

SARD Initiative logo

**Cultural indicators of Indigenous Peoples'
food and agro-ecological systems**

by Ellen Woodley

in collaboration with Eve Crowley, Caroline Dookie and Andrea Carmen

Draft summary¹ for discussion

*Prepared for the Second Global Consultation on
the Right to Food and Food Sovereignty for Indigenous Peoples*

*organised by the International Indian Treaty Council (IITC)
in its role as Indigenous Peoples' Focal Point
for Sustainable Agriculture and Rural Development (SARD)*

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- 1. Indigenous Peoples worldwide are urgently calling for recognition of the vital and fundamental importance of culture for the viability of their traditional food and agro-ecological systems², as well as for sustainable development.** The literature review has shown that development interventions, as well as global trends of biodiversity loss, expansion of industrialized agriculture, monocultures, and the market economy can have negative and, in some cases, devastating impacts on the traditional food systems, subsistence-based economies and agro-ecological systems upon which Indigenous Peoples depend for survival. Evidence shows that changes in traditional food and agro-ecological systems can also have negative repercussions for indigenous culture and, cultural rights and practices, in some cases leading to the erosion of Indigenous Peoples' cultural identity. Indigenous cultures are particularly affected by policies and programmes that marginalize Indigenous Peoples from decision-making processes and fail to respect their traditional knowledge, spiritual and cultural practices, languages and rights to lands, natural resources and sacred sites. Understanding the close interconnection and mutually-sustaining relationship between traditional culture and traditional food and agro-ecological systems for Indigenous Peoples is critical for ensuring their food security, food sovereignty³, and sustainable development.
- 2. Indigenous Peoples and a number of other organizations and bodies⁴ interested in supporting their livelihoods and well-being⁵ believe that cultural indicators can provide a valuable, practical basis for a common understanding of the role of culture in sustaining food and agro-ecological systems and, through this, community health and well-being.** Agreement on such indicators can also help to ensure consistency and a minimum acceptable standard in the formulation, implementation and evaluation of policies and programmes that are intended to benefit Indigenous Peoples. Such agreement might also ultimately form the basis of a rights-based, culturally respectful partnership model for development.
- 3. This document provides a summary of a literature review that elaborates on and validates Indigenous Peoples' views about some of the most important cultural indicators of food security, food sovereignty, agro-ecological systems and sustainable development.** The review supports the value of a set of indicator areas identified by Indigenous Peoples⁶, by summarizing independent research findings on the interactions between food, agro-ecological systems and culture and the factors, programmes, policies, and trends that affect them. The review compares and enriches Indigenous Peoples' indicators with those proposed or currently in use by different organizations at national, local and international levels. The document attempts to present this literature in a concise and

² An "agroecological system" is a land use system defined through the coevolution of human culture and ecosystems, such that both influence the land that is used for crops, pasture, and livestock, the adjacent uncultivated land that supports other vegetation and wildlife, and the associated atmosphere, the underlying soils, groundwater, and drainage networks.

³ "Food security" is a situation that exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life. "Food sovereignty" is the right of people to define their own policies and strategies for the sustainable production, distribution, and consumption of foods. For Indigenous Peoples, this definition also includes respect for their own cultures and their own systems of managing natural resources and rural areas. Indigenous Peoples consider food sovereignty to be a precondition for food security.

⁴ Several UN Declarations, Treaties and Conventions recognize the marginalization of Indigenous Peoples and the need for Indigenous self-determination, including the United Nations Declaration on the Rights of Indigenous Peoples, International Labour Organization Convention No. 169, the International Covenant on Civil and Political Rights, United Nations Educational, Scientific and Cultural Organization (UNESCO), and Agenda 21 (Chapter 26).

⁵ "Well-being" is the state of being healthy and happy and enjoying the basic material conditions, social relations, security, and freedom of choice and action for a good life.

⁶ Indigenous Peoples' initiative to establish cultural indicators for SARD: questionnaire on Indigenous Peoples' traditional foods & cultures (IITC, 2003)

consolidated fashion in order to promote discussion, negotiation, refinements, and possible consensus and use of the most relevant indicators among particular peoples, organizations, programmes, and cultural contexts. The primary clients for the indicators proposed in this paper are Indigenous Peoples' organizations, and the staff of NGO's, Governments, International Organizations and development agencies engaged in programmes and policies that are intended to benefit them. It is expected that the indicator areas/benchmarks defined here will be particularly useful for those working to restore and/ or maintain Indigenous Peoples' food sovereignty through projects or programmes and for those attempting to work in indigenous communities, but with a limited understanding of their cultures and livelihoods.

4. The paper contains four central arguments:
 - i. Culture should be considered a fourth pillar of sustainable development, additional to the social, economic and environmental pillars.
 - ii. The development of and agreement on a set of indicators, which are able to measure impacts, relationships and interactions between culture and food and agro-ecological systems, can promote improved understanding, transparency and accountability between Indigenous Peoples and those working to assist and support them.
 - iii. Several cultural indicator areas/benchmarks are proposed and validated through comparisons with indicators developed by other organizations and the findings from recent research (see **Table 1.0:** long table of cultural indicators). These benchmarks were subsequently consolidated into five main areas as a result of the Second Global Consultation on the Right to Food and Food Sovereignty for Indigenous Peoples which reviewed this paper (see Table 2.0: consolidated table of cultural indicators).
 - iv. Further review, refinement and research on these indicator sets, by different parties, will be needed to verify, adapt and select those most relevant and useful for specific cultural contexts, to provide a framework for analysing existing data, and to identify the most effective, culturally relevant, and enduring methods for future data collection.

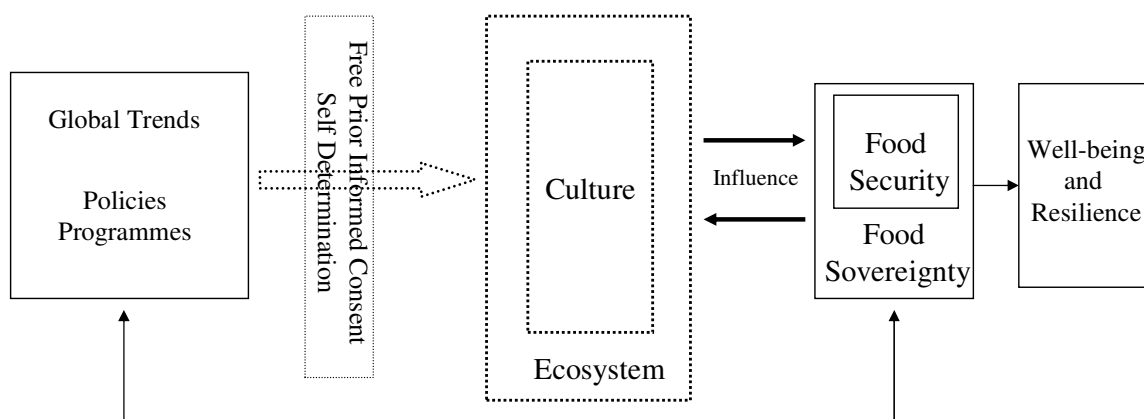
Each of these arguments is explored in greater detail under the four headings below.

Culture: the fourth pillar of sustainable development

5. **Culture should be considered a fourth pillar of sustainable development, additional to the social, economic and environmental pillars.** Culture encompasses the shared beliefs, values, traditions, customs, knowledge, ceremonies, and objects that people transmit across generations and use to define and sustain their collective identities and relationships with the world and each other. Most indigenous cultures do not consider land to be a commodity or simply a source of environmental services or “resources”, but “a living mother” that is the source of life and a home for past, present, and future generations. That relationship carries a range of spiritual and material responsibilities of deep historical, linguistic, and spiritual significance for Indigenous Peoples. It is manifested in the profound and multi-faceted relationships that Indigenous Peoples have with their traditional subsistence foods and practices.
6. **The review finds that traditional cultural practices and food systems are positively related and mutually supportive and both are fundamental for food security and well being.** This substantiates Indigenous Peoples' views that traditional cultural practices and traditional food systems are fundamental for their food security, well-being, collective identities, physical and spiritual health and survival as the conceptual framework show (refer

to figure 1). Cultural and spiritual beliefs, knowledge, and practices shape how Indigenous Peoples use their agro-ecosystems, the significance they give to their traditional land and natural resources', and therefore what makes up their changing subsistence base and food systems. Distinct cultures shape the environment in different ways, but substantial evidence about how culture shapes the environment can be grouped and described in terms of three interlocking subsystems: 1) systems for generating and transmitting knowledge, worldview, and values; 2) systems of land, water, and living resource access, use, and distribution; and, 3) systems of food production, processing, distribution, and consumption. Depending upon their viability, these inter-related systems can mediate the impacts of global trends, policies and programmes on Indigenous Peoples and play a critical role in maintaining cultural integrity.

Figure 1: Conceptual Framework depicting relationships between development, culture, food security, food sovereignty and well-being



- The literature reviewed suggests that as people are deprived of or lose their traditional means of subsistence and of procuring traditional foods, human health and cultural identity can also decline.** Similarly, when the relationships between Indigenous Peoples and their traditional lands, natural resources and ecosystems are severed, the knowledge, worldviews, values and practices about these relationships and about other aspects of their food and agro-ecological systems, commonly erode over time as well. In short, changes in Indigenous Peoples' environment, food and agro-ecological systems can profoundly affect many aspects of their culture and well-being, including identity and continuity.
- The review of recent research findings, which are mostly qualitative and found in geographically diverse case studies, corroborates Indigenous Peoples' convictions about the importance of culture and traditional food and agro-ecological systems for sustainable development.** Because culture is often intangible and highly variable across different contexts, however, it is often treated as an unmanageable constraint to development efforts. Cultural variability also complicates efforts to identify universally applicable indicators, making it essential to distinguish clusters/areas of indicators, which can be disaggregated, defined and adapted for distinct contexts (see Indicator Table).

Cultural indicators for indigenous food and agro-ecological systems

- The development of and agreement on a set of indicators can promote improved understanding of the role of culture in food and agro-ecological systems.** It can foster transparency and accountability between Indigenous Peoples and those working to assist them. To be of value, cultural indicators need to be developed or approved first and foremost

by Indigenous Peoples themselves. At the same time, they need to be simple enough to be understandable and useable by organizations, international agencies and people who are familiar neither with culture nor with Indigenous Peoples' livelihoods. Indicators need to be measurable, either qualitatively or quantitatively. The most valuable indicators are those on which data have been or can be systematically collected through existing institutions, at minimal cost, and with the full participation of the Peoples potentially affected.

10. **Some of the targets and indicators that have been developed to measure well-being and poverty levels in recent years do not adequately reflect the realities and most critical concerns of Indigenous Peoples.** The Human Development Index and Millennium Development Goals (MDGs), for example, mostly focus on material achievements as well as deprivations that have an important bearing on quality of life and human well-being. However, they tend to disregard other, often intangible, dimensions of human well-being that are fundamental to Indigenous Peoples, including the following: the integrity of cultural systems; spiritual values and relationships to plants and animals; inter-generational indigenous knowledge transmission systems; the continuity and cultural significance of traditional food practices; access rights and protection of land and natural resources including sacred sites and ceremonial areas; the quality of rural ecosystems as historical human habitats, and; the right of self determination⁷. There is also an absence of reliable disaggregated data on the socio-economic conditions of Indigenous Peoples, making trends on the status of Indigenous Peoples difficult to determine statistically.
11. **Several important initiatives are currently developing indicators relevant to Indigenous Peoples, including some based on Indigenous Peoples' own visions and understandings of well-being.** For example, the Convention on Biological Diversity is developing indicators of traditional ecological knowledge and guidelines on impact assessment procedures. Organizations in Canada and Aotearoa (New Zealand) are developing indices to measure community well-being that reflect indigenous issues. In addition to complimenting Indigenous Peoples' ongoing regional efforts to develop indicators, these endeavours can contribute to poverty reduction efforts that rely on more conventional indicators of poverty, such as those associated with the Millennium Development Goals (MDGs), Poverty Reduction Strategy Papers, and the High Level Commission on the Legal Empowerment of the Poor.
12. Beyond these, a few indicators are suggested that relate to overarching principles, which are demonstrated in the literature to be essential for any rights-based approach to food security. These are the recognition and upholding of Indigenous Peoples' rights to self determination, free and prior informed consent⁸, and full and effective participation in the development of strategies for resource use and benefits sharing that affect their food and agro-ecological systems. **As has long been affirmed by Indigenous Peoples, food sovereignty appears to be a precondition for food security, as well as for the survival of their cultures, traditions, languages, spiritual values, health and identities.**

⁷ "Self Determination" is the right of all peoples to freely determine their political status and freely pursue their economic, social and cultural development"

⁸ "Free, prior and informed consent" recognizes the legitimate authority of a community or people (i.e. Indigenous Peoples) to require that third parties obtain their full, informed and prior agreement, in the absence of any form of coercion and with all relevant information on potential impacts provided, before conducting any activity that may affect their lands, lives, rights, cultures, ecosystems or food security.

Proposed areas for cultural indicator development

13. **The study elaborates on benchmarks previously identified by Indigenous Peoples for the further development of cultural indicators** (see **Table 1.0:** long table of cultural indicators). Areas covered include i) the abundance or scarcity of traditional foods and medicines, ii) rights of access to traditional lands, iii) change in consumption and preparation of traditional foods and medicines and associated ceremonial uses; iv) the practice of ceremonies, dances, prayers, songs etc. related to the use of traditional foods and subsistence practices; v) the use of language associated with traditional food systems; vi) the integrity and access to sacred sites related to use of traditional food sources, vii) rural-to-urban migration patterns and viii) the use of Free, Prior Informed Consent with community members. Greater systematization and analysis are required, as well as refinement based upon further research and the perspectives, world-views and practical experiences of Indigenous Peoples. However, the literature review confirms that the broad categories proposed by Indigenous Peoples touch on some of the most important, potentially measurable factors that influence impacts on and resilience⁹ and sustainability of cultural and agro-ecological systems that are fundamental for food security and human well-being.

14. **The value and applicability of these benchmarks is confirmed by comparisons with indicators developed by other agencies, organizations and processes, as well as the findings from recent research.** In each of the benchmarks/indicator areas previously identified by Indigenous Peoples' organizations, relevant indicators are either already in use or are being developed. Furthermore, the importance of these benchmarks, as critical factors for the sustainability of cultural, food and agro-ecological systems, is supported in each case by some evidence from research reviewed in this study. Where sufficient evidence exists in the literature, the study suggests more specific indicators that could be used. For example, the literature review suggests that threats to the abundance of traditional foods, seeds and medicines is driven by i) the loss of traditional knowledge, ii) habitat loss and land conversion, iii) expansion of the market economy and iv) climate change. Indicators within each of these four sub-themes are suggested based on existing indicators where available, or new indicators where there are sufficient research findings to substantiate them.

15. **Where research findings demonstrate important relationships for which no indicators are currently in use, the study and the Second Global Consultation on the Right to Food and Food Sovereignty for Indigenous Peoples (Puerto Cabezas, September 7-9, 2006) proposed three new cultural indicator categories beyond the benchmarks originally identified by Indigenous Peoples.** These relate to Indigenous Peoples' institutions for knowledge transmission, resilience and self-governance. The first is the capacity of Indigenous Peoples' institutions to convey and transmit indigenous knowledge, practices, worldviews, and values across generations and, as relevant, to decision making processes at other scales that involve non-indigenous decision makers. By monitoring and sharing data on the well-being of Indigenous Peoples, traditional institutions for knowledge transmission can play a critical role in ensuring that Indigenous Peoples' concerns shape policies and influence decision making processes at all levels. From an Indigenous Peoples' perspective, the very notion of "sustainability" is intimately associated with the transmission of knowledge and traditions across generations. Resilience is the capacity for change and self organization in

⁹ "Resilience" is the capacity of a system, community, People or society to maintain, recover, or regain an acceptable level of functioning, well-being, and integrity in response to disturbances, shocks, adversity, or risk, in keeping with their own criteria and goals.

order to adapt to changes that affects food and agro-ecological systems. Self-governance is closely related to prior informed consent, self-determination and exercise of autonomy in decision making. Some indicators help to measure the level and extent of cultural dimensions of traditional food and agro-ecological systems and the impacts of trends, policies and programmes on these, others measure whether cultural knowledge, practices, and systems can be scaled up and transmitted inter-generationally and can accommodate and respond effectively to change.

16. **Consolidation of benchmark areas.** The final consolidated table of cultural indicators (Table 2.0) prepared by a Drafting Committee after the Consultation is intended to support efforts to raise global awareness about these issues and to promote policy change.

Further research

17. **More research may be needed to develop the proposed benchmarks and indicators.** To be of value to a range of development practitioners, further research following standard procedures for indicator development would be beneficial on the relationships between sustainability, culture and food systems implied by each of the benchmarks, particularly if these are developed with full participation and free prior and informed consent of Indigenous Peoples themselves. This includes the need to define primary and secondary criteria for indicator development and to consider factors such as applicability, data availability and quality, and existing/improved data collection methods, costs, and processes.
18. The further development of cultural indicators will depend upon future research that provides both qualitative and quantitative evidence and a clearer understanding of the complex relationships between global trends, policies, programmes, culture, food and agro-ecological systems, and human well-being. One valuable area of future research could include the relationship between biodiversity loss and cultural change, given the global correlations between cultural diversity and biodiversity and the established relationship between increased agro-biodiversity and indigenous traditional food systems. The relationship between access to formal education and levels of traditional knowledge about food systems also needs to be investigated. Evidence that helps to establish relationships such as these will further the development of cultural indicators. At every step of this process, it is imperative that Indigenous Peoples play a leadership role in determining the relevance and utility of the proposed indicators and benchmarks, and to ensure that the principles of free, prior informed consent, full participation, and cultural respect are upheld.

Next Steps

19. This summary is intended to facilitate communication and comment about the literature review. Comments on the paper are expected from the Second Global Consultation on the Right to Food and Food Sovereignty for Indigenous Peoples. In addition, the summary will be circulated to peer reviewers from Indigenous Peoples' organizations, UN agencies and elsewhere in October 2006. Should you be interested in participating as a peer reviewer, please contact: Eve.Crowley@fao.org with "Peer review: cultural indicators" in the subject line. Please also let her know, should you know of other venues in 2006 in which this paper should be circulated for comment.

Table 1.0. Long table of Cultural Indicators¹⁰

Suggested indicator	Source
1. ABUNDANCE, SCARCITY AND/OR THREATS TO TRADITIONAL SEEDS, MEDICINAL PLANTS AND FOOD ANIMALS	
<i>Local Knowledge of Bio- and Agro-biodiversity</i>	
1. Number of government/local policies/programs to transmit/learn indigenous ecological and agro-ecological knowledge	UNPFII 5 Indicators (2006); The Advisory Group to Article 8 (j) CBD; United Nations University (2005)
2. Percent of Indigenous Peoples that participate in traditional vs. non-traditional economic activities	UNPFII 5 Indicators (2006)
3. Status and trends of linguistic diversity and numbers of speakers of indigenous languages (as a proxy for traditional knowledge) (nb: Other indicators of the status of indigenous and traditional knowledge are being developed)	CBD 2010 Biodiversity Indicators Partnership Project
4. Folklore associated with species 5. Distribution of knowledge about a species across different sectors of the community and transmitted across generations	Conservation and Sustainable Use of Agricultural Biodiversity: A Sourcebook (CIP-UPWARD 2003)
6. Knowledge of hunting techniques	Tchoumba 2005
7. Total number of different species used in the household/unit time 8. Self-reported number of plant-made items that people report knowing how to make	Reyes-García et al (2006)
9. Education systems that encourage use of local ecological knowledge	Suggested indicator for exploration
<i>Introduced and Genetically Modified Seeds</i>	
10. Yield of traditional crops and yield of introduced or GMO crops 11. Consumption of traditional vs. introduced crops 12. Prices of traditional vs. introduced crops	IFAD
13. Number of different traditional cultivars of species preferred for distinct uses	CIP-UPWARD (2003)
<i>Habitat Loss through Land Conversion (i.e. monocultures) and Environmental Degradation</i>	
14. Number of endangered flora and fauna [species] linked to Indigenous Peoples' current and future subsistence needs, and dependence based upon ceremonial and cultural practices 15. Number of fish, animals and other life-forms that can be sustainably	UNPFII 5 Indicators (2006)

¹⁰ Suggested cultural indicators (75) for measuring the state and trends in Indigenous Peoples Food and Agro-ecological Systems, Rights to Food, Food Security and Sustainable Agriculture and Rural Development. Nine main Indicator areas (in capitals) are listed with suggested sub-groupings (in italics) and suggested indicators for each area with the sources of the indicators.

*Cultural indicators of Indigenous Peoples' food and agro ecological systems:
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Suggested indicator	Source
<p>hunted, fished and gathered on lands and territories</p> <p>16. Threats to viability of resources (climate change, contamination levels, habitat destruction/conversion)</p> <p>17. Level/sources of protection of traditional habitat</p> <p>18. Indigenous Peoples' inclusion, participation and employment in ecosystem management</p> <p>19. Number of preventive programs, regulations, ordinances and measures protecting indigenous lands from extractive activities and other non-sustainable activities</p> <p>20. Number of violations to environmental protection regulations and reports of environmental damage within and near indigenous lands and territories</p>	
21. Extent of changing land-use patterns (i.e. territories where traditional land use has changed to other uses i.e. forest clearance to intensive agriculture; could possibly be measured by the Global Information Satellite systems (GIS))	The Advisory Group to Article 8 (j) CBD; ECLAC Indicator Worksheet 4
22. Intensity of fertilizer, insecticide and/or herbicide use on agricultural land	ECLAC Indicator Worksheet 4
<i>Market Expansion</i>	
<p>23. Percent of Indigenous Peoples that participate in modern/non-traditional economic activities</p> <p>24. Percentage contribution of traditional subsistence activities to indigenous communities' economy</p>	UNPFII 5 Indicators
25. Capacity (i.e, access to markets) to sell local products	IFAD; Tchoumba (2005)
26. Use of traditional exchange and reciprocity systems	Suggested indicator for exploration
2. ACCESS TO AND INTEGRITY OF TRADITIONAL LANDS, WATERS AND HABITATS USED FOR FOOD PRODUCTION, HARVESTING AND/OR GATHERING	
<i>Security of tenure: physical property rights</i>	
<p>1. Recognition of indigenous governance and customary laws by state governments</p> <p>2. Existence of legal frameworks for indigenous veto over the use of indigenous lands</p>	UNPFII 5 Indicators (2006)
3. Prevalence of land disputes	FAO
<p>4. Recognition/existence/continuation of traditional land tenure systems (including common property regimes) of indigenous and local communities (territories may include fresh and marine waters (e.g. sea and sea-bed tenure))</p> <p>5. Traditional lands and waters managed or co-managed by indigenous and local communities such as co-managed protected areas (where indigenous and local communities may be able to exercise traditional ecological knowledge on managing lands and waters traditionally occupied by them)</p> <p>6. Proportion of [indigenous] population with secure access to land and to traditional resource rights</p> <p>7. Loss of [rights to] traditional lands and waters</p>	The Advisory Group to Article 8 (j) CBD

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Suggested indicator	Source
8. Enforced protection of lands from illegal encroachment 9. Extent of privatization 10. Government expropriation, forced resettlement	Suggested Indicators for exploration
<i>Agricultural changes and gender</i>	
11. Change in women's decision making capacity at household level 12. Change in women's participation in decision making at project/local level	IFAD
13. Changes in women's traditional resource access rights	Suggested indicator for exploration
3. CHANGES IN THE USE OF TRADITIONAL FOODS AND MEDICINES (AND ASSOCIATED CEREMONIAL USES)	
1. Change in production and consumption of [traditional] staples 2. Change in number of species used for medicinal purposes and frequency of use 3. Change in number of species used as food and frequency of use	IFAD
4. EXTENT OF CONTINUED PRACTICE/USE OF CEREMONIES, DANCES, PRAYERS, SONGS AND OTHER ORAL TRADITIONS RELATED TO THE USE OF TRADITIONAL FOODS AND SUBSISTENCE PRACTICES	
1. Degree to which people are engaged in traditional practices: participation in and knowledge of traditional spiritual ceremonies related to food	Registered Indian HDI; CIP-UPWARD 2003; Working Group on Article 8j. CBD; Maputo Task Force 2005
2. The existence of totems (indicating totemic diversity)	Advisory Group to Article 8 (j) CBD
3. Religious and folk festivals	UNESCO (2000)
4. Societal respect for basic human freedoms of belief, thought and expression 5. Societal encouragement for innovative expression	Cultural Freedom and Creative Empowerment Indices (UNRISD)
5. PRESERVATION AND CONTINUED USE OF LANGUAGE, SONGS, STORIES AND CEREMONIES, TRADITIONAL NAMES FOR FOODS AND AGRO-ECOLOGICAL PROCESSES	
1. Number of speakers of mother tongue (indigenous languages)	CBD 2010 Indicators; UNESCO (2000)
2. Development of community [communication] media in local languages 3. Officialization of indigenous national languages	The Maputo Task Force Laaksonen (2005)
4. Percent of children learning indigenous languages	UNPFII 5 (2006)
5. Extent to which indigenous language is used for naming species and ecosystem features 6. Extent to which indigenous language forms the basis of songs and stories, frequency of use and means of transmission of songs and stories	Suggested indicators for exploration

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Suggested indicator	Source
6. THE USE OF SACRED SITES FOR ASSOCIATED CEREMONIAL PURPOSES	
1. Recognition of sacred sites by local communities, governments, development industries	The Maputo Task Force Laaksonen (2005)
2. Level of access/activity (wood gathering, cultivation, etc) in sacred forests 3. Biodiversity in sacred forests	Suggested indicators for exploration
7. RATE OF RURAL TO URBAN MIGRATION AND IMPACT ON TRADITIONAL FOOD SYSTEMS	
1. Demographics and statistics on the urbanization [rate] and movement/s of indigenous and local communities away from traditional territories	The Advisory Group to Article 8 (j) CBD; UNPFII 5 (2006)
2. Number of households that report income from sources outside the community 3. Household income and use of non-traditional, purchased foods 4. Gender ratio in households and level of agricultural workload on women 5. Level of traditional ecological and agroecological knowledge of returned migrant workers	Suggested indicators for exploration
8. NUMBER AND EFFECTIVENESS OF CONSULTATIONS FOR PLANNING, IMPLEMENTATION AND EVALUATION; USE OF THE PRINCIPLE OF FREE, PRIOR INFORMED CONSENT (PIC) AND THE EXTENT TO WHICH CULTURAL CONCERNS ARE CONSIDERED AND ADDRESSED	
<i>Intellectual Property Rights</i>	
1. Level of knowledge and awareness of IPR among community members 2. Protection mechanisms in place for traditional knowledge and innovation	Suggested indicators for exploration
<i>Access and Benefit Sharing</i>	
3. Support for indigenous capacity, leadership, policy and programme development by state and indigenous governance, including number of programs and persons participating in and completing training	UNPFII 5 (2006)
4. Participation in the creation of protected areas and management of forest concessions	Tchoumba (2005)
5. Number of development programs that involve collaborative partnerships with participating community (co-management) 6. Number of development activities that include Free, Prior and Informed Consent 7. Legislation to regulate access to genetic resources and benefit sharing	Suggested indicators for exploration
9. INDIGENOUS INSTITUTIONS FOR KNOWLEDGE TRANSMISSION	
1. Existence of knowledge holders and the persistence of customary law 2. The establishment and effective implementation of local/government policies/programmes for traditional knowledge retention, use and intergenerational transfer and their effective implementation (see area 1)	The Advisory Group to Article 8 (j) CBD; UNPFII 5 (2006)

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Suggested indicator	Source
3. Level of involvement of youth and elders in community decision-making	Registered Indian HDI
4. Legal framework for local level institutions 5. Extent of use of traditional ecological and agro-ecological knowledge in formal institutions at higher scales	Suggested indicators for exploration
10. RESILIENCE	
1. The extent of acquired local knowledge of the relationship between changing ecological conditions and the impact on traditional foods and agro-ecological system 2. Locally developed food production and procurement strategies for adapting to changing ecological conditions	Suggested indicators for exploration

Table 2.0. Consolidated table of Cultural Indicators¹¹

1. Access to, security for and integrity of lands, territories, natural resources, sacred sites and ceremonial areas used for traditional food production, harvesting and/or gathering and related cultural and ceremonial purposes		
Structural Indicators	Process Indicators	Results Indicators
1. Number of constitutional provisions, policies, programs, legislative and administrative measures (national, state, local/tribal and/or international) in place for demarcation, legal recognition, management, protection and conservation of lands, territories, subsistence resources, ceremonial areas and sacred sites used traditionally by Indigenous Peoples.	1. Number of constitutional provisions, policies, programs, legislative and administrative measures (national, state, local/tribal and/or international) being effectively implemented for the demarcation, legal recognition management, protection and conservation of lands, territories, subsistence resources, sacred sites and ceremonial areas used traditionally by Indigenous Peoples.	1. Percentage of lands, territories subsistence resources, sacred sites and ceremonial areas used traditionally by Indigenous Peoples for subsistence and food production to which IPs still have full access and/or control, and are legally demarcated or otherwise recognized today as compared to benchmarks established in the past (i.e. lands recognized in treaties and agreements, original/traditional use areas).
2. Number of policies, programs, legislative, administrative measures and legal mechanisms in place (national, state, local/tribal and/or international) which restrict, limit, respect or uphold Indigenous Peoples' use of and access to lands, territories, subsistence resources, sacred sites and ceremonial areas used traditionally.	2. Number of court cases or legal challenges to measures, policies or programs which restrict or limit Indigenous Peoples' use of and access to lands, territories, subsistence resources, sacred sites and ceremonial areas used traditionally and percentage of conflicts settled in favor of Indigenous Peoples.	2. Percentage of lands, territories and subsistence resources used traditionally for food production (farming, fishing, hunting, gathering, herding) and related ceremonial uses currently being used by Indigenous Peoples compared to benchmarks established in the past (5, 10, or 20 years etc); Percentage which have retained their full productive capacity vs. percentage which are now damaged, diminished, contaminated, etc.
2. Abundance, scarcity and/or threats to traditional seeds, plant foods and medicines, and food animals, as well as cultural practices associated with their protection and survival		
Structural Indicators	Process Indicators	Results Indicators
1. Number of programs and projects in place in communities for clean up and restoration of impacted habitats and/or restoration of plant or animal food species by government, corporate, agency, NGO or other outside entity programmes; number of such programmes which are initiated, run and/or evaluated by Indigenous community members	1. Number of investigations and studies on abundance and health of traditional subsistence foods based on changes in monthly/yearly harvests of food plants and animals used traditionally and reasons for any changes; number of programs/policies initiated as a result and percentage of those carried out by Indigenous Peoples and communities.	1. Percent of traditional cultural practices associated with the use, production, protection and abundance of traditional food sources and resources still being used on a regular basis as compared to benchmarks from the past.
2. Number of community-initiated and community lead programs or other initiatives in operation to provide education about the current threats to	2. Number of studies initiated by Indigenous communities and/or outside agencies to compare access to traditional foods, abundance and/or	2. Percentage of traditional subsistence food resources (plant and animal) and habitats which are intact, viable, productive, healthy and free

¹¹ Consolidated Indicators Table Developed at the 2nd Global Consultation on the Right to Food and Food Security for Indigenous Peoples: Cultural Indicators for Food Security, Food Sovereignty and Sustainable Development

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subsistence practices and resources (environmental contamination, habitat destruction, loss of traditional knowledge and Indigenous language, misappropriation and misuse of biological resources, genetic modification, etc.)	scarcity with diet related diseases (diabetes, malnutrition, infant mortality, maternal health, obesity, suicide rates and other physical, mental or social illness or factors.)	from contamination (toxics, GMO's etc) compared to percentage of subsistence plants and animals that show signs of disease, toxic contamination, diminishing population based on changes in monthly/yearly harvests and other affects.
3. Number of laws, ordinances and provisions in place to protect traditionally used subsistence plant and animals and their habitats from overuse, environmental destruction, misappropriation, contamination etc; Percentage that have been developed and are being implemented by and/or in conjunction with Indigenous Peoples.	3. Numbers of studies or assessments by Indigenous communities and others in conjunction with Indigenous Peoples to assess impacts of imposed development (dams, deforestation, urbanization, industrial agriculture, mining, drilling, etc.) and introduced environmental contaminants (i.e. mercury, POPs, pesticides and other agro-chemicals, genetic contaminants etc.) on traditional subsistence foods including breast milk.	3. Number of traditional food plants and animals which have been declared endangered, have decreased in numbers, and/or have disappeared (suggested comparisons to 50 years and 10 years ago, as per reports of subsistence users as well as existing governmental, agency and outside organization studies); number considered to be under current threat.
3. Use and transmission of methods, knowledge language, ceremonies, dances, prayers, oral histories, stories and songs related to traditional foods and subsistence practices, and the continued use of traditional foods in daily diet as well as in relevant cultural/ceremonial practices		
Structural Indicators	Process Indicators	Results Indicators
1. Number of traditional institutions or other mechanisms or programs in place for transmitting traditional knowledge, languages and cultural practices related to food production, use, protection, preparation and/or abundance.	1. Number of youth, women, elders and other community members involved in and benefiting from these programs to record and transmit traditional knowledge about food and subsistence practices.	1. Percentage of community households which use traditional/ subsistence foods as a regular part of their diet, compared to an agreed upon number of years in the past (5, 10 or 25 depending on community history); Percentage of total household diets based on traditional foods (weekly, monthly and over a year) as compared to "introduced" foods (i.e. processed foods, imported foods, GMO's etc.)
2. Number of programs and institutional mechanisms existing, led and controlled by indigenous communities (using new and/or traditional knowledge transmission methods) to record and transmit traditional knowledge about traditional food production and subsistence activities and related cultural knowledge and practices.	2. Number of community-initiated and community lead programs or other initiatives in operation to provide education about the nutritional value, health benefits and cultural significance of traditional foods, and culturally relevant and environmentally sustainable food production methods; number of such programs in operation initiated by groups/agencies from outside the community.	2. Percentage of community members who know traditional methods for food gathering/production/preparation including the traditional language, songs, dances, stories and ceremonies associated with these practices traditional; Percentage of community members which participate in and use these practices and percentage of those who are youth.
3. Number of government laws, programs and policies in place and being implemented that support and recognize Indigenous Peoples' rights to maintain, protect and transmit their traditional knowledge, control their educational systems and make other decisions in that	3. Number or percent of indigenous youth in a community/tribe/nation who perceive or express that their traditional foods and subsistence practices as relevant in today's world (dynamic, vibrant, essential for success, cultural identity, health,	3. Percentage of foods and food related items used traditionally in ceremonies which are still in use today as compared to an agreed upon number of years in the past (5, 10 or 25, depending on community history).

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regard.	survival).	
4. Capacity by Indigenous Peoples for adaptability, resilience, and/or restoration of traditional food use and production in response to changing conditions including migration, displacement, urbanization and environmental changes		
Structural Indicators	Process Indicators	Results Indicators
1. Number of community run programs for reestablishment of lost or threatened food sources, practices and/or knowledge (including adaptation to changing environmental, political, cultural and/or economic conditions).	1. Existence of and extent of participation in community-based discussions and decision-making regarding the need and/or desirability for adapting traditional methods and food sources to changing conditions, including level of participation by elders, youth, cultural leaders, women and traditional practitioners.	1. Percent of Indigenous community members that continue to use and produce traditional foods in their territories while adapting to changing conditions (migration, environmental changes, etc.).
2. Number of laws/agreements in place providing for and enabling the free movement and return of traditionally mobile Peoples and for mobile subsistence practices (herding, fishing, hunting, gathering) including across international borders.	2. Number of new culturally and environmentally sustainable technologies or methods in use or under development for food production or related activities (i.e. sustainable energy production, water purification, irrigation, natural pest control etc.) with the agreement and involvement of local practitioners and number of studies or assessments carried out by or involving community members to assess impacts of these new technologies and methods.	2. Percentage of persons/youth that leave the community on a seasonal, semi-permanent (for at least 2 years) or permanent (5 years of more) basis for employment/economic/subsistence or other reasons; of those who return to the communities, what percentage go back to using traditional food systems and related ceremonial/cultural practices.
	3. Number of Indigenous Peoples and/or institutions, including indigenous youth, who use new communication technologies and knowledge transmission methods to transmit and refer to indigenous knowledge about traditional foods, threats to Indigenous Peoples' traditional foods and related cultural practices, and/or to organize support for and protection of traditional indigenous food systems.	3. Number of indigenous food traditions and resources that have resisted, adapted, and/or has been re-incorporated into new situations and places, (new locations and residences, intercultural marriages, responding to impacts of climate changes, adapted as income-earning activities, etc.) in ways that are consistent with indigenous dignity and well-being as defined by the practitioners.
5. Ability of Indigenous Peoples to exercise and implement their rights including self-determination and free prior informed consent, as well as their self-government structures, to promote and defend their Food Sovereignty and related aspects of their development		
Structural Indicators	Process Indicators	Results Indicators
1. Number of laws, legal systems and mechanisms in place and being implemented (traditional/ tribal/ state/national/ and international) for the recognition, protection, control, ownership, restoration and/or redress of violations of Indigenous Peoples'	1. Number of court cases and complaints filed to prevent and/or redress violations of Indigenous Peoples' rights to their collective knowledge systems and bio-cultural heritage (symbols, genetic resources, seeds and plants, including medicinal plants, etc.), to halt proposed	Number of Indigenous communities who practice food sovereignty through self-government structures and assertions of their rights using a variety of mechanisms.

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<p>collective knowledge systems and bio-cultural heritage, and other aspects of their right to food and food sovereignty.</p>	<p>non-sustainable development projects or to otherwise defend their food sovereignty; percent of those settled in favour of Indigenous Peoples.</p>	
<p>2. Number of public policies, institutions, treaties, agreements and laws in existence which respect and support Indigenous Peoples' rights to self-determination, free prior informed consent, autonomy, food sovereignty and right to subsistence at all levels; number/percent being effectively implemented and number being violated .</p>	<p>2. Number of consultations for program planning, implementation and evaluation with community members and representatives by states, outside agencies or other entities; Percentage of community members including elders/traditional subsistence practitioners/traditional food producers/knowledge holders/ users participating in and/or taking a leadership role these consultations and resulting activities and programs.</p>	<p>2. Number of development projects/proposals from outside Indigenous communities that respect and uphold the rights of free prior informed consent, self-determination and development as defined and assessed by impacted community members including traditional subsistence producers/users.</p>
<p>3. Number of ordinances and laws passed by Indigenous Peoples' own governing bodies and leadership institutions related to protection of food sovereignty, food producing lands, territories and resources; number of national/state/provincial laws and programmes (including those providing financial assistance to communities) that support and/or undermine the implementation of these tribal/Indigenous community ordinances and laws.</p>	<p>3. Number of programmes in Indigenous communities to inform and assist community members, leaders and practitioners to know their rights and available mechanisms/processes to assert these rights; Numbers of participants in these programmes (general and also specific to women, youth and elders).</p>	<p>3. Number of Indigenous community members, including community leaders, who understand the relationship between their rights to self determination and self government, their food sovereignty/food security and their community health and well being.</p>