**Online consultation on the development of a Global Core Set (GCS) of forest-related indicators**

**Collection of contributions received**

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# Topic note

Forests play a vital role in food security and nutrition, providing food and livelihoods to many of the poorest people on earth as well as environmental services that are crucial for agricultural production ([State of the World’s Forests 2016](http://www.fao.org/publications/sofo/2016/en/), chapter 4, provides more detail). For this reason, the [Collaborative Partnership on Forests](http://www.cpfweb.org/en/)(CPF) is partnering with the FSN Forum to host an online consultation on the development of a [**global core set of forest-related indicators**](http://www.cpfweb.org/45807-055c9f7b6468ead398fb71e110c3becd.pdf), for use not only in the forest sector, but also in a broader context.

Indicators are used to measure progress towards policy goals. In recent years, the international community has articulated many goals related to forests, in the broader development context (the Millennium Development Goals and the Sustainable Development Goals both refer several times to forests), in the context of the Rio conventions, and in instruments focused on the forest sector, notably the UN Forest Instrument and the UN Strategic Plan for Forests. There is a strong commitment by all parts of the international community to provide the information necessary for monitoring progress towards all these targets in a comprehensive, efficient, timely and meaningful way.

However, there has not, so far, been a close coordination of the different forest-related indicators used by these various processes. This has contributed to unclear messages, and an unnecessarily high reporting burden.

To remedy this problem, a number of agencies with responsibilities for forest-related issues have been working to develop a [**global core set of forest-related indicators**](http://www.cpfweb.org/45807-055c9f7b6468ead398fb71e110c3becd.pdf), with the aim of simplifying and harmonising concepts and terminology, on a voluntary basis, while respecting the needs of all potential users. The ultimate outcome should be a clearer, more comprehensive picture of trends and a significant reduction in reporting burden. Following a number of informal meetings, an international expert workshop in Ottawa, and an organisation-led initiative (OLI) in Rome, a task force under the Collaborative Partnership on Forests is drawing up a proposal for a [**global core set of forest-related indicators**](http://www.cpfweb.org/45807-055c9f7b6468ead398fb71e110c3becd.pdf). We are now organising this online consultation so that the final set can benefit from the views of a wide range of experts and stakeholders. The results of the on-line consultation will be analysed at an Expert Consultation to be held in June 2017, and will be taken into account when the global core set is finalized.

The [**Global Core Set of forest-related indicators**](http://www.cpfweb.org/45807-055c9f7b6468ead398fb71e110c3becd.pdf) is intended to contribute to the following purposes:

1. To measure progress towards sustainable forest management (including SDG 15.2.1).
2. To measure progress in implementing the UN Forest Instrument and the UN Strategic Plan for Forests, notably the Global Objectives on Forests, and their associated targets.
3. To measure progress towards SDG targets other than 15.2.1, as well as internationally agreed goals on forests in other instruments notably through meeting the forest-related reporting needs of the Rio conventions.

We would like your comments to have the biggest impact possible. We would therefore appreciate it if you could share them with us by 14 May so that we can present them at the Expert Consultation.

When making your comments, please bear the following in mind:

* The Global Core Set as a whole should be comprehensive, balanced and short (preferably less than 15 indicators).
* The significance of each indicator should be immediately understandable from its title.
* A true indicator should be defined, not just an area of interest.
* There should be reason to believe that reliable data on the indicators will be available in the short term for most countries in the world.
* The focus is on indicators whose development can be influenced by policy makers, not on context or descriptive indicators, which cannot be changed in the short or medium term.

To be useful, the indicators should be defined in “scale-neutral” terms, such as ratios or rates of change.  Absolute areas or volumes will of course be needed, but they are not “indicators” unless they are put into a context, and given a meaning. The online consultation is not concerned with data reporting or quality, as that is the responsibility of the various agencies, each with its own mandate.  Therefore, please focus on the issue of which indicators should be included in the global core set, and how the indicators should be formulated.

The Global Core Set is a work in progress.  A short version of the set, as of April 2017, after input from the CPF Task Force, is set out below.

[**Click here to access the global core set of forest-related indicators**](http://www.cpfweb.org/45807-055c9f7b6468ead398fb71e110c3becd.pdf)

Please feel free to comment on any aspect of the global core set of forest-related indicators, however, it will help analysis if you focus on the following questions:

1. **Is the global core set, as it stands in April 2017, sufficiently comprehensive, balanced and short to achieve its stated objectives?**
2. **If not, how should it be changed:**

* **Additional indicators? Please specify.**
* **Deletion of indicators? Please specify.**
* **Modification/reformulation of indicators? Please specify.**

1. **In particular, please provide suggestions for development of the indicators marked YELLOW – further work needed.**

FAO and its partners in the CPF Task Force take this opportunity to thank all those who will contribute to this exercise.

Kit Prins, facilitator of the online consultation

**Global Core Set of forest-related indicators: input to online consultation**.

Set out below is the global core set, as proposed by the OLI, with the suggestions of the Task Force, and including the colour coding: GREEN: placed in core set by OLI, YELLOW: further work needed, RED: remove from core set.

|  |  |  |  |
| --- | --- | --- | --- |
| **#** | **Current proposal by Task Force** | **Initial proposal by OLI meeting** | **Comments from TF meeting** |
| **1** | **Forest area as proportion of total land area** | **Forest area net change rate (%/per year)** | **Modified** from "Forest area net change rate (%/year) as the net change rate can be computed using forest area as proportion of land area (land area reference year 2015). The proposed indicator name corresponds to the SDG 15.1 wording. No factual change. |
| **2** | **Forest area within protected areas** | **Proportion of forest area located within legally established protected areas (%)** | **Modified.** The term "legally established" dropped to avoid confusion and the indicator changed from proportion to total area. The protected areas should follow the definition of IUCN/CBD. If possible, the reporting should be broken down by IUCN categories. The proportion of forest area located within protected areas can be calculated. Efforts be made to maintain consistency with SDG indicator terminology. |
| **3** | **Above-ground biomass stock in forest** | **Above-ground biomass stock in forest (tonnes/ha)** | **Modified**. Suggest reporting in tonnes instead of tonnes/ha as the latter can be derived. Overharvesting/degradation/damage will result in reduced biomass/ha. In some cases increased biomass/ha may be negative (increased fuel load for fires) |
| **4** | **Forest area designated and managed for protection of soil and water** | **(a) Mountain Green Cover Index**    **Or**  **(b) Forest area designated and managed for protection of soil and water** | **Changed to green**. Option (b) preferred as already reported to FRA. However, it can be difficult to identify forests “designated and managed” for protection as they often are part of areas managed for multiple purposes.  Option (a) Mountain Green Cover Index is currently a Tier 2 SDG indicator. Development work in progress. Not ready to be included in the core set but progress needs to be assessed and inclusion to be considered in the future |
| **5** | **Employment in forestry and logging** | **Number of forest related jobs per 1000 ha of forest** | **Modified and changed to green**. Change proposed from "Number of forest related jobs per 1000 ha of forest" to employment in forestry and logging. Employment per 1000 ha of forests can then be derived). |
| **6** | **Existence of policies supporting SFM** | **Existence of policies supporting SFM, including formal protection of existing forest, or definition of a permanent forest estate in countries where this is necessary, with the institutions and resources necessary to implement these policies** | **Modified**. *"…including formal protection of existing forest, or definition of a permanent forest estate in countries where this is necessary, with the institutions and resources necessary to implement these policies*" was deleted from the indicator name as those are only examples of such policies. They can be added to the explanatory note. Concept already used in FRA 2015. |
| **7** | **Existence of scientifically sound national forest assessment process** | **Existence of a recent, scientifically sound, national forest inventory** | **Modified.** Deleted the word ‘*recent*’ and added the word ‘*process’* in the original indicator to reflect the need for continuous information flow. Suggest adding "includes NFI and related information and monitoring systems" in the explanatory note.  Concept already used in FRA 2015 |
| **8** | **Existence of a national mechanism to secure multi-stakeholder participation in the development and implementation of forest-related policies** | **Existence of a national multi-stakeholder policy platform, with active participation of civil society, indigenous peoples and the private sector** | **Modified** the original wording to avoid ambiguity. Concept already used in FRA 2015 |
| **9** | **Forest area under a long-term forest management plan** | **Proportion of forest area under a long-term forest management plan** | **Modified** from "*proportion of forest area*" to "*Forest area*” in order to align with SDG 15.2.1. Concept already used in FRA 2015 |
| **10** | **Forest area under an independently verified forest management certification scheme** | **Forest area under an independently verified forest management certification scheme (ha)** | **Changed to green**. Explanatory note should refer to different types of certification schemes. The TF discussed the problem of double accounting but did not find a solution to that because countries seem not to have that information. Deleted "ha". Concept already used in FRA 2015 .  Concern in IAEG that certification is not an official policy instrument. Not all sustainably managed forest are certified – indicator could lead to misunderstanding |
| **11** | **Official development assistance for SFM** | **Percentage change in official development assistance for sustainable forest management** | **Modified.**  "Percentage change in…” was removed from the original wording of the indicator The use of absolute value allows calculation of share of SFM funding of total ODA.  Included in GOFs. |
| **12** | **Volume of wood removals** | **Volume of wood harvested per 1000 forest workers (m3/1000 workers)** | **Modified.** Suggest replacing “wood harvested per 1000 forest workers" with “wood removals" and consider as **new indicator, using JFSQ data.** Some issues identified with the original proposal was the interpretation and significance, and how to handle informal workers. |
| **13** | **Existence of a traceability system for wood products** | **a. Proportion of traded/consumed forest products derived from illegal logging or trade (%)**  **or**  **b. Existence of a robust system to track sustainable produced forest products** | **Modified and changed to green.** The TF meeting suggested a rewording of option (b) to “*Existence of a verified tracing system to track sustainably produced forest products***”.** After the meeting a further consultation with FAO subject specialists suggested “*Existence of a traceability system for wood products*”. FAO has modified the name accordingly.  The meeting suggested to **drop option (a)** as reliable data on illegal logging and trade are difficult to obtain |
| **14** | **Forest health and vitality: % of forest area disturbed** | | **Further work needed**.   * Fairly good data exist on fire and possibly large areas hit by storms.  Suggest dropping of vitality as it is difficult to measure. * "Area disturbed" needs a clear definition (e.g., reduced production >20%, unwanted or unnatural fire, damage from invasive insects), especially to distinguish it from ‘degradation’. So this indicator would monitor natural disturbances and other kind of degradation as well as harvesting would be reported using another indicator. * It is difficult to combine data on different types of disturbance |
| **15** | **Percentage change in area of degraded forest** | | **Further work needed.**   * Link to GOFs lost during their revision. * Measurement of forest and land restoration was seen as a better option and it was noted that the intention seems to be include forest degradation as part of 15.3.1 (Proportion of land that is degraded over total land area) which has three sub-indicators which are land cover and land cover change, land productivity, and carbon stocks above and below ground. * It was also noted that forest degradation is ambiguous as no globally agreed definition for it exists, thereby also difficult to measure. * Should be differentiated from the indicator on disturbance. |
| **16** | **a. Percentage change in the number of forest dependent people**  **or**  **b. Livelihoods of forest dependent people** | | **Further work needed.**   * Both indicators are vague as the terms ‘forest-dependent people’ and “livelihoods” lack globally accepted definitions. * It is not clear whether a positive change in the value of the indicator reflects positive development. * The TF proposes using "Number of people living in extreme poverty whose livelihoods are dependent on forest and trees" instead. * The indicator requires further work and alignment with the Global Forest Goals. |
| **17** | **Financial resources from all sources (except ODA) for the implementation of sustainable forest management ($/ha of forest)** | | **Further work needed.**   * Included in the GOFs * Need to define “all sources” * Although it is important to track all financing sources it would be easier to limit the indicator to public expenditure on SFM (as was done in the past FRAs). * Potential danger of double accounting (private sector, academia, etc). |
| **18** | **Share of wood based energy in total primary energy consumption, of which in modern clean systems (%)** | | **Further work needed.**   * The Task Force questioned this indicator’s role in the GCS of indicator and proposes using **removal statistics** (woodfuel vs total removals) instead. * Its significance is not fully clear (traditional wood energy vs. clean wood-based renewable energy) |
| **19** | **Value of payments for ecosystem services (PES) related to forests (value of payments, as ratio to total forest area or area of forest covered by such PES)** | | **Further work needed.**   * Not ready for the GCS of indicators. Data on payments (from where?) * Concepts not yet defined * Measurement problems, especially for small PES schemes |
| **20** |  | **Recovery rates for paper and solid wood products (volume recovered for re-use as % of volume consumed)** | Indicator considered outside scope of SFM, as not subject to SFM policy instruments |
| **21** |  | **Carbon stocks and carbon stock changes in forest land: net forest GHG sink/source of forests, forest carbon stock, carbon storage in harvested wood products (Tons C)** | **TF meeting suggest to drop this indicator**. Changes in ABG biomass stock already captured by another indicator. Using UNFCCC data could cause confusion as it often disagrees with the figures reported to FRA (forest definition, etc.). Too many elements in indicator. |

# Contributions received

## Emile Houngbo, National University of Agriculture, Porto-Novo, Benin

Here is my comment on the Global Core set of Forest-related Indicators:

1) I think the indicators 4, 5, 8, and 17 can be deleted and replaced by the “Percentage of forest under sustainable management” (say the usefulness of the forest for the environment and people)

2) The indicators 14 and 15 are approximately the same. We can just maintain the indicator 15;

3) The indicator 16 is not pertinent and should be difficult to establish;

4) Instead of defining the indicator 19 like that, I propose to use the “Percentage change in Total Economic Value (TEV)”

5) I think you can add these two indicators:

- Forest biodiversity level (the Shannon diversity index can be used for that) to show the richness of the forest;

- Percentage change in species under overexploitation (overuse) in order to indicate the challenge for the forest restoration.

Best regards.

## Oamenii Padurii, Romania

- Indicator 4 must be implemented in other

- indicators 14 and 15 must be only one

- a new indicator must be implemented - forest biodiversity

## Arshad Malik, PMAS – Arid Agriculture University Rawilpindi, Pakistan

1.pricing of forest products (wood like fire wood, timber wood, etc)

2. markets of forest products (wood etc)

3. area under private and government forest development ha.

4. annual government spending on forest US$

5. area damaged (under forest fire) or annual damage  of forests ha.

6. major utilisation of forest resources

## James Benson, Canada

I think an indicator should include some measure of productivity for tree and biomass products; any definition I have seen for 'forested' is too broad to be meaningful without such a measure.

## Frédéric Achard, Joint Research Centre, European Commission, Italy

Comments on Global Core Set of forest-related indicators.

Indicator # 1 “Forest area as proportion of total land area”

“Forest area as proportion of total land area” allows to produce / compute  “Forest area net change rate (%/per year)” if such forest area proportion is provided for different years, in particular at regular time intervall (e.g. every 5 years). Ideally, it would sound more convenient to provide  “Forest area” (in ha) instead of “Forest area proportion”, as (i) forest area is needed to compute Forest area proportion, (ii) is needed to compute indicator 3 in tonnes/ha and (iii) is more

However nor “Forest area proportion” nor “Forest area” are good indicatord to measure progress towards sustainable forest management. Indeed there is probably no relationship between forest area (or proportion) and progress towards sustainable forest management (e.g. Indonesia has a high forest area proportion but is probably performing poorly in terms of  sustainable forest management). The change rate seems more appropriate for the purposes of  this global Core Set of forest-related indicators.

Indicator # 3 “Above-ground biomass stock in forest”

The modification (tonnes instead of tonnes/ha) is justified as tonnes/ha can be derived (from indicator in tonnes and Forest Area). However, similary to comment made for indicator 1, “Above-ground biomass stock in forest” in itself is not a good indicator to measure progress towards sustainable forest management. Indeed there is probably no relationship between biomass stock in forest and progress towards sustainable forest management (e.g. again the example of Indonesia which has a high biomass stock in forest). A change rate would be more appropriate for the purposes of this global Core Set of forest-related indicators.

However if original data are expected to be provided as most convenient solution to compute appropriate indicators (such as change rate), it is indeed a good solution to provide  biomass stocks in forest at regular time intervals together with forest area (indicator 1).

## Anke Weisheit, Excel Hort Consult Ltd, Uganda

**Comments on Global Core Set of forest-related indicators:**

**Indicator 5:** Include Non-Timber Forest related jobs (Honey, resin, herbal medicine etc. related jobs)

**Indicator 8:** include Academia

**Indicator 12:** Relevant to forest health/cover is how much wood is harvested by the area of forest, not per forest worker

**Indicator 14:**Agree with b. as forests have more diverse products than wood and unsuitable harvesting of those can damage the forest (e.g. tree bark for medicine, mushrooms, honey, stakes, firewood)

**Indicator 16:** Agree on the percentage of total livelihood depending from forest-related services (food, shelter, habitat, medicine, building materials, energy, recreation etc.) - suggestion minimum 70% will indicate high dependence on forest-related services and products. This will enable this indicator to be measurable.

## Paulson Kasereka, Environment Management & Systems (EMS), Democratic Republic of the Congo

Indicator 2 may be merged with 4, as follow: Forest area designated and managed for protection of soil and water, including forest area within protected areas.

## Christopher Prins, facilitator of the consultation

Dear Mr. Houngbo,

Thank you for these perceptive and constructive comments.

Here are my comments, set out between yours

*1. I think the indicators 4, 5, 8, and 17 can be deleted and replaced by the “Percentage of forest under sustainable management” (say the usefulness of the forest for the environment and people)*

Indeed, the main objective of many international efforts, notably SDG 15.2.1, is to monitor the area of forests sustainably managed.  The challenge is to define and measure this area, given the wide variety of national conditions.  Certification by itself is not sufficient as while most certified forests are sustainably managed, many sustainably managed forests are not certified.  Also, “legal” is not always the same as “sustainable”.  For SDG 15.2.1, an approach is being developed which combines essentially indicators 2, 3, 9, 10 (biodiversity conservation, biomass stock, long term management plan, area certified).  The UN Statistical Office working group on this is advancing fast.  It is clear that the Global Core Set of forest-related indicators would have to be adapted to be in conformity with the agreed SDG indicators in this respect.

2. *The indicators 14 and 15 are approximately the same. We can just maintain the indicator 15;*

They are indeed similar, but there are still differences. Mostly 14 refers to natural damage (pests, wind, fire, game etc.), while 15 refers to forests which have lost most of their ability to supply forest functions, often through human agency, notably overcutting.  The term “degraded forest” occurs often in the official texts, but no-one has yet devised an agreed objective way of measuring it at a global level.  Hence “more work is needed”, as we cannot ignore the many references to forest degradation in the high level documents.  Do you or any other readers have ideas, to supply a waterproof definition of “degraded forest”?

3. *The indicator 16 is not pertinent and should be difficult to establish;*

I think it is pertinent (Global forest goal 2.1 is “extreme poverty for all forest-dependent people is eradicated”), but it is extremely hard to implement, for the reasons set out in the task force comments.  Should we give up on measuring poverty among “forest dependent people”?

4. *Instead of defining the indicator 19 like that, I propose to use the “Percentage change in Total Economic Value (TEV)”*

This indicator was meant to focus on the specific issue of payment for ecosystem services, which is seen as a core part of the emerging green economy, and a correction of the exclusive focus on economic value.  However, as the task force says, this aspect is probably “not ready for the GCS of indicators” – which at present is too long, and should contain only indicators which are ready to go in every way.  I would like to collect data on Total economic Value of forests world-wide, but it could be difficult.

*5. I think you can add these two indicators:*

*- Forest biodiversity level (the Shannon diversity index can be used for that) to show the richness of the forest;*

It has been a long struggle to monitor biodiversity at the national level in a standard way, and so far only proxies, (e.g. area protected or endangered species) have been used.  The Shannon diversity index seems to have quite rigorous data needs, and to be more adapted to particular forests than to national level monitoring.  Have I misunderstood?

- *Percentage change in species under overexploitation (overuse) in order to indicate the challenge for the forest restoration.*

I agree it would be good to measure change in species diversity.  This has been tried in Europe, but proved surprisingly difficult as national level knowledge of trends by species is not very good.  We should perhaps revisit this.

Best regards.

Thanks again

Kit Prins

Moderator

## Christopher Prins, facilitator of the consultation

Dear Mr. Padurii

Thank you for your comments.

 You suggest indicators 14 (health and vitality) and 15 (degraded forest) should be combined.  I addressed this in my reply to Mr. Houngbo: the two are not quite the same, but both are difficult to measure at the national level.  The issue of forest degradation occurs in the high level goals and targets, so should probably be maintained.  It is clearly of the highest policy importance to combat and monitor forest degradation.  Do you, or other participants, have suggestions for a robust way of defining and measuring “forest degradation”?

You suggest a new indicator on forest biodiversity.  It is true that the lack of a biodiversity indicator is a weakness.  The draft core set contains several proxies for forest biodiversity, mostly focused on policy instruments to promote biodiversity: protected areas (3), policies supporting SFM (6), stakeholder participation (8), management plan (9), certification (10), payments for ecosystem services (19).  There is nothing concrete on outcomes, chiefly because no practical way of monitoring forest biodiversity at the national level, in most countries of the world, has emerged from the numerous discussions which have taken place.  Perhaps a major open debate should be launched on this topic (possibly for the next global core set of forest related indicators)?

Thanks again

Kit Prins

Moderator

## Christopher Prins, facilitator of the consultation

Dear Mr. Malik,

Thank you for your suggestions – and for broadening the discussion on the topics to be covered by the Global Core Set.  I agree that economic factors like prices, markets, government spending and use of forest resources are critical to our understanding of and policy making for the forest sector.  It seems to me quite unrealistic to look only at what happens inside the forest area, and ignore what goes on elsewhere.  However these areas, notably prices and markets, have not been addressed in depth by most of the discussion on sustainable forest management.  It would be interesting to have the opinion of other contributors on whether this type of factor should be included in a Global Core Set.

On the detail of your suggestions: 4 and 5 (government spending and fire damage) are included in the draft set, as part of indicators 17 (financial resources from all sources) and 14 (all damage/disturbance).

Thanks again

Kit Prins

Moderator

## Christopher Prins, facilitator of the consultation

Dear Mr. Achard

Thank you very much for these comments which describe accurately the difference between real indicators and simple parameters or data series.  Given the huge variety in different circumstances, it is indeed not enough just to provide data, even on a per hectare basis, without giving the indicator a real meaning.  There will always be countries with large forest areas and high biomass stocks per hectare, whose forests are not being managed sustainably, and others with small forest area or low biomass/ha which are sustainably managed.  I agree with you that if we are looking for meaning, we should focus (for many of the core indicators) on change over time.  The absolute data for area or biomass may not tell us much, but a reduction, either in forest area or biomass per hectare, is a strong signal to look closer at the situation.  There are circumstances where a reduction may be acceptable (e.g. average biomass per hectare may fall in the early stages of afforestation), but in general a reduction is a warning signal for analysts.  (Incidentally, it is not possible to say that while a reduction, for instance of area or growing stock, is “bad”, an increase is “good”: sustainably managed forests may be stable in area and growing stock, as no increase is possible or desirable)

Your remarks bring out the fact that the Global Core Set should contain meaningful, policy relevant indicators: it is not a questionnaire to collect data (although it does, of course depend on reliable data notably those supplied by FRA).

Thanks again

Kit Prins

Moderator

## Christopher Prins, facilitator of the consultation

Dear Ms. Weisheit

Thank you for these suggestions from a non-wood perspective, which is unfortunately quite rare in these discussions!

Here are my comments

I agree we should try to include non-timber forest jobs, where possible.  Unfortunately most statistical data are collected according to standard employment classifications which refer to “forestry and logging”.  We should try to move beyond this – also to jobs related to services, such as teaching, recreation, tourism, conservation etc. which are clearly forest related (when they occur in forests) but usually classified outside “forestry and logging”.

We should indeed include academia and science in indicator 8.

Indicator 12 (wood harvested per worker, in the version agreed by the OLI) was an attempt to address the issue of productivity and efficient use of resources, which is stressed in the green economy discussion, but has not met with a very enthusiastic response.  The sustainability of harvest levels – obviously crucial – should be addressed by indicator 3, trends in biomass per hectare, as this would fall if harvests are too high

 I am not sure about your reference to indicator 14 (forest health and vitality), which at present has no subheadings a and b.  Perhaps you could clarify?

Do I understand that you propose as definition of “forest dependent people” those for whom at least 70% of livelihood comes from forest related goods and services?  This is a clear and measurable definition – although it would certainly take time to collect comparable data worldwide.  At present, there is no such definition agreed.  Here is something I wrote on the question in the background paper for the OLI:

**"Forest dependent people**The second Global Objective refers to “livelihoods of forest dependent people” and it is clear that many millions of people, mostly very poor, are concerned.  However the term of “forest dependent people” is not defined in FRA 2015 and it is uncertain whether the dependency refers to economic factors, residence, share of income or ecological dependency.  Given the widespread poverty in these communities, and the importance of subsistence farming, it is also unlikely that comprehensive statistical coverage will be possible.  A recent article[*[1]*](http://www.fao.org/fsnforum/activities/discussions/forestry_indicators#_ftn1)considers that “there are substantial divergences in who the term refers to, what each of its constituent words mean, and how many forest-dependent people there are globally” and proposes an 18 dimension taxonomy for analysis.  The authors point out that “it is not intuitively obvious that either increasing or decreasing forest dependence in any of these dimensions is a policy objective that necessarily benefits the people in question or that is always desirable” Before correspondents are asked to provide information, clear guidance on these matters should be prepared."

We seem to need an informed discussion on the subject of an indicator for forest dependent people.  Contributions are welcome!

Kit Prins

Moderator

[[1]](http://www.fao.org/fsnforum/activities/discussions/forestry_indicators#_ftnref1) Who are forest-dependent people? A taxonomy to aid livelihood and land use decision-making in forested regions Peter Newton, Daniel C. Miller, Mugabi Augustine Ateenyi Byenkya, Arun Agrawal.  Land Use Policy 57 (2016) 388–395  <http://dx.doi.org/10.1016/j.landusepol.2016.05.032>

## Christopher Prins, facilitator of the consultation

Dear Mr. Kasareka,

There is a good case for merging indicators 2 (protected areas) and 4 (areas managed for soil and water protection) as in many cases the regimes are similar and there is a lot of overlap.  Most areas protected for biodiversity also protect against erosion.  Also in many countries, ***all***forests are managed for protection of soil and water (see the latest study on State of Europe’s Forests, where several countries point out that all forests are meant to provide protection for soil and water).  The problem here is that such a merger leaves one of the seven thematic elements (on the protective functions of forests) without its own dedicated indicator.  Is that acceptable?  What do the contributors think?

Thanks again

Kit Prins

Moderator

## Gaudencio Benítez, Comisión Nacional Forestal, Mexico

With attentive greetings.

Following the consultation on the Basic Set of Global Forest Indicators it is proposed to include as an indicator:

* Percentage of income of the national forest sector in relation to the Gross Domestic Product (GDP)

This indicator reflects the economic and social importance of the forest sector for a country.

Best regards

Gaudencio Benítez

## Christopher Prins, facilitator of the consultation

Dear all,

Comments have all been positive and constructive.

UNFF12 in New York last week noted the process to develop the Global Core Set and asked the CPF to present the final set to UNFF13 next year.  Eva Muller of FAO urged people to participate in our online consultation.  So this consultation should have consequences in the real world!

The main general points I have noted are:

* The Global Core Set of forest related indicators should be composed of meaningful indicators, not simply lists of parameters.
* Biodiversity seems to be under-represented in the list – probably because of the difficulty of measuring outcomes objectively
* An indicator of livelihoods of forest dependent people should be included, but is very difficult to formulate properly.
* Likewise coverage of non-wood products is weak
* Should we have more “economic” indicators (markets, prices etc.)?
* Can we find a workable definition for “degraded forest”?

As a comment on the above, we must also avoid inflation on the list, which should not exceed 10-15 indicators.  That means we should be deleting, not adding indicators.  This is difficult as no-one likes cutting important topics.  And every topic is someone’s favourite, in which they have invested time and thought.  As Yeats said, in another context, “Tread softly because you tread on my dreams”.

Kit Prins

Facilitator of the online discussion

## Marilise Wolf-Crowther, Eurostat, Luxembourg

#1: Forest area alone or including "other wooded land"? I propose the former, to align with the SDGs. What "land area" means also needs to be specified: with or without the area of inland water? I propose the latter.

#3 could be simply the growing stock of timber on forest area. Biomass stock can be calculated fro this. In practice, the biomass of non-timber will not be known. In general, all variables needed for carbon reporting should be covered.

#5 this and other economic variables should be in agreement with national accounts.

#6: rather weak, better "Are SFM policies enforced?"

#8 is too general. I would replace this and #16 with 3 questions:

1) Size of the forest area inhabited by indigenous peoples?

2) How many indigenous persons depend entirely for their survival upon the forest land they inhabit, yet have no formal ownership?

3) Size of the forest area where persons who depend upon it for their survival can participate in forest-related decisions?

#9 & 10 could be merged.

#12: both removals and fellings are needed, as is net annual increment, the latter 2 for carbon reporting.

#13: both are difficult. Positive facts are easier to collect, e.g. "How much timber was felled with a certificate of legality?"

#14 & #15: delete and replace with

1) How many forest tree species exist in the wild?

2) How any of these are planted for commercial use?

3) Naturalness: size of forest area with natural regeneration? Conversely, size of plantation area?

#17: this should come from national accounts (subsidies).

#18: drop the "modern clean systems" and change to "estimate of fuelwood consumption in households in 1000 m3"; alternatively "gross inland energy consumption from solid biomass".

#19 is linked to #4, but is not yet viable at a global level.

## Emile Houngbo, National University of Agriculture, Porto-Novo, Benin (2nd contribution)

Dear Moderator,

I was very happy to receive yor quick reply on my comments. Here's attached my reaction on your reply.

Best regards.

Attachment:

<http://www.fao.org/fsnforum/sites/default/files/discussions/contributions/My%20comment.docx>

## Justine Mwanje, Uganda Forestry Assocation, Uganda

Global sustainable development is daunting because the socio-economic and bio-physical factors are varied across the globe. Within that context, the root causes and/or drivers of deforestation and forest degradation are complex and intricate. Therefore, an agreeable balance between the need to reduce the reporting burden and applying a relevant set of SMART indicators can and must be achieved.

Please note the following about the current set of indicators:

1. It is not based on any principles and criteria. As a result, it is arbitrary, subjective and technically unsound.
2. Several of the indicators negate the need to lessen the reporting burden. They include indicators 5, 8, 12 and 15.
3. Indicator 14 is a criterion.
4. Indicator 17 is ambiguous and should be combined with 11.

*The entire set of indicators is critically flawed and must be overhauled.*

My suggestions are based on *internationally agreed common thematic areas of sustainable forest management (SFM)*. The thematic areas are:

1. extent of forest resources
2. biological diversity
3. forest health and vitality
4. production functions of forest resources
5. protective functions of forest resources
6. socio-economic functions
7. legal, policy and institutional framework

The respective criteria and indicators are shown in the table below:

**Criterion 1: Enabling conditions for SFM (legal, policy and institutional framework)**

**Indicator 1.1:** Existence and implementation of policies, laws and regulations to govern forest management.

**Indicator 1.2:** Amount of funding in forest management, administration, research and human resource development.

**Indicator 1.3:** Structure and staffing of institutions responsible for sustainable forest management.

**Indicator 1.4:** Forest area (ha.) under long-term forest management plans

**Criterion 2: Extent and condition of forests (Extent of forest resources)**

**Indicator 2.1:** Area (ha.) of forests committed to production and protection

**Indicator 2.2:** Area (ha.) and percentage of total land area under each forest type.

**Criterion 3: Forest ecosystem health (forest health and vitality)**

**Indicator 3.1**: Extent (ha.) and nature of forest encroachment, degradation and disturbance caused by humans, and the control measures applied.

**Criterion 4: Forest production (production functions of forest resources)**

**Indicator 4.1:**Extent (ha.) and percentage of forest for which inventory and survey procedures have been used.

**Indicator 4.2:**Total amount of carbon stored in forest stands.

**Indicator 4.3:** Existence of a log and/or forest product tracking system, or similar control mechanisms.

**Criterion 5: Biological diversity (biological diversity)**

**Indicator 5.1:** Forest area (ha.) within protected areas.

**Indicator 5.2:** Existence and implementation of procedures to identify and protect endangered, rare and threatened species of forest dependent flora and fauna

**Indicator 5.3:** Extent (ha.) and percentage of production forest that has been set aside for biodiversity conservation

**Criterion 6: Soil and water conservation protection (protective functions)**

**Indicator 6.1:** Extent (ha.) and percentage of total forest area managed exclusively for the protection of soil and water.

**Criterion 7: Economic, social and cultural aspects**

**Indicator 7.1:** Value and percentage contribution of the forestry sector to gross domestic product (GDP)

**Indicator 7.2:** Existence and implementation of mechanisms for the equitable sharing of the costs and benefits of forest management

**Indicator 7.3:** Extent to which tenure and user rights of communities and indigenous peoples over publicly owned forests are recognized and practiced

I hope my suggestions are useful.

*Reference: International Tropical Timber Organization, 2005. Revised ITTO Criteria and Indicators for the sustainable management of tropical forest, including reporting format. ITTO Policy development series No. 15*

## Zoltan Somogyi, Hungarian Forest Research Institute, Hungary

I have rather general comments with the aim to improve the entire system.

"Indicators are used to measure progress towards policy goals." This definition requires that "policy goals" are set, and "progress" is defined. (If policy goals include sustainability (they do), then sustainability also has to be defined.) In other words, there must be a concept based on which indicators have to be developed AND evaluated. All in all, what is needed to  see if processes are working towards policy goals is a **complex system of theory, estimation and assessment**.

Unfortunately, the current document on the Global Core Set of forest-related indicators only list some indicators without considering the above.

Below is an example for the possible development of a complex system in the above sense for a few policy goals (with Capital First Letters), involving a few INDICATORS (all capitals).

Let's say we want to maintain the yield of products and services that we get from forests of a fixed area (a broad policy goal). "Maintaining" can only mean maintaining relative to what rather dynamic forests can deliver. For example, forest characteristics keep changing even under an unchanging management system due to the internal dynamics of forests such as the development of age class and site distribution over time. Increment, carbon sink, total volume, total amount of deadwood, total water cleaning capacity etc. all keep changing over time even if the area of the forests does not change. So what can be maintained is a **moving target**.

But it is also true that this moving target is spoiled if forest area decreases. Therefore, the decrease of forest area (something unwanted) is against a policy goal of **Constant Forest Area**, i.e., a **proxy** used to expect a **Constant Yield of Forest Products and Services**. The **RATE OF DEFORESTATIONS** (in terms of area) can be a measure of how much the above moving target gets closer to zero, and farther from the above policy goal. However, if the situation is that forest area has been decreasing for some time, a rational policy goal could be to **Halve or Stop the Decrease by Some Future Date**. In this case, if the area decrease is less intensive than the policy goal than the indicator value is still negative, but should be assessed as positive (and vice versa).

In a similar fashion, if a country has little forest area and there is room to do afforestations, then a policy goal can be to **Increase Forest Area by X Amount by a Specific Date**. Then, if the **RATE OF AFFORESTATIONS** (i.e., positive values) is less then that, then the rate as an indicator should be assessed to say that the processes are unsatisfactory (and vice versa).

It must be added that, from a yield of products and services point of view, **it does matter what types of forests**are disappearing, or what types of forests (or plantations) are established. **Forests are not created equal**! Therefore, analyses should be done on more detailed levels, e.g., by forest type, species, age or diameter, volume class etc.

The above suggests that **there may not be such a thing as a "global" indicator**, only regional indicators, and a single global indicator can only be designed/applied if the assessment of the regional indicators can somehow be "summed up".

Also to note is that the "rate of change" type quantities are quantities against a base value. The same rate of change can mean very different actual rates with different base values. For example, deforesting 0.5% of the forest area can mean a far greater forest area loss in a year than the same rate ten years later. Processes are non-linear, which should be reflected in the description of the **assessment guide**, which should be developed for each individual indicator.

Let me now consider a system for a forest of constant area. In such a system, any addition to (afforestations) and reduction from (deforestation) the forest should be able to estimated, otherwise the assessment of the indicator values will be biased. In such a system, policy goals could include **Maintain or Change Absolute Quantities** (e.g., volume the area of protected forests) or **Maintain or Change Rates of Changes** (e.g., sink rate, wood increment, harvest rate etc.). There can be many of these, and it is not evident which of the possible set are important. In order to select specific goals for a pragmatic system, the **importance**of the quantities or the rates of change **should be demonstrated**.

It applies, however, for most or all of the possible goals that they are **moving targets**. This means that in order to develop appropriate policy goals, and in order to develop appropriate assessment guides, **modelling may be necessary**to see what the future values might be under a BAU and a "With measures" policy. It is clear that the estimates will have uncertainties that need to be considered in the assessment guide.

For example, let's say that we want to **Maintain the Forest Carbon Sink**. This sink is not constant over time (i.e., too general, anc can be incorrect), and may even turn to a source after some period of time, or under climatic influence etc. If the sink can be shown to reduce in the next ten years under an acceptable scenario, then the policy goal can be to **Maintain the Projected Carbon Sink**. Any sink that is less than this sink can be assessed as unsatisfactory.

It may be impossible to directly assess and/or model the required quantity/change. In this case, proxy values may be used. For example, increasing timber harvest usually results in the reduction of the forest carbon sink, therefore, the forest carbon sink might (partially) be monitored by estimating and assessing **TOTAL TIMBER HARVEST RATE**against the policy goal of **Not Increasing Timber Harvest**. In case such a proxy value is used, the concept of the indicator and its assessment should clearly demonstrate why it is applied, and under what conditions it can be used as a proxy.

Finally, the current list of indicators includes qualitative ones such as the "Existence of policies supporting SFM". In my view, this is very weak. For one, SFM has not defined well. To me, sustainability is a quantitative thing, for example, we can sustain area, volume, increment. The concept of "sustained yield" captures this approach. In the history of forest management, people first applied the concept of sustained area, then sustained volume, then sustained yield. All of them may, and probably are in one form or another, applied in practice. These are true sustainability concepts. The mere fact that, in a country, there is a Forest Act, does not say if that act leads to sustainability or not. Hard quantities may.

Again, the above were just ****examples****. I believe that the whole system should be re-designed. I published a paper about a possible approach last year, accessible at [www.scientia.hu/cv/2016/Sustainability\_framework\_Zoltan\_Somogyi.pdf](http://www.scientia.hu/cv/2016/Sustainability_framework_Zoltan_Somogyi.pdf).

## Cornelia Ehlers, GIZ, Germany

Dear Kit Prins,

thank you for posting the indicators and making this discussion open for a wider round. Please find attached some comments from GIZ colleagues working on forestry. We hope this can help in the process.

Best regards,

Evy von Pfeil, Nora Krieger and Cornelia Ehlers

Attachment:

<http://www.fao.org/fsnforum/sites/default/files/discussions/contributions/Global%20Forest%20Indicators_GIZ.docx>

## Mostafa Jafari, TPS for LFCCs, Iran

Thanks to all colleagues as organizers or contributor.

1- C&I for SFM is very important issue not for the countries with high portion of forest cover but also for low forest cover countries (LFCCs).

Tehran Process Secretariat for LFCCs (TPS for LFCCs) dealt with this important issue from its early establishment.

LFCCs need and requirements should be seen in a real way of drafting indicators.

In current proposal text provided by Task Force (current list) related to items 1, 2, and 9, forest area and forest cover for different management goals, and we need to how it can be apply for LFCCs.

LFCCs refer to those countries which their forest cover are less than 10% to total land so it is not refer to density and forest cover. But normally forest density and forest cover in LFCCs comparing with high forest cover countries are low!

2- Another point is tree out of forest (ToF) which we need to have some indicator to be considered in national level.

3- Other important point is to lay on the results of national research outcomes, so it is necessary to add three columns in the table with title of (Global), (Regional), (National). By this means we can recognize the level importance and applicability in different dimensions.

4- I have done ten (10) years research (in two five years research plans) on consideration of C&I for SFM in Hyrcanian forest in north part of Iran. I proposed a little bit different indicators even is various location in Hyrcanian forest in Iran.

Best wishes,

Mostafa Jafari

Head of TPS for LFCCs

(Climate Change expert- LA IPCC, Member of Academic Board, Forest manager, and Plant Ecology and Ecophysiolgy specialist in Research Institute of Forests and Rangelands)

13 May 2017

## Christopher Prins, facilitator of the consultation

Dear Mr. Benson,

Thank you for your suggestion (and sorry about the delay in replying to you).

As regards the definition of forest used by FAO, SDG and others, no-one claims it is perfect, which is not surprising given the wide variety of circumstances and points of view.  However, it has emerged from more than 20 years of discussion and negotiation, and is probably the best possible at present.  So everyone should stick with it for the time being.

I am not sure exactly what you mean by “productivity for tree and biomass products”.  If you mean net annual increment or another measure of forest productivity in terms of wood growth, I agree this would be desirable – and this measure is often used, for instance in the pan-European indicator set.  The problem here is that many countries with a high proportion of natural forests (including Canada) do not measure increment, and could not supply the information.  From a (wood-focussed) sustainability point of view, the important thing is that drain (harvests and natural losses) is not higher than increment.  At present, it appears not to be possible to measure the different components of this equation for all, or even most, countries.  However, the net outcome of this interaction is changes in forest biomass: if drain is higher than increment, growing stock decreases; if not, growing stock is stable or increases.  This is covered by indicator 3.  So the productivity question is covered indirectly.

Thank you again

Kit Prins

Facilitator

## Christopher Prins, facilitator of the consultation

Dear Mr. Benitez

Thank you for your suggestion, which reflects the content of several regional indicator sets.

I agree that economic and social aspects should be better covered in the Global Core Set.  Furthermore, data are available (this is tracked by FRA).  The problem arises with the interpretation of the results.  In fact the share of the forest sector in GDP is not determined by the forest sector itself, but by the rest of the economy.  There are many cases of dynamic and expanding forest sectors in countries with strong economies, where the share of the forest sector in the national GDP is small – and shrinking.  This is due to the fact that other parts of the economy (services, information technology, etc. etc.) are much larger and growing faster than the forest sector (typically the forest sector accounts for less than 1% of GDP).  There is little that forest sector policy makers can, or should, do about this.

Perhaps the economic dimension could be strengthened by an indicator of “Gross value added by the forest sector as ratio to forest area “(in $/ha).  This would also have measurement problems, notably the omission of forest related income not included in the “forestry and logging” part of national accounts (forest related tourism, teaching, research, subsistence livelihoods etc.), but, it seems to me, could be a good start.

Thanks again.  What do you, and others contributors, think of my suggestion?

Kit Prins

Facilitator

## Christopher Prins, facilitator of the consultation

To Ms. Wolf-Crowther

Dear Marilise

Welcome to the Forum, and thanks for the precise comments.  I have set out my response to each comment below.

#1: Forest area alone or including "other wooded land"? I propose the former, to align with the SDGs. What "land area" means also needs to be specified: with or without the area of inland water? I propose the latter.

Y*es, I think the Global Core Set should focus on “Forest”, leaving “other wooded land” aside for the time being, following practice elsewhere.  In general, the set should not reinvent the wheel but follow established practice wherever possible.  This reduces the reporting burden, and improves consistency between data sets and analysis.  Likewise for inland water: let us follow FRA practice*

#3 could be simply the growing stock of timber on forest area. Biomass stock can be calculated fro this. In practice, the biomass of non-timber will not be known. In general, all variables needed for carbon reporting should be covered.

*The main difference between growing stock of timber and above ground biomass is the volume of wood beyond the stem (which is roughly what is measured for growing stock): branches etc., which can be significant for some species.  “Non-timber” biomass is apparently not very large and certainly difficult and expensive to measure.  In general, however, growing stock in m3 and biomass in tons will follow the same trends.  The latter was chosen because it communicates better with eh “climate change community”.  In practice, the differences will be quite superficial.  However, above ground biomass has now been accepted as a component of the SDG indicator 15.2.1, which is unlikely to be changed at this stage.  So it is prudent to stay with “above ground biomass”.*

#5 this and other economic variables should be in agreement with national accounts.

*Yes, of course.  But beware the classification problems I mentioned to Mr. Benitez.*

#6: rather weak, better "Are SFM policies enforced?"

*Here we touch on the sensitive issue of effectiveness of policy and governance, which is usually approached indirectly (How many governments will answer “No” to your question?).  It seems better to ask governments to present, in a transparent way, what their policies are, and what institutions are responsible for implementing, and what resources have been made available.  It is then possible for analysts, of international organisations or civil society to bring the data together and provide a realistic, preferably non-judgemental, conclusion.*

#8 is too general. I would replace this and #16 with 3 questions:

1) Size of the forest area inhabited by indigenous peoples?

2) How many indigenous persons depend entirely for their survival upon the forest land they inhabit, yet have no formal ownership?

3) Size of the forest area where persons who depend upon it for their survival can participate in forest-related decisions?

*Indicator 8 is not primarily focused on indigenous peoples but on the mechanisms for participation, chiefly national forest programmes.  For this indigenous peoples are important, but so are civil society and the private sector.  Indicator 16 is indeed a major challenge, especially as “livelihoods of forest dependent people” are specifically mentioned in the Global Forest Goals and targets (Target 2.1 “Extreme poverty for all forest dependent people is eradicated”).  I believe that as a forest community, we should not try to avoid responsibility in this area, but address the major challenges which include: definition of forest dependent people, as well as defining and measuring livelihoods.  Clearly, existing forest inventory systems are not designed to answer these questions, so specific surveys will probably be necessary (in cooperation with efforts to monitor SDGs, notably 1.1, focused on extreme poverty and livelihoods, inside and outside forests).*

#9 & 10 could be merged.

*They are certainly linked, but certification is much more comprehensive, as well as being voluntary and market based.  There are also problems with defining management plans (do they have to be approved?  For what minimum size of holding?)  At present both these indicators are listed as subcomponents for SDG indicator 15.2.1 on progress towards sustainable forest management.  It is prudent to maintain the exact wording used by the SDG monitoring exercise.*

#12: both removals and fellings are needed, as is net annual increment, the latter 2 for carbon reporting.

*I agree that volume of removal (or fellings) is not very meaningful measured in isolation.  Unfortunately, many countries, especially with many natural forests, do not have data on increment, so to see the removals/increment balance, we have to look at trends in growing stock/biomass.  Se my response to Mr. Benson for more background*

#13: both are difficult. Positive facts are easier to collect, e.g. "How much timber was felled with a certificate of legality?"

*I agree that both are difficult!  Do all countries have “certificates of legality”?  And do they keep statistics on it?  My feeling at present is that the existence of a traceability system (for all wood, not just domestically produced) is essential to get at the proportion of wood from sustainable sources (another of the forest goals),and is relatively easy to answer on a yes/no basis*

#14 & #15: delete and replace with

*I fear we cannot delete 15 as there are strong commitments to halt forest degradation (GOF 1) – even though defining and monitoring “forest degradation” has proved challenging*

1. How many forest tree species exist in the wild?

T*his question has proved (surprisingly?) very hard to answer in Europe, and I do not think it would be easier elsewhere.  Also, the meaning of the indicator is not clear as species abundance varies a lot between ecosystems, so it is not a policy relevant indicator*

How any of these are planted for commercial use?

*The motives of plantations are often complex and change over time*

Naturalness: size of forest area with natural regeneration? Conversely, size of plantation area?

FRA collects information on area of natural forest and plantations.  As regards “disturbance”, “damage” *and “degradation”, there are many difficulties in distinguishing natural ecosystem processes, such as wildfire or insect infestations, from external “damage” or “degradation”*

#17: this should come from national accounts (subsidies).

*Yes.  But subsidies are far from being the whole picture: “all sources” includes commercial investment, by forest owners and the financial community, which are not identified (except at the aggregate level, perhaps) in national accounts*

#18: drop the "modern clean systems" and change to "estimate of fuelwood consumption in households in 1000 m3"; alternatively "gross inland energy consumption from solid biomass".

*Or, alternatively, drop the indicator?  We all agree biomass energy is important, but the linked questions are quite complex and a single indicator may over-simplify the question*

#19 is linked to #4, but is not yet viable at a global level.

*I am afraid you are right!*

Thanks again

Kit

## Christopher Prins, facilitator of the consultation

Dear Mr. Mwanje

Thank you for your thoughtful and constructive contribution, and especially for generating an alternative set of indicators.

However, there may be a misunderstanding, due to my failure to explain fully the context of this Global Core Set of Forest-related Indicators, which are based on the experience of regional and national sets of criteria and indicators, and took them all into account, after carrying out interviews with many major players.  The Global Core Set does not aim to start from a blank sheet and first principles, as that is no longer possible, after the lengthy negotiations and compromises which have taken place, inside the forest sector and outside it.  We did in fact start with the seven thematic elements which you list, but these have now been relegated in importance by high level policy commitments, notably the UN Strategic Plan for Forests and its Global Forest Goals and Targets, along with the Agenda 2030 and the SDG targets, some of which refer to forests, and the Aichi biodiversity targets.  These state, at a high policy level, what are the targets, and therefore what should be monitored.  The Global Core Set aims to synthesize, on the basis of these approved targets, and the forest sector’s experience with criteria and indicators, what should be measured, to enable coordinated reporting, and indicate clearly to those responsible for data collection where the priorities should be.  The list as it stands is organised by the colour codes used in the process (maintain/further work/delete), which has unfortunately concealed its inner structure.  I hope this can be remedied before the core set is finalised.  So the draft Global Core Set may not be theoretically sound, but it reflects the state of play in the global forest dialogue as of 2017.

I do not understand your reference to not reducing the reporting burden: data on all the indicators you mention (5, 8, 12 and 15) are easily available of good quality through the FRA.  (Others do of course present considerable reporting challenges).

Indicator 14. It is true that the first half is a criterion, but the second half (“% of forest area disturbed”) is a proper indicator.  Thank you for pointing this out: I think it can be fixed.

The overlap between 17 and 11 arose because the global dialogue at first focused on ODA (11) and then widened to “resources from all sources” (17).  At present data on ODA are more easily available and better structured, and so easier to handle.  However, I agree that there is a lot of overlap and we should try to combine them, bringing together data of different quality and different sources to generate a broader picture.

I do not have the possibility to comment on every one of your very coherent indicator set, which follows the “classical” structure of many regional indicator sets.  I would make a few comments:

* It appears to be only concerned with the forest sector and not open to cross sectoral issues such as livelihoods of forest dependent people.
* Some of the indicators would be difficult to quantify and aggregate (“structure and staffing”, “existence and implementation of procedures”), although the importance of these aspects is undeniable.
* There seems to be an implicit assumption that forests can be classified as production, protection, or biodiversity forests, whereas in practice, there are multiple functions and complex, sometimes mutually incompatible, management objectives.  Successive FRAs have encountered problems when they tried to break forest down by management objective.
* “Equitable sharing of the costs and benefits” is an important concept and mentioned both in the SDGs and the Aichi Targets (in the context of genetic resources only).  However, I am not sure how this could be monitored in an objective and comparable way without much preliminary discussion.

Thank you once again for your contribution

Kit Prins

Facilitator

## Christopher Prins, facilitator of the consultation

Dear Mr. Somogyi

Thank you for your clear and interesting contribution, and for stressing that indicators only have meaning when they are in a context of policy objectives.  Thank you also for reminding us how difficult it has proved to define sustainable forest management in an objective way.  (My own favourite definition is the one in Helsinki Resolution H1 of the MCPFE, but there is now a global definition approved by the General Assembly)  In practice, SFM has been defined implicitly by the various sets of criteria and indicators negotiated at the regional level.  The key word here is “negotiated”: although many processes started with the type of clarity you display, confusion increased as delegates compared their own specific national circumstances to the emerging texts, and complained vigorously when their own situation was not fully reflected (or their national reality looked bad according to the emerging indicators).  The situation has become more complex with the high level policy commitments which have an influence on the forest sector, notably biodiversity and climate, as well as desertification.  Even wider commitments (first the MDGs, than Agenda 2030 and the SDGs) have put forest issues in the context of sustainable development.  Thus it is no longer possible, at the international level, to start with a clean sheet of paper and draw up a set of indicators from first principles.  On the other hand, we now have a lot of formal high level policy commitments, which, taken together, provide direction for the Global Core Set.  The three most important high level commitments in this context are the Global Forest Goals and Targets in the UN Strategic Plan for Forests, Agenda 2030 and its forest related SDG indicators, and the Aichi Targets of the CBD.  There is overlap and duplication between these commitments, which are  “negotiated text” with all that implies of complexity and sensitivity.  Nevertheless there are some quite specific quantifiable commitments, including to increase forest area by 3% worldwide, and that 17% of terrestrial ecosystems should be conserved for biodiversity.

I am afraid that to “redesign the whole system” as you recommend would be to attempt to replace the carefully negotiated high level policy commitments with a new system which depended only on the intellectual rigour of the designers.  Such an exercise would not be supported widely.  The draft Global Core Set of Forest Related Indicators should be seen firmly in the context of the high level policy commitments, and build on the experience of the global (and regional) forest dialogue of the last 25 years.

You also question the usefulness of the so-called “qualitative indicators” (in fact indicators of the legal policy and institutional framework, the seventh “thematic element”).  In many cases, indicators of outcomes (for instance a change in forest area, growing stock or biodiversity) have serious drawbacks as tools to guide policy: often the outcomes have multiple causes, so weakening the links with policy, and, in the forest sector, policy changes often need many years to have any effect at all.  It is established practice in sets of criteria and indicators to combine indicators of outcomes with indicators of the legal, policy and institutional framework.  Neither type is adequate by itself, but taken together they can be useful.  Of course, it would be good to incorporate some measure of the effectiveness, efficiency and equity of the policy measures, but that can be hard in an intergovernmental context.

Thank you again for your valuable contribution

Kit Prins

Facilitator

## Christopher Prins, facilitator of the consultation

Dear GIZ colleagues

Thank you for concise and realistic comments

A few reactions:

3 I agree tonnes/ha is a better indicator than just tonnes

7 FRA normally collects information on date of survey.  I suppose that it is part of being “scientifically sound” to be recent!

8  Agree to propose addition of “effective” to the indicator – although few respondents would admit their NFP was not “effective”.

13  I agree that existence of a traceability system is critical – and easier to measure than illegal logging and trade.  Furthermore, there is a commitment to increase the proportion of products from sustainably managed forests.  I think it is impossible to monitor this without the existence of some sort of traceability system.

15  Thanks for the suggestions of contacts on measurement of degraded forest

16  You say, rightly, that this indicator is “vague”.  However Global Forest Goal 2.1 is “extreme poverty[[1]](http://www.fao.org/fsnforum/activities/discussions/forestry_indicators#_ftn1) for all forest-dependent people is eradicated”, which is a very precise and ambitious commitment.  Perhaps the indicator should follow the wording of the commitment: “Number of forest dependent people living in extreme poverty”?  In my view, the topic of extreme poverty of forest dependent people cannot be omitted from the Global Core Set.

18 (wood energy)  the fundamental problem is that in some (developing) countries, policy makers want to reduce wood energy (because of air pollution, fuel poverty, overharvesting etc.), while elsewhere the emphasis is on expanding renewable energy, including wood biomass from sustainable sources.  Given the generally weak data quality, and the difficulty of giving meaning to this indicator, not to mention the fact that wood energy is not mentioned in any of the global commitments[[2]](http://www.fao.org/fsnforum/activities/discussions/forestry_indicators#_ftn2), I am inclined to think this indicator might be dropped.

19  I agree that the time is not right to include an indicator on payment for ecosystem services.

20 You recommend to drop an indicator of recovery rates for wood and paper, and I have seen no strong support for this indicator, partly because it is seen as being outside the scope of a forest focused indicator.

21 You recommend to drop the indicator on carbon stocks and flows.  I am rather reluctant as two of the Global Forest Targets (1.2 and 2.5) refer to carbon stocks and mitigation/adaptation of climate change.  In my view, the key question is whether indicator 2 (above ground biomass stocks) is adequate to monitor forests’ contribution to climate change mitigation.  As it stands, indicator 21, as the Task Force said, has too many elements.  Could it be streamlined to refer to GHG sink/source of forests??

Thanks again for your contribution to the ongoing discussion

Kit Prins

Facilitator

[[1]](http://www.fao.org/fsnforum/activities/discussions/forestry_indicators#_ftnref1) Defined in the SDGs as people living on less than $1.25 a day

[[2]](http://www.fao.org/fsnforum/activities/discussions/forestry_indicators#_ftnref2) SDG 7.2.1 refers to renewable energy, without specifying wood or biomass

## Christopher Prins, facilitator of the consultation

Dear Mr. Jafari,

Thank you for introducing the perspective of Low Forest Cover Countries to the discussion.

I believe most of the indicators are fully applicable to LFCCs – it is the interpretation of the results which will differ between countries.  In particular the results of the monitoring might be able to support a case for increasing forest cover in LFCCs.

Trees outside the forest are especially important in LFCCs (although their importance is increasingly recognised elsewhere).  How do you think they could be addressed in the Global Core Set (bearing in mind the need for a streamlined set, and links to high level policy commitments)?

The Global Core Set has focused on monitoring policy commitments.  So while research must, of course, be the foundation of the measurement, and the methods used must be scientifically sound, guidance should come from policy makers as to priorities for monitoring.  So I see no need for extra information - in the Global Core Set itself - on links between the indicators and research.  Or have I misunderstood your concerns?

Thank you for your contribution

Kit Prins

Facilitator

## Meinrad Abegg, National focal point FRA, Switzerland

Dear FSN Forum,

Please find attached my response to the "online consultation on the development of a Global Core Set (GCS) of forest-related indicators".

Best regards,

Meinrad Abegg

National focal point FRA for Switzerland

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Meinrad Abegg, dipl. Forst Ing. ETH  
Wissenschaftlicher Dienst LFI  
Eidg. Forschungsanstalt WSL  
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Attachment:

<http://www.fao.org/fsnforum/sites/default/files/discussions/contributions/GCS%20consultation%20matrix_Swiss%20NFI_0.docx>

## Giovanni Santuopoli, Università degli Studie del Molise, Italy

Dear moderator,

the topic of forest-related indicators is very interesting.

Often, we explore C&I for SFM report (such as State of Europe’s Forests) when we have to make a report or congress presentation, but some information are not available or not easy to understand or not very clear (such protected areas, naturalness, regeneration, etc.).

In my opinion it could be fine to take into consideration some aspects, that often are useful for describing forest and forest management. For this reason, I would suggest to evaluate the possibility to include some of the follow indicators which still are not included in the Global core set:

* Forest mixture or tree specie composition;
* Extend of old growth forest (or forest which are not used since 50 years ago);
* Sylvicultural system adopted: % of different systems (e.g.: clear-cut system, seed tree system, shelterwood system, coppice system, selection system). This indicator could be very useful for describing how forests are managed and allow to evaluate in the temporal frame the variation among systems. The indicators have to refers to the amount of forest area available/harvested for timber production. This indicator will give also information about the vertical distribution of trees;
* Similarly, it could be interesting to have an indicator which reflect the forest management objective and which describe the extent of forest functions according their priority management at national level (e.g.: 85% productive; 4 % protective soil and water; 10% biodiversity; 1% recreational);
* Age structure and/or diameter distribution;
* Extent of forest area affected by illegal logging distinguished by natural events (e.g.: fire and other environmental damages) or human made ( e.g.: Weaknesses in forest governance);
* Finally, it could be very interesting, as regards the biodiversity, to have a value of the average abundance of tree-related microhabitat per hectare. I know that the last one is quite difficult and expensive to monitor, but it could be fine that forest policy will support the occurrence of particular ecological niches in order to support the conservation of forest biodiversity.

I hope that you can consider the possibility to include these indicators in the global set.

Best regards,

Giovanni

Giovanni Santopuoli  
Natural Resources & Environmental Planning  
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## Jingpin Lei, Chinese Academy of Forestry, China

Hello,

I am from China, and I have been involved in Montreal Process for a long time, I have comments about the Global C&I which are talking about.

1, It is very difficult for us to development a core set of C&I related forest, as forest is a very complicated ecosystem. From my personal point of veiw, even at country level and regional level, to evaluate the process to Sustainable Forest Management is not easy, we have to full consider the diffrerence of the economic situtation, the social develepment level and the natural situation for the forest growth. That's not easy to evaluate.

2, It is depend on the target, that means what we will use the core C&I to do? It will be operational or just principle for considering!

I like to discuss this topic with the expert from all over the world, as it is very interesting and very meaningful

Keep in touch

With the best

Sincerely

Jingpin Lei  
Professor  
TAC member of Montreal Process  
Research Insititute of Forestry, Chinese Academy of Forestry  
Beijing,100091

## Stefanie Linser, EFICEEC-EFISEE and chair of IUFRO WP 9.01.05 on Research and Development of SFM indicators, Austria

General comments: I strongly support the selection of only up to 15 indicators into a Global Core Set (GCS) of forest-related indicators.

Attention should be paid to the fact that the selection of indicators should give a representative, worldwide relevant picture of forests and forestry but should also be of interest for related sectors like biodiversity, climate change, energy or bioeconomy.

Therefore, the core set should contain indicators which are also part of indicator sets of *related sectors* like indicators used within the CBD, UNFCCC or UNCCD which have also indicator related reporting obligations.

#2 and 4: I recommend to keep the indicator on *protected forest areas* separated from the *indicator on protective forest areas*(proposal of another expert), as protected areas are a main CBD indicator for Assessing Progress towards the 2010 Biodiversity Target and the indicator on “forest area within protected areas” directly contributes to this.

#3 and 1: Concerning the reporting of *above-ground biomass stock in forests* in tonnes instead of tonnes/ha, is a need to determine if we want to agree now on the measurement units which should be requested from the data providers or on the measurement units which should be officially reported/communicated. I do not mind if related data is requested in tonnes. However, it should be reported in above-ground biomass stock in forest (tonnes/ha) as otherwise the comprehension will be limited (Comparison with national figures). I would propose to negotiate measurement unit which will be used to present the underlying data. This is also relevant for indicator 1 on forest area. Fine to request information on forest area as proportion of total land area, but of interest for the sector, the broad public and the politicians is the forest area net change rate, which should be part of the information presented.

#5 Employment in forestry and logging: I would rather propose to use *employment in the forest sector*, as the forest sector is defined by the statistical offices. Then further divide the data accordingly to statistical subcategories.

#13 Existence of a traceability system for wood products. This indicator is without underlying measurement unit difficult to comment on. If it there are only yes/no options per country, then it seems rather meaningless. It needs to consider at least different ownership structures. Would be helpful to have the possibility to comment on the underlying explanatory notes as well.

#14 Forest health and vitality: Should be part of the set, as indicators on forest health and vitality are part of all regional C&I processes and data is available in FRA. Concentrate on *forest area damaged* (by multiple factors) and separate data on *forest area damaged by fire*, as this is an emerging issue.

#15 Area of degraded forest: Should be part of the set and changed into green, as degraded forests are an emerging issue due to climate change, particularly through draught, heat, erosion. Degraded land area is also an indicator under UNCCD.

#18: Share of wood based energy in total primary energy consumption…: should be part of the set to show *the sectors contribution to a green/bioeconomy.*

#21 Carbon stocks and changes in forest land: Should be definitely moved back to the set as *carbon stocks and carbon stock changes are an important UNFCCC indicator*and we should show the forest sector’s contribution to climate change mitigation. Concerning the comment about deviating UNFCCC and FRA data I was informed that the reviewers of the Greenhouse-Gas-Inventories double check validity with the FRA data. Even so that data harmonisation is often necessary the indicator should definitely be part of the Global Core Set due to its global importance in the climate change debate.

## Jingpin Lei, Chinese Academy of Forestry, China (second contribution)

C5, is difficult to get the data, as large number of people are part time employment in forestry; and for employment in logging, there will be different between the logging mechaine and artificial.

C15, Percentage change in area of degraded forest: there is no accepted definition about the "degraded forest".

C14, Forest health and vitality: % of forest area disturbed: is also a indicator that data collection is difficult.

C20, recovery rates for paper and solid wood products (volume recovered for re-use as % of volume consumed): it is not about SFM.

C21, Carbon stocks and carbon stock changes in forest land: net forest GHG sink/source of forests, forest carbon stock, carbon storage in harvested wood products (Tons C): it will take a long time for many countries to report it, it is not operational.

## Zoltan Somogyi, Hungarian Forest Research Institute, Hungary (second contribution)

Dear Mr. Prins,

thanks for your reply. As far as I understand, the kew sentences of your reply are the following: "you recommend ... to attempt to replace the carefully negotiated high level policy commitments with a new system which depended only on the intellectual rigour of the designers.  Such an exercise would not be supported widely." Without going much into the details, I only would like to reac to their main points.

First, I think that rigour is not necessary because of designers, but rather, because of the laws of Nature. I also think that these laws cannot be developed from "high level policy commitments", whether they were negotiated by policy makers carefully or not, rather, they should be developed from the laws of Nature. Second, I am aware that we are talking about a policy process. But I am also aware that it already happened (e.g. in the climate change negotiations) several times that policy makers tried to formulate wishes, and then it were scientists that had to develop guidance, based on the laws of Nature, on how to comply with wishes in practice, and it were scientists in a number of cases that had to inform policy makers that what they want is simply not possible. I was just advertising my opinion about what you need to consider to implement a system that works. I fully understand if changing the system is not feasible at this point (although, as an additional minor point, I cannot fully understand how a system can be carefully negotiated if it is not a final one, i.e., when some indicators can be dropped, others suggested, and some remaining indicators changed.) Finally, you have not rebutted in your reply any of my arguments with counter-arguments, and as long as my arguments are not falsified I will continue to believe in them. This means that, if the "carefully negotiated" system cannot be changed this time, one option is that people in the process could at least start considering the principles and argumens I have outlined and, if found justified, the current system could be developed based on (at least some of) these considerations, together with the experience from its implementation.

With my best regards,

Zoltan Somogyi

## Christopher Prins, facilitator of the consultation

Dear Mr. Abegg

Thank you for your detailed comments and suggestions.

Here are my reactions

GCS1 I agree that the significance of changes in area will depend on circumstances.  Indicators do not provide objective assessments of “good” and “bad” trends.

GCS 2. As you say, “protected” is not legally defined.  However there is a lot of experience, in FRA and IUCN of how it should be interpreted.  In this matter, I think we should follow precedent.

GCS3 For reporting purposes, tons and tons/ha are both quite easy.  However, this indicator should, in my view, focus on ***change*** in growing stock, as a reduction in growing stock in most cases implies overuse of the resource (I know Switzerland is an exception as growing stock is at too high a level).

GCS4  I agree that it is difficult to identify the importance of the protection functions of forests

GCS 5  With “forest related jobs” (not quite the same as “employment in forestry and logging”), it seems to me the challenge is to agree on what the meaning of the indicator is.  More jobs can mean a healthy sector, or inefficient labour practices.

GCS 6  Yes, an explanatory note will be needed when information is collected.

GCS 7 Good point about need to define "scientifically sound"

GCS 9 I agree that definitions and interpretation of what constitutes a “long term management plan” is vital.  FRA does have experience in this respect, so that can be the base.

GCS 10 You touch on a sensitive spot when you express concern about using certification as a surrogate for sustainability.  I sympathise with your point of view.  However, forest laws are not well implemented in many countries, and certification provides a visible and comprehensive guarantee of sustainability, which follows the wood through the chain-of-custody systems, even if many sustainably managed forests are not certified.  For many people outside the sector, certification is the only way of reaching sustainability: some people proposed area of certified forest as the only indicator for sustainable forest management!  In any case, at present certified area is in the SDG indicator for progress towards SFM, so it would be hard to exclude it now.

GCS 11  Yes.  Several people have proposed merging this indicator (on ODA alone) with indicator 17 on all financial resources for SFM.  This is probably a good idea, even though defining and measuring the other financial resources will be challenging.

GCS 13  You say a traceability system is often not needed.  But is not the idea of traceability behind chain-of-custody systems and policy instruments like the EUTR and the Lacey Act, which are increasingly important everywhere?  So the concept is applicable to all countries, not only those with an illegal logging problem.  There is a commitment to increase the proportion of products from sustainably managed forests: I do not see how this can be done without some sort of traceability.

GCS 14 I agree with your remarks about defining and measuring “damage” or “disturbance”

GCS 15 Defining degradation is indeed a major challenge.  The FRA 2015 approach (partial canopy cover loss) is not 100% satisfactory.  But again, there are high level commitments to halt forest degradation so a means must be found to monitor it

Thanks again

Kit Prins

Facilitator

## Christopher Prins, facilitator of the consultation

Dear Giovanni,

Thank you for your comments based on real experience.

The indicators you identify are all of great interest.  In fact some of them are already included in the pan-European set (species composition, naturalness of forest, silvicultural system, – not as detailed as you suggest – age structure, damage).  A few of them (naturalness, disturbance, and management objective, with slightly different wordings) are in FRA 2015.

Unfortunately we are trying to reduce (not increase) the number of indicators and link each of them to the global objectives (SDG, Strategic Plan, Aichi Targets), none of which, to my knowledge, specifically mentions the indicators you list, with the exception of the commitment to reduce illegal logging/improve forest governance (addressed - weakly, I am afraid - by indicators 13 traceability/illgal logging and 15 degraded forests).  I also fear that some of the indicators you mention might prove very challenging to measure at the global level, especially in countries with a high proportion of natural forests, with very different approaches to silviculture.

So I believe your very interesting suggestions would probably be more appropriate to the European regional context, not the Global Core Set.

Thanks again, and best regards

Kit

Facilitator

## Christopher Prins, facilitator of the consultation

Dear Jingpin Lei,

Thank you for your detailed and constructive comments.

I fully agree that it is very challenging to devise indicator sets to suit very diverse conditions.  As a consequence, a global core set, which must address global commitments made in a variety of high level fora, is bound to lack specific detail, and needs to be complemented by other indicators valid for particular regions, countries or ecosystems.  The aim is to provide information in a form which can be used in the global policy dialogue – not only by forest sector experts and policy makers, but also by policy makers for other sectors and for sustainable development as a whole.  This objective should be borne in mind when making the tradeoffs which are inevitable in agreeing a global core set.

As regards your specific comments (separate post), you agree with several other commentators on the challenge of defining “degraded” and the concepts underlying “% disturbed”.  You also agree with others that recovery rates for paper and wod are outside the scope of SFM, and on the challenges of employment data.  On carbon stocks and flows, you are right that colecting data is difficult and expensive.  However, the UNFCCC has developed detailed guidelines on GHG accounting, which have been widely used by signatories of the Kyoto Protocol.  The point here is that forest inventory people should work closely together with those responsible for GHG accounting, to achieve useful results (even if there are sometimes tensions between the two approaches) .

Thanks again

Kit Prins

Facilitator

## Christopher Prins, facilitator of the consultation

Dear Stefanie,

Thanks a lot for the detailed and constructive comments.  I respond to them below

General comments: I strongly support the selection of only up to 15 indicators into a Global Core Set (GCS) of forest-related indicators.

*Thanks (although I notice that, like everyone else you are keener to add than to delete indicators!)*

Attention should be paid to the fact that the selection of indicators should give a representative, worldwide relevant picture of forests and forestry but should also be of interest for related sectors like biodiversity, climate change, energy or bioeconomy.

*Yes indeed – but also the SDG process, which incorporates them all*

Therefore, the core set should contain indicators which are also part of indicator sets of *related sectors* like indicators used within the CBD, UNFCCC or UNCCD which have also indicator related reporting obligations.

#2 and 4: I recommend to keep the indicator on *protected forest areas* separated from the *indicator on protective forest areas* (proposal of another expert), as protected areas are a main CBD indicator for Assessing Progress towards the 2010 Biodiversity Target and the indicator on “forest area within protected areas” directly contributes to this.

*I fully agree on the necessity of using the same wording as other sectors to improve consistency*

#3 and 1: Concerning the reporting of *above-ground biomass stock in forests* in tonnes instead of tonnes/ha, is a need to determine if we want to agree now on the measurement units which should be requested from the data providers or on the measurement units which should be officially reported/communicated. I do not mind if related data is requested in tonnes. However, it should be reported in above-ground biomass stock in forest (tonnes/ha) as otherwise the comprehension will be limited (Comparison with national figures). I would propose to negotiate measurement unit which will be used to present the underlying data. This is also relevant for indicator 1 on forest area. Fine to request information on forest area as proportion of total land area, but of interest for the sector, the broad public and the politicians is the forest area net change rate, which should be part of the information presented.

*I think there was some confusion in the Task Force between the formulation of the indicators (which should have a direction and meaning) and the problems of data collection.  The latter are the concern of FRA or other operations, and not directly the concern of the Global Core Set.  Clearly the data will be collected in absolute terms (ha, m3, tons etc.), but the indicator says how these data should be put in a context.  For #3, which I see as monitoring the drain/increment ratio, what is important is the change, as if drain exceeds increment and/or there is deforestation, the above ground biomass will decrease.  In this context, it is probably better to lok at change in tons, rather than change in tons/ha.  If the latter is monitored, deforested land simply disappears from the equation.  You could even have an increase in tons/ha in a deforestation situation (if the deforested area had below average biomass/ha)*

#5 Employment in forestry and logging: I would rather propose to use *employment in the forest sector*, as the forest sector is defined by the statistical offices. Then further divide the data accordingly to statistical subcategories.

*I used the term “forestry and logging” as that is used by the international ISIC classification.  However, it does exclude many jobs which relevant to the forest sector, such as subsistence farming as well as tourism, research, nature conservation etc.  We should perhaps refer to employment in the forest sector, even if we are forced back to basic data on “forestry and logging”.*

#13 Existence of a traceability system for wood products. This indicator is without underlying measurement unit difficult to comment on. If it there are only yes/no options per country, then it seems rather meaningless. It needs to consider at least different ownership structures. Would be helpful to have the possibility to comment on the underlying explanatory notes as well.

*It is true that a yes/no question does not give much possibility for differentiation.  My idea was that we need to link sustainably managed forest with consumption of products, in line with the commitment to increase the proportion of products from sustainably managed forests (global forest target 3.3) (unclear whether the commitment refers to production or to consumption).  Perhaps we should express the traceability in volume terms (“volume of wood products consumed which can demonstrate they are from sustainable sources”, or similar)?*

#14 Forest health and vitality: Should be part of the set, as indicators on forest health and vitality are part of all regional C&I processes and data is available in FRA. Concentrate on *forest area damaged* (by multiple factors) and separate data on *forest area damaged by fire*, as this is an emerging issue.

*“Forest health and vitality” appears in all regional C&I sets, and the 7 thematic elements.  However, I have just noticed that the Global Forest Goals and Targets refer to “resilience” and “adaptive capacity” which are not quite the same.  There are also the well-known problems of measuring damage or disturbance (multiple causes, combined effects, damage v. normal ecosystem processes).  All in all, I cannot really see a global core set which does not address health and vitality in some way!*

#15 Area of degraded forest: Should be part of the set and changed into green, as degraded forests are an emerging issue due to climate change, particularly through draught, heat, erosion. Degraded land area is also an indicator under UNCCD.

*Fully agree, especially as there are several high level commitments to halt forest or land degradation.  However, we still need a workable definition of “degraded forest”!*

#18: Share of wood based energy in total primary energy consumption…: should be part of the set to show *the sectors contribution to a green/bioeconomy.*

*That was my thinking, but several contributors have questioned it (and we do need to reduce the number of indicators a bit).  I looked at the high level commitments and found no reference at all to wood or biomass energy.  The SDGs (7.2.1) refer to renewable energies, without further detail.  It would be good to have more views n this.*

#21 Carbon stocks and changes in forest land: Should be definitely moved back to the set as *carbon stocks and carbon stock changes are an important UNFCCC indicator* and we should show the forest sector’s contribution to climate change mitigation. Concerning the comment about deviating UNFCCC and FRA data I was informed that the reviewers of the Greenhouse-Gas-Inventories double check validity with the FRA data. Even so that data harmonisation is often necessary the indicator should definitely be part of the Global Core Set due to its global importance in the climate change debate.

*I also would find it strange to have a global core set without any specific mention of forests’ role in climate change mitigation.  Nor am I worried about differences between FRA and UNFCCC processes, as we should not exclude policy relevant information for reasons of data consistency.  However, the indicator might be streamlined (bearing in mind that carbon stocks are implicitly addressed in #3) to something like “Net GHG sink/source of forests”, which would capture the effect of deforestation on the climate as well as the forests’ contribution to climate change mitigation, where this occurs.*

 Thanks again

Kit

Facilitator

## Christopher Prins, facilitator of the consultation

Dear Mr.Somogyi,

Thanks for continuing the discussion.

You are of course right about the laws of nature – although observing the climate change debate leads me to think that some policy makers are perfectly happy to destroy the planet’s ecosystems whatever the scientists say!

What you are proposing can very well progress in parallel with the Global Core Set, as they are quite different enterprises.  Nor do I disagree with many of your suggestions, most of which seem excellent, and I have no desire to “rebut” any of them.  My problem is that for an indicator set to be operational at the international, or national, level, there must be a broad consensus of all stakeholders. The ultimate responsibility for decision lies with the Governments which represent their peoples.  At the international level, these Governments must also seek consensus, which is a complex and sensitive process.  The result is negotiated texts, notably in our case, Agenda 2030 (the SDGs), the Aichi targets of the Convention on Biodiversity and the Global Forest Goals and Targets set out in the UN Strategic Plan for Forests.  The first and third of these were formally approved by the General Assembly of the UN and the second by the CBD COP.  The forest sector as whole, as part of the international community, has a responsibility to supply information to these policy makers in the form which they will find useful.  This is the context for the Global Core Set, which, perhaps unfortunately, does not have the freedom to start a new process, ignoring the discussions which have taken place between hundreds or thousands of people, over 25 years – even if, from time to time, we disagree as individuals with what has been agreed.  None of this prevents any person or group from creating their own structure of criteria and indicators of sustainable forest management, starting from first principles, as you propose.

Thank you again for your valuable contribution to the discussion

Kit Prins

Facilitator

## Bronwen Powell, Canada

Dear CPF team. I am sorry I was not able to post before May 14th, but have been thinking about indicators for forests' contribute to food security and nutrition for a long time so I will post now.

Indicators forests' contribute to food security and nutrition can and should be incorporated into both FSN data tools and Forest monitoring tools. Below I will list both, with the ones I think are the easiest (requiring the least resources and adaptation of existing tools) listed first.

Potential Indicators from FSN data:

* Percent of fruits, vegetables and animal source foods in the diet from wild species or tree species. By frequency or weight. Would require better identification of less common foods in dietary survives (e.g. less common foods are often grouped into "other vegetable" categories).
* Percent of fruits, vegetables and animal source foods in the diet from forests, agroforests or uncultivated lands. By frequency or weight. Would require asking the source of foods in dietary survives.
* Percent of fruits, vegetables and animal source foods available in community/ region/ or market that come from forests, agroforests or uncultivated lands. By frequency or weight. Would require asking the source of foods in market survives. Given the push to improve nutrition and food system data available globally, with a focus on improving data collection for the monitoring of food prices for nutritionally important foods such as fruits and vegetables, this might be easily included as well.

Potential Indicators from Forestry data:

* Collection of non-wood-forest products, with a focus on those used as fruits, vegetables and animal source foods. By frequency or weight. Systematic collection of data on weight of wild fruits and vegetables could be incorporated into FAOSTATs on food production and food available for consumption, allowing for accurate tracing of the contribution of forest foods to diet quality.
* Number of percentage of population consuming forest foods (and ideally the amount of frequency of consumption).
* Number of percentage of population collecting forest foods (and ideally the amount of frequency of consumption).

Without better, systematic/ globally comparable data we will remain unable to accurately estimate the contribution of forest foods to diet quality, nutrition and food security.

I would be happy to contribute further if there are ways I can be helpful,

Thanks, Dr. Bronwen Powell, Pennsylvania State University

## Christopher Prins, facilitator of the consultation

Dear all,

A lively discussion continues, with many points of view and nearly all parts of the world participating. I have counted 18 contributors, some representing groups and some contributing more than once. I hope this continues.

Some of the debate has been quite detailed, but I would pick out the following, in addition to what I reported in my first overview.

* For any indicator set, it is crucial to clearly articulate the objectives. For the Global Core Set, these are to be derived from the high level policy commitments, notably the SDGs, the Aichi targets and the newly approved Global Forest Goals and Targets. The forest community has an obligation to put itself in a position to supply information on progress towards the goals identified by policy makers, and the Global Core Set should streamline this process.
* Should we have an indicator on wood energy? (It is not actually mentioned in the high level commitments.  SDG 7.2.1 refers to renewable energy as whole.)
* For policy instruments, it is not enough just to look at the existence of an instrument, but also its effectiveness.  But how to do this in a context of international indicators?
* There seems to be consensus on dropping the indicators on recovery rates for wood and paper and on payment for ecosystem services
* On the other hand, some support maintenance of the indicator on carbon stocks and flows – or at least net GHG sink/source. Otherwise it might appear that forests are not contributing to climate change mitigation.  Indicator 3 on above ground biomass does not cover the whole topic, it seems.
* The situation and viewpoints of Low Forest Cover Countries must also be reflected
* The indicator on livelihoods (16) might be adapted to reflect the commitment to eradicate extreme poverty for all forest dependent people (Global Forest Target 2.1).
* Indicator 7 (ODA) could be merged with indicator 11 (finance from all sources for SFM)
* Doubts are expressed about how to formulate indicator 14 on forest health and vitality, but most seem to favour its maintenance whatever the problems.

Finally, the consultation must end on 21 May (this Sunday), as I should transmit the results to an Expert Consultation starting on 12 June.

Thank you all

Kit Prins

Facilitator

## H. Gyde Lund, Forest Information Services, United States of America

**Online consultation on the development of a Global Core Set (GCS) of forest-related indicators**

**Is the global core set, as it stands in April 2017, sufficiently comprehensive, balanced and short to achieve its stated objectives?**

I do not have any suggestions for the *addition* or *deletion* of indicators. *Modification/reformulation of indicators* - What is it we are trying to track – the changes in amount and use of trees or the changes amount and use of forests? It seems to me that the former is more important. The FAO definition of ‘forest’ excludes tree covered areas that are used for agriculture, yet these areas store carbon, protect soil and water, produce wood products, can be disturbed, degraded, and ‘deforested’ just like a teak or eucalyptus plantation which would count as ‘forest’. So why not include?

Regardless of what lands are included if the indicators are to be monitored over time or compared with indicators from another location then there needs to be some very specific definitions and measureable thresholds for terms like ‘forest’, ‘forest area’, ‘protected area’, ‘disturbed area’, ‘degraded area’, etc. For example, does the removal of a single tree constitute a disturbance or degradation? If not, how many trees need to be removed before the area is classified as disturbed, degraded or even deforested?

My comments on specific indicators are given below. Thank you for the opportunity to review and please forgive the rantings of an old man. Cheers, Gyde.

Attachment:

<http://www.fao.org/fsnforum/sites/default/files/discussions/contributions/Online%20consultation%20on%20the%20development%20of%20a%20Global%20Core%20Set_Lund.docx>

## Sejuti Sakar De, Society for Natural Resource Management and Community Development (SNRMCD), India

Following are our comments on Global Core set of Forest related Indicators:

Indicator 2: There are levels of legal protection of forest – parts where community are allowed to enter and parts where all non-forest activities are banned. The indicator may be further segregated for better outcome.

Indicator 3: Above ground biomass stock to be measured in lower units like kg. In resource rich areas like that of rainforest yield/ha may be greater to a large extent than resource poor forest areas like that of desert/semi-desert areas. Lower units can help in error-free calculations.

Indicator 4: Forest areas are managed for multiple ecological benefits. It may be difficult to identify forest areas managed only for soil and water conservation. The same is true for mountain green cover. In India, glacial Himalaya is under Forest Department which have less green cover but is source of water for whole South Asia. A more suitable indicator may be Forest area (in ha.) under watershed management plan.

Indicator 5: The phrase ‘employment in forestry’ may be better clarified. The term ‘Employment’ will only include the Forest Department staff and those employed by contractors. Forestry also includes protection works and many community members including women are involved in forest protection. Members of Joint Forest Management Committees (JFMCs) in India and similar such committees for Community Forest Management in South and South-East Asia are involved in forest protection in lieu of benefit sharing with Forest Department. Also, Forest Department employs Consultant Agencies for forest management, planning and monitoring. Staff of these agencies are also employed in forestry activities.

Indicator 9: ‘Proportion of forest area’ will be better for comparative analysis. Some countries may have smaller forest area but better forest management plan.

Indicator 12: Volume of wood harvesting can be m3/ha unit. This can be easily calculated in terms of 1000 people. Moreover, the unit m3/ha is used in many countries in forest management plans and the figure will be readily available. Also, forest wood calculation should consider illegal logging as well as logs decomposed due to natural processes. In India, a good percentage of logs are being left in the National Parks for decaying by order of Hon. Supreme Court. This should be taken under consideration.

Indicator 14: We think ‘degradation’ is a better term than disturbance. The factors of degradation may be specified as mentioned in Comments column. Another major disturbance in Invasive Species and Forest Department presently allocate budget for it’s removal.

Indicator 16: Livelihood of forest dependent communities can be calculated under Economic Valuation of Forest other than timber (unit per ha.). In India, forest area is being used by community for rearing of Tussar silk worms, mulberry silk worms, cultivation of lac, areca nut, black pepper, betel leaf etc. The valuation of NTFP collected, specially, fuelwood and fodder grass regularly from forest is quite high. According to estimate of Planning Commission of India, 275 million people depend on NTFP and annual business turnover of NTFP generated and processed is more than Rs.6000 crores (approx. 960 million USD). Ecotourism is another major source of revenue generation and employment generation from forest both for Forest Department and community. In highly populated countries of South Asia, Community Forest Management and revenue generation through NTFP and ecotourism are essential for forest protection and conservation. The economic valuation of livelihood of forest dependent communities will be a strong positive indicator.

Two major indicators that need to be added to the global set of forest related indicators are biodiversity and Trees Outside Forest (TOF).

* Biodiversity, ranging from predator to decomposer, is a major indicator of health of forest. Tropical forests and rainforests have significantly high biodiversity and this need to be calculated for classification of ‘good and bad’ forest. Biodiversity or animal species per hectare of forest area is an important indicator to be added to the global set.
* TOF is presently a significant contributor to green areas of country. Plantation under Compensatory Afforestation scheme, highway authority, industries etc. are done mainly in areas outside forest. TOF is measured as green area in satellite data captured by Forest Department. So data on Trees Outside Forest will be a good indicator of ecological initiatives of governments.

We heartily appreciate FAO and team for embarking on such an important task which was long pending. Framing of forest related indicators along with water will be a significant step towards natural resources conservation.

Thanks & Regards,

Sejuti Sarkar De, Chief Coordinator, Society for Natural Resource Management and Community Development and Women Scientist Fellow of Department of Science and Technology, Govt. of India

& Debasish De, President, Society for Natural Resource Management and Community Development and Adviser, Department of Environment Forest and Climate Change, Govt. of Nagaland, India

## Simon Bridge, Natural Resources Canada, Canada

This is a great start to a global set of core forest indicators. It is quite a challenge to find a list that is comprehensive, balance and short – the desired outcome expressed at the experts’ workshop held in Ottawa in May 2016 and at the Organization-Led Initiative workshop held in Rome in November 2016.

As a starting point, therefore, I thought about how I might reduce the list to be closer to the desired number of 12-15 essential indicators, while still being balanced among the accepted Criteria of established Criteria and Indicators Processes and aligned, as much as possible, with other existing reporting needs. In this way, global discussions on sustainable forest management are aided by increased consistency of information among countries and across reporting processes. Also, countries will be better able to respond to the many and varied requests they receive for information about their forests. I have articulated a possible list below (note that I have reordered the indicators so that similar or related indicators are closer together in the list).

1. Forest area
2. Forest area within protected areas
3. Forest area designated and managed for protection of soil and water
4. Forest area under a long-term forest management plan
5. forest area disturbed (including natural and anthropogenic disturbance)
6. Existence of scientifically sound national forest assessment process
7. Above-ground biomass stock in forest OR total growing stock
8. Volume of wood removals
9. number of forest dependent people
10. Employment in forestry and logging
11. Value of payments for ecosystem services (PES) related to forests OR value of forest products produced
12. Existence of policies supporting SFM
13. Existence of a national mechanism to secure multistakeholder participation in the development and implementation of forest-related policies

Generally, the task force that worked on this list of indicators has well described the technical challenges with the indicators. Below, I provide additional comments on the individual indicators, using the order in which they were presented in documents provided to this forum.

**Forest area as proportion of total land area**

The indicator “forest area” is preferred to the indicator “forest area as a proportion of total land area”. “Forest Area” is already widely reported, can be tracked over time for many individual countries, and would allow readers to easily calculate useful proportions for other area-based indicators in this list (e.g. forest area in protected areas) relative to the total forest area. Forest area as a proportion of land area can be readily calculated by readers as needed.

**Forest area within protected areas**

The current wording is fine in as much as it is easily reported. However, calculating the proportion relative to the total forest area (as suggested in the comments from the TF meeting) will require extra calculations if the first indicator is the proportion of forest relative to total land.

This indicator may not adequately capture important aspects of species diversity. Indicators such as the number of forest-associate species at risk or the number of forest-associated species extinctions could be considered.

**Above-ground biomass stock in forest**

Having some idea of total volume to measure removals against is useful. Growing stock of commercial species might be more useful in this regard than total above ground biomass, but may be more difficult to measure by all countries. Changes in biomass have to be reported in context of the countries circumstances to tell a story. A massive shift to intensive plantations might increase a country’s biomass, but what does that mean for sustainability?

**Forest area designated and managed for protection of soil and water**

All of the C&I processes include criteria on soils and water, so it’s important to include a relevant indicator in the core set. This indicator’s similarity to a GFRA indicator means that many countries likely can report on this indicator using established definitions.

**Employment in forestry and logging**

An important indicator. The current wording is a big improvement over the original suggested wording about the number of jobs per 1000 ha of forest. However, it would be useful to see the definition of employment expanded to beyond the current FAO definition to include those who work in saw mills and pulp and paper mills.

**Existence of a national mechanism to secure multistakeholder participation in the development and implementation of forest-related policies**

This indicator is fine, as long as it recognizes that in some countries, forest management is conducted at the sub-national level, and that the “national” mechanism may in fact be a series of sub-national mechanisms that cover the country.

**Forest area under a long-term forest management plan**

The indicator is fine as worded, but a definition of “long-term” is required

**Existence of a traceability system for wood products**

This may be too indirect to serve as a good indicator of illegal logging

**Forest health and vitality: % of forest area disturbed**

Simplifying this indicator to “forest area disturbed” would make it more it more comparable with other area-based indicators. Similarly, the proportion of forest disturbed could be calculated by readers if an indicator of total forest area is included in the set. Also, the term “forest health and vitality” should be removed. Other indicators do not possess prefaces like this, and it may lead to misunderstandings that forest disturbance is always negative for forests. In boreal and temperate forests, some level of disturbance is necessary for proper ecosystem functioning. Clarity will be needed on which disturbance types/intensities shall be included

**Share of wood based energy in total primary energy consumption, of which in modern clean systems (%)**

Wood energy is one product of many produced from the forest. Once the wood is harvested, the type of product it is turned into is not really relevant to whether the forest was managed sustainably or not.

**Value of payments for ecosystem services (PES) related to forests**

Forests have value beyond wood products and they are managed for multiple values - e.g. ecosystem services, like purifying water, stabilizing land, etc. However, as noted by the task force, the concepts are poorly defined and measurement would be a problem. Consider replacing it with an indicator on value of wood products - granted it is not as comprehensive as ecosystem services, but it is globally reportable.

## Cornelia Ehlers, GIZ, Germany (second contribution)

Dear Mr. Prins,

thank you for creating some more time for input into this discussion. I will react on one of your questions:

*Should we have an indicator on wood energy?  (It is not actually mentioned in the high level commitments.  SDG 7.2.1 refers to renewable energy as whole.)*

yes the SDG only looks at renewable energy as a whole, however wood is the most important renewable energy source world wide and its use is in many cases not sustainable (1/3 of world consumption).

I also agree with the previous comment that wood used for energy is one product and yes potentially, if we monitor the sustainability of the ressource we should cover it all. However wood energy consumption is highly influenced by renewable energy policies or the (non-)existence of bioenergy policies and this can increase or decrease the consumption accordingly. Decisions on how much wood for energy consumption will be needed depend highly on decisions made in the energy sector (if they are made or monitored). In many cases the question of demand and supply of energy wood is falling between the chairs, since the forestry sector only monitors the management of the ressource and the energy sector monitors how much energy is consumed from which source and what the emissions from its use are (and here often wood is considered as renewable, no matter whether it is harvested sustainably or not). There is often not much dialogue between the two sectors. Considering that 50% of wood harvested worldwide is used for energy (with a potential to increase, since the demand is projected by IEA to increase) an indicator that looks into a dialogue and matchmaking between the forest and the energy sector seems relevant to me. Especially since any decision made in the energy sector will have an effect on the availability of the resource or alternatively will have an effect on the profitability of producing energy wood/ using wood residues from sustainable management practices for energy. So potentially an indicator related to the availability of energy wood demand and supply would serve the purpose?

But maybe this is something that does not need to be monitored on the global level, but rather on the national level or incorporated in any forestry policy on the national/regional level.

Best regards,

Conny Ehlers

## Abraham Santigui Keita, Forum des Nations Unies sur let forêts, Guinea

*[French original]*

Je voudrais vous soumettre trois (3) indicateurs issus des forêts à analyser dont entre autre:

- Huile rouge

un produit issu des palmiers et une production exploitée par les communauté en grande partie qui rentre dans l'alimentation.

-Noix de cola

le colatier produit des noix de cola qui sont presque utilisé en Afrique tout entière, issus des plantations forestières, c'est un élément qui rentre également dans l’alimentions et la décoration des pagnes de la forêts sacrée .

- le Karité est l'unique espèce connu du genre vitelaria qui appartient à la famille des Sapotacée, ses noix sont utilisées pour fabriquer du beurre de karité  est extrait des fruits du karité arbre poussant uniquement à l’état sauvage dans les savanes arborés de l'Afrique et utilisé pour l'alimentation

Ces trois éléments permettez moi de les analysés et à les affecter à des indicateurs correspondants

Abraham Santigui KEITA

Point Focal du FNUF Guinée-Conakry]

[*English translation*]

I would like to submit three (3) indicators derived from forests for analysis, as follows:

- Red oil

A product derived from palms whose production is principally exploited by communities for food.

- Cola (Kola) nut

The cola tree produces the cola nut which is used over almost all of Africa, derived from forest plantations; it is an element that is part of the diet as well as being used on loincloths decorated with sacred forest subjects.

- The shea nut is the only known species belonging to the Vitellaria genre, which belongs to the family of the Sapotaceae. The nuts are used to make shea butter, extracted from the fruit of the shea tree which grows exclusively in the wild in the African savannah and which is used for food.

These three elements are amenable to analysis and to assignment of their corresponding indicators.

Abraham Santigui KEITA

Focal Point of UNFF [United Nations Forum on Forestry] Guinea-Conakry

## Conceição Ferreira, ICNF, Portugal

Dear colleagues

Dear Kit

We found the work done so far very interesting and we understand the need to have a limited number of indicators, specially for communication purposes and we are glad to contribute to the process.

In our view, and as a general comment, it seems that, as the UNSPF/UNFF) has 6 Global Forest Goals and 26 associated targets, there is a somehow unbalanced approach in relation to the SFM criteria - Biodiversity shoud be reinforced and “non-wood forest products” should also be introduced.

As an overall comment to the indicators, there should be a coherent line in relation to the use of percentage in their designation.

On specific indicators:

Ind. 5 – “Employment in forestry and logging” seems that excludes industry, which is also relevant and we concider that logging is included in “forestry”.

Ind. 7 – important to retain in the explanatory note that it "includes NFI and related information and monitoring systems".

Ind. 10 – we share the view concerning “certification and certified area”, as certification isn’t an official policy instrument and rather a market driven voluntary tool.

Ind. 13 – not clear what is expected concerning “traceability” in this context. Does EU Timber Regulation respond to this?

Ind.14 – “Forest health and vitality“ is the designation of the criterion, not of the indicator. This indicator should use FRA references, although the Forest Europe indicator2.4 (forest damage) seems appropriate and describes better what is included here.

Ind.15 – we agree that it is very unclear how to assess forest degradation, due to the difficulty to answer the basic question of how to define it. Degradation is linked to cover loss, carbon stock loss, biodiversity loss. It is, in fact, a “combined indicator” . Need for a baseline year, if expressed in “percentage change”.

Ind. 16 – how to define? we doubt there are available sources for assessing “forest dependent people” or “livelihoods”.

Ind. 17 – as for previous indicators don’t use “$/ha of forest”. “All sources” means private and public, as included in the GFG4 - 4.2) but we recognize that most of the private sources are difficult to estimate.

Ind. 18 – consumption or supply? Forest Europe indicator 6.9 uses supply. “modern clean systems ” is ambiguous and complicated to define.

Ind. 20 - we agree it can be deleted.

Continuation of the good work.

Conceição Ferreira

ICNF, Ministry of Agriculture, Portugal

## John Hontelez, Forest Stewardship Council, Belgium

From: John Hontelez, Chief Advocacy Officer, Forest Stewardship Council.

I thank FAO and its CPF partners for this opportunity to give feedback.

FSC is pleased to see that forest certification is now proposed as one of the 13 indicators.

I would like to respond to the observations made in the Explanatory note.

The problem of double accounting. We appreciate that. Two months ago, FSC and PEFC have agreed to work together to providing information about double certification, country by country, on an annual basis. Next week we will publish a list for the end of 2016 with figures for the 28 countries where this occurs. The total area of double certification in the world is 68 million ha, or 16% of the 429 million ha certified. We have estimations for 2012 to have a historical starting point. We would like to discuss with the governments in the 28 countries and FAO on how to incorporate our findings in the reporting on SFM.

Certification not an official policy instrument: on the one hand: several goverments do use forest certification as policy instrument, in particular in countries where governments own forests. On the other hand: which of the other indicators proposed are part of official policies in all/most countries?

Not all sustainably managed forests are certified: that is obviously true, and it is good that the set of indicators, includes another one that approaches the issue differently (nr. 9). But that indicator is not necessarily better: it does not guarantee a certain quality of management plans nor their systematic application in practice. Forest certification has the advantage that it is clearly defined and guarantees a certain level of performance. It is also a positive message to society, including the forest industry and consumers, to see that forest certification is recognised as a valid indicator for SFM: because the connected chain-of-custody and labelling standards can encourage SFM through creating demand.

## Tomasz Juszczak, UNFF Secretariat, United States of America

This is a step in the right direction as, indeed, this work will further contribute to the reduction of overlaps in data collection/reporting burden and will enhance the consistency of forest data. The current set fulfils the purpose of providing input for SDG Indicator 15.2.1: “Progress towards sustainable forest management” – as it contains all five “sub indicators” included under .15.2.1.

It will also support monitoring progress towards Global Forest Goals (GFG)/targets of the UN Strategic Plan for Forests and SDGs/targets other than 15.2 – although, to a lesser extent. E.g.:

GFG2: *Enhance forest-based economic, social and environmental benefits, including by improving the livelihoods of forest dependent people*, contains 5 targets:

2.1 Extreme poverty for all forest dependent people is eradicated.

2.2 Increase the access of small-scale forest enterprises, in particular in developing countries, to financial services, including affordable credit, and their integration into value chains and markets.

2.3 The contribution of forests and trees to food security is significantly increased.

2.4 The contribution of forest industry, other forest-based enterprises and forest ecosystem services to social, economic and environmental development, among others, is significantly increased.

2.5 The contribution of all types of forests to biodiversity conservation and climate change mitigation and adaptation is enhanced, taking into account the mandates and ongoing work of relevant conventions and instruments.

Indicator 16 of the core set, which still needs to be developed, will help measuring progress towards target 2.1; however, support for measuring other targets is less clear. This need for indicators/data gap is related not only to GFG2, but also to other SDGs - beyond SDG 15 and, in general, to measuring the contribution of forest to sustainable development. We, as forest community, always state and communicate the “importance” of forests to e.g. food security or poverty eradication; however, we still lack solid data/evidence for these statements. It is not an easy area of work, methodologies for specific indicators are still needed. We do need to enhance data availability and quality and build capacity for all this. However, these are the reporting requirements that could help to demonstrate the full benefits coming from forests. Thus, we strongly support further work, as needed, on Indicator 16 and, if possible, considering adding an indicator that could help measuring progress towards contribution of forests to food security: GFG2, target 2.3 and SDG3.

Thank you very much for providing the opportunity to comment,

Tomasz

## Armando Alanis, Comisión Nacional Forestal (CONAFOR), Mexico

Contribuitions from Mexico’s Ministry of Environment and Natural Resources (SEMARNAT) and National Forest Commission (CONAFOR)

1. Is the global core set, as it stands in April 2017, sufficiently comprehensive, balanced and short to achieve its stated objectives?

In general terms, there is a lack of indicators reflecting socio-economic issues. This is understandable as those are more difficult to define and measure.

Also indicators related to biodiversity are missing; although they are also difficult to define and measure at national level the use of a Forest Spatial Integrity Index estimated through a global assessment can be proposed.

1. If not, how should it be changed:
   * Additional indicators? Please specify.

No additional indicators are proposed.

* + Deletion of indicators? Please specify.

No deletions are proposed

* + Modification/reformulation of indicators? Please specify.

Some modification and rformulation are proposed (see annex)

1. In particular, please provide suggestions for development of the indicators marked YELLOW – further work needed.

**Global Core Set of forest-related indicators: input to online consultation**.

Set out below is the global core set, as proposed by the OLI, with the suggestions of the Task Force, and including the colour coding: GREEN: placed in core set by OLI, YELLOW: further work needed, RED: remove from core set.

| **#** | **Current proposal by Task Force** | **Initial proposal by OLI meeting** | **Comments from TF meeting** | **Comments from Mexico** |
| --- | --- | --- | --- | --- |
| **1** | **Forest area as proportion of total land area** | **Forest area net change rate (%/per year)** | **Modified** from "Forest area net change rate (%/year) as the net change rate can be computed using forest area as proportion of land area (land area reference year 2015). The proposed indicator name corresponds to the SDG 15.1 wording. No factual change. | Agree. |
| **2** | **Forest area within protected areas** | **Proportion of forest area located within legally established protected areas (%)** | **Modified.** The term "legally established" dropped to avoid confusion and the indicator changed from proportion to total area. The protected areas should follow the definition of IUCN/CBD. If possible, the reporting should be broken down by IUCN categories. The proportion of forest area located within protected areas can be calculated. Efforts be made to maintain consistency with SDG indicator terminology. | Agree. Categories should allow inclusion of protected areas voluntary designated by land forest owners, as in the case of Mexico, which are legally recognized. |
| **3** | **Above-ground biomass stock in forest** | **Above-ground biomass stock in forest (tonnes/ha)** | **Modified**. Suggest reporting in tonnes instead of tonnes/ha as the latter can be derived. Overharvesting/degradation/damage will result in reduced biomass/ha. In some cases increased biomass/ha may be negative (increased fuel load for fires) | Agree. At the extent possible would be good to have estimations by major types of forest vegetation. |
| **4** | **Forest area designated and managed for protection of soil and water** | **(a) Mountain Green Cover Index**    **Or**  **(b) Forest area designated and managed for protection of soil and water** | **Changed to green**. Option (b) preferred as already reported to FRA. However, it can be difficult to identify forests “designated and managed” for protection as they often are part of areas managed for multiple purposes.  Option (a) Mountain Green Cover Index is currently a Tier 2 SDG indicator. Development work in progress. Not ready to be included in the core set but progress needs to be assessed and inclusion to be considered in the future | Agree; this indicator is already part of FRA reporting, although further clarification is needed to ensure a common understanding, recognizing that in many cases such areas are part of areas under multipurpose management or there is no official designation to specifically manage these areas for protection of soil and water.  Please consider adding **designated and/or managed**, as in many cases there is no formal/legal designation |
| **5** | **Employment in forestry and logging** | **Number of forest related jobs per 1000 ha of forest** | **Modified and changed to green**. Change proposed from "Number of forest related jobs per 1000 ha of forest" to employment in forestry and logging. Employment per 1000 ha of forests can then be derived). | **Change** current proposal only takes into account on-the-field jobs and excludes those occurring in other forest-related activities such as saw mills and other forest industries which underestimate and undervalue contribution of forestry sector to national economies. Definition should be expanded to include jobs in forest industry and for other management activities such as protection, conservation and ecotourism,also. Clarification might be needed on how to address informal and/or temporary jobs. |
| **6** | **Existence of policies supporting SFM** | **Existence of policies supporting SFM, including formal protection of existing forest, or definition of a permanent forest estate in countries where this is necessary, with the institutions and resources necessary to implement these policies** | **Modified**. *"…including formal protection of existing forest, or definition of a permanent forest estate in countries where this is necessary, with the institutions and resources necessary to implement these policies*" was deleted from the indicator name as those are only examples of such policies. They can be added to the explanatory note. Concept already used in FRA 2015. | Agree, as it is already included FRA, although some clarification might be needed for a better and common understanding on what kind of policies should be considered.  An optional definition is proposed:  **Existence of policies and legal frameworks supporting SFM** |
| **7** | **Existence of scientifically sound national forest assessment process** | **Existence of a recent, scientifically sound, national forest inventory** | **Modified.** Deleted the word ‘*recent*’ and added the word ‘*process’* in the original indicator to reflect the need for continuous information flow. Suggest adding "includes NFI and related information and monitoring systems" in the explanatory note.  Concept already used in FRA 2015 | Agree, as it is already used in FRA. Inclusion of adding *"includes NFI and related information and monitoring systems"* in the explanatory note is strongly supported. |
| **8** | **Existence of a national mechanism to secure multi-stakeholder participation in the development and implementation of forest-related policies** | **Existence of a national multi-stakeholder policy platform, with active participation of civil society, indigenous peoples and the private sector** | **Modified** the original wording to avoid ambiguity. Concept already used in FRA 2015 | Agree as it is already used in FRA. |
| **9** | **Forest area under a long-term forest management plan** | **Proportion of forest area under a long-term forest management plan** | **Modified** from "*proportion of forest area*" to "*Forest area*” in order to align with SDG 15.2.1. Concept already used in FRA 2015 | Agree as it is already used in FRA. Further clarification about what “long term” means may be required. |
| **10** | **Forest area under an independently verified forest management certification scheme** | **Forest area under an independently verified forest management certification scheme (ha)** | **Changed to green**. Explanatory note should refer to different types of certification schemes. The TF discussed the problem of double accounting but did not find a solution to that because countries seem not to have that information. Deleted "ha". Concept already used in FRA 2015 .  Concern in IAEG that certification is not an official policy instrument. Not all sustainably managed forest are certified – indicator could lead to misunderstanding | Agree, as it is already used in FRA. For the case of Mexico is important that it includes certified area under national schemes (auditorías técnicas voluntarias y bajo la norma official Mexicana sobre certificación del manejo forestal) as it is currently included in FRA. |
| **11** | **Official development assistance for SFM** | **Percentage change in official development assistance for sustainable forest management** | **Modified.**  "Percentage change in…” was removed from the original wording of the indicator The use of absolute value allows calculation of share of SFM funding of total ODA.  Included in GOFs. | Agree, although it may be difficult to match information from donors and recipient countries. Some reliable international source of global information on ODA should be used. |
| **12** | **Volume of wood removals** | **Volume of wood harvested per 1000 forest workers (m3/1000 workers)** | **Modified.** Suggest replacing “wood harvested per 1000 forest workers" with “wood removals" and consider as **new indicator, using JFSQ data.** Some issues identified with the original proposal was the interpretation and significance, and how to handle informal workers. | Agree; utilization of JFSQ and FRA data is strongly supported. |
| **13** | **Existence of a traceability system for wood products** | **a. Proportion of traded/consumed forest products derived from illegal logging or trade (%)**  **or**  **b. Existence of a robust system to track sustainable produced forest products** | **Modified and changed to green.** The TF meeting suggested a rewording of option (b) to “*Existence of a verified tracing system to track sustainably produced forest products***”.** After the meeting a further consultation with FAO subject specialists suggested “*Existence of a traceability system for wood products*”. FAO has modified the name accordingly.  The meeting suggested to **drop option (a)** as reliable data on illegal logging and trade are difficult to obtain | Agree; this indicator should allow including explanation on how countries are building their traceability systems and what is their progress when such system is not fully operational. |
| **14** | **Forest health and vitality: % of forest area disturbed** | | **Further work needed**.   * Fairly good data exist on fire and possibly large areas hit by storms.  Suggest dropping of vitality as it is difficult to measure. * "Area disturbed" needs a clear definition (e.g., reduced production >20%, unwanted or unnatural fire, damage from invasive insects), especially to distinguish it from ‘degradation’. So this indicator would monitor natural disturbances and other kind of degradation as well as harvesting would be reported using another indicator. * It is difficult to combine data on different types of disturbance | Supplementary indicators are proposed  **a) Total forest area affected by wildfires by year.**  **b) Total forest area affected by pest and/or diseases by year.**  **c) Total forest area affected by extreme hydro-meteorological events by year (floods, hurracaines, storms, etc.)**  Most countries have information and use similar indicators.  Or a single indicator could be used, as follows:  **Total forest area affected by year (including wildfires, pests and/or diseases, and hydrological events).** |
| **15** | **Percentage change in area of degraded forest** | | **Further work needed.**   * Link to GOFs lost during their revision. * Measurement of forest and land restoration was seen as a better option and it was noted that the intention seems to be include forest degradation as part of 15.3.1 (Proportion of land that is degraded over total land area) which has three sub-indicators which are land cover and land cover change, land productivity, and carbon stocks above and below ground. * It was also noted that forest degradation is ambiguous as no globally agreed definition for it exists, thereby also difficult to measure. * Should be differentiated from the indicator on disturbance. | Altough is desirable to include an indicator on forest degradation, we agree that there is no commonly accepted definition of forest degradation and that forest degradation is difficult to measure.  It should not be considered at this time. |
| **16** | **a. Percentage change in the number of forest dependent people**  **or**  **b. Livelihoods of forest dependent people** | | **Further work needed.**   * Both indicators are vague as the terms ‘forest-dependent people’ and “livelihoods” lack globally accepted definitions. * It is not clear whether a positive change in the value of the indicator reflects positive development. * The TF proposes using "Number of people living in extreme poverty whose livelihoods are dependent on forest and trees" instead. * The indicator requires further work and alignment with the Global Forest Goals. | We agree at some extent with proposal by TF; an alternate indicator is proposed as follows:  **Number of people in [extreme] poverty living in forest areas**  However, decreasing numbers might not be as result of successful policies but rather due to migration of people to areas outside forests. |
| **17** | **Financial resources from all sources (except ODA) for the implementation of sustainable forest management ($/ha of forest)** | | **Further work needed.**   * Included in the GOFs * Need to define “all sources” * Although it is important to track all financing sources it would be easier to limit the indicator to public expenditure on SFM (as was done in the past FRAs). * Potential danger of double accounting (private sector, academia, etc). | We agree on limiting the indicator to public expenditure on SFM (as was done in the past FRAs) as it is easier to track.  Althoug is incomplete to address what is included in the GOF’s, the following indicator:  **Amount of public financial resources for implementation of sustainable forest management by year ($)**  This must include investment on forest conservation, restoration, training, technical assistance. |
| **18** | **Share of wood based energy in total primary energy consumption, of which in modern clean systems (%)** | | **Further work needed.**   * The Task Force questioned this indicator’s role in the GCS of indicator and proposes using **removal statistics** (woodfuel vs total removals) instead. * Its significance is not fully clear (traditional wood energy vs. clean wood-based renewable energy) | Following indicator is proposed:  **Amount of wood used for primary energy consumption (either cubic meters or tonnes)** |
| **19** | **Value of payments for ecosystem services (PES) related to forests (value of payments, as ratio to total forest area or area of forest covered by such PES)** | | **Further work needed.**   * Not ready for the GCS of indicators. Data on payments (from where?) * Concepts not yet defined * Measurement problems, especially for small PES schemes | Agree that further work is needed; not all country members are implementing PES schemes.  Also PES schemes may include a large variety of activities for different countries. |
| **20** |  | **Recovery rates for paper and solid wood products (volume recovered for re-use as % of volume consumed)** | Indicator considered outside scope of SFM, as not subject to SFM policy instruments | Agree; the indicator as it is outlined here is out of scope of SFM.  However, an indicator to express the amount of reused forest by-products (from logging or industrial forest processes) in other production processes such as energy should be explored. |
| **21** |  | **Carbon stocks and carbon stock changes in forest land: net forest GHG sink/source of forests, forest carbon stock, carbon storage in harvested wood products (Tons C)** | **TF meeting suggest to drop this indicator**. Changes in ABG biomass stock already captured by another indicator. Using UNFCCC data could cause confusion as it often disagrees with the figures reported to FRA (forest definition, etc.). Too many elements in indicator. | Agree. Althoug is important further work and analysis are needed.  Carbon stocks can be estimated from above ground biomass but estimating carbon stocks in other reservoirs is still challenging. |

## David Gritten, RECOFTC - The Center for People and Forests, Thailand

Dear Kit and team

Thanks for sharing and encouraging input and discussions on this vital area.

Many of my comments / questions might not be relevant as I missed the earlier steps in the process - where my questions will likely have been addressed. I also was slightly confused as many of the # I see more as being research topics rather than indicators of SFM - I think that my confusion is more based on my lack of background on this work though.

#2. "Forest within protected areas" I wholeheartedly agree that efforts should be made to break down into IUCN categories.

#5. "Employment in forestry and logging". I realise this is in FAO FRA but am not 100% clear for what this is an indicator? Also why especially emphasise logging? Could change to forestry and forest industry?

#11. "ODA for SFM" again am not clear on what this is an indicator for? Less ODA is a sign that a country is more sustainably managing its forests? What about countries that are doing such a poor job that they get little ODA?

#16. Forest dependent people. Again this would be an indicator of what? Are we seeing that decrease in number of forest dependent people is good... or bad? similar issue with "livelihoods of forest dependent people" increase or decrease is an indicator of?

Could we also consider indicators of area under community forestry (smallholder and communal) compared to that under State management? Could we also look at the rights that are under CF types (e.g. bundle of rights)?

Thanks again for this opportunity and hope my thoughts have been relevant.

David

## Rastislav Raši, FOREST EUROPE - Liaison Unit Bratislava, Slovakia

Dear colleagues,

Here my personal comments on Global Core Set of forest-related indicators with the focus on moderator's questions:

**1) Is the global core set, as it stands in April 2017, sufficiently comprehensive, balanced and short to achieve its stated objectives? (The Global Core Set of forest-related indicators is intended to contribute to the following purposes:**

1.To measure progress towards sustainable forest management (including SDG 15.2.1).

2.To measure progress in implementing the UN Forest Instrument and the UN Strategic Plan for Forests, notably the Global Objectives on Forests, and their associated targets.

3.To measure progress towards SDG targets other than 15.2.1, as well as internationally agreed goals on forests in other instruments notably through meeting the forest-related reporting needs of the Rio conventions.)

- I consider proposed set of indicators to be sufficient for reporting of SDG 15.2.1 as it covers its components (Forest area, Biomass stock, Protected areas located in forests, Forest area under forest management plan)

- To measure Global Forest Goals and their associated targets a specific system should be proposed or the list of indicators should be extended to cover 6 Global Forest Goals and all 26 associated targets. Proposed set covers GFGs 1-5, but does not cover all associated targets and GFG 6.

- To measure progress (contribution of forests and forestry sector) towards SDG targerts other than 15.2.1 should be further discussed and analysed.

**2.If not, how should it be changed:**

•Additional indicators? Please specify.

If there are 3 thematic objectives (SFM, UNSP, non SFM SDGs) of the core set, I would suggest to split and further develop this core set accordingly.

•Deletion of indicators? Please specify.

The same as above.

•Modification/reformulation of indicators? Please specify.

Provided below.

**3.In particular, please provide suggestions for development of the indicators marked YELLOW – further work needed.**

4-Forest area designated and managed for protection of soil and water - I support indicator as proposed.

5-Employment in forestry and logging - I suggest: Employment in forestry and forest industry/wood processing.

10-Forest area under an independently verified forest management certification scheme - I suggest: To complement this indicator with the indicator Area of forests available for wood supply.

12-Volume of wood removals - I support indicator as proposed.

In addition I suggest: Volume of increment.

13-Existence of a traceability system for wood products - I support indicator as proposed.

14-Forest health and vitality: % of forest area disturbed - I support indicator as proposed.

15-Percentage change in area of degraded forest - I suggest: Area of degraded forest land.

In addition, I suggest indicator: Area of restored degraded forests/Degraded area restored by afforestation.

16-a. Percentage change in the number of forest dependent people or b. Livelihoods of forest dependent people - I suggest to remove both variants due to difficulty of data collection as well as interpretation.

17-Financial resources from all sources (except ODA) for the implementation of sustainable forest management ($/ha of forest) - I support indicator as proposed.

18-Share of wood based energy in total primary energy consumption, of which in modern clean systems (%) - I suggest: Wood based energy, of which produced in modern clean systems (%), Total primary energy production.

19-Value of payments for ecosystem services (PES) related to forests (value of payments, as ratio to total forest area or area of forest covered by such PES)- I suggest: Value of payments for ecosystem services (PES) related to forests and area of associated forests

20-Recovery rates for paper and solid wood products (volume recovered for re-use as % of volume consumed) - I suggest to remove if not specifically relevent for any target.

21-Carbon stocks and carbon stock changes in forest land: net forest GHG sink/source of forests, forest carbon stock, carbon storage in harvested wood products (Tons C) - I suggest to use directly figures reported under UNFCCC/KP.

I also suggest additional indicators highly relevant for SFM:

Naturalness: % Undisturbed by man; Semi-natural; Plantations

Genetic resources: Area managed for in situ gene conservation; Area managed for ex situ gene conservation; Area managed for seed production

Thanks for the oportunity to comment. I look forward to cooperate on the theme.

Best regards,

Rastislav

## Adam van Opzeeland, Ministry for Primary Industries, New Zealand

**Adam van Opzeeland, in collaboration with colleagues from the Ministry for Primary Industries, New Zealand**

We would like to thank Mr Kit Prince for his excellent work in drafting and developing these indicators, and commend the task force for their work in refining the set. It is pleasing to see the progress made, and the continued input from a range of stakeholders through the Ottawa meeting last year, the OLI meeting in Rome last November, and other international forests meetings.

**Some general comments and questions:**

* We are supportive of continued efforts to streamline reporting across forest fora, and identify this global core set of forest indicators as an excellent opportunity to advance these efforts.
* We caution against the “over-dilution” of indicators. Many of the indicators have been somewhat simplified by the refinement process. Although this allows for flexibility and country-specific circumstances, which is important, we also risk rendering the indicators to a state that lacks significance, ambition and usability.
* In many instances the “comments” section identifies further ways to break down the indicator when reporting (e.g. can use the IUCN categories for indicator 2) or a suggested unit or %, should this be reflected in the title of the indicator itself, or are we leaving this to the “explanatory note”?
* The explanatory notes will be important for the understanding of these indicators. This will be especially important for those in binary form (e.g. indicators 6, 7, 8, 13), and for those that, without a unit (e.g. %, ha), could be interpreted as a binary indicator.
* At the OLI in November it was acknowledged that the narrative to accompany these indicators will be important. Will this be prescribed within the core set, or will the option and nature of a narrative to accompany the indicator be the choice of the individual body to which the country is reporting?
* Using established, widely used and proven indicators as the basis for the core set is a sensible starting point.
* Ensuring that the SDG 15.2 indicators are a part of this set is both practical and important; the SDGs are a globally recognised platform and ensuring the international forests community’s alignment with them is important for the profile of forests for sustainable development and for the profile of individual forest bodies themselves. With the FAO being custodian of these SDG indicators, we can be confident that they will remain relevant and useful for the set. We should keep in mind that the SDG indicators are reviewed periodically, and that flexibility should be built into the core set to allow for changes of this nature over time.
* As well as the established indicators, it has been encouraging to see efforts to develop indicators for new and emerging issues or topics, and for those that have been around for some time yet do not have widely used or acknowledged indicators. The visibility and usability of a core set can allow for the advancement of conversations on these topics, and the best way to measure progress towards better management. It may be that the initial core set cannot accommodate all of these, but we do not want to see the discussions on these indicators go to waste. Having a system through which an ongoing dialogue can continue to address these issues or topics, and an opportunity for developing indicators to “graduate” to the core set, is encouraged.
* It was recognised at the OLI in Rome last year that socio-economic indicators for forests and for SFM are 1) very important and 2) in need of further discussion and development. Recognising and effectively measuring the interdependence between forests and people is also critical to the value proposition for intact forest systems. Socio-economic indicators should be well represented in this list, and are excellent examples of a (very broad) topic that should attract the aforementioned further development and “graduation” into the list over time.
* We join others in noting that the core set lacks specific indicators on biodiversity and ecosystem services (though indicator 4 is indirectly relevant). While noting that this core set is focused on forests and forestry, we also stress that 1) many CPF bodies’ mandates concern forests, but forests are not their central focus, and 2) even bodies primarily focused on forests and forestry are increasingly adopting an “integrated” approach, or cross-sectoral approach, to forest land management. Biodiversity and ecosystem services represent a wider consideration of both the ways in which forests interact with other land and water usages, and also the value of standing forests and their functions.
* The Montreal Process on Criteria and Indicators for the Conservation and Sustainable Management of Temperate and Boreal Forests (The Montreal Process) has, as one of its 5 criteria, the “conservation of biological diversity”. This criterion includes indicator sets on ecosystem diversity, species diversity, and genetic diversity. These can provide the basis for further indicators, or one robust and useful indicator on biodiversity and ecosystem services.

**Some comments on individual proposed indicators:**

**Indicator 2:**Have no problem with the removal of “legally established” but would prefer to keep the “%” from previous iteration and use recognised IUCN and CBD definitions of protected areas.

**Indicator 3:**Although this indicator is quantitative, narrative and explanation notes are still important to avoid perverse outcomes by maximising biomass (e.g. with fast growing plantations) at the expense of natural forests, or other inappropriate sites.

**Indicator 4:** This is similar to Montreal Process indicator 4.1.a, however we propose to change the first “and” to “or”. This better aligns with the Montreal Process indicator and allows for the inclusion of forest area that is managed for the protection of soil or water, but not necessarily as its primarily designated as land area for this purpose. It would then read “Forest area designated or managed for protection of soil and water”

**Indicator 6**: We acknowledge that effective SFM is contextual and a different challenge for different countries, and thus broadly support the inclusion of this indicator. We note that the inclusion of the deleted sections in the explanatory note is important (as is noted in the comments section), and that the note should acknowledge that this deleted section is a list of examples and that there are others beyond the list (i.e. please include “inter alia” to accommodate this). The indicator itself could be strengthened by inserting “ongoing implementation of” in place of “existence of”.

**Indicators 7 and 8:** Similar to Indicator 6, it would be good to see something in the title of the indicator that requires an ongoing process, and the improvement/strengthening of such a process. We support the retention of ‘scientifically sound’ in indicator 7.

**Indicator 13:** An indicator to address illegal logging is important, and we are pleased that the preferred indicator at this time is a policy based, rather than an outcome-based, indicator, as we know that reliable data are very hard to obtain, and what is considered legal is contextual. We also note that indicator 10 could be complemented by this indicator, adding chain of custody to forest certification.

**Indicator 14:** it could be useful to count the degree of forest disturbance/year and the causes, but it is difficult to attribute this to “forest health and vitality”, as some disturbance will have a positive effect on forest health, and some a negative, and in many cases this cannot be determined for longer time periods.

**Indicator 18:**the use of the wood once is harvested is beyond the scope of sustainable forest management, as forests should be managed when growing, and when harvested, in a legal and sustainable way regardless of end use. There could also be issues with what constitutes modern clean systems and put cost-barriers in place for traditional and low-income forest-dependent com

**Indicator 19**: This is an important topic but, as is noted in the comments, the indicator is not yet ready. As mentioned in our general comments above, there is a need for acknowledgement of ecosystem services from forests, and this is important for the value proposition of intact forests and forest systems, and forestry practises that nurture these.

Agree with removal of indicators 20 and 21: 20 is out of scope, and carbon (21) should be left to the work of the appropriate body (UNFCCC).

**Finalising the list of core indicators**

As a final comment, we are interested in clarifying the process for finalising the list of core indicators, and members states having final input. It was mentioned at the 12th Session of the United Nations Forum on Forests that the list would be finalised following the FRA expert consultation. **Will members states be given the opportunity to review this list again, or an opportunity to approve the list before finalisation? When and where will the CPF task force present the final proposed list?**

## Tim Payn, Scion, New Zealand

Hello Kit

Thanks for the opportunity to contribute to the discussion and development of the core set of indicators.  Development of a small set of core indicators will be very useful globally as we work towards the SDGs and also regionally and nationally as a mechanism to communicate key aspects of forests and forestry.

The core set out for consultation build nicely on the foundations developed by various C&I processes such as Montreal Process, ITTO, Forest Europe and the UNFAO FRA. Keeping the number of indicators to a small number is important. A key point here is that the indicators should cover all important aspects of forests. My view currently is that the biophysical apsects of forests are very well covered. Social aspects less so.

My main point on the current proposed list is based around how we link forests to people, communities, other land uses and sectors. There are suggestions of this link in the draft list across a couple of indicators - relating for instance to employment numbers.

I think the people aspect of forests needs to be further considered.

I will give an example fo my thinking here. The Montreal Process has an indicator:

*6.5.b The importance of forests to people*

*Rationale: This indicator provides information on the range of values that communities and individuals hold for forests. These values shape the way people view forests, including their behaviours and attitudes to all aspects of forest management.*

This is an attempt to capture some of the less tangible aspects of forest's values to communities - not just a forest community.

An example from New Zealand where I am based may help clarify the context. 28% of NZ land is in protected natural forests (Government owned), and 7% in commercial planetd forests (privately owned). The benefits of these forests is far wider than the forest sector and affects other land uses and also other sectors and industries.

The latest Hollywood movie - Alien Covenant draws heavily on New Zealand's natural environment as did the Lord of the Rings and Hobbit trilogies. Very significant value ($multi  million) accrued to the producers of these films from NZ's forests - this sort of intangible and indirect benefit or value needs to be recognised.

Much larger than this is the impact of forests and our natural environment on New Zealand's largest export sector - tourism. Billions of NZ$ accrue to NZ annually, Millions of tourists vsiit our forests, spend money on accomodation, transport, crafts and souvenirs.

Additionally forests provide many benefits to surrounding land uses - this is more the tradtional ecosystem services concept - clean water, fresh air, recreation etc.

While payment for ecosystem services is recognised in the draft set of core indicators this indicator may be limited as there are many non market values associated with ES and PES is in its infancy generally. However there needs to be some way to reflect these values and discussion around the boundary for these values - we should not focus purely 'within' the forest we need to show the value fo the forests interaction much more widely. For example to evaluate the forests contribution to food security, tourism or even urban development.

So I think some further work and focus on how we incorporate these aspects within the core list will give long term benefiots and allow us to better work towards the SDGs and other sustainabilty goals where we need to consider issues holistically.

I look forward to continuing the discussions

Tim Payn

## Guy Robertson, Forest Service - Pacific Northwest Research Station, USA

Dear Moderator,

Please find attached our response to the CPF Global Core Set (GCS) Indicator Consultation. These comments are provided by the **US Department of Agriculture (USDA) Forest Service Research and Development Branch with interagency consultation**. Thank you for providing the opportunity to comment.

Regards,

Guy Robertson PhD  
Acting Assistant Station Director for Science Program Development  
Forest Service  
Pacific Northwest Research Station  
Portland, OR 97204

**US Department of Agriculture (USDA) Submission to CPF Global Core Set (GCS) Indicator Consultation**

**Introduction**

The following comments are provided by the USDA Forest Service Research and Development Branch with interagency consultation.

Thank you for the opportunity to comment on the GCS indicators.  The USA has previously been engaged in this process through participation in the international expert workshop in Ottawa (May 2016) and the OLI meeting in Rome (November 2016).  We are happy to see the progress made in producing the latest draft GCS indicators as they represent a marked improvement from the set emerging from the OLI meeting in Rome.  The current GCS is sensible and clear, though there are a number of issues still left to be resolved (many of which are already noted in the TF meeting comments). The ongoing need for revision, and the impactful nature of the GCS if and when it is implemented, points to the importance of developing explicit provisions for the ongoing adaptation of the GCS up to and, importantly, after implementation.

Strong linkages between GCS and FAO FRA where feasible are an important aspect of the GCS development and implementation process.  Several of our indicator-specific comments are derived from observations we have supplied as input to the FAO FRA process. These comments apply where GCS and FRA indicators are closely aligned.

**Comments on Specific Indicators**

Indicator 4: Forest area designated and managed for protection of soil and water. The various ecosystem services provided by forests are increasingly recognized, and many forests are designated and managed for a broad array of benefits. The current GCS (and FRA) emphasis on primary designated functions runs the risk of mischaracterizing and/or discounting multiple use forests in terms of their benefit provision, both for soil and water conservation and for other values.

The characterization of multiple-use forests has been a perennial challenge for the United States both in FRA reporting and in reporting out for the Montréal Process’s Criterion 4 (which focuses on soil and water conservation). We find that the true contribution of US forests to soil and water conservation is undercounted because this goal is not explicitly designated as a primary function in forests that nonetheless provide these services. A more complete accounting of benefits from multiple use forests is needed.  This would likely first be implemented through the FRA (for example, through the inclusion of subcategories listing designated functions, including multiple use), but the GCS Indicator 4 would need to be adjusted accordingly.

Indicator 5: Employment in forestry and logging. (This indicator follows FAO FRA conventions). Forestry and logging is too narrow an employment category to adequately measure the contribution of forests to national economies.  In the United States, for example, we estimate approximately 2 million people were employed in the forest sector in 2012, but our FRA 2015 submission identifies only 55,000 people employed in forestry and logging. Note that as the forest sector develops, a decreasing share of activity will be devoted to primary production such as logging and forestry, and an increasing share will be devoted to value-added production (this is true for agriculture as well). So employment trends will also be misleading, indicating declines in forest sector activity when the underlying cause may instead be shifts to value-added production. Finally, the amount and trend of forest sector value-added production is an important indicator of forest sector development in its own right.

As we strive to educate the public as to the importance of forests, including their contribution to national economies, we need a more accurate measure of total employment associated with the forest sector. This will require the inclusion of additional job categories in the FRA (and subsequently GCS).

Indicator 10: Forest area under an independently verified forest management certification scheme. While we understand that third party certification can be one avenue to verify that a forest area is sustainably managed, we want to stress the fact that certification is neither necessary nor sufficient for assuring long term forest sustainability.  Other mechanisms (e.g., legal and institutional frameworks, public-private partnerships) are used widely.  And the enterprise level focus of certification is not sufficient to assure landscape-scale forest sustainability. Moreover, the adoption of certification is driven by various economic and social forces, and decisions by private land holders to certify their lands may have little connection to their desire and capacity to pursue sustainable forest management.  Trends in adoption may likewise be driven by factors other than actual SFM pursuit and attainment.

Indicator 10 is easily reported and therefore a potential candidate for inclusion (with the caveat that it should be accompanied with Indicator 9), but the underlying question of SFM attainment remains.  We feel that this indicator, and the issue it addresses, should receive on-going scrutiny and, if needed, adjustment

Indicator 14. Forest health and vitality: % of forest area disturbed. We note that this indicator is still in development (designated orange in GCS list).  Elevated disturbance activity has been identified as a principle threat to forest sustainability in the United States, and this observation likely extends to many other countries.  This is an important indicator, and its development should be pursued.

As noted in the TF meeting comments, the measurement challenges for this indicator are considerable.  Breaking it up into sub-indicators (e.g., area of fire, area of pathogen-induced mortality) may be the best way to proceed as the combination of different disturbance types in a single indicator is very problematic.

## Andres Meza, Gerencia de Desarrollo y Fomento Forestal, Corporación Nacional Forestal, Chile

Quisiera proponer indicadores que den cuenta de la valoración de los bosques más allá de su extensión y de la producción de madera. Sugiero considerar en la discusión:

Producción total de productos forestales no madereros

Fundamento: Este indicador ofrece información sobre los productos forestales no madereros que ilustra la importancia de los bosques como una fuente de este tipo de productos para la sociedad.

Superficie y porcentaje de bosques disponibles y/o manejados para la recreación pública y el turismo.

Fundamento: Este indicador proporciona información sobre la superficie y el grado en el cual los bosques están disponibles y/o son manejados para actividades recreativas y turísticas. La disponibilidad y el manejo de los bosques para estas actividades es un reflejo del reconocimiento de la sociedad al valor de los bosques para la recreación y el turismo.

ENGLISH VERSION

I would like to propose indicators that give an idea of the value of forests beyond their area / extent and of timber production. I suggest considering in the discussion the two following proposal:

Total production of non-wood forest products

Rationale: This indicator provides information on non-wood forest products that illustrates the importance of forests as a source of these products to people.

Area and percent of forests available and / or managed for public recreation and tourism.

Rationale: This indicator provides information on the area and extent of forests are available and / or managed for recreation and tourism activities. The availability and management of forests for these activities is a reflection of society's recognition of the value of forests for recreation and tourism.

Best regards from Chile

## Christopher Prins, facilitator of the consultation

Dear Gyde,

Your “rantings” are very welcome, and remind us of the necessity of clear definitions – and how the choice of definitions can strongly influence the meaning of the information.

You (along with others) ask the most important question “What are we trying to track?”  In my view, we have to be careful when addressing the Global Core Set, as this is not FRA nor a free standing set of criteria and indicators: rather it is a streamlining of what needs to be tracked to monitor whether we are fulfilling the commitments made at the global policy level.  This is broader and more inter-sectoral than “pure” forest sector monitoring, and is not itself a data collection system, but a framework for data collection systems, and a clarification of the needs of the users of those systems.

Furthermore, the Global Core Set is being built in an international area where there has been long and detailed discussion over many years: so we must avoid reinventing the wheel, and calling into question the many compromises agreed over the years.  Thus on your questions on the definition of forest (the corner stone of the whole building), we have no choice but to use the existing FRA definition, whatever its well-known shortcomings and, as you point out, ambiguities (but nothing better has been found yet!).  This approach is even explicitly endorsed by the SDGs.

I agree with you that “more work is needed” on a number of issues and definitions, including “degraded forest”, forest dependent people” “ecosystem services” “designated and managed”, “health and vitality”.  All of these should be addressed in the follow-up to the agreement on the Global Core Set.

Finally, thank you for the remark that we are all dependent on forests in one way or another, which is true.

Regards

Kit

## Christopher Prins, facilitator of the consultation

Dear Dr. Powell,

Thank you very much for positive suggestions on forests’ contribution to food security, which is definitely covered inadequately by the Global Core Set, especially as Global Forest Target 2.3 specifically refers to “the contribution of forests and trees to food security”. The question is actually “can we supply meaningful information, in a simple indicator, for use at the global level, in the short term?” This is not my area of expertise, but the indicators you propose seem to be more the building blocks than the big picture: they are all measurable at the survey level, but can they be scaled up to the national level, and how do you combine them to cast light on the question of how much forests contribute to food security? You say “Without better, systematic/ globally comparable data we will remain unable to accurately estimate the contribution of forest foods to diet quality, nutrition and food security”. (Incidentally, it seems to me that forests’ contribution to food security is wider than forest foods.) To me, this means that, regretfully, at this stage, we cannot propose an indicator on food security for the Global Core Set, but that work is urgently needed, in the right circles, to generate such an indicator with supporting methodology and definitions. Perhaps such work could start from your proposals?

Thank you again

Kit Prins

Facilitator

## Christopher Prins, facilitator of the consultation

Dear Sejuti Sarkar De and Debasish De,

Thank you for your detailed suggestions for an Indian perspective, backed up by hard data.

To start from your suggestions for additions:

* A direct measure of biodiversity is indeed missing as it has so far proved impossible to find one which is globally applicable and realistically measurable.  Proxies include policy instruments (protected areas, stakeholder participation, certification, all in the draft global set), and in some areas, numbers of species/threatened species, deadwood/hectare.  Can we do better?
* Many have drawn attention to trees outside the forest, and FRA collects data on them.  However, the type and use of TOF varies widely between regions, from food production, to shade in cities etc., so the true meaning of statistics on trees outside the forest has been hard to measure.  In the circumstances, is it sufficiently important/meaningful to merit inclusion in the short list f the 15 core indicators?

A few brief reactions to your detailed comments:

#2 Practices do vary very widely on how to define “protected areas”.  However, guidelines are available, notably from IUCN.

#3  At a national or global level measurements in kg would lead to excessive detail

#4  There are indeed many problems in defining “designated” objectives in multi-function forests, which have been discussed at length in the context of FRA.  In India, it may well be OK to use “Forest area (in ha.) under watershed management plan”.

#5 “Employment” is indeed difficult to define, and it is hard to set the boundary lines for what is covered.  “Employment” is defined by ILO, but does it include everyone, such as the groups you mention.  We should follow the international guidelines where they exist, even though many groups might be left out.

#9  I agree that “proportion of area” is more meaningful than area in hectares.

#12  I also agree that we need a ratio here, not just an absolute figure.  Illegal logging should be included in removals, but, for obvious reasons, is difficult to report.

#14  Degradation” and “disturbance” are not quite the same, and both present problems of concept and definition.  There is a high level policy commitment to halting forest degradation while disturbance is a part of any ecosystem, so perhaps we should give priority to degradation – but how defined?

#16 Thank you for the data on India which clearly show the importance of NWFP for livelihoods.  It is a big challenge to “zoom out” from local and national levels to find something which is usable at the global level, because of the multiplicity of products, each with its own measurement system.

Thank you again

Kit Prins

Facilitator

## Christopher Prins, facilitator of the consultation

Dear Simon,

Thanks for the list and comments.  As you saw, a lot of them build on what was done at the Ottowa workshop.

I like your list, and that you had the courage to slash some surplus.  You did remove some indicators linked to high level policy commitments (e.g. on financial resources for SFM and degraded forest), but maybe that is the price to pay for streamlining.  That is not for me to decide.

On your specific comments, I have some responses

* You prefer absolute measures (e.g. forest area in ha) rather than indicators (e.g. % change in forest area) as the ratios can be calculated from the data supplied.  Clearly it is the absolute data which will be supplied to (for instance) FRA, but I do feel that it is necessary to define and agree on a real indicator, with a meaning, and a relationship to stated policy commitments. A set of indicators is not the same as an FRA enquiry.
* It would be good to have a better indicator on biodiversity outcomes, but nothing has worked so far.
* You are absolutely right that interpretation of the indicator data needs careful analysis, taking account of national circumstances.  An indicator set is a powerful tool and needs to be handled with care and respect!
* “Employment in forestry and logging” although data are collected for it, is clearly not everything.  You propose including employment in sawmills and paper mills (which enlarges the scope of the set).  Others have pointed to informal jobs, as well as to forest related tourism, biodiversity conservation, teaching etc..  Another question is what these data mean: we all know SFM provides jobs, but do we want to encourage inefficient use of labour? Is more jobs automatically a good thing?
* Good point about subnational stakeholder participation (e.g. Provinces in Canada)
* “Long term management plan” was used in FRA 2015, so experience is available
* I see traceability systems not so much as an indicator of illegal logging (or the absence of illegal logging) but as a necessary support measure to back up statements about the use of products from sustainably managed forests
* More clarity is certainly needed on “% disturbed”.  You are quite right that “Forest health and vitality” is a criterion, not an indicator, and should be removed.
* I foresee a vigorous discussion about whether or not to include wood energy – which is not specifically mentioned in the high level policy commitments.
* The point about “payment for ecosystem services” was that it is a green economy approach.  But many agree that it will be very hard to measure or monitor.  “Value of wood products” is a more direct measure of one of the economic benefits of SFM

Thanks again

Kit Prins

Facilitator

## Christopher Prins, facilitator of the consultation

Dear Ms. Ehlers

Thank you deepening the discussion about wood energy.  I very much agree with your description of why it is important, and the way this important topic falls into a “gap” between forest and energy policies (you say “there is not much dialogue between the two sectors”: in Europe, that is quite an understatement – and the energy sector has the financial resources).  Wood energy is also an issue where the whole discussion is radically different in developed and developing countries (or even regions within countries).

I would also like an indicator of demand, supply and sustainability of supply for wood energy, but I fear this might be complex in practice as all wood can be burned, and the main tension is often between uses of wood, not total harvest levels.  On balance, I agree with your last sentence: that wood energy may not need to be included in the Global Core Set of forest related indicators, but should be carefully monitored at the national level and incorporated into all statements and commitments about policy for forests – and for energy.

Thank you again

Kit Prins

Facilitator

## Christopher Prins, facilitator of the consultation

Cher M. Keita

Merci de vos suggestions concernant des produits forestiers non-ligneux qui sont importants dans l’Afrique de l’ouest. Plusieurs participants à cette consultation ont souligné l’importance d’identifier et de suivre ces produits, qui contribuent certainement à la sécurité alimentaire. Cependant, je ne pense pas que ces produits ont leur place dans une liste des indicateurs clé au niveau mondial et qui se réfère aux grands engagements globaux, qui ne font pas mention de produits spécifiques. Cependant, je vous encourage à continuer de souligner l’importance de ces produits et de suivre les tendances de production et de consommation. Il sera certainement nécessaire de faire une agrégation, pour le FRA probablement, de tous les produits forestiers non-ligneux, en termes économiques ou physiques ($, tonnes) pour démontrer l’importance de ce secteur.

Merci

Kit Prins

Facilitateur

## Christopher Prins, facilitator of the consultation

Dear Conceição,

Thanks for the precise and constructive comments.

You make an important point about the general line, and the need for balance. And I agree that biodiversity and NWFP are not well covered – chiefly because we couldn’t find anything that worked. This has been picked up by quite a lot of contributors. However, the scope is not only the Global Forest Goals and Targets, but also forest-relevant parts of other instruments, notably Agenda 2030, the Aichi targets (biodiversity again!) and UNCCD as well as, to a certain extent UNFCCC. Given that we hope for a rather small core set, these big guns rather squeeze the list.

On your detailed comments:

* #5 “forestry and logging” is the (rather old-fashioned) term used in the international classifications. I agree industry should be included as well as other forest related jobs (conservation, education, research, tourism related to forests) and the informal/subsistence economy. All of these present quite big technical/statistical challenges!
* # 7 Agree we need to mention NFI in a note
* #10 The decision on whether or not to include certification will no doubt be taken at a higher level than me! It is worth pointing out however that one of the subcomponents of SDG indicators 15.2.1 “progress towards sustainable forest management” is “Proportion of certified forest area”, and the global core set should probably maintain consistency with the SDGs. While certification is clearly voluntary, and many sustainably managed forests are not certified, certification does have the advantage of identifying very clearly a specific forest area which is sustainably managed, and is able to demonstrate this.
* #13 traceability. Yes, I see traceability systems as being the type of system countries are putting in place in response to the EUTR. The main argument for me is that without traceability, we cannot say anything for certain about the share of products from sustainably managed forests (GFG 3.3)
* #14. Yes, putting “health and vitality” in the indicator title was a mistake. “% disturbed” is better, although there are still many problems
* #15 “Forest degradation” is perhaps the biggest challenge for the group, but, in my view we have a responsibility to try because of the clear commitment in GFG 1.3 and the link to UNCCD.
* #17. If not $/ha, what ratio should we use? Perhaps % change. Financial resources in dollars without any context do not have much meaning. Private resources are of course difficult to define and to measure, but again we must try!
* #18 I prefer supply, but the big question, given we are trying to streamline, is whether to look at wood energy at all. See my exchange with Ms. Ehlers and others.
* #20 OK. No-one has shown any interest in recovery rates

Thanks again

Kit Prins

Facilitator

## Christopher Prins, facilitator of the consultation

Dear John,

Thank you for your comments, and especially for the news that FSC and PEFC are working together to fix an annoying statistical/analytical problem. The two organisations were the only people able to fix this, so we all thank you.

As regards whether or not to include certification as part of the Global Core Set, there have been quite intense discussions (centred on the issues you mention) not only in forest circles, but also at the Interagency and Expert Group (IAEG) responsible for the SDG indicators, in particular 15.2.1 Progress towards sustainable forest management. At present the share of certified forest is one of the subcomponents of this compound indicator. As long as that is the case, it would probably be unwise for the Global Core Set to diverge from the SDG indicator.

Thanks again

Kit Prins

Facilitator

## Christopher Prins, facilitator of the consultation

Dear Tomasz

Thank you for your comments, and in particular bringing the discussion back to the precise high level commitments we are meant to monitor, which I take as the Global Forest Goals and Targets, the SDG forest-related indicators, the Aichi targets, UNCCD and UNFCCC. I am working on a systematic cross reference between these goals and the Global Core Set, for the Expert Consultation which might help decisions. You also identify two of the most challenging topics livelihoods/extreme poverty and food security, both of which still pose major challenges. I hope the CPF will be able to address these challenges in the near future as an interagency approach is necessary for this type of issue. We (the forest “community”) will indeed not look good if we are unable to back up our claims that forests are important for food security and livelihoods with hard facts. This implies not only agreeing on concepts and methods, but carrying out surveys in a significant number of counties before, say, 2019.

Thanks

Kit Prins

Facilitator

## Christopher Prins, facilitator of the consultation

Dear colleagues of SEMARNAT and CONAFOR

Thank you for detailed and constructive comments.

I agree that socio-economic and biodiversity indicators are not well covered, for the reasons you mention.

As regards your detailed comments (ignoring, for the sake of space, those occasions when you provide background or say that further definition of terms is needed):

* #4 Excellent idea to use “designated and/or managed”, as in many cases there is no formal/legal designation
* # 5 I agree with your proposal to include downstream (industry) and forest-related jobs, even though these will be difficult to measure in practice
* #6 Good idea to add legal frameworks. Possibly also institutions
* #10 Important to mention national but “independently verified” certification schemes
* #14 you propose to stay with the traditional breakdown of disturbances (fire, biotic, abiotic), as measured in previous FRAs. This is probably the most robust solution, although it does not address the question of how much disturbance is part of normal ecosystem processes and how much is “damage”. This will vary strongly by ecosystem and whether the forest in question is managed or not, and how.
* #15 you suggest dropping this because of the problems of definition. But is this politically possible given that global forest target 1.3 includes a commitment to “restore degraded forests”?
* #16 You suggest an alternative indicator Number of people in [extreme] poverty living in forest areas, which reflects global forest target 2.1 (Extreme poverty for all forest dependent people is eradicated). Extreme poverty is defined as living under $1.25/day. You rightly point out the difficulty of interpreting the numbers which will emerge when you point out that decreasing numbers might not be the result of successful policies but rather due to migration of people to areas outside forests. I have a lot of sympathy with this approach.
* #17 you suggest focusing only on public financing of SFM. However, global forest target 4.2 refers to “Forest-related financing from all sources at all levels, including public (national, bilateral, multilateral and triangular), private and philanthropic financing”, which sets an ambitious target. In fact, private financing, notably by forest owners themselves, is probably the major source of SFM financing, at least in those countries with significant private forest ownership.
* #18 The debate is open as to whether to include wood energy or not (see other posts)

Thank you

Kit Prins

Facilitator

## Christopher Prins, facilitator of the consultation

Dear Mr. Gritten

Thank you for the interesting comments and challenging questions. Any indicator set needs to be put in a context and address specific questions.

On your specific remarks

#2 I am not sure we will break down the totals, but at least use IUCN concepts of what consitutes “protection”. Many foresters would say that all forests are protected, simply by the existence of a forest law, but this is not what is meant here.

#5 Two points: “logging” is included because that is the title of the heading in ISIC. Others have suggested a wider scope for this indicator. You raise an important point about the meaning of the indicator. Frequently SFM is welcomed as a provider of jobs, but people tend to forget that labour, like all other factors of production should be used efficiently. We should not aim at SFM only to provide jobs. And in many advanced forest countries, employment in forestry is dropping steadily because of improved productivity (while forest related jobs may be expanding – but we don’t know for sure)

#11 ODA is included because there is a commitment to provide more ODA (or financial respources in general), and this should be monitored. But I share your concerns about the meaning of this, espcially as many countries in the world receive no ODA, for forests or anything else. Here, it is the donors, rather than the recipients who might be monjitoried.

#16 Likewise with forest dependent people. Here the main commitment is to eradicate extreme poverty for all forest dependent people. Perhaps we should focus on reducing the number of forest dependent people living in extreme poverty?

Community forestry is of course important in those countries where it is possible/apprpriate, which is by no means all countries in the world (remember this global core set applies to all countries, not just developing countries), so this might be difficult. Is there a clear and accepted defintion of “community forestry”?

Thanks again

Kit Prins

Facilitator

## Christopher Prins, facilitator of the consultation

Dear Rastislav,

Thank you for your comments and above all for linking the Global Core Set to its stated objectives. In other work, I have prepared cross references between the draft Global Core Set and the forest relevant SDG indicators, the Global Forest Goals and Targets and the Aichi Targets relevant to forests: I can confirm that most of the targets are covered in some way by the Global Core Set, with the exception of food security and some of the institutional objectives in Global Forest Goals 4 and 6, which are not well adapted to an indicator approach. Coverage of the contribution of forests to “social, economic and environmental development” (GFGT 2.4) is weak, chiefly because of the vagueness of wording of the target.

I would be cautious about splitting the Global Core Set into sections according the goals, as the idea of the core set is to achieve efficiency by devising indicators which can be useful in several contexts, thus reducing the reporting burden.

As regards your detailed comments (apart from indicators where you agreed with the draft):

* #5 Several others also support including forest industries in the employment indicaor
* #10 “Available for wood supply” has proved difficult to measure in practice even in Europe, and is not in FRA 2015: so it might be difficult to include.
* #12 I would also like to have data on increment. Unfortunately, many countries, especially those with many natural forests, do not have this information, and it is not in FRA.
* #16 It is clear that getting data on livelihoods will be difficult. But can we ignore this issue, when there is a clear commitment to eradicate extreme poverty of forest dependent people?
* #21 At this stage, the Global Core Set does not specify where the data would come from. Clearly on carbon/GHG stocks and flows UNFCCC would be a major source

On the additional indicators you propose:

* Naturalness data are available and provide important context. However, it is hard to see how management and policy can influence this in the short term.
* Data on genetic diversity are indeed important, and are slowly improving in Europe (hanks to effective cooperation with a specialised institution), although problems remain. Is it realsitic to expand this to the global level?

Thank you again

Kit Prins

Facilitator

## Christopher Prins, facilitator of the consultation

Dear Mr. Van Opzeeland and colleagues,

Thank you for your wide ranging, realistic and detailed comments. I will do my best to cover all the questions you raise, in a summarised way.

* It is indeed important to have indicators which are focused and clear as to their meaning (not too “diluted”). In practice this is quite difficult, and our present set could certainly be improved. I think the Global Core Set should be expressed in such a way that its meaning is evident, even to non-specialists (after all, policy makers are the primary audience!). It will need explanatory notes, for those who have to work closely with it, notably data providers, but the indicators should be able to stand alone. We have not yet started drafting a “narrative” (although it is implicit in many of the remarks in this online forum), but my personal view is that it should be simple and focused on why the indicators are needed, not on how they should be defined and collected. The latter questions are, of course, essential, but should not conceal the broad intentions of the set.
* I like your concept of setting in motion a process to bring up indicators which are not yet ready for the Global Core Set, so that they can “graduate” at some future time. The Global Core Set will certainly have weak points (you mention some of them), but we should not accept this situation for ever. Perhaps a short list of “candidate” indicators could be attached to the final set. However the existence of such a candidate list should not be an excuse for avoiding important topics which must be in the Global Core Set itself. Improving coverage of socio-economic indicators, biodiversity and payment for ecosystem services would figure prominently on that list. We would certainly use the experience of the Montréal Process, and of the other regional sets in this process.

Reactions to some of your detailed comments:

#4 Another contributor suggested “Forest area designated and/or managed for protection of soil and water”. I think that would address the issue you raise?

#6, 7 and 8 The notes should indeed make clear what types of policies and institutions are meant here, as well as the importance of “process”. In fact experience with FRA 2015 on these topics seems to be quite positive.

#13 and 10. I see traceability and certification as two sides of a coin, both the fight against illegal logging and increasing the share of products from sustainably managed forests – and being able to demonstrate that they do in fact come from sustainably managed forests.

#14 It is now clear that “health and vitality” should not be part of the indicator itself, and just confuses the topic. It is already difficult enough to define and measure “disturbance”!

#18 Opinions appear divided on whether or not wood energy is inside the scope of SFM. I am not sure myself which way to go.

#19 Agree that PES is not “ripe” yet. Perhaps to include it in the list of “candidates”?

#21 Clearly data on carbon/GHG stocks and flows should be collected through UNFCCC which has well tested guidelines. However is climate change mitigation through forests really outside the scope of a Global Core Set of forest related indicators?

Thank you for raising the question of finalising the Global Core Set. I am not a part of the decision making bodies but, as I understand it, the idea is to have an open and participatory process of drawing up the Global Core Set, including the OLI and the online consultation, which will finish at the Expert Consultation in Joensuu, but not to have a formal negotiating process. The final decision on the Global Core Set will be taken by the CPF, on the basis of the consultation process. I do not think any decision has been made inside the CPF on how this will be done. However, the CPF has been formally asked by UNFF12 to present the Global Core Set to UNFF13 next year, so countries will have a chance to comment then.

Thanks again

Kit Prins

Facilitator

## Christopher Prins, facilitator of the consultation

Dear Tim

Thank you for your interesting contribution, which opens the discussion to some new aspects (Hollywood!).

I fully agree that social aspects are not covered well enough. One fundamental reason is that our forest community is better at measuring trees and ecosystems than societies and social processes. We have to learn, and your demonstration of the many people-centred ways in which forests contribute to new Zealanders’ welfare was very interesting. In other countries, the list would look quite different. However, unfortunately, I do not think we are ready yet to include an extra indicator to the Global Core Set, which is linked to the global commitments, measurable and universal. But we must work towards this correction as our present unbalanced indicator set (which reflects data measurement problems, but also in many cases, policy priorities) will influence the way we, and people outside the “forest sector”, think about our challenges and issues.

Thanks

Kit Prins

Facilitator

## Christopher Prins, facilitator of the consultation

Dear Guy and colleagues,

Thank you for the detailed and balanced comments.

I agree with you on the need to build in adaptation/improvement processes from the beginning, and to closely coordinate between GCS and FRA – while maintaining their quite separate missions.

On the specific indicators:

#4 It is quite true that measuring the contribution of multi-function forests (i.e. all of them) is difficult, but necessary. This indicator is the only one on the protection functions of forests, which usually are not remunerated, and often (but not always) occur as a consequence of the pure existence of the forest.

# 5 We do need a more accurate indicator of “employment associated with the forest secor”, including upstream (forest) and downstream (industry) as well as forest related jobs n conservation, education, research, ourism etc. Getting this out of noral employment statistics may need a creative approach!

#10 We are aware of the shortcomings of certification as an indicator of SFM, and the need to intepret the results carefully (that applies to all the indicators). It is however very impactful and easily understood, which is presumably why it is part of the SDG 15.2.1 indicator, which the GCS should shadow. I agree that this indicator should receive ongoing scrutiny, and care be taken to point out that many sustainably managed forests are not certified.

#14 Share of forest area disturbed is indeed vital, and needs a lot of work, because of the specific characteristics of the different types of disturbance. Breaking it up by type of disturbance is probably necessary for the construction of the data, but at the “macro” level of the Global Core Set, it will be necessary to aggregate them.

Thanks again

Kit Prins

Facilitator

## Christopher Prins, facilitator of the consultation

Dear Mr. Meza,

Thank you for your suggestions.

I agree that non-wood forest products are very important, for forest value and for livelihoods. The challenge is measuring such different products and assigning monetary values to them (the only solution for any aggregated outcome).

I recently had the privilege of visiting Chile’s untouched temperate rain forests, so fully agree on the importance of public recreation and tourism. There are challenges however, notably of multi-function forests which provide recreation and tourism alongside protection, biodiversity and even wood, as well as distinguishing “availability” for recreation from actual use for recreation, as measured for instance by visitor numbers (rarely available). In the European context we have been wrestling with this dilemma for some time, with limited success, it must be said.

Thank you again

Kit Prins

Facilitator

## Christopher Prins, facilitator of the consultation

The on-line consultation has now been completed.  Thank you all: you made many lively and constructive contributions.  Over the consultation as a whole, there were 34 individuals or groups who contributed, sometimes more than once, representing all regions and many different specialities.  In addition, the webpage of the consultation received in total around 1,300 page views over the 3 weeks of the consultation.  This clearly demonstrates a high level of interest in the question.  Most of the contributions were quite comprehensive and all showed that the contributor had thought in depth about the issues

It is fair to say that everyone supported the basic concept of the Global Core Set of Forest-related Indicators, which should be short, comprehensive and balanced, and help the forest sector to monitor the high level policy commitments on forests, while reducing the reporting burden.

In addition to the points I mentioned in the first two overviews, the following emerged in the last few days:

* Faced with the challenge of devising indicators on difficult topics, it was suggested that provisions be made for continuous development of the Global Core Set.  For instance, indicators which were not ripe for inclusion, for methodological or data reasons, could be put on a “candidate list” to be worked on.
* On process, the on-line consultation will be reported to the Expert Consultation on the FRA2020 in June, which will also discuss the core set.  Thereafter, the CPF will finalise the list and present it to UNFF13 in 2018.
* Many expressed a wish for an indicator on non-wood forest products
* On forest-related jobs, many wanted to expand the scope beyond “forestry and logging” to include downstream activities (industries) and forest related jobs in tourism, research, education, conservation and so on, as well as forest-related subsistence livelihoods.
* PEFC and FSC are now working together to quantify forest areas with double certification, removing one obstacle to estimating the total area of certified forest.
* Many stressed the importance of including “Share of forest area disturbed”, while acknowledging problems in measuring the various disturbances, and combining the outcomes.
* When agreed, the Global Core Set should have a “narrative” setting out its objectives, and a set of notes on how the indicators should be interpreted.
* Throughout, the indicators should be consistent with other relevant work, notably FRA, IUCN (on protected areas), UNFCCC (on GHG stocks and flows) etc.
* An indicator on the contribution of forests and trees to food security would be desirable, because of Global Forest Goal 2.3.  But how to measure it?  One participant started the discussion with some suggestions, but, as she said, much remains to be done.
* In the context of “forest dependent people”, one contributor pointed out that we are all dependent on forests in one way or another, which is true.

## Christopher Prins, facilitator of the consultation

**Synthesis of online consultation on Global Core Set of Forest Related Indicators**

The on-line consultation took place between 2 and 21 May on the website of the Food Security Network[[1]](#footnote-1). Over the consultation as a whole, there were 34 individuals or groups who contributed, sometimes more than once, representing all regions and many different specialities. In addition, the webpage of the consultation received around 1,300 page views over the 3 weeks of the consultation. This clearly demonstrates a high level of interest in the question. Most of the contributions were quite comprehensive and all showed that the contributor had thought in depth about the issues

It is fair to say that everyone supported the basic concept of the Global Core Set of Forest-related Indicators, which should be short, comprehensive and balanced, and help the forest sector to monitor the high level policy commitments on forests, while reducing the reporting burden.

Some of the debate was quite detailed, but some general points emerged:

* For any indicator set, it is crucial to clearly articulate the objectives. For the Global Core Set, these are to be derived from the high level policy commitments, notably the SDGs, the Aichi targets and the newly approved Global Forest Goals and Targets. The forest community has an obligation to put itself in a position to supply information on progress towards the goals identified by policy makers, and the Global Core Set should streamline this process.
* Indicators should all have a clear significance, with a relevance to the high level policy goals, and not be purely descriptive. The significance should be clearly understandable from the wording of the indicator.
* In general some areas were covered less strongly than others, notably socio-economic factors, biodiversity outcomes and food security. One participant started the discussion with some suggestions as to what information should be collected on forests’ contribution to food security, but, as she said, much remains to be done
* When agreed, the Global Core Set should have a “narrative” setting out its objectives, and a set of notes on how the indicators should be interpreted. The order of indicators should also be restructured (the present numbering emerged from earlier stages of the consultation, and was maintained for ease of reference).
* Throughout, the indicators should be consistent, to the extent possible, with other relevant work, notably FRA, IUCN (on protected areas), UNFCCC (on GHG stocks and flows) etc.
* Faced with the challenge of devising indicators on difficult topics, it was suggested that provisions be made for continuous development of the Global Core Set. For instance, indicators which were not ripe for inclusion, for methodological or data reasons, could be put on a “candidate list” to be worked on.
* The situation and viewpoints of Low Forest Cover Countries must also be reflected
* For policy instruments, it is not enough just to look at the existence of an instrument, but also its effectiveness. But how to do this in a context of international indicators?
* Coverage of non-wood forest products is weak. Several participants suggested specific NWFP to consider.

The following points were made about specific indicators:

* On forest-related jobs (#5), many wanted to expand the scope beyond “forestry and logging” to include downstream activities (industries) and forest related jobs in tourism, research, education, conservation and so on, as well as forest-related subsistence livelihoods.
* Indicator 7 (ODA) could be merged with indicator 11 (finance from all sources for SFM)
* There were differences of opinion on indicator 10 Forest area under an independently verified forest management certification scheme. Some considered it not necessary as certification is a private, voluntary method, while others pointed to its clarity and visibility, as well as to the fact that some governments did indeed use certification as part of forest policy. It was pointed out that this indicator is a subcomponent of SDG indicator 15.2.1 on Progress towards SFM, and that there should be consistency between the Global Core Set and the SDGs. PEFC and FSC are now working together to quantify forest areas with double certification, removing one obstacle to estimating the total area of certified forest.
* Several welcomed the draft indicator on traceability systems (#13), as a tool against illegal logging and as a contribution to monitoring the share of products from sustainably managed forests (Global Forest Target 3.3).
* Doubts were expressed about how to formulate indicator 14 on forest health and vitality, which should be expressed in terms of share of forest area disturbed. However, most seem to favour the maintenance of an indicator in this area, whatever the problems.
* Global Forest Target 1.3 includes a commitment to “restore degraded forests”, so an indicator on area of degraded forest (#15) seems necessary. However, finding a workable definition for “degraded forest” is challenging.
* An indicator of livelihoods of forest dependent people (#16) should be included, but is very difficult to formulate properly. This indicator might be adapted to reflect the commitment to eradicate extreme poverty for all forest dependent people (Global Forest Target 2.1). .
* Should an indicator on wood energy (#18) be included? Some pointed out the policy importance of wood energy, as on the frontier between forest and energy policy, while others considered it outside the scope of SFM, and difficult to monitor. (Wood energy is not actually mentioned in the high level commitments. SDG 7.2.1 refers to renewable energy as whole.)
* Interest was expressed in a new indicator on payment for ecosystem services (#19) as an emerging policy instrument in the green economy concept, but most considered the concept and data was not yet ripe to include this in a global core set.
* There seems to be consensus on dropping the indicator (#20) on recovery rates for wood and paper.
* Some proposed to drop the indicator on carbon stocks and flows (#21) as outside the scope of SFM, but others supported its maintenance – or at least of net GHG sink/source from forests. Otherwise it might appear that forests are not contributing to climate change mitigation. Indicator 3 on above ground biomass does not cover the whole topic. Concern was expressed that the data would have to be supplied by UNFCCC, according to guidelines different from those in FRA.

The next step for the Global Core Set is working group discussions at the Expert Consultation on FRA2020 in June. The results of the on-line consultation will be presented to participants. Then the CPF will finalise the Global Core Set, which will be presented, by CPF, to the thirteenth session of the UN Forum on Forests in 2018.

I take this opportunity to warmly thank   you all again for your participation and your valuable contributions to this intense high level consultation.  It has indeed been a very rewarding and useful process.

Kit Prins

Facilitator

1. http://www.fao.org/fsnforum/activities/discussions/forestry\_indicators [↑](#footnote-ref-1)