MINISTRY OF PUBLIC WORKS
REPUBLIC OF INDONESIA

Policy Directions:

Addressing the Issues of Natural Disasters in Spatial Planning and Management[1]

Keynote Speech, delivered by:

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University of Technology Germany, and Islamic University of Indonesia,

Distinguished guests and participants of the 1st International Conference on Sustainable Built Environment 2010 in Yogyakarta, Indonesia.

Ladies and Gentlemen,
Good morning to all of you.
Assalamualaikum Wr. Wb.

First of all, let us praise and gratitude the God Almighty for the opportunity, strength, and health, so we can participate in the 1st International Conference on Sustainable Built Environment 2010 in Yogyakarta, Indonesia. Secondly, I would like to thank the Islamic University of Indonesia for inviting me to speak in this keynote session.

On behalf of the Government of Indonesia and the Ministry of Public Works, I highly appreciate the Islamic University of Indonesia which is one of the leading private universities in Indonesia in organizing this reputable conference. Hopefully, in the future, the Islamic University of Indonesia can always play

an active role in advancing science and technology in the global arena.

Distinguished guests and participants,

In this opportunity, I would like to invite all of you to look at some strategic issues and challenges that we faced in recent years related to natural disasters. Besides, several global issues related to environment, such as global warming and climate change are also the issues that directly impact our community's life at the local level.

Geographically, Indonesia is located at the intersection of three tectonic plates of the Eurasia plate, the Pacific plate, and the Indo-Australia plate. Such conditions have caused that most Indonesian islands are very prone to earthquake, volcanic eruptions, tsunamis and other natural hazards.

There are at least 150 active volcanoes scattered all over the Indonesia islands, except Borneo. Seven out of 24 deadliest volcanic eruptions in the world occurred in Indonesia and causing hundred of thousands of casualties and physical damage. The biggests among them were Tambora eruption in 1815 (92.000 killed) and Krakatau eruption in 1883 (36.417

killed). The 2004 earthquake in India Ocean near Aceh, with a magnitude of 8.9 Richter scale, that followed by the deadliest tsunami in history, killing more than 260.000 people and destroying major infrastructure in Nangroe Aceh Darussalam.

Honored guests, participants, ladies and gentlemen,

In the last few years, our country is experiencing different types of natural disasters, following the 2004 tsunami in Aceh, the earthquake in Nias and Bengkulu in 2005, the earthquake in Yogyakarta and tsunami in Pangandaran in 2006, flood in Jakarta in 2007, mudslides in West Sumatera in 2008, the earthquake in Padang 2009, and various other disasters. All disasters result in the loss of both lives and property damages. In addition, this disasters also destroy the social-economic fabrics of our community.

According to the data from Bakornas PB (National Coordinating Body on Natural Disasters), during the period 2004-2009 there have been more than 1430 disasters occured with various types. The data indicates that more than 50% of the disasters are

Hydro-Meteorological disasters which related to climate change and hydrological cycle.

Honored guests, participants, ladies and gentlemen,

Besides due to natural causes, some of the disasters are also related to our human activities in the past. The high incidence of landuse change both in rural and urban areas such as deforestation, conversion of rice fields into residential or industrial areas indicates that we had not given optimum attention in development planning and control. The economic growth and welfare that we achieved in the past had been achieved at the cost of environment and natural disasters that we have created ourselves. It seems that economics and environmental is cancelling each other out, and therefore must be considered as a “zero-sum game” phenomenon.

Deforestation due to illegal logging and agricultural land conversion into non-agricultural land as can be observed in Java Island will certainly reduce the carrying capacity of the environment. Although the forest data indicates that we still have natural forest areas of about 70% of our total land area nationally.

Nevertheless, for some relatively more-developed islands like Java, which is the most densely populated island, the forest area is now only remain 18% of its 13 million hectares land area. This proportion is certainly below the minimum requirement of forest coverage as stipulated in the forestry law as well as spatial planning and management law that require 30 % river stream area to be forest area.

On the other hand, the phenomenon of climate change due to global warming has added further stress to our conditions. In general, climate change threatens in at least two ways: increasing the sea level and changing in the hydrological cycle. In addition to natural causes, it is also caused by less of local wisdom.

In the context of climate change, in 2030, based on estimated results of the Inter-Governmental Panel of Climate Change (2007), our sea level will rise up to 29 centimeters. This condition makes the existence of more than 2000 small islands in the Indonesian oceans would be threatened, including 92 outer islands that serve as the reference territory of Indonesia.

In the cultivated zones we also face the high level conversion of agriculture land. Java and Bali islands are amongst the island that suffered most of such phenomenon, where there are approximately 3,600 hectares loss of agriculture land each year out of 3,5 million hectares of rice field that represents of 41% of total rice field in Indonesia.

Distinguished guests and participants,

In order to address such various issues related to both natural and mad-made disasters, Government of Indonesia has stipulated several laws and regulations including **Law Number 26 Year 2007 Concerning Spatial Management** and the **Law Number 24 Year 2007 Concerning Disaster Management, and Law Number 32 year 2009 regarding Environment Protection**. Apart from these laws, there also some related new regulations such as Forestry Law, Agricultural Law, and other sectoral laws such as law on Water Resources Management and Solid Waste Management.

All of the Laws have one basic consideration in common that is how to protect our natural environment intact and mitigate the natural hazards. As stated in

the Spatial Planning and Management law, the strategic vision of the spatial management policies is to achieve a secure/safe, comfortable, productive and sustainable spatial (regional/urban) development.

Secure/safe means that the development should consider the potential of **natural and man-made disasters**. Comfortable, productive and sustainable mean that development should provide effective and efficient infrastructure to increase **community welfare**, facilitate the production and distribution process of the **economy to increase added value**, and to enhance competitiveness; while at the same time to provide **better quality of environment** not only for current generation but also for the future generation.

In ensuring the sustainability of our development, we have to bear in mind that **the space that we enjoy is not the** one **that we inherited from our ancestors, but it would rather a space that we borrow from our children**.

Distinguished guests and participants,

From the issues and problems that we've faced both associated with natural and man-made disasters, such

as the condition of forests, green space, and land use change, it seems that we need a strong spatial policy that can integrate various aspects to overcome the problems in a systematic and integrated way.

Government alone may not be able to do the necessary countermeasures. Therefore we need concerted efforts from all parties involved. We cannot deal with this environmental problem partially and independently. All parties involved must do what can be done to improve the current conditions of our environment.

In terms of disasters handling, Ministry of Public Works has set up some operational policies that prioritized the handling of emergency (rescue) response as soon as possible in order to restore the function of the infrastructure for other rescue activities.

While in terms of prevention or post disasters policy, it will focus on the reconstruction process and planning better reponse to disasters prone area such as provide evacuation routes and evacuation zones. In terms of infrastructure rehabilitation and reconstruction are always executed on the basis of spatial planning-based considerations. These types of facilities are

now mandated to be included in the local area spatial plans.

According to new law, the spatial plans have to consider the disaster prone zones and give special attention to promote the awareness and readiness of the people to increase resilience against potential hazards. Besides, the law also stipulates that the spatial plans should indicate some special zones to be given special treatments due to its potential either in economics, cultural, scientific, security, natural resources or environmental sensitive aspects.

Honored guests, participants, in city planning context, the awareness of necessary for ecological and environmental aspects has moved to specifically carry importance of urban green space as part of the infrastructure of the city. This concept was developed in mid 1990s that emphasized the importance of the natural environment as a prerequisite for ongoing socio-economic activities of urban areas. Later, this concept also stresses the importance of a multifunctional nature of the various sections of open space by combining the city parks, flood retention lakes, recreational facilities, and productive agriculture. Recent, tendencies in the context of a sustainable city is developing eco-town concept. This concept developed to promote environmentally friendly city zero

carbon or carbon neutral through using energy efficiently and waste treatment in an integrated manner.

Distinguished guests and participants,

In order to provide guidance for national spatial development, Government of Indonesia has passed the Government Regulation No 26/2008 regarding National Spatial Plan. The plan contains amongst other the national special zones and national protective areas, as part of the strategy to mitigate and anticipate the natural hazards.

The plan also provides directions of national geo-strategy in achieving the secure/safe, comfortable, productive and sustainable objectives in national space utilization as an archipelagic state and to keep national unity and security.

The plan is further brokendown into a more detail main islands plans. The 7 (seven) drafts of seven main islands are now being prepared including: major islands Sumatera, Java-Bali, Kalimantan, Sulawesi, Papua, and Maluku and Nusa Tenggara Islands.

Honored guests, participants, ladies and gentlemen,

It has never been easy to wipe away our memory on the **tsunami disaster in Aceh** in 2004 which had been followed by several other natural disasters afterwards somehow like the earthquake disaster in Yogyakarta in 2006. **But fortunately, we are blessed with strong people's resilient and social solidarity. We are also grateful for the solidarity shown by international community**. **The last earthquake disaster in West Sumatera in 2009 is probably the best example** on how recovery and reconstruction program can be both accomplished within a relatively short period through community-based approach. Thanks to the global humanitarian aids that have helped us went through the difficult times during rehabilitation and reconstruction programs.

Distinguished guests and participants,

In order to make the plan effective, there should be an operational policy in implementing the plan. In doing so, there should be a policy action to ensure **The Triple E: which includes engineering, education, and the Enforcement of the law**.

Engineering aspect consists of prevention, recovery, and control of damaging power (mitigation). Prevention efforts can be made through the program of protected areas conservation, town forests, and permanent wetland designation.

Meanwhile, recovery efforts can be done through programs of rehabilitation and reforestation of forest lands, encouraging people to plant trees, development of green open space (green space) in urban areas, and recovery of function of technical irrigated land. Whereas, efforts to reduce the damaging capacity (mitigation) can be achieved through the development of such buildings, dams, check dams, flood canals, small ponds revitalization, and provision of disaster evacuation spaces.

Education aspect includes socialization, public campaigns and direct empowerment of community, to increase awareness and readiness about the importance of preserving green areas and understanding the nature of hazards. The form of this education process can also be done with the involvement of local communities around forest and agricultural lands.

Meanwhile, **law enforcement aspect** can be made through the provision of incentives-disincentives to increase the level of compliance as well as the imposition of legal sanctions that can provide a definite deterrence effect.

Your Excellencies, honored guests and participants,

Finally, I would like to conclude my speech by stressing that disasters only occur when hazards meet vulnerability of people or area. The basic strategy is then how to reduce the risks and increase the resiliency of people and community.

Spatial Planning has a strategic role in the process of built-up development, both in local and national context. Spatial management can be used as a tool to control the utilization of space in order to prevent disaster.

The Ministry of Public Works plays a central role in implementing the spatial plan at all levels. As long as all stakeholders are consistently complied to the spatial planning, then the area of the development

would be based on it, and in turn this can prevent and control the disaster.

The role of spatial plan is both provide guidance for development to reduce risks and increase people knowledge through education and public campaign to increase people awareness and readiness which reduce the vulnerability.

I think we can only respond best to the natural hazards only if we understand well the nature of the hazard. Therefore I would like to challenge all the audience and participants of this conference to further pursue the science and knowledge of the potential hazards.

The role of education and research institutions such as the Islamic University of Indonesia is then very important and strategic to contribute for the betterment of our knowledge and understanding of natural hazards and disasters.

If all of us can make a positive contribution in achieving our spatial planning objectives, then the development can be carried out in a sustainable way, and in turn we can prevent and mitigate the unwanted natural as well as mandmade disasters.

Your Excellencies, honored guests and participants,

Finally, I wish that this conference could have positive and productive dialogues and discussions to better improve our knowledge and understanding in order to **Enhance Disaster Prevention and Mitigation**. May Allah bless you all.

Terima kasih.

Wassalamu alaikum wr. wb.

Menteri Pekerjaan Umum,

DJOKO KIRMANTO