



## OPINION

By Fitriani Ardiansyah

The writer is climate and sustainability specialist, and recently is asked to lead an initiative for sustainable landscape in Indonesia for IDH. He can be reached at [Ardiansyah@idhsustainabletrade.com](mailto:Ardiansyah@idhsustainabletrade.com)

# Can we realize a ‘sustainable landscape’?

**T**he global population and the demand for food, fiber and fuel are sharply on the rise. As a consequence, there is a constant question whether our human civilization can meet such demand while ensuring that our resources, landscape and ecosystems can be sustainably managed for the long-term.

In Indonesia alone, the Agriculture Ministry projects that there are 23.3 million tons of rice needed in 2015 and 28.1 million in 2030 to meet the demand of 255 million and 308 million people in the corresponding years. It is clear that threats to food security will grow as the population continues to soar and economic activities develop, while land availability becomes more limited.

Indonesia’s primary energy supply and demand per capita show that the country remains relatively strong in the context of energy security issues, indicated by a sufficient energy provision per capita. Data in 2013, however, show that the average growth of supply was only 3.5%, below the average growth of demand at 4%. Without proper interventions and measures, Indonesia is likely to have an energy security issue in the future.

Development of Indonesia’s land and resources is also driven by the global demand. Palm oil is a prime example of this. The skyrocketing global demand for vegetable oils has pushed land development all over the tropics including in Indonesia. Currently, this commodity is

grown on 16.4 million hectares worldwide and more than majority of the production is in Indonesia and Malaysia.

Global and domestic demand for coal, to some extent to compensate the shift from oil dependency, has dramatically increased the production of coal. This is indicated by a persistent growth of production of coal, with the proportion of export reaching above 90% in the period of 2007-2009, as reported by the Energy and Mineral Resources Ministry in 2012.

Meeting such demand would require Indonesia to continue exploiting its resources and land. These development activities would certainly impact on local communities and our remaining fragile ecosystems.

The development agricultural, forestry and energy sectors contribute to the country’s economy but at the same time, as a result, water, land and other natural resources are becoming scarcer.

The use of water for agriculture, mining and industry means increased competition among cities, industrial estates and farmers. Concerns are also growing about the large-scale overdraft of groundwater and water contamination from agricultural runoff, and industrial and mining waste.

The increased use of land, the conversion of forests and the extraction of natural resources, mean continuous deforestation, and ecosystems and land degradation. In addition to direct forest or ecosystem conversion, poor soil

management practices, frequent use of heavy machinery and improper use of technology lead to a significant reduction in the productive capacity of land.

Furthermore, the growth of land use and land use change can create disputes over land rights and ownership leading to conflicts, with other land users, local and indigenous communities.

Deforestation and the expansion of land for agricultural, industrial and mining use also exacerbates climate change, contributing to greenhouse gas emissions, from draining peat lands and clearing natural forests.

Based on the above situation and future trends, initiatives to address land and water issues in the context of landscapes are urgently needed to be developed and realized. Such initiatives ought to be inclusive and more importantly acknowledging the role of agricultural, industrial and mining production as contributors to problems as well as solutions.

There are an increasing number of commodity companies, linking to international market, that have developed initiatives to mitigate their direct impacts on land and water through supply chain management initiatives. There are also mining companies and associations that produce best management practices and industrial codes regarding land, forest and water management.

These sustainability standards attempt to incorporate indicators



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that impact social, land and water parameters beyond the production area. But these standards primarily regulate practices in farming, forest and mining concessions so that these concessions or firms can be certified. Areas outside the concessions, including important ecosystems in the buffer zone, wildlife corridors, and land utilized for indigenous communities may not be incorporated or supported.

In the context of a landscape, these corporate sustainability standards contribute to the betterment of environmental management, but only in concession areas. Such standards may leave huge gaps and still lead to undesirable environmental and social impacts for a particular landscape.

Landscapes are patchworks of interlinked pieces of land, ecosystems, water and species (including human). It is, therefore, important for the existing sustainability standards and corporations that are involved in such standards to invite and work together with other corporations, government bodies, organizations and communities to realize

a better environmentally managed landscape.

Realizing a healthy mosaic landscape requires a challenging multi-stakeholder approach. This is because ownership of, responsibility for, and impact on a landscape lie in the hands of a multitude of stakeholders.

Also, different stakeholder groups (such as local and regional governments, companies from various sectors, local farmers and communities) can have very different perspectives and thus different incentives to want to look beyond their own direct interest.

Front-runners of sustainability, both from corporations, government bodies and civil society groups, need to join forces so that an initiative to promote sustainability at a landscape level can be realized firmly.

can act as ‘movers and shakers’ in convening different stakeholders and garnering support from them, building public-private-NGOs-community partnerships as a way to transform agribusiness and energy markets to sustainability, from a bottom-up landscape level.

At a landscape level, for such movement to be successful, a shared-vision and model of sustainable land and water management need to be formulated and agreed by different stakeholders. These vision and model are crucial to be used as the basis for addressing issues and finding solutions at the landscape level.

Government regulations and relevant legal framework and innovative incentives are also imperative to ensure that this landscape initiative can be sustained in a longer term and land users can be supported.

If a sustainable landscape initiative can be matched with existing sustainability standards at the global and national levels, learning, innovation and improvement can be generated and desirable environmental and social impacts can be achieved.

If this is the case, a viable governance model from the landscape to global level that supports sustainable practices is not only considered feasible but may well be one of key solutions that many stakeholders involved in land-related development sectors have been searching for. **C**