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SESSION 3.0
Sustainable Forest Management (SFM)

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LEARNING OBJECTIVE

By the end of this session, participants will be able to explain the Sustainable Forest Management and its factors, evaluate sustainability in forestry in accordance to the relevant criteria and indicators and identifying the un-sustainable forest management practice.

DEFINITIONS OF SFM

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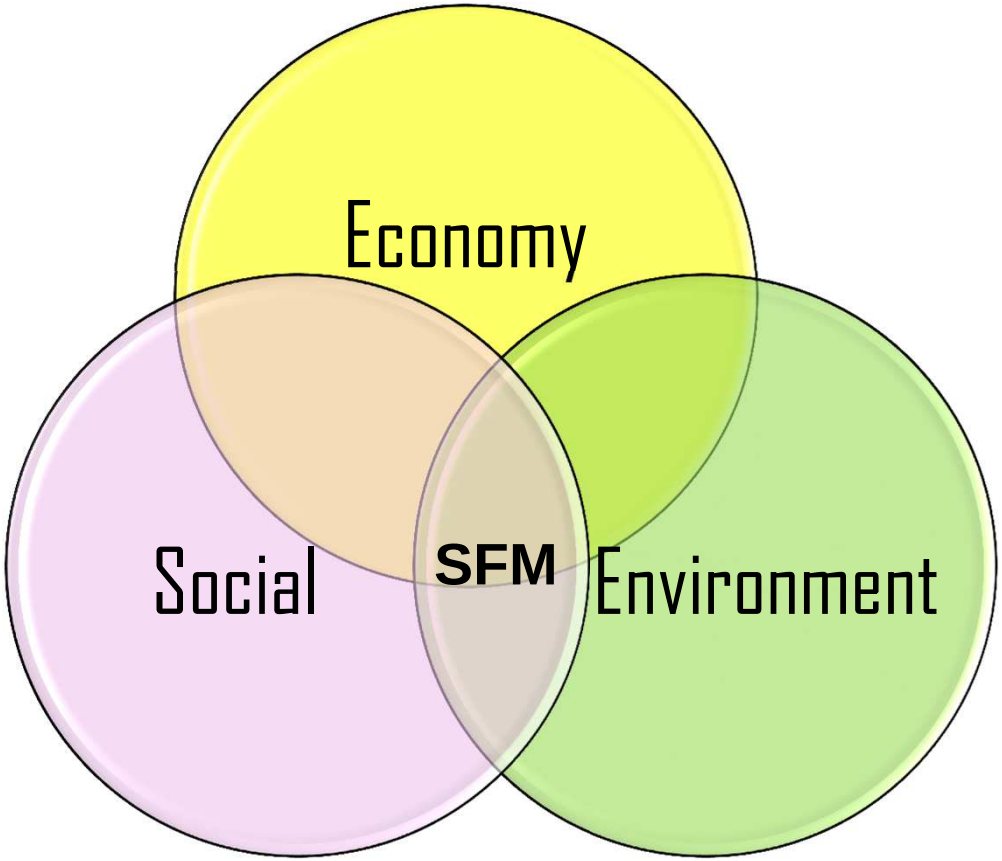
Sustainable Forest Management (SFM)

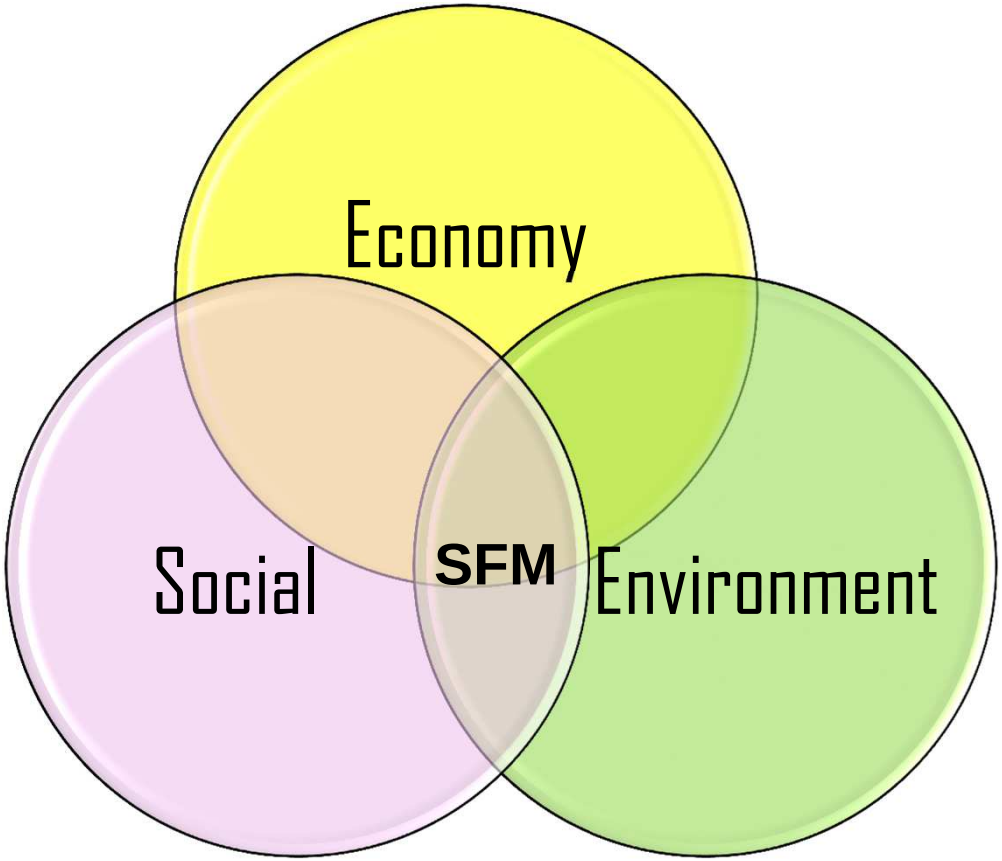
the process of managing forests ensuring goods and services derived from forest meet current needs while at the same time securing their continious availability and contribution to long-term development.

CHARACTERISTICS OF SFM



Sustainable forest management mediates a range of economic, social and environment concerns that underpin for the continuity of forests' utilization and optimal exploitation on its natural resources.

CHARACTERISTICS OF SFM



Characteristics of SFM can be divided into 7 main groups:

1. Extent of forest resources;
2. Biological diversity;
3. Forest health and vitality;
4. Productive function of forest resources;
5. Protective function of forest resources;
6. Socio-economic functions;
7. Legal policy and institutional framework.

CHARACTERISTICS OF SFM

1. Extent of forest resources

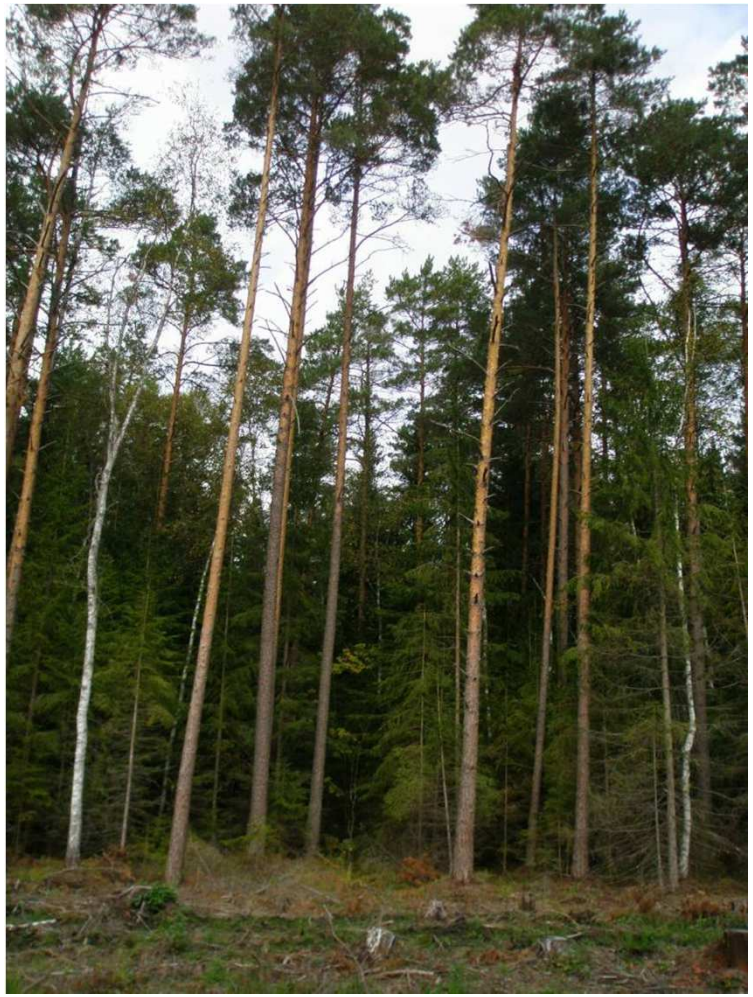
The theme expresses an overall desire to have significant forest coverage to support the social, economic and environmental dimensions of forestry. The existence and extent of specific forest types are important as a basis for conservation efforts. This theme aims to reduce deforestation and rehabilitate degraded forest landscapes.

CHARACTERISTICS OF SFM

2. Biological diversity

Biological diversity is concerned with the conservation and management of biodiversity at ecosystem, landscape, species and genetic levels. Such conservation includes protecting areas with fragile ecosystems, conserving habitats of endangered species and therefore maintaining diversity of life, and providing connectivity between protected areas (to avoid fragmentation and isolation of populations) to keep ecosystems viable.

CHARACTERISTICS OF SFM



3. Forest health and vitality

Forests need to be managed to mitigate the risks and minimize the impacts of unwanted disturbances, including wildfires, airborne pollution, storm felling, invasive species, pests, diseases and insects. Such disturbances may affect social, economic as well as environmental dimensions of forestry.

CHARACTERISTICS OF SFM

4. Productive functions of forest resources

Forests and trees outside forests provide a wide range of wood and non-wood forest products. This theme covers the objective of maintaining a high and valuable supply of primary forest products, while at the same time ensuring that production and harvesting are sustainable.

CHARACTERISTICS OF SFM

5. Protective functions of forest resources

The theme delivers the role of forests to help moderate soil, hydrological and aquatic systems. This includes maintaining clean water, including healthy fish populations, as well as minimizing the risks and impacts associated with floods, avalanches, erosion and droughts. Protective functions of forest resources also contribute to ecosystem conservation efforts.

CHARACTERISTICS OF SFM

6. Socio-economic functions

Forest resources contribute to the overall economy, for example through employment, processing and marketing of forest products and energy, and trade, and investments in the forest sector. The theme also addresses the important functions of forest to host and protect sites and landscapes that have high cultural, spiritual or recreational values. Thus it includes aspects of land tenure, indigenous and community management systems, and traditional knowledge.

CHARACTERISTICS OF SFM

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7. Legal, policy and institutional framework

Legal, policy and institutional arrangements are necessary to support the previous 6 themes, including participatory decision making, governance and law enforcement, and monitoring and assessment of progress.

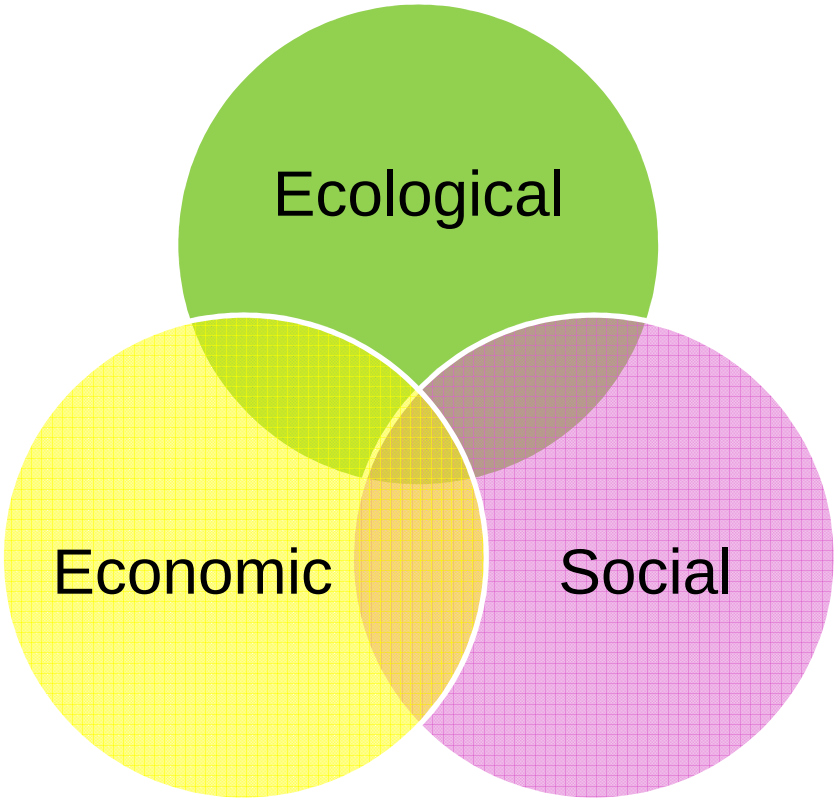
It also embraces broader societal aspects; including fair and equitable use of forest resources, science research and education, infrastructure arrangements to support the forest sector, transfer of technology and capacity building, and public information and communication.

THE BENEFITS OF SFM

What would be the benefit of SFM??

THE BENEFITS OF SFM

3 elements of forest sustainability :



THE BENEFITS OF SFM

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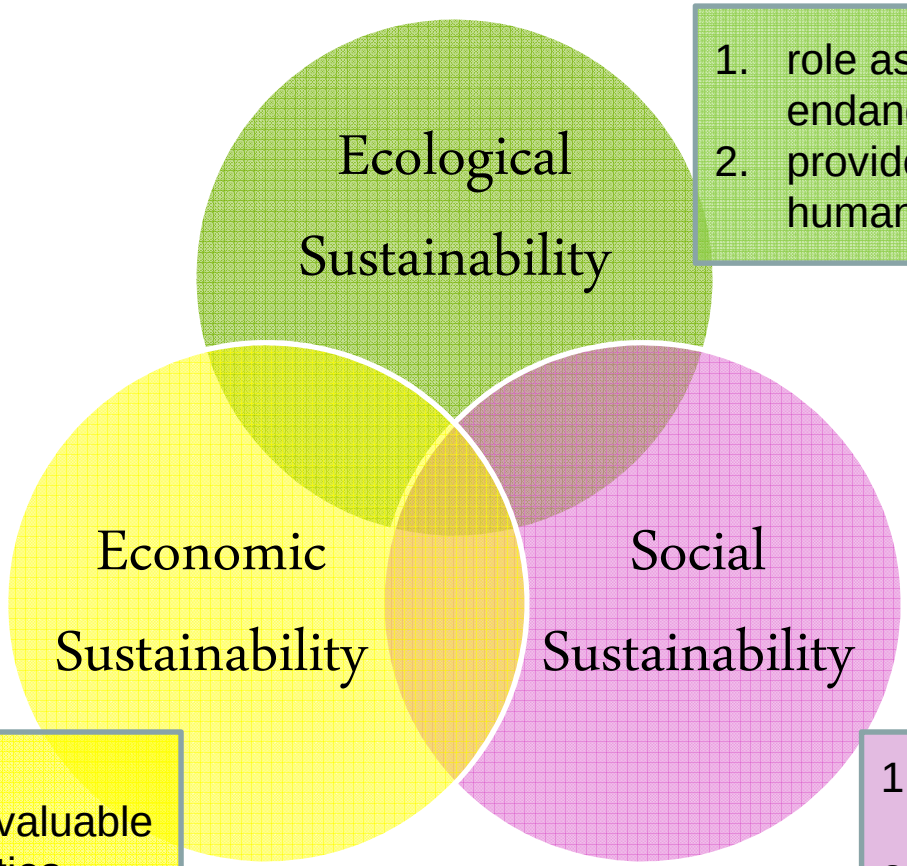

1. role as havens for wildlife and endangered plants and animals
2. provide shade for animals and humans

Forest products are valuable export commodities.

1. role in protecting the environment
2. role in recreation, tourism (ecotourism)

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KEY PLAYERS

What roles they have and how can SAI use them?

RESULTS OF UNSUSTAINABLE FOREST MANAGEMENT

Estonian example:
The NAOE has found that the State Forest Management Centre (managing 38% of Estonian forests) is carrying out felling on prime state forests – old trees on fertile soils – at a rate faster than such forest can regenerate.

This reduces the chance of future generations being able to manage state forests as profitably as is currently being done, since the best trees at the right age for felling will, at some point, simply run out.

RESULTS OF UNSUSTAINABLE FOREST MANAGEMENT

Estonian example:
The NAOE also showed that it would be impossible to sustain the forest ecosystem, if the present rate of felling continues.

The aging of protected forests cannot make up for the reduction in the area of fertile old stands in managed forests, regardless of the fact that the total area of strictly protected forest land increased markedly at the turn of the century and in the first half of the last decade.

RESULTS OF UNSUSTAINABLE FOREST MANAGEMENT

Please name results of or risks connected with unsustainable forest management?

MAJOR RISK TO FOREST

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1. Logging risk
2. Industry growth risk
3. Biodiversity lost risk

RISKS RELATED TO SFM

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Biodiversity and ecosystem lost

Forest fire

Illegal logging

Illegal use of land

Disasters

Conflict

RISKS RELATED TO SFM

Revenue loss

Livelihood loss

Social problems

Decreased carbon storage

Reduced water quality

Shortage of raw materials for industry

HOW TO EVALUATE SUSTAINABILITY IN FORESTRY

The specific toolset developed to describe and help monitor progress (or lack of it) towards SFM, in particular at the national level, is called **Criteria and Indicators (C&I)**.

The development of this tool within regional country-driven initiatives started in1992 prior to United Nations Conference on Environment and Development (UNCED), by the International Tropical Timber Organization (ITTO) to demonstrate members' commitment to achieve sustainable management of tropical forests. It has since spread world-wide.

Criteria and Indicators (C&I)

The specific toolset developed to describe and help monitor SFM

HOW TO EVALUATE SUSTAINABILITY IN FORESTRY

Since 1992 several eco-regional forestry processes have been established for the development and implementation of C&I:

Temperate and boreal forests

- Pan-European Process (1993/1998)
- Montreal Process (1994)

Arid zone forests

- Dry-Zone Africa Process (1995)
- Near East Process (1996)
- Regional Initiative for Dry Forests in Asia (1999)

Tropical moist forests

- ITTO (1992)
- African Timber Organization (1993)
- Tarapoto Proposal (1995)
- Lepaterique Process of Central America (1997)

HOW TO EVALUATE SUSTAINABILITY IN FORESTRY

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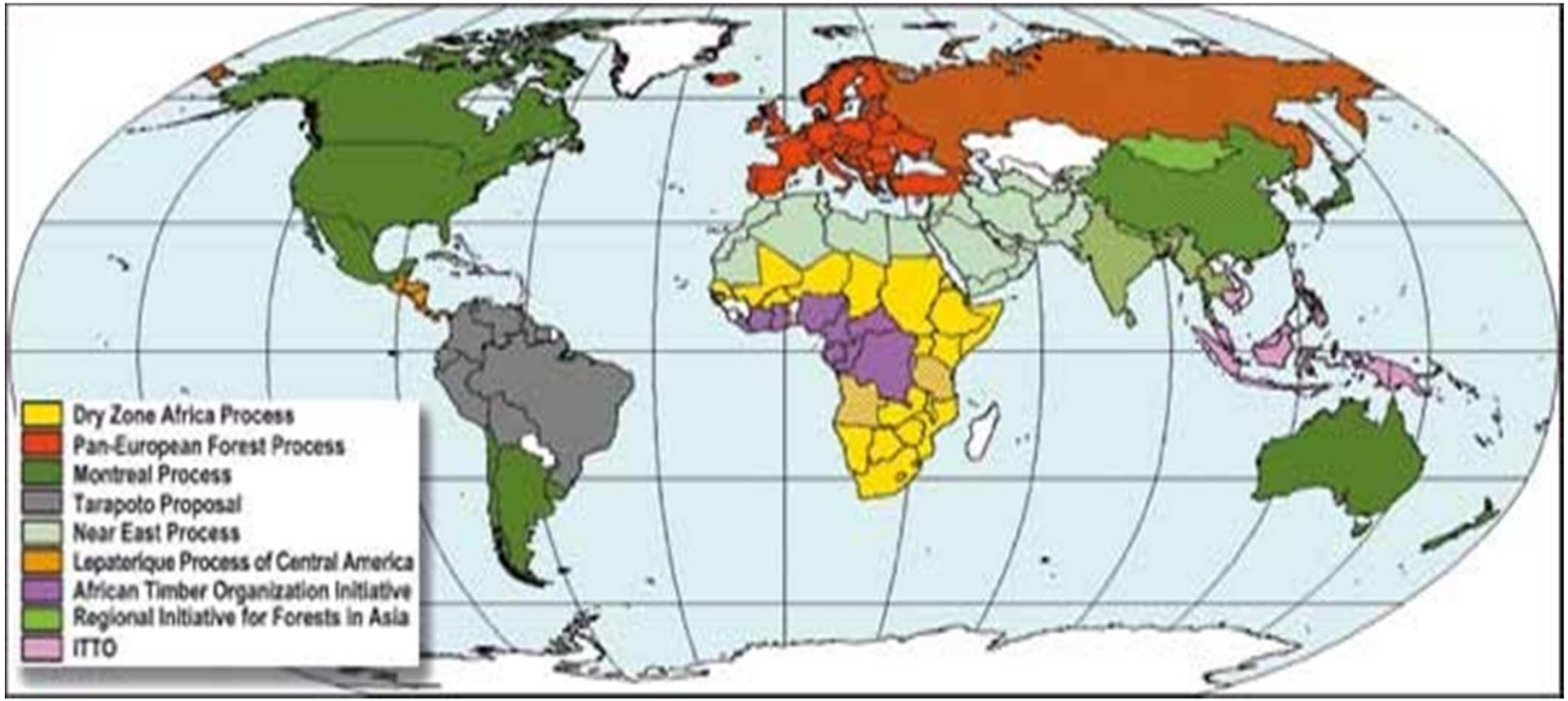

HOW TO EVALUATE SUSTAINABILITY IN FORESTRY

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Some of the regionally based processes cover also other forest types in the region. Several countries are member of more than one process.

Temperate and boreal forests

Pan-European Process

- **Signatory Countries (41):** Albania, Austria, Belarus, Belgium, Bosnia-Herzegovina, Bulgaria, Croatia, Czech Republic, Denmark, Estonia, European Community, Finland, France, Georgia, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Liechtenstein, Lithuania, Luxembourg, Monaco, Netherlands, Norway, Poland, Portugal, Romania, Russian Federation, Slovak Republic, San Marino, Slovenia, Spain, Sweden, Switzerland, Turkey, Ukraine, United Kingdom and Yugoslavia.

Montreal Process

- **Member Countries (12):** Argentina, Australia, Canada, Chile, **China**, Japan, Republic of Korea, Mexico, New Zealand, Russian Federation, Uruguay and USA.

HOW TO EVALUATE SUSTAINABILITY IN FORESTRY

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Some of the regionally based processes cover also other forest types in the region. Several countries are member of more than one process.

Arid zone forests

Dry-Zone Africa Process

- **Member Countries (30):** Burkina Faso, Cape Verde, Chad, Gambia, Guinea Bissau, Mali, Mauritania, Niger, Senegal, Djibouti, Eritrea, Ethiopia, **Kenya**, Somalia, Sudan, **Uganda**, Angola, **Botswana**, Democratic Republic of Congo, **Lesotho**, Malawi, Mauritius, Mozambique, Namibia, Seychelles, South Africa, Swaziland, **Tanzania**, **Zambia**, **Zimbabwe**

Near East Process

- **Member Countries (30):** Afghanistan, Algeria, Azerbeijan, Bahrain, Cyprus, Djibouti, Egypt, Islamic Republic of Iran, Iraq, Jordan, Kuwait, Kyrgyz Republic, Lebanon, Libya, Malta, Mauritania, Morocco, Oman, Pakistan, Qatar, Kingdom of Saudi Arabia, Somalia, Sudan, Syria, Tadjikistan, Tunisia, Turkey, Turkmenistan, United Arab Emirates, Yemen

Regional Initiative for Dry Forests in Asia

- **Member Countries (9):** **Bangladesh**, **Bhutan**, **China**, India, Mongolia, Myanmar, **Nepal**, Sri Lanka, **Thailand**

HOW TO EVALUATE SUSTAINABILITY IN FORESTRY

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Some of the regionally based processes cover also other forest types in the region. Several countries are member of more than one process.

Tropical moist forests

ITTO

- **Member countries (55):** Australia, Austria, Belgium/Luxembourg, Bolivia, Brazil, Cambodia, Cameroon, Canada, Central African Republic, **China**, Colombia, Cote-d'Ivoire, Democratic Republic of Congo, Denmark, Ecuador, Egypt, European Union, Fiji, Finland, France, Gabon, Germany, Ghana, Greece, Guyana, Honduras, India, **Indonesia**, Ireland, Italy, Japan, Liberia, **Malaysia**, Myanmar, **Nepal**, The Netherlands, New Zealand, Norway, Panama, Papua New Guinea, Peru, Philippines, Republic of Congo, Republic of Korea, Spain, Suriname, Sweden, Switzerland, **Thailand**, Togo, United Kingdom, Unites States of America, Venezuela

African Timber Organization

- **Member Countries (13):** Angola, Cameroon, Central African Republic, Congo, Cote-d'Ivoire, Democratic Republic of Congo, Equatorial Guinea, Gabon, Ghana, Liberia, Nigeria, Sao Tome et Principe, **Tanzania**

Tarapoto Proposal

- **Member Countries (8):** Bolivia, Brazil, Colombia, Ecuador, Guyana, Peru, Suriname, Venezuela

Lepaterique Process of Central America

- **Member countries (7)**: **Belize**, Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, Panama

HOW TO EVALUATE SUSTAINABILITY IN FORESTRY

- All these regionally based processes have their own set of Criteria and Indicators (C&I). Even some criteria and indicators can be different, the basic idea is similar – to describe/measure:
  - *Policy and Legislation,*
  - *Forest Management ,and*
  - *Socio-Economic, Financial and Cultural Aspects.*
- All governments of member countries must regularly prepare reports about fulfilling the C&I.
- Auditors can use same C&I from the relevant Process to evaluate present situation (and therefore governments estimations). Also auditors can compare governments reports from different years to describe changes in forestry and based in that to evaluate sustainability.

HOW TO EVALUATE SUSTAINABILITY IN FORESTRY

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- Even though there are different C&I among the country, it doesn't mean that one C&I is better than others.
- And even there are only one process, where country is a member, there is no important and unimportant criteria.
- It depends on country's present situation, which criteria are more relevant (based on risk assessment).

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SUMMARY

- *What are the main characteristics of the SFM?*
- *How to evaluate SFM in your country?*