

TARAPOTO PROCESS ON THE AMAZON FOREST'S SUSTAINABILITY CRITERIA AND INDICATORS

INTERNATIONAL EXPERT MEETING ON MONITORING, ASSESSMENT AND REPORTING ON THE PROGRESS TOWARD SUSTAINABLE FOREST MANAGEMENT

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I. BACKGROUND

In February 1995 the Member Countries of the Amazon Cooperation Treaty: (Bolivia, Brazil, Colombia, Ecuador, Guyana, Peru, Suriname and Venezuela), drafted the "Tarapoto Proposal" on the Amazon Forest's Sustainability Criteria and Indicators at a regional workshop held in Tarapoto - Peru.

Through this Proposal, the Amazon countries identified and defined 12 criteria and 77 indicators, grouped in three categories, which reflect the specific features of the region's ecosystems as well as their social and cultural factors.

- National level
- Management Unit level
- Services at global level

The main purpose of this regional effort, aimed at making environmental sustainability factors compatible with an efficient economic use of Amazon forests, constitutes a political commitment as well as a technical tool, which six months after developing the Proposal, was perfected through a process of National Consultations that allowed to evaluate and validate the applicability of the proposed indicators in each country.

II. NATIONAL CONSULTATIONS

2.1 General Objective

Assess the adequacy of the criteria and the indicators' applicability to measure Amazon forest sustainability.

2.2 Specific Objectives

- Initiate the validation process, injecting more dynamism to the ACT.
- Identify basic consensus on the indicators' applicability.
- Compile new proposals for indicators, modification of wording and elimination of indicators whenever these are considered inapplicable.
- Contribute to the analysis of sustainable forest development in each of ACT's Member Countries.
- Foster the development of a participatory forest concentration process.
- Contribute with new conceptual elements to national and regional discussions to design, formulate and adopt sustainable forest management criteria and indicators.

2.3 IMPORTANCE OF NATIONAL CONSULTATIONS

The ACT has politically prioritized the process of national consultations on the Tarapoto Proposal, with the purpose of attaining national consensus concerning the indicators' applicability based on the reality of each Member Country and harmonizing forest and environmental legislation and policy proposals. The National Consultations also served to identify institutional capacities and limitations within the public and private sectors, as well as the need to establish scientific and technical mechanisms and procedures for the collection, systematization and analysis of information required to make decisions.

The National Consultations also allowed to analyze the juridical and institutional framework to promote sustainable forest development, the need to establish adequate agreement and participation processes involving civil society and, finally, discussing the relevant elements of the Amazon forest's sustainability and the level of integration of various indicators to evaluate a criterion.

Between December 1996 and June 2000, the eight National Consultations were carried out, with the financial support of the Government of Finland and the technical support of FAO GCP/RLA/128/NET project to support the PTS - ACT.

Country	City	Date	Nº of Institutions	Nº of Participants
Colombia	Leticia	November 25, 1996	12	27

	Mocoa	December 2, 1996	10	22
	Florencia	December 2, 1996	15	34
	Bogotá	December 16, 1996	17	38
Ecuador	Quito	January 27 and 28, 1997	34	64
Peru	Iquitos	January 29 through 31, 1997	25	58
Bolivia	Cochabamba	June 17 through 19, 1997	32	51
Venezuela	Mérida	July 4, 1997	17	65
	Barquisimeto	July 11, 1997	14	59
	Ciudad Bolívar	July 18, 1997	18	66
	Caracas	July 28 through 30, 1997	15	54
Suriname	Paramaribo	February 11 and 12, 1999	25	51
Guyana	Georgetown	February 15 and 16, 1999.	35	53
Brasil	Belem	February 28 and 29, 2000	30	70
	Manaus	March 30 and 31, 2000	13	28
	Rio Branco	April 19 and 20, 2000	21	38
	Brasília	June 13, 2000	18	52
TOTAL			351	830

2.4. METHODOLOGY USED TO EVALUATE INDICATORS

At the National Consultations, the indicators of the Tarapoto Proposal were evaluated based on their applicability. Applicability refers to the feasibility of using an indicator to rate a criterion within the context of an Amazon country. Indicators may be qualitative, quantitative or descriptive. The analysis to evaluate applicability took into consideration the current or future availability of mechanisms and instruments to measure the indicator. Applicability must not consider the relative importance of an indicator in comparison with other indicators.

Some indicators will require improved wording for the sake of clarity, given that they should not give rise to several interpretations. In these cases it was recommended to eliminate the indicator or to draft new proposals.

At each national consultation a number of working groups were formed, which performed an analysis of the indicators' applicability based on the reality of each country. Each group was of a multidisciplinary nature with the participation of representatives of the different sectors that were invited to participate: State, universities, businessmen, research and development institutes, non-governmental organizations and independent professionals, among others.

The work methodology for the analysis and discussion of the indicators' applicability was implemented using evaluation cards. On a scale from 0 to 100, the following ratings were used:

Not applicable:	0 – 25
Little applicability:	26 – 50
Applicable:	51 – 75
Very applicable:	76 –100

To rate the applicability of each indicator the country's socioeconomic, ecological, technological and political reality was taken into consideration, as well as institutional capacity at the public and private level.

2.5. RESULTS OF THE NATIONAL CONSULTATIONS

Of the 77 indicators proposed at the I Tarapoto Meeting, the Amazon countries that carried out the National Consultations conferred the highest applicability ratings (Very Applicable, in the 75-100 range) to a total of 15 indicators.

SUMMARY

	CRITERION Nº	INDICATOR
CRITERIA AT THE NATIONAL LEVEL	2. Policies and Juridical and Institutional Framework for Sustainable Forest Development	b. Policies and juridical framework for environmental organization through ecological-economic zoning.
	4. Conservation of Forest Cover and Biodiversity	a. Extension of areas according to the type of forests included in conservation area categories in relation to the total forest area.
		f. Conversion rate of cover forest for other purposes.
	6. Science and Technology for Sustainable Forest Development	a. Quantity and quality of adequate technologies for sustainable management and production
		c. Investment in research, education and technology transfer.
		d. Quantity and quality of research and sustainable development projects under execution.
CRITERIA AT THE MANAGEMENT UNIT LEVEL	8. Juridical and institutional framework	a. Forest management plan approved by the competent authority.
		b. Periodicity of evaluation of management plan compliance and average compliance percentage
	9. Sustainable Forest Production	e. Level of utilization of environmentally healthy technologies.
	10. Conservation of Forest Ecosystems	a. Proportion of environmental protection areas in comparison with areas destined to permanent production.
		f. Measures to protect watercourses for forest activities.
SERVICES AT GLOBAL LEVEL	12. Economic, Social and Environmental Services of the Amazon Forest	b. Contribute to global carbon balance.
		d. Contribute to the conservation of biodiversity.
		f. Contribute to maintain the values and cultural diversity and knowledge of indigenous and local populations.
		g. Contribute to the economy, culture, science and recreation.

III. TARAPOTO PROCESS

Once the National Consultations concluded in the respective Member Countries, the Pro Tempore Secretariat of the ACT, prepared a consolidated report of the National Consultations on the Amazon Forest's Sustainability Criteria and Indicators, which served as the basis for the discussions and adoption of decisions at the Second Regional Meeting on Sustainability Criteria and Indicators. The report contained a consolidated and comparative analysis of the National Consultations carried out between December 1996 and June 2000.

The II Regional Meeting on the Amazon Forest's Sustainability Criteria and Indicators was held in the city of Tarapoto- Peru, in June 2001, with the participation of delegates from eight Member Countries of the Amazon Cooperation Treaty and the following main topics were discussed:

- Agreement on selected indicators;
- Presentation of proposal for a regional validation project for Selected Indicators;
- Definition of future policies and strategies concerning the Amazon Forest's Sustainability Criteria and Indicators;
- Approval of initiation of the Tarapoto Process.

The work methodology adopted comprised consideration of the indicators' level of consensus and applicability.

**LEVEL OF CONSENSUS AND APPLICABILITY OF THE AMAZON
FOREST'S SUSTAINABILITY INDICATORS,
ATTAINED AT THE SECOND REGIONAL MEETING**

LEVEL OF CONSENSUS	APPLICABILITY	Nº OF INDICATORS
With consensus	Very applicable	15
	Applicable	18
	Subtotal	33
Without consensus	Very applicable	3
	Applicable	1
	Not analyzed due to absence of consensus at National Consultations	33
	Subtotal	37
Eliminated		7
	TOTAL	77

SELECTED PRIORITY 1 INDICATORS: VERY APPLICABLE WITH CONSENSUS FOR PRIORITY VALIDATION (15)

Criterion 2. Policies and juridical and institutional framework for Sustainable Forest Development

1. b) Policies and a juridical framework for environmental organization, through ecological-economic zoning.

Criterion 4. Conservation of cover forest and biodiversity

2. a) Extension of areas according to the type of forests in conservation area categories in comparison with the total forest area.
3. f) Conversion rate of cover forest for other purposes.

Criterion 6. Science and technology for sustainable forest development

- 4. a) Quantity and quality of adequate technologies for sustainable management and production
- 5. c) Investment in research, education and technology transfer.
- 6. d) Quantity and quality of research and sustainable development projects currently under execution.

Criterion 8. Juridical and institutional framework

- 7. a) Forest management plan approved by competent authority.
- 8. b) Periodicity of evaluation of management plan compliance and average compliance percentage

Criterion 9. Sustainable forest production

- 9. e) Level of utilization of environmentally healthy technologies.

Criterion 10. Conservation of forest ecosystems

- 10. a) Proportion of environmental protection areas in comparison with the areas destined to permanent production.-
- 11. f) Measures to protect watercourses for forest activities.

Criterion 11. Local socioeconomic benefits

- 12. e) Number of direct and indirect jobs and level of income.

Criterion 12. Economic, social and environmental services of the Amazon forest

- 13. d) Contribute to world carbon balance.
- 14. f) Contribute to maintain, the cultural values, and diversity of the indigenous and local populations.
- 15. g) Contribute to the economy, health, culture, science and recreation.

These 15 indicators will be validated through a regional project.

SELECTED PRIORITY 2 INDICATORS: APPLICABLE WITH CONSENSUS THAT COULD BE VALIDATED AT A SECOND STAGE (18)

Criterion 1. Socioeconomic benefits

1.2 Investment and economic growth indicators in the forest sector

1. d) Growth rate of sustainable recreation and tourism activities.

1.3 Indicators of cultural, social and spiritual needs and values

2. a) Area and percentage of managed forest areas to protect cultural, social and spiritual needs and values in comparison to total forest area.

Criterion 2. Policies and juridical and institutional framework for sustainable forest development

3. a) Appropriate political, and juridical framework to stimulate sustainable development in a concerted effort among the different governmental and non governmental levels.

Criterion 4. Conservation of forest cover and biodiversity

4. e) Natural regeneration rates, species composition and survival.

Criterion 5. Integral conservation and management of water and soil resources

5. a) Soil conservation measures

Criterion 6. Science and technology for sustainable forest development

6. b) Level of reclaim or recover and use of autochthonous technologies.
7. f) Level of access to technology and information for different social segments.

Criterion 7. Institutional capacity to foster sustainable Amazon development

8. a) Quantity and quality of institutions and their intersectoral and interinstitutional, coordination.
9. b) Existence of plans and their implementation level.

10.d) Civil society's effective participation level (academic institutions, grassroots organizations, NGOs, union companies).

Criterion 9. Sustainable forest production

11.b) Area and percentage of forests soils that suffered an intervention with significant alteration of their physical-chemical properties and erosion.

Criterion 10. Conservation of forest ecosystems

12.b) Measures for the sustainable protection, reclaim or recover and use of wild populations of endangered species.

13.c) Area and percentage of forests affected by different natural processes or agents (plagues, diseases and fire, among others) and as a result of anthropic action.

14.d) Regeneration rates and structural of forest ecosystems.

15.e) Soil conservation, measures.

Criterion 11. Local socioeconomic benefits

16.d) Impact of economic use of forest on the availability of significant forest resources to local populations.

17.f) Nature, and amount of benefits resulting from forest management.

18.i) Consultation mechanisms and effective participation of the local communities in forest resources management depending on management scale.

VERY APPLICABLE INDICATORS THAT ARE LIKELY TO ATTAIN CONSENSUS (3)

Criterion 4. Conservation of forest cover and biodiversity

1. b) Measures for '*in situ*', conservation of endangered species.

Criterion 9. Sustainable forest production

2. a) Annual exploitation of timber yielding and non-timber yielding products compatible with the resource's sustainable capacity.

3. d) Level of production diversification.

APPLICABLE INDICATOR LIKELY TO ATTAIN CONSENSUS (1)

Criterion 12. Economic, social and environmental services of the Amazon forest

1. a) Contribute to satisfy the world demand of sustainable timber yielding forest products.

APPLICABLE INDICATORS THAT WERE NOT ANALYZED DUE TO THE ABSENCE OF CONSENSUS AT THE NATIONAL CONSULTATIONS (33)
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Criterion 1. SOCIOECONOMIC BENEFITS

1.1. Income, production and consumption indicators

1. a) Economic profitability of sustainable forest management and use.
2. b) Sustainable production, consumption and collection of forest products.
3. c) Value of sustainable and non-sustainable forest products as a percentage of Gross Domestic Product.
4. d) Jobs and direct and indirect revenues from sustainable activities within the forest sector and generation of forest management jobs in comparison with the national total.
5. e) Average *per capita* income from different activities within the forest sector.

1.2 Investment and economic growth indicators in the forest sector

6. a) Share of annual investments in plantations and sustainable management and conservation in comparison with total investments in the forest sector.
7. b) Level of value added in sustainable forest production.
8. c) Rates of return from investments in different economic activities within the sustainable forest sector, in comparison with other sectors of the economy considering all the costs and benefits.

1.3 Indicators of cultural, social and spiritual needs and values

9. a) Area and percentage of managed forest areas to protect cultural, social and spiritual needs and values in comparison to total forest areas.
10. c) Level of participation of local populations in management activities and benefits generated by forest activities.
11. d) Development of productive alternatives for illegal crops and mining activities.

Criterion 2. POLICIES AND JURIDICAL AND INSTITUTIONAL FRAMEWORK FOR SUSTAINABLE FOREST DEVELOPMENT

Indicators

- 12. c) Implementation capacity of international instruments to which the country is a party.
- 13. d) Harmonization and implementation of legislation in effect in the country.

Criterion 3. SUSTAINABLE FOREST PRODUCTION

Indicators

- 14. a) Extension and proportion of forestlands and forests dedicated to sustainable production in comparison with the total area destined to permanent production.
- 15. b) Quantity and proportion of sustainable forest production in comparison with the national total
- 16. c) Quantity and proportion of sustainable productive units according to their size in comparison with the national total.
- 17. d) Area and percentage of forestlands managed for recreation and tourism in comparison to the total forest area.

Criterion 4. CONSERVATION OF FOREST COVER AND BIODIVERSITY

Indicators

- 18. c) Measures to preserve genetic resources.
- 19. d) Area and percentage of forests affected by different processes or agents (plagues, diseases, fire or floods, among others)
- 20. h) Impact of activities of other sectors on the conservation of forest ecosystems (mining, agriculture, energy, infrastructure, etc.).

Criterion 5. INTEGRAL CONSERVATION AND MANAGEMENT OF LAND AND WATER RESOURCES

Indicators

- 21. d) Effects of forest conservation on the integral management of water resources

Criterion 6. SCIENCE AND TECHNOLOGY FOR SUSTAINABLE FOREST DEVELOPMENT

Indicators

- 22. e) Remuneration mechanisms for traditional knowledge.

Criterion 7. INSTITUTIONAL CAPACITY TO FOSTER SUSTAINABLE AMAZON DEVELOPMENT

Indicators

23. c) Quantity and quality of education and research programs.

Criterion 8. JURIDICAL AND INSTITUTIONAL FRAMEWORK

Indicators

24. c) Juridical framework that guarantees long-term stability of forest investments.

Criterion 9. SUSTAINABLE FOREST PRODUCTION

Indicators

25. c) Effectiveness of management and control systems.

Criterion 11. LOCAL SOCIOECONOMIC BENEFITS

Indicators

26. a) Quality of life of local populations.

27. b) Profitability and rate of return of forest management.

28. c) Efficiency of production systems and transformation of forest products

29. g) Annual quantity of products used per hectare

30. h) Production's value added

Criterion 12. ECONOMIC, SOCIAL AND ENVIRONMENTAL SERVICES OF THE AMAZON FOREST

Indicators

31. b) Contribute to global carbon balance.

32. c) Contribute to global water cycle.

33. e) Contribute to balance and radiation regulation

ELIMINATED INDICATORS (7)

Due to their low applicability and absence of consensus:

Criterion 1. SOCIOECONOMIC BENEFITS

1.1 Income, production and consumption indicators

1. f) Efficiency and competitiveness of production and transformation systems for forest products.
2. g) Impact of the economic exploitation of forests on the availability of important forest resources for local population
3. h) Relationship between the direct and indirect use of forests.

Criterion 4. CONSERVATION OF COVER FOREST AND BIODIVERSITY

Indicator

4. g) Areas and percentage of forestlands with fundamental ecological changes

Criterion 5. INTEGRAL CONSERVATION AND MANAGEMENT OF LAND AND WATER RESOURCES

Indicators

5. c) Percentage of water bodies in forest areas in comparison with the historical variability and maintenance ratio between forests and hydrobiological resources

Because the same concept is expressed in indicator 9d, at the management unit level:

Criterion 3. SUSTAINABLE FOREST PRODUCTION

Indicator

6. e) Level of diversification of sustainable forest production.

Due to the imprecise original wording

Criterion 5. INTEGRAL CONSERVATION AND MANAGEMENT OF LAND AND WATER RESOURCES

Indicators

7. b) Areas and percentage of forestlands managed for environmental protection purposes.

IV. FUTURE TASKS OF THE TARAPOTO PROCESS

The II Regional Meeting held in Tarapoto suggested that the *Pro Tempore* Secretariat, in consultation with the Member Countries, identify the most adequate mechanisms and procedures for technical validation, through the measurement, rating or characterization of the selected indicators.

The Member Countries of the Amazon Cooperation Treaty agreed to implement a regional validation project, characterized as a research and development project, which convenes the active participation of all the actors in the forest sector, with the purpose of launching the **Tarapoto Process**, whose components include the following, among others:

1. Definition of conceptual framework and specific objectives.
2. Development of indicator validation methodologies.
3. Selection and prioritization of areas or sub-regions where the validation of indicators will be carried out.
4. Validation of selected indicators.
5. Dissemination and promotion of validated indicators for application and monitoring in the Region.

V. CONCLUSIONS

Taking into account the important progress registered in the analysis of the Tarapoto Proposal and the consensus attained with respect to the indicators selected at the Second Regional Meeting, the delegations agreed to initiate the **Tarapoto Process**, and suggested that this Process be included in the agenda of the next meeting of the Special Environmental Commission of the Amazon Region (CEMAA), with the aim of examining it and submitting it for ratification.

Additionally, they decided to prepare a Technical Document that would furnish the elements to support the launching of the **Tarapoto Process** by the Member Countries of the Amazon Cooperation Treaty.

As of the launching of the Tarapoto Process, each government may have at its disposal, at the management unit level, a useful tool to define and apply forest and environmental policies in its Amazon territory and simultaneously promote sustainable forest management, territorial organization and the active participation of different groups of stakeholders. Moreover, it allows to integrate the set of data for decision making and constitutes an instrument to evaluate the

trends and changes in forest conditions within a country's economic, social and political context.

At the regional level it represents an important forest and environmental policy harmonization effort in the Amazon forest, based on a political commitment to sustainable development, the improvement of the population's quality of life, the conservation of biodiversity and participation in the production of goods and services within a globalized economy.

At the global level, due to the Amazon Region's worldwide importance, it constitutes a tool that will allow to improve the negotiation capacity at the international level. The Amazon forest contributes to the world with economic, social and environmental services, underscoring among others, forest production, global carbon balance, global water cycle, conservation of biodiversity and the values and cultural diversity of indigenous and local populations.

The Tarapoto Process is part of the international forest agenda, and it has created expectations worldwide, therefore it is necessary to consolidate this process and continue developing it through permanent political and technical consultations at the national and regional level.

The financial support of the Governments of Finland and the Netherlands, as well as FAO's technical support, have been important factors that contributed to the its progress.