

# **The Legal and Policy Analysis on Forest Ecological Compensation in Taiwan**

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## **INTRODUCTION**

The forests in Taiwan, which covers approximately 2.1 million hectares<sup>1</sup>, occupy almost 60.1% of the total land area of the island. It is an important habitat for various animals and plants; it also helps to conserve clean and pure water resource for its residents and communities downstream. However, most of the mineral resources are also located within the mountain area and overlap with the government-owned public or national forest. The mining activities destroy the forest and habitat on the land that cause broad concerns on the protection of the environment and the diversity of its biology.

### **Status and Issues**

A documentary film, *Beyond Beauty II*, filmed in 2017, disclosed that the Asia Cement Corporation owned a cement site in Hua-Lien County which is expanding and almost reaches the Taroko National Park area. The said site attracted broad discussions and concerns on the mining activities operating within the national forest. Those mining activities not only damage the landscape of mountains but also destroy the natural resources and biological diversities, including forest, water, air quality and wild life. In 2017, after the film was released, many environmental groups and citizens protested against the company and asked the government to delay its application for license renewal. To further protect forest and wild life conservation, they even suggested the government to cancel or withdraw all granted mining licenses of the various private mining companies. In order to reply to those requests, the Bureau of Mines (BOM) prepared an amendment proposal to revise the current Mining Act. The current Mining Act was only designed to manage the mining rights, mineral exploration rights and mining lands. The concerns on forest protection and wildlife protection raised by the environmental groups are not covered. Especially when most of the mine sites in Taiwan are located in the deep mountainous area with rich forest coverage, the mining activities will not only destroy the forest but will also affect the habitats of wildlife.

Based on the current Forest Act,<sup>3</sup> the lands designed as forestlands cannot be changed to other usage, unless both central and local authorities approve it. The Mining Act, which was introduced in 1930, and experienced 17 amendments, also requires that the mining right owner shall have prior approvals on using the land as mining sites.<sup>4</sup> Furthermore, if the mining activities were implemented within the area of national or public forestlands, the operation scope shall be reviewed and approved by a competent forest authority. Hence, the mining activities are allowed to operate within the forestlands and the forestland could be leased for the mining purpose.

The Forest Act and Mining Act both focus on the usage of mineral and timber resources on

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<sup>1</sup> Forestry Bureau, Council of Agriculture, Executive Yuan. Available web site <https://www.forest.gov.tw/0001492>

<sup>3</sup> Forest Act, Article 6.

<sup>4</sup> Mining Act, Article 43.4.

the forestland. The current regulations on mining management and forest protection do not require the mining right owners to prepare recovery plans or reforestation after the mining is finished. The protections of habitats and wildlife are not covered in these regulations. When the mining rights expire or the mine sites are closed, the current Mining Act will neither hold the mining right holder liable to recover the landscapes nor compensate for the loss of biological diversities on the site. The mineral right fee is taken by the central government but not shared with the local government and residents. However, the local stakeholders suffer most severe environment pollutions and damages without any compensation. Whether the mining right owners shall complete the environment and habitat recovery to bring wildlife back to nature is subject to a lot of discussion. Without considering the loss of forest and biology, this suggested amendment might not satisfy and be accepted by the lawmakers and environmentalists.

### **Policy and Law Analysis**

The new amendment proposal prepared by the BOM in 2017 suggests that the mining rights owners who hold two hectares of lands and produce 50,000 tons of minerals shall follow the Environment Impact Assessment Act (EIA Act) which shall be reviewed by the committee. Second, the private lands owned by indigenous or indigenous tribes but planned as mining sites shall be agreed and be granted consensus by the indigenous people. Third, the applicants who applied for mineral rights shall host public hearing and disclose all related information to the public for at least 30 days after the application has been filed. Last, the BOM suggested to charge a mineral right fee which is 50% higher than the current standards. This amendment proposal does not mention anything related to forest protection and wildlife conservation. The BOM remains its stance on minerals and mining industry management but does not consider forest expansion and habitat conservation for wildlife. Some environmental groups suggested the government should charge “ecology compensation fee” from the mining right owners after its mining operations are complete. The fee shall also be used for the recovery of activities and pay for the reforestation expenses of the used or abandoned mining sites.

This article concerns the choice of adequate competent authority in charging such compensation fee and the definition of “ecology compensation” used in the suggestions. First, the BOM is an authority on mining operation management but not biological conservation. The Bureau of Forestry (BOF) is the authority to manage natural resources like forests and protection of habitat for wildlife. The BOM shall collaborate with other related bureau or agency to define the elements or criteria which constitute the term of ecology and the scope of compensation. The two authorities shall also define the calculation formula on ecology recovery after the mining sites are closed or terminated. The new suggested proposal should also require the mining site owners to pay a specific amount of fees to provide a guarantee on reforestation and recovery commitments. Since the mining operation will cause damage on the environment and forests, the BOF shall have the final veto right to determine whether the mining operation could be activated.

Second, the term “ecology compensation” is a specific mitigation measure only used by the Wetland Conservation Act (WCA) in Taiwan. Furthermore, it belongs to a given measure to prevent the loss of wetland but not a calculation measure to describe economic loss of forests, timber and biodiversity. If the land range of mining site did not cover the land scope of Important Wetland, the ecological compensation measure could not be used to protect wildlife habitats and the forest coverage. In Taiwan’s legal system, it is a new term and concept introduced from Ramsar Convention in recent years and not adopted by any other domestic regulations. Therefore, we need more regulations to provide different definition on “ecology compensation” and design it to calculate the cost of reforestation, biological

conservation and their loss during the mining operations. The components of ecology are obviously different from the term of ecological system services. The ecology is defined as the relations and interactions among organisms and their environment. It concentrates on individual animals or species and their habitats. However, the ecosystem is another term and covers a broader scope including living organisms and non-living organisms. Furthermore, the United Nations published the Millennium Ecosystem Assessment in 2005 and suggested that the ecosystem services concept is to describe the human being taking benefits from the ecosystem.<sup>5</sup> The different terms used in the amendment proposal describe a different scope and lead to create different criteria to decide the amount of compensation. Since the new Mining Act amendment would introduce the new legal term, further definitions on ecology, ecosystem and ecosystem service are needed. We neither complete the biological survey in the whole island nor establish biological database to determine the ecology. The mining right owners might not be able to estimate or calculate payment on ecology compensation fees. Therefore, the amendment proposal shall be very careful in the usage of these legal terms.

### **Conclusion and Suggestions**

Although the current Forest Act and Mining Act does not require the mining right owners to prepare a recovery plan after the mining operations, the BOF still encourages the mining right owners to reach voluntary contract on reforestation on the hillsides of mining areas. It is a voluntary reforestation contract but does not consider the functional loss on ecology and damage of animal habitats. The suggested Mining Act shall not limit its proposal on mining permit management and land usage. It should also expand its suggestions on management of abandoned mine lands and recovery plan. The mining right owners shall take the recovery responsibility and reduce the adverse impact on environment after the removal of the valuable minerals. The amendment on Forest Act is also suggested because the forest shall not be treated as economic products only but an essential ecology function provider for the wildlife and various plants. This amendment proposal also reminds that the Taiwanese shall pay more attention to the preservation of its natural resources and more legislation efforts are also needed on the conservation of the island's natural.

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<sup>5</sup> Millennium Ecosystem Assessment, 2005. Ecosystems and Human Well-being Synthesis. 5. Island Press, Washington D.C..