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Relationship between National Forest Policy and the United Nations Sustainable Development Goals (UN SDGs)



Key policy messages

- 1. SDGs are adopted and developed for the “future look” approach to formulate a direction for sustainable resource management of the planet.**
- 2. Forestry issues are relevant across almost all the SDG goals thus policy makers can incorporate this approach (cross-cutting) to find joint solutions to the world’s immediate and imminent challenges**

Background

Global policy makers know well the value of forests, however development initiatives and interventions have failed to recognise and influence their contributions to ecosystems and livelihoods (Velde, 2014). At the UN Conference on Sustainable Development (“Rio +20) in June 2012, the United Nations Sustainable Development Goals (UN SDGs) were established and intended to guide global action on health, poverty, hunger, climate and other development challenges carrying forward the achievements of the Millennium Development goals, which had expired in 2015 (Brack, 2014; Mayers, 2014). The UN SDGs contain 17 goals that each of the 193 member countries committed to try and achieve voluntarily. Four of the 17 goals are directly linked with forests and their management (UNDP, 2015). They

recognize that applying certain strategies in the forestry sector to address a range of social needs, create job opportunities, tackle climate change and dispense environmental protection ensure the promotion of an economically, socially, and environmentally sustainable future.

Forests maintain water supplies, help mitigate climate change and provide billions of the world's poorest people with income, food and medicine. They cover 31 per cent of the world's land area and are amongst the most important habitats for biodiversity with tropical forests alone supporting over 80 per cent of the world's terrestrial species (Brack, 2014). Additionally, Weitzman (1992) has suggested that perhaps half of all known species reside in tropical forests alone. Forests regulate flow and quality of water for rivers and streams, agriculture purposes, human consumption and hydro-power. They are important in the regulation and balance of the earth's water-cycle system.

Since forests have multiple functions and are important features of the sustainable development and management of the world's ecosystem, it is therefore important to integrate the UN SDGs in present and future forestry policies to address a cross-cutting approach considering the economic, environmental, cultural and social sectors.

Issues/ Problems

1. Forest Biodiversity and Poverty



The removal of timber and non-timber resources from the forests without a proper logging plan forces the issue of impact logging which destroys and degrades natural ecosystems, reducing biodiversity, isolating and fragmenting wildlife habitats.

Loss of forest area, increase in fragmentation, and greater exposure to human land-uses along the fringes of harvested forests, creates long-term changes to the structure and function of the remaining fragments causing significant loss of biodiversity.

Intermediate ecosystems between the fragments, characterized by agroforestry systems, are not managed to enhance their conservation values. Often managed forests create monocultures of uniform age stands of exotic and few native fast-growing species. Monocultures not only replace the natural forests, but reduces livelihood opportunities of the forest-dependent communities as their source of food and herbal medicines dwindle with the reduction in species biodiversity. Generally, few quality hardwoods plantations are raised reducing fuel wood of higher specific heat. Further, environmental and ecological values of forests with reduced species diversity weakens their capacity to mitigate and adapt to climate change. Unless something is done about the problems stated above, the livelihood of thousands of people will be adversely affected, leading to widespread poverty.

2. Forests and river systems

For sustaining and regulating the flow of water in rivers and streams, not only hydrological functions of forests in general need to be managed scientifically, but maintaining good quality vegetation along the river banks (riparian) is equally critical. However, construction of logging roads close to rivers and in their catchments, and the felling of trees in the riparian zone is common in forestry operations. These riparian zones are often assigned for other uses, including agriculture, which deprive the river systems of potential to recharge and maintain natural waterways, flow rate and regulation of seasonal flows.

3. Forests and land degradation

Changing forests to other uses, unsustainable collection of fuel wood, harvesting of timber and non-timber forest resources, rendering open access to forest resources, forest fires, illegal removal of forests resources are the principal agents of deforestation (cutting of trees from forests) and forest degradation (lowering quality of forest) and desertification (turning forests into unproductive land). When replanting is not done in the harvested areas, species composition is changed with fast growing local species.

**Analysis of the issues*

1. Forest biodiversity and poverty

Forests are cornucopia of biodiversity abundant in various unique flora and fauna. This was highlighted in the UN SDGs number 15.4 and 15.5 as described below-

15.4 by 2030 ensure the conservation of mountain ecosystems, including their biodiversity, to enhance their capacity to provide benefits which are essential for sustainable development

15.5 take urgent and significant action to reduce degradation of natural habitat, halt the loss of biodiversity, and by 2020 protect and prevent the extinction of threatened species

The hope is that by the year 2030, there would be significant actions taken to reduce loss of biodiversity and prevent extinction of our natural ecosystems.

Clearing forests for other uses and logging for timber degrade natural ecosystems and habitats (Haddad et al., 2015). The same authors state this will break up habitats into smaller and more isolated fragments separated by a pattern of human-transformed land cover. The loss of forest area, and greater exposure to human land uses initiate long-term changes to the structure and function of the remaining fragments and loss of biodiversity.

These isolated fragments reduces movements of fauna and if local extinction takes place, the chances of recolonizing these forest fragments are reduced which affects the basic ecosystem functions such as carbon and nitrogen retention, productivity, and pollination.

Another important issue related to forestry is poverty alleviation as highlighted in SDG number 1.4 which states that-

1.4 By 2030, ensure that all men and women, in particular the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services, ownership and control over land and other forms of property, inheritance, natural resources, appropriate new technology and financial services, including microfinance

Sunderlin, et al., 2005, states that the location of lingering rural poverty and natural forests tend to overlap indicating that forestry has relevance in broad planning of poverty alleviation. They concluded that forest resources and the context in which they are used are contrary to the goal of poverty alleviation. They argue that forest resources are often important in poverty mitigation and avoidance, with no substitute for these vital services especially in the

rural areas where forest areas and prolonged poverty overlap. Forest resources provide local environmental services for which substitutes do not exist as often villages are not endowed with productive agricultural lands. Land uses in such situations are better suited to forestry or agroforestry. Forest-conserving land uses would assist poverty mitigation, avoidance as well as elimination.

2. Forests and river systems

Generally forests are critical to the quantity and quality of water as is evident in the two UN SDGs numbers 6.6 and 15.1 described below:

6.6 By 2020, protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes

15.1 By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements

The hope is to safeguard the protection of water-related ecosystems and the restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services. To sustain the flow of water in the rivers, the quality and the area under the riparian vegetation is critical (Bellamy 1999). However, forest policy remains oblivious to this need. As a consequence, construction of logging roads close to rivers and felling of trees in the riparian zone is common in forestry operation. McDonald et al., 1997, reports the need to improve this practice which calls for change in forest policy and awareness. Protecting forests reduces erosion and sediment, improves water purity, and in some cases captures and stores water. It is a cost-effective way to provide clean drinking water (Ernst et al. 2004).

3. Forests and land degradation

Forest land degradation diminishes species diversity (Gonzalez, 2001) and the ability of ecosystems to function. It reduces the provisioning of ecosystem services and eventually hinders poverty reduction and sustainable development¹. Land degradation reduces social and ecological ability to spring back to their normal function as well as cause food/water security¹. Our forest policy should reflect these goals so that maximum benefits can be realised.

This issue is highlighted in the UN Sustainable Goal 2.4 and 15.2 as described:

2.4 By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality

15.2 By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally

****Conclusions and options***

1. Forest biodiversity and poverty

Forests are vital for avoidance and mitigation of poverty as they form a source of a host of environmental services. However, forest resources do not feature in the board planning of poverty alleviation programme even though in the rural areas no substitute exists for them. In fact the context in which forests is used appears to be contrary to the goal of poverty alleviation. There are many possibilities in which forests can be employed to mitigate poverty. Community forests can be established with the objective to mitigate poverty.

Similarly, some forests can be leased to the populations affected by poverty to be used particularly for poverty alleviation. In some cases forests can be leased to poverty-affected people for starting ecotourism enterprises. Biodiversity conservation and poverty alleviation works can be carried out through partnership and collaboration of different stakeholders.

While good forest cover is critical for biodiversity conservation, clearing forests for other uses and logging continues. Logging and conversion of forests to other uses continues to decrease the forest cover. For instance in many countries in the region the forest cover is below 20% of the area, while in some cases it stands around 50%. Only few countries in the Asia-Pacific region boasts forest cover of above 60%. Generally, decrease in forest cover is weakening the habitat effectiveness of the forests. In order to overcome this problem clear cutting of forests can be prevented. Logged areas can be reforested and isolated forests sections can be bridged by creating corridor plantations of diverse species to strengthen habitat effectiveness and restore basic ecosystem functions. An option to improve biodiversity would be replacing large-scale monoculture plantation with the one of diverse species composition.

2. Forests and river systems

Generally, forests play a critical role in regulating the quality and quantity of water. They reduce erosion and sediment, improves water quality, and in some cases capture and store water. However, lack of policy to safeguard this role of the catchments and riparian zones are impacted negatively by logging, roads, and felling of trees in the riparian zone. Freshwater systems, rivers and streams also play important roles for all the flora and fauna depending on them. The overall health conditions of people relying on these water bodies can be easily affected by the quality and quantity of water provided by the rivers and streams. It is therefore crucial that forests, that help to retain moisture and function as the main source of water should be protected and maintained at all costs. These problems can be overcome by saving the riparian vegetation, improving planning and building of forestry infrastructure such as logging road, protecting forests in critical catchment areas and so on. Wherever feasible mechanized logging can be introduced and manual logging can be abolished.

3. Forests and land degradation

The land on which forests grow depends on the vegetation it supports and vice versa. Degradation of forest lands diminishes species diversity and the ability of ecosystems to function. It reduces the provisioning of ecosystem services, causes food/water insecurity and hinders poverty reduction and sustainable development. It also reduces social and ecological ability of forests to spring back to their normal functions. To prevent degradation of land, the forests over the land should be protected from various forms of degradation. Degraded lands are not fertile due to erosion of the rich top soil. This can have far greater consequences in terms of the quality of livelihood of the people. These problems can be overcome by reforestation of the deforested area and carrying out enrichment planting in the degraded forests through mobilization and participation of multi-stakeholders.

****Recommendations on possible course of actions***

1. Strengthening the role of forests for biodiversity conservation and poverty mitigation:

- i. Since good quality of forests is critical for biodiversity conservation and poverty mitigation, the quality of forests needs to be improved through participatory

community and multi-stakeholder forestry programmes, giving special consideration to the participation of rural communities.

- ii. Forest management should enhance the role of forests on poverty mitigation.
- iii. Reforestation should aim at improving the species composition of forests and monoculture plantations should be replaced by plantation of diverse species.
- iv. Isolated forests sections should be bridged corridor plantations of diverse species to strengthen habitat effectiveness and restore basic ecosystem functions.

2. Enhancing the hydrological function of forests:

- i. The quality, quantity and flow regimes of rivers and streams depend on the management of forests. Therefore, water catchments and river basins need to be managed based on the watershed management principle and rationale land use.
- ii. Forest policy should focus on creating alternative income sources for local communities situated near freshwater systems, e.g. instead of mining, dredging or logging, the alternative can be a water-rafting and ecotourism scheme.

3. Restoration of degraded forests:

- i. The degraded forest lands should be restored by through multi-stakeholder participation to improve their conservation and economic values. Where necessary restored forests should be protected legally. Restoration programme should form part of the poverty mitigation plan and ensure that the programme form a part of poverty mitigation and environmental conservation strategies.
- ii. Forest policy can also focus on awareness on afforestation and reforestation programs that can help stop soil erosion in harvested areas.

References

- Balick, M and R. Mendelsohn, 1992. The economic value of traditional medicine from tropical rain forests, *Conservation Biology*, 6, 128-139.
- Bellamy, J. A., 1999. Evaluation of integrated catchment management in a wet tropical environment: Collected papers of LWRRDC R&D Project CTC 7. CSIRO Tropical Agriculture 120 Meiers Rd, Indooroopill, Queensland 4068, Australia.
- Brack, D. 2014. Sustainable Development Goals and forests. A summary of UN Open Working Group debates and country reflections.
- Ernst, C.; Gulik, R.; and Nixon, K. 2004. Protecting the Source. *Conserving Forests to Protect Water*. Opflow, Vol. 30, No.5.
- Gonzalez, P. 2001. Desertification and a shift of forest species in the West African Sahel. Earth Resources Observation Systems Data Center, US Geological Survey, Washington, DC 20523-4600, USA
- Haddad, N.M.; Brudvig, L.A.; Clobert, J.; Davies, K. F.; Gonzalez, A.; Holt, R.D.; Lovejoy, T.E.; Sexton, J.O.; Austin, M.P.; Collins, C.D.; Cook, W.M.; Damschen, E.I.; Ewers, R.M.; Foster, B.L.; Jenkins, C.N.; King, A.J.; Laurance, W.F.; Levey D. J.; Margules, C.R.; Melbourne, B.A.; Nicholls, A.O.; Orrock, J.L.; Song, D.X.; and Townshend, J.R. 2015. Habitat fragmentation and its lasting impact on Earth's ecosystems. *Science Advances* 20 Mar 2015: Vol. 1, no 2, e1500052. DOI:10.1126/sciadv.1500052.
- Mayers, J (2014) Forests in the sustainable development goals. *Biores* 8(3):16–19.
- Mc Donald, G. and Bellamy, J.A., 1997. "ICM in the Herbert River Valley", Paper presented to the Royal Australian Planning Institute, Queensland Planners Conference, Roma, Australia.

Sunderlin, W.D; Angelsen, A.; Belcher, B.; Burgers, P.; Nasi, R.; Santoso, L.; and Wunder, S.; 2005. Livelihoods, Forests and Conservation in Developing Countries: An Overview. World Development Vol. 33, No. 9, pp 1383-1402. Elsevier Ltd.

UNDP, 2015. Sustainable Development Goals (SDGs). www.undp.org/content/undp/en/home/sdgoverview/post-2015-development-agenda.html.

Velde, 2014. Role of forests in SDGs takes centre stage at UN. <http://blog.cifor.org/21197/role-of-forests-in-sdgs-takes-center-stage-at-un?fnl=en> Forest News. Tuesday 4th February, 2014.

Weitzman, M. (1992) On diversity. Quarterly Journal of Economics, CVII, pp. 363-406

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