

**MANAGING PEATLAND, COPING WITH CLIMATE CHANGE:
INDONESIA'S EXPERIENCES**

by

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[Slide 1 – Pristine peatland]

Your Excellency Mr. Clement Mouamba, Prime Minister, Republic of Congo

Your Excellency Madame Arlette Soudan-Nonault, Minister of Tourism and Environment, Republic of Congo

Your Excellency Mr. Amy Ambatobe Nyongolo, Minister of Environment and Sustainable Development, Democratic Republic of Congo

Honorable Mr. Erik Solheim, Executive Director of UN Environment

Distinguished Guests,

Ladies and Gentlemen,

First of all, I would like to extend my sincere appreciation to the Government of the Republic of Congo and the United Nations Environment for hosting the 3rd Global Peatland Initiatives Partners Meeting. It is my great honor to have this opportunity given by UNEP, to address this important meeting and share Indonesia's experiences in Managing Peatland to Cope with Climate Change. These include the background of the urgency of policies on managing and restoring peatland , the history of peatland utilization, reform toward and peat landscape management and governance, strategic policies, institutional and operational aspects, lessons learned and the future perspectives.

[Slide 2 - fire]

In 2015, just in the first year our cabinet tenure, we experienced a severe fire damaging about 2.6 million hectares of land and forest areas, or about the size of Western Sahara, of which about 0.9 million hectares occurred in peatlands.

This calamity seriously affected Indonesia's economy and public health. At that time we had almost 22,000 hot spots.

[Slide 3 – dramatic achievement]

Excellencies, Ladies and Gentlemen,

In response to the 2015 disaster, President Joko Widodo has taken a lead in managing and controlling the difficult and hard time. The directives given by the President consist of the following measures.

Firstly, suppression and control of the fire in the peatland with all possible efforts including waterbombing, re-wetting, canal blocking, establishing small dam, and deep wells.

Secondly, Law enforcement which involves administrative sanction, civil law and criminal law.

Thirdly, promote the prevention by means of peatland management and governance.

Fourthly, burnt areas in the private concessions should be controlled by the government.

Those directives are given to the central and local government leaders, including police and army, at the beginning of each year since 2016.

Those directives have been very effective, which can be seen from the decrease of hotspots by 93.6%, and burnt areas were also reduced from 2.6 million hectares in 2015 to 438 thousand hectares in 2016 and 165 thousand hectares in 2017. Similar result was on the carbon emission from peat fires, which in 2017 was 12.5 million tons CO₂ equivalent, which is equal to only 1.56% of 2015's carbon emissions from peat fires.

[Slide 4 – Indonesian peatlands]

Excellencies, Ladies and Gentlemen

After presenting you with the highlights now allow me to describe the situations in Indonesia more thoroughly.

Indonesia has over 15 million ha of peatlands, nearly the size of Tunisia. Our peatlands has wide varieties of peat ecosystem; including: the coastal peat of the main islands of Sumatra, Kalimantan and Papua; and peatland located in basin, in the central Mahakam, East Kalimantan, Kapuas of West Kalimantan and the Mamberamo river in Papua. The basin peatland is comparable to ones in the Congo Basin.

[Slide 5 – history of peat utilisation]

As regards the history of utilization, in the early 20th century, the utilization of Indonesian peatlands was mostly for subsistence agriculture and conducted through relative sustainable practices. Subsequently in 1960s, the Indonesian Government included peatland in the transmigration program and for logging concessions. In 1990's the government introduced industrial forest plantations and agricultural estates, in particular oil palm. The extensive promotion of this industry has degraded almost half of Indonesia's peatlands which are mostly located in Sumatra and Kalimantan. In our record, not less than 4.5 million hectares of the private concession area since 1990 are peatland.

The further utilization of degraded peatlands for plantation unfortunately has also contributed to massive peat fire and carbon emissions which have caused huge environmental deterioration, as well as, economic and social.

[Slide 6 – peat management regulation chronology]

Triggered by the impacts of the massive fire for almost more than 15 years, indicated by the huge forest fire in 1997, 2013 and the most one in 2015, and considering the condition of land and forest governance in general, President Jokowi has instructed to reinforce the suspension of permit issuance for Primary Forests and Peatlands utilization, known as the Moratorium, which was issued for the first time in 2011 under REDD agenda, but not well implemented yet. Hence the government emphasized stronger implementation agenda and control, by issuing Government Regulation 57 of year 2016, ammended of Government Regulation 71 of 2014 concerning protection and management of peat ecosystem; and by strictly applying the Presidential Decree on Moratorium of new license in the primary forest and peatland.

This is a monumental decision reflecting the commitment of Indonesian government to reform its peatland and forest management. The implication was the postponement of all new applications for formal licenses of plantation companies. This political commitment to reinforce the Moratorium is applied through the issuance of several related regulations to intensify enhancement actions towards protecting and managing peatland sustainably.

Ladies and Gentlemen,

[Slide 7 – the involvement of private sector]

In Production Forests, our new approach to promote better timber management within peatland has been reflected by the issuance of the Environment and Forestry Ministerial Regulation which provides new guidelines for restoration of peat ecosystem. Furthermore, a specific Environment and Forestry Ministerial Regulation has also been issued last year, establishing areas of Peatland Hydrological Zone, defining the protected peat dome and deep peatland to be protected and requiring concession holders to revise their respective working plans in such a way to shift new plantation from those protected zones. Meanwhile, the non-protected or cultivated zone can be planted as usual.

Implementation of the aforementioned measures have been positively responded by the private sector and commitment of concession holders can be seen. Our record says that more than 45 industrial forest concession and 123 estates companies have already developed plans for peat restoration until 2026, with the main objective of improving the hydrological function, particularly through canal blocking, canal back filling, water pumping and deep wells. Other techniques include water management at farm level, construction, operation and maintenance, applying the traditional cultivating practice, revegetation and succession. Those activities are the main support for peatland recovery.

Such new policies considering the negative impacts of unsustainable use of peatlands, is actually an important lesson for other countries with similar situation. These will be so much relevant to other countries such as Democratic Republic of Congo that has about 20% of its peatlands under forest concessions, and approximately 53% of these are already in operation.

[Slide 8 – law enforcement]

Policies and regulations developed for governing Indonesian peatland management have been supported by law enforcement.

After big land and forest fires in 2015, no less than 500 legal cases are investigated and many have already been brought to justice and got penalized, including an unprecedented USD 1.2 billion. Among the administrative sanctions applied are revocation of the licenses of 3 companies, the freeze of licenses of 16 companies, forcing of 31 companies and warning for 189 companies with serious notices. Fines were imposed to private corporations proven to have committed crimes against the environment. This law enforcement does not only discourage others for non-compliance, but it also improves public trust in environmental law enforcement in Indonesia.

Excellencies, distinguished guests, ladies and gentlemen

[Slide 9 – best practices]

Indonesian communities have been practicing their customary knowledge and wisdoms in managing peatland. The Banjar communities in South Kalimantan through *Handils* associations have been managing peat lands for centuries. *Handils* are worm ditches/small canals constructed by local farmers of South Kalimantan to access their agricultural peatland areas. Dayak Ngaju tribe has used “*Tata*”, a small hand dug waterways into the forest to harvest non-forest timber products.

Indonesia is also developing modern and advanced techniques in managing peatland and preventing fires. Indonesian scientists in collaboration with international partners have provided scientific-based techniques and policies in managing peatlands and preventing fires such as technology for monitoring water table level in peatlands, namely SESAME and MORPALAGA. These technologies will support sustainable management of peatland in Indonesia.

[Slide 10 - NDC]

Currently, innovative community-based approaches like *Desa Peduli Gambut*, (peatland managed by villagers), are in practiced, which is developing

governance structure, based on the peat hydrological unit, to ensure that peat domes are managed through ensuring a stable water level as a key scientific principle. Coherently, to reduce deforestation and peat degradation while promoting social forestry programs is promoted, as part of the efforts on peatland management under participatory villagers. This led to equally reduced national deforestation rates by 24% from 2016 to 2017, and vulnerability to fires by 32.8%.

[Slide 11 - SDG]

Indonesia has gained extensive experience in managing tropical peat, both in positive and negative terms, as managing peatlands to provide livelihoods for local communities as well as to conduct intensive agriculture and forestry may contradict with the protection of the environment. The option includes whether to drain water in the peatland for plantation development, or to avoid draining.

If peatlands should not be drained, then the question is what are the alternatives for economic activities? Paludiculture and agroforestry could be among the options available. Local communities had some experiences in paludiculture by utilizing tree species such as Jelutung, Belangiran, Ramin and Gemor. We also utilize food from peatland such as sago and nipah.

When peatland is actually be drained for forestry and agriculture, an option that can be taken is practicing the Land Clearing without Burning. This technique is required to prevent the use of fire. Fire for clearing plant remnants must be avoid as well and litter or crop residues can be processed into several types of products such as compost, wood vinegar and charcoal briquettes.

Ladies and Gentlemen,

[Slide 12 – Way Forward]

Having similar characteristics of the cuvette central basin found here in the Congo, Indonesian peats could provide interesting lessons learned for planners and local governments. Indonesia also home for upland peats in the highland of Papua or unique isolated areas like the Rawa Aopa Watumohai in Sulawesi, which are often forgotten but equally important in terms of environmental

services. Peatlands are home to unique biodiversity like the orangutans, a great ape comparable to the gorillas of Central Africa. There are also rhino, elephant, and tiger, and unique plant species including fungi which may be important to human existence in the future.

Hence, Indonesia has gained extensive knowledge through these experiences, which is currently being observed and documented by many scientists and becoming part of the science realm. One of the elements of the Jakarta Declaration is regarding the establishment of an international research centre on tropical peatlands in Indonesia. Prior to implementation, the Ministry of Environment and Forestry has taken initial steps by considering its Research and Development and Innovation Centres in Bogor in collaboration with CIFOR (Centre for International Forestry Research), with the support of field operation sub-centres, possibly one in Kalimantan and one in Sumatera. The candidate locations for the sub-centres are: Riau, Jambi, South Sumatra, West Kalimantan and Central Kalimantan.

Indonesia is keen to share experiences on peatland management through south-south and triangular cooperation. Indonesia intends to share and may assist and collaborate with other developing countries. For such activities we can provide opportunities to learn and have field practice in Indonesia with our support and UNEP direction.

Moreover, references and knowledge concerning the operation and maintenance system of hydrological infrastructure on peatlands on a regional development basis is required to support particularly the corporates, as well as soft loans especially for corporates.

We appreciate that UNEP and the Global Peatland Initiative provides an excellent platform for scientists, policymakers and private sector to share experiences and lessons learned among the major tropical peat countries in the world and international centres of excellence. Indonesia is proud to be the principal partner country representing Asia. Indonesia is consolidating efforts to make our peatlands be the world records.

Excellencies, Ladies and Gentlemen:

A minute destruction takes a decade to restore. The historic 2015 fire in Indonesia should be monumental as a world's archive. It could serve as a basis for developing technical, social and institutional approaches to forestland fire management. I am sure with strong commitment from all of us, we could make a better planet.

As lessons learned, I would like to screen a short video of Sebangau National Park, where we have successfully restored degraded peat forests.

For your kind attention, I thank you.