of the person submitting the report	
Affiliation and contact details	
<b>Convention Strategic Objective(s) for which the indicator applies:</b> <i>State the Convention strategic objective(s) for which the indicator applies</i>	
Strategic Objective 2: To improve the condition of ecosystems	
<b>UNCCD Core indicator S-5:</b>	
Maintenance of or increases in ecosystem function, including net primary productivity	
<b>Name of the indicator</b>	
<b><u>IX. Land cover status</u></b>	
<b>Metric:</b>	
<b><u>Land Productivity</u></b> (According to their capacities, where possible, countries should report on both land productivity and land cover. Where capacity is more limited, land cover should be reported)	
<b><i>Understanding of the Indicator (Definition)</i></b>	
Land productivity (in different land cover and use systems) could mean the following: <ol style="list-style-type: none"> <li>(i) Annual production of major crops and vegetation types (tonnes per ha of major crop or Net Primary Productivity (NPP);</li> <li>(ii) Crop diversity (alternative varieties recorded (number and percentage of total production);</li> <li>(iii) Production per unit of physical inputs (i.e. water, agrochemicals).</li> </ol> <p>Land productivity changes reflect impacts on ecosystem services, predominantly on provisioning services. Land degradation is manifested as a reduction in land productivity. However, productivity may be measured through a wide range of context-dependent methods and metrics. The International Soil Resources Information Centre (ISRIC), under a subcontract with FAO LADA, has constructed a measure of greenness trends using the Global Inventory Modelling and Mapping Studies (GIMMS) normalized difference vegetation index (NDVI) time series (1981 to 2006) assembled by the University of Maryland.</p>	
<b><i>Data needed:</i></b>	
Processing of the indicator requires: <ul style="list-style-type: none"> <li>• An NDVI-calculated time series (at least multi-annual) of high temporal resolution satellite data</li> <li>• Annual rainfall for a corresponding time series</li> </ul>	

**Data sources:**

All required data sets are already available from the Global Assessment of Land Degradation (GLADA). Data sources used by GLADA are GIMMS (Global Inventory Modelling and Mapping Studies) and VASClmO 1.1 (Variability Analyses of Surface Climate Observations).

The GIMMS data set is an NDVI derived from imagery obtained from the Advanced Very High Resolution Radiometer (AVHRR) sensor on board National Oceanic and Atmospheric Administration (NOAA) satellites. The GIMMS dataset was corrected for distortions due to instrument calibration, view geometry, volcanic aerosols, and other effects unrelated to vegetation change (University of Maryland, undated). The spatial resolution of the resulting product is 8km. Time series are possible for these date ranges: 2000–2007, 1981–2002; 1981–2006. The VASClmO comprises the most complete monthly precipitation data for 1951–2000, compiled from long, quality-controlled station records, gridded at resolution of 0.5°, from 9 343 stations. For 2001–2003, these were supplemented by the GPCC full data re-analysis product (Schneider and others, 2008) to produce monthly rainfall values matching the GIMMS NDVI data.

Data references

[http://apdrc.soest.hawaii.edu/datadoc/gpcc\\_1.htm](http://apdrc.soest.hawaii.edu/datadoc/gpcc_1.htm);  
<http://www.landcover.org/data/gimms/>

**Check the glossary for**

‘accuracy’, ‘Advanced Very High Resolution Radiometer (AVHRR)’, ‘aggregation’, ‘agricultural land’, ‘data’, ‘data analysis’, ‘data source’, ‘dataset’, ‘deforestation’, ‘desertification’, ‘desertification, land degradation and drought (DLDD)’, ‘Fraction of Photosynthetically Active Radiation Absorbed by Vegetation (fPAR)’, ‘Global Inventory Modelling and Mapping Studies (GIMMS)’, ‘greenness’, ‘ground truth’, ‘indicator’, ‘indicator metadata’, ‘land cover’, ‘Land Degradation Assessment in Drylands (LADA)’, ‘land use’, ‘lead agency’, ‘method of collection’, ‘metric’, ‘NDVI Standard deviation (STD)’, ‘Net Primary Productivity (NPP)’, ‘Normalized Difference Vegetation Index (NDVI)’, ‘Rainfall Use Efficiency (RUE)’, ‘Remote sensing’, ‘Spatial resolution’, ‘Sum NDVI’, ‘time scale’, Variability of Surface Climate Observations (VASClmO).

**SECTION 1 – Indicator methodology and data profile**

**What method was used for assessing land productivity in your country? [Up to 500 characters]**

**What data were used to compile the indicator?**

Sources of information and dates	Specify the sources used to extract the information provided (add as many rows as necessary)
	1. _____
	2. _____
	3. _____

**Please state the length of the data series (i.e. beginning and end date and/or time in years, months, days)**

**Which monitoring and surveying methods and calculations were used?**

**How often are the data recorded (hourly, daily, monthly, yearly, etc.)?**

**Geographic coverage**

*What is the geographic area covered by the data? For the purposes of national reporting, the indicator land productivity shall be reported for affected areas. Please specify whether the information provided for this indicator is based on:*

	National-level statistics: The entire national territory or a vast portion of it (more than 70%) is affected by DLDD
	National-level statistics: Only part of the national territory is affected by DLDD but disaggregated data for affected areas are not available
	Areas affected by DLDD only: Disaggregated data are available

*If areas affected by DLDD only, please specify demarcation (i.e. provinces, states and districts) and the criteria used to identify affected areas (if different from those described in the in the template for the definition of affected areas)*

**Show the smallest geographic scale at which the data are relevant**



**If remote-sensed data are used, are the observations repeatedly ground-truthed and revised, based on the findings of the ground-truthing? Please provide details of ground-truthing [Up to 500 characters]**

**What quality assurance procedures were used for the data (i.e. what measures and checks were performed to guarantee the quality of the data?) [Up to 500 characters]**

**Please specify the agency responsible for collecting the data and/or an appropriate contact person**

**Section 2 – Indicator results/values**

*Please fill in the class names according to the land cover classes used and tick (✓) land cover types for which land productivity has been assessed and you are providing information. Insert additional rows as required*

Land Cover Class	
<i>Land cover class 1 (please specify name according to the system used in your country)</i>	
<i>Land cover class 2</i>	
<i>Land cover class 3</i>	
<i>Land cover class 4</i>	
<i>Land cover class 5</i>	
<i>Land cover class 6</i>	

*For each land cover type please fill in the class names according to the land cover classes used and provide estimates regarding productivity for each of the land cover classes and land use systems*

Year	Land cover class 1 <i>(please specify name according to the system used in your country)</i>		Land cover class 2		Land cover class 3		Land cover class 4		Land cover class 5		Land cover class 6	
	T/ha	Number or %	T/ha	Number or %	T/ha	Number or %	T/ha	Number or %	T/ha	Number or %	T/ha	Number or %
2008												
2009												
2010												
2011												
2012												
2013												
2014												
2015												
2016												
2017												
2018												

*T/ha = Tonnes per hectare*

*#= number of species, % = major crop as percentage of total production*

*If information is not available for the table above, please provide the most recent data on productivity for each of these land cover/land use systems*

Year	Land cover class 1 <i>(please specify name according to the system used in your country)</i>		Land cover class 2		Land cover class 3		Land cover class 4		Land cover class 5		Land cover class 6	
	T/ha	Number/%	T/ha	Number/%	T/ha	Number/%	T/ha	Number/%	T/ha	Number/%	T/ha	Number/%
2000												
2001												
2002												
2003												
2004												
2005												
2006												
2007												

*T/ha = Tonnes per hectare*

*#= number of species, % = major crop as percentage of total production*

*If available, please provide a map or graphics showing the productivity of each of these land cover/land use systems. If possible, include a shape file (low resolution e.g. >1:250 000) or a very high resolution map of extent with subclasses (e.g.<1:250 000)*

*Please provide an assessment of the productivity of each of these land cover/land use systems in your county filling in the class names according to the land cover classes used*

Land Cover Class	Increasing	Decreasing	Stable	No data/Unknown
<i>Land cover class 1 (please specify name according to the system used in your country)</i>				
<i>Land cover class 2</i>				
<i>Land cover class 3</i>				
<i>Land cover class 4</i>				
<i>Land cover class 5</i>				
<i>Land cover class 6</i>				
<i>Others (please specify)</i>				

*What are the key questions which the land productivity indicator helps to answer? Please refer to national policy and reporting priorities related to Desertification/ Land Degradation and Drought (DLDD)*

**Section 3 – Indicator interpretation**

*Please provide an interpretation of the figures, graphs and maps (a storyline)*

*Please provide possible reasons for upward or downward trends*

*What are the limitations of the indicator used above?*

*Please provide details of key lessons learned during this exercise (maximum 500 words)*

### III. Conclusions and recommendations

26. Having reviewed this document in conjunction with document ICCD/COP(10)/CST/INF.6, which contains the methodological guide to reporting on the two mandatory impact indicators and their associated metrics, as well as with the glossary contained in document ICCD/COP(10)/INF.9, which includes a glossary of the terminology and definitions used, among other things, in the formulation of the subset of impact indicators.

27. Taking into consideration that:

(a) The reporting templates on impact indicators for use by affected country Parties have been developed and tested through pilot impact indicator tracking exercises at the national level; and

(b) The lessons learned, conclusions and recommendations from this exercise will be made available in the aftermath of COP 10.

28. The CST may wish to recommend that the COP:

(a) Provisionally adopt the draft reporting templates contained in this document;

(b) Entrust the secretariat with fine-tuning them for use in the second leg of the fourth reporting and review process based on the conclusions and recommendations of the pilot impact indicator tracking exercise;

(c) Request the secretariat to make available in all United Nations languages and to publish on the UNCCD website the methodological guide to reporting on the two mandatory impact indicators and their associated metrics, contained in the document ICCD/COP(10)/CST/INF.6, as well as the glossary of terms and definitions contained in document ICCD/COP(10)/INF.9;

(d) Request the secretariat to make available reporting guidelines and a generic template for the remaining impact indicators provisionally accepted at COP 9, but considered optional for inclusion in reports by affected countries.

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