

## **Tasek Bera Forest Reserve in Pahang: Deplete or conserve?** (Hutan Simpan Tasek Bera: Hapus atau pulihara?)

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### **Abstract**

The tremendous increase in environmental movements including researches, studies and non-governmental organization actions are the manifestation of environmental concern towards the scarcity of natural resources and biodiversity. The collectivism attitude in preserving the resources are still not much and proactive since the monetary value that can be gained from the direct exploitation or depletion of the natural resources seems to be more profitable and advantageous for certain people. Is it worth to deplete the resources without sustaining it or is it better to exploit it in an appropriate and reasonable manner? Nevertheless, it is important to bear in mind that the sustainable exploitation for agrofood and national food security agenda is amongst the critical priority by the government. Undeniably, there is a conflict of interest between the agricultural industry and managers of natural resources to meet up the national challenge and vision to bring the agricultural industry to a higher level; and at the same time preserving the invaluable natural resources. This paper discusses a case study of Tasek Bera Forest Reserve as internalizing the issues and problems existing here such as the disturbances of the biodiversity and its ecosystems, the dimensions that contribute to the problems and generally describing the appropriate strategies to encounter particular matters. A series of physical observations and discussions with the stakeholders have been carried out in order to obtain the important information and current problems existing in this area.

### **Introduction**

Extensive reports of tropical environment's losses should be seen as a vital concern of society towards their environment. The constituency and referendum from specific consumer segment translated into the implementation of conservation and restoration plans or efforts can be seen in the environmental issues such as deforestation of tropical rain forests and threatened marine ecosystems. The increasing public attention towards certain issues of environmental destruction ignited the increasing efforts between the policy makers and the management of natural resources.

Efficient exploitation of natural resources consequently affects future consumption and utilization. The peat swamp forest is another important component of the tropical environment, although it has received less publicity. The concern about the continuous degradation of these forests has been highlighted mainly in the numerous literatures at local and global level.

The peat swamp forest or wetland areas basically consists of the properties that can be directly harvested, used and marketed such as forestry, agriculture, recreation/tourism as well as research/education, water supply, wildlife and

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fish production. Moreover, there are also indirect benefits that are difficult to value but without the natural wetland's ecosystem there would be substantial 'replacement costs' for many critical functions such as flood mitigation, prevention of saline water intrusion, maintenance of base flows in rivers, sediment removal, nutrient removal, toxicant removal, groundwater recharge, carbon sink and groundwater discharge. Estimates suggested that 5,800 t of carbon per ha could be stored in a 10 m deep peat swamp compared to 300 – 500 t/ha for other types of tropical forest (UNDP 2006). Peat swamps often serve as a natural gene bank, preserving potentially useful varieties of plant species. At a global scale, the peat swamp forests contribute to the storage of atmospheric carbon that is an agent of global warming, thus helping to slow down the process. Peat swamp forest areas can also be very productive through the managed extraction of fish, timber and other forest products.

Apparently the flora and fauna in Tasek Bera face threats to their survival in view of the large scale of deforestation of wetlands and pollution of rivers since certain species demand some specific habitats for them to survive. The destruction of Tasek Bera has also been reported by Chong (2007) concerning the deterioration of water quality and water quantity. The main source of degradation includes surface run off containing nutrient rich water from nearby plantations, sewage from communities living around the lake, logging activities and oil discharges from motorboats (Sharip and Zakaria 2008). Human activities such as shifting cultivation, possible pollution, destruction of watershed, logging operations, erosion and siltation have been known to have caused the detriment of many valuable species at Tasek Bera (Norma et al. 2001). Although it may look like both direct and indirect human activities are the cause for the destruction, the direct human activities are the major contributors towards the degradation of the peat swamp forests.

More importantly, the human alterations by creating conversion of peat swamp forests to agriculture and rural settlement, as well as forestry uses and the other human activities, clearly has led to the remarkable recent losses of wetland habitats.

### **Deforestation and agriculture**

There is no perfect word or statement that would be able to describe 'deforestation' since the terminology is still not standardized yet, presumably that it can be determined as a situation that highlights not only forest conversion but also different types of degradation (Wunder 2000). Deforestation is generally based on some matters or purposes (Geist and Lambin 2001) indicating three main proximate causes in which the expansion of agriculture is one of the main causes followed by wood extraction and infrastructure extensions. There is no doubt that the major contributor of deforestation comes from the agricultural sector especially for countries that rely on commercial-large scale plantations like Malaysia. Agricultural expansion can be categorized into at least four categories, consisting of shifting cultivation such as traditional and colonist shifting cultivation while permanent cultivation pointed out activities such subsistence, commercial and rural integrated development agriculture projects. In 2012, a report of a combined effort by the United Nation Economic and Social Commission for Asia and the Pacific (UNESCAP), Asian Development Bank (ADB) and United Nation Environment Programme (UNEP) stated that total loss of forest cover appears to have accelerated in Afghanistan, Armenia, Cambodia, Malaysia, Pakistan and Sri Lanka. *Table 1* shows the decreasing forest cover from 1990 to 2010 indicating Malaysia's deforestation rate is accelerating faster than that of any other tropical country in the world (UNESCAP-ADB-UNEP 2012).

Food and Agriculture Organization of the United Nations (FAO) stated that Malaysia's annual deforestation rate jumped

Table 1. Malaysia’s forest cover (excluding planted forests)

	Forest cover (1,000 ha)
1990	20,420
2000	19,932
2005	19,317
2010	18,649

Table 2. Trends in natural forest cover (deforestation), 1990 – 2010

	Annual change rate	
	1,000 ha	Percentage
1990 – 2000	-49	-0.2
2000 – 2005	-49	-0.24
2005 – 2010	-128	-0.64

(-) number represents deforestation

Source: Butler (1999 – 2009)

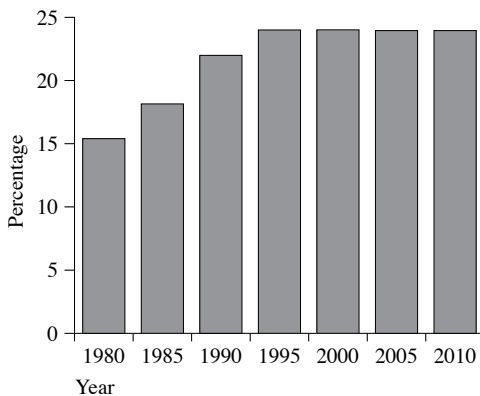


Figure 1. Agricultural land of Malaysia (%)

almost 86% between 1990 and 2000 period and between 2000 and 2005. In total, Malaysia lost an average of 140,000 ha/year (6% of its forest area) since the early millennium compared to the other Southeast Asian countries who lost an average of 78,500 ha (0.35% of its forests) annually during the 1990s. Based on Table 2, the trends of deforestation in natural forest cover in Malaysia were estimated to be 0.2% in both 1990 – 2000 and 2000 – 2005 periods, but experienced an abrupt increase in 2005 – 2010 period by 0.64%.

Most of the land cover changes in this country were dedicated to the commercial-

agricultural expansion as reported by Tsuyuki and Goh (2011) in their specific case study in Sarawak. Their report stated that oil palm plantations has increased from 28,500 ha in 1985 to 744,372 ha in 2008. The depletion of natural forests, particularly peat swamp forests for large scale oil palm plantations is also estimated at about 70% increase annually as the current figure noted more than 1 million ha of oil palm plantations existed in Sarawak. The driving force for this particular situation is fundamentally derived from the dependency of the state economy from the forest production which contributed to 52% of state revenue. Exploitation of natural resources such as forests or other existed biodiversity is complicated and complex to discuss as the internalization of many underlying factors need to be taken into account. The social, political, economic, cultural and technological perspectives are crucial in describing the human-environmental relations. The trend in Figure 1 portrays an increasing percentage of agricultural land in Malaysia especially between the periods of 1980 and 1995. Although it has been approximately constant from year 2000 onwards, few other factors might have contributed to the decreasing number of Malaysia’s total forest cover as presented in Table 2.

On the other hand, Malaysia’s visions on agriculture sector since 1960’s were written extensively by the government especially for socio-economic welfare as well as rural poverty eradication and continued to the current for wealth creation. In reality, the agricultural sector is struggling to fulfil the national vision on food security and self-sufficiency levels. The pace of technological enhancement should be aligned with the increasing population that needs to be fed. However, the technological changes in the agricultural sector might only exacerbate more deforestation no matter what systems or principles applied such as green agriculture or white agriculture. Agricultural expansion is a major force of

tropical deforestation, but not all expansion results in the loss of intact forests. Shrublands, pasture, logged or re-growing forests, degraded land and shifting cultivation fields are all sources for new permanent agriculture (Gibbs et al. 2008).

Most influencing dimensions that are possible such as adaptation, pace of technology generation and the impact of technological progress are abandoned when the externalities, policy induced distortion and societal welfare are not internalized. The idea is the impact of technological advances in agriculture to forestry depends importantly on how technological advances in agriculture directly compete with forestry for land. Fundamentally, the increase of agricultural crops' productivity such as oil palm and rubber are indirectly leading to forested land competition and further deforestation. This situation is likely to be prevented by price mechanism as in the paddy industry which has so far proved to be productive, resulting from the technological progress without too much dependence on soil exploration. As stated by Jayasuria (2001), the effect of low prices for food produced in the lowlands may increase deforestation because whenever the food prices are low, the farmer's incomes will be declined and this would encourage for land conversion to increase the agricultural land in order to maintain their income. However, even if farmers, as a result of high commodity prices or increase in productivity, obtained higher income, there is also the possibility for deforestation as demand for the upland crops will also increase. In other words, higher income farmers still inevitably affect the exploitation of natural resources by time, indicating the sustainable management of natural resources is an alternative that should be considered seriously.

#### ***Tasek Bera Forest Reserve***

Tasek Bera is a freshwater marsh lake located in the middle of the watershed area of the south central part of Peninsular

Malaysia, Pahang River basin. It is a unique lake that has been labelled as a watery refuge, freshwater swamps, wetlands mysterious, legendary lake, wetland forests or wetlands that are hidden in Malaysia. All this explanation is in recognition of its unique features as a wetland habitat in Malaysia and Asia, and was gazetted as a Ramsar site. Ramsar Convention (Convention on wetlands of international importance, especially as Waterfowl Habitat) is an international treaty that was signed in the city of Ramsar, Iran on 2 February 1971 between the governments as a framework to conserve potential natural wetlands and implemented on 21 December 1975. To date, 159 countries have agreed to sign. There are 1,836 wetlands that have been listed with an area of more than 171 million ha. These wetlands include mangrove swamps, sea-grass, coral reefs and many other ecosystems. The status was granted in 1994 by Wetlands International - Asia Pacific, based on the biological diversity of Tasek Bera and values of ecological and socio-economic potential. In line with this recognition, Tasek Bera and the surrounding forest were gazetted as forest reserve by the Pahang state government with the aim of preserving and conserving the area which is full of natural treasures and valuable natural resources.

Tasek Bera with 6,870 ha of wetlands in the Ramsar site consists of freshwater and peat swamp forest (5,440 ha, 79%), open transition swamp forest (510 ha, 7%), filled with Pandanus plants and *Lepironia heliopus articulata* (800 ha, 12%) and open water (120 ha, 2%). There is a very wide range of habitats community consisting of algae and macrophytes. A total of 374 plant species have been recorded, of which 10 species are known to be endemic to Peninsular Malaysia while 328 species of algae have been recorded during the research in the 1970s. Diversity of vertebrate fauna in Tasek Bera wetlands and surrounding forest is in line with the flora diversification. A total of 453 vertebrate

species have been recorded consisting of 62 species of amphibians and reptiles, 94 species of fish, 230 species of birds and 67 species of mammals. Fish species diversity is also a key value for Tasek Bera; offering breeding, treatment and source of food for fish from the Pahang River. The local residents, Semelai aborigines, with a population estimated around 2,000 people, can be found scattered throughout the area, but the majority of the village occupies an area called Pos Iskandar. The lake and forest environments were once full of swamps and largely occupied by lowland forests but now greatly disturbed by shifting cultivation activities, illegal logging and excessive exploitation by humans.

#### ***Potential benefits of peat swamp forests***

The peat swamp forests are very significant to humans and the environment. It plays an important role in stabilizing ecosystems, especially in the control of drainage, microclimate water purification and soil formation. Delineation of peat and swamp acts as a buffer between marine and freshwater systems as well as to prevent excessive intrusion of saltwater into coastal land and groundwater. Peat has often served as a natural gene bank for potentially useful plant species preserve. Peat swamp forest area can also be very productive through a well-managed fish extraction, timber harvesting and affordable systematic and production of various forest products such as herbs. It also has the ability to be an effective carbon store in preserving the best quality of the atmosphere. Various uses and functions are shown in *Table 3* as well as attributes that could be enjoyed from the wetlands biodiversity ecosystem.

Peat swamp forests are also managed not only to reduce the risk of flash flooding by reducing the velocity of the water but also to provide a large area for flood water storage depending on the capacity and space availability. The dispersion of water when peat swamp areas flood due to the reduction of water velocity, removes

most of the suspended sediment from the water thus providing clean water to flow into the river. As the water from floods held in peat swamps is released gradually over a long period, it can also contribute to the maintenance of base flows in rivers by maintaining the water level in rivers that run through them during dry periods. Peat is also able to bind some metals such as mercury and arsenic and can act as a reservoir for these toxic metals. This is due to the accumulation of airborne and waterborne sources over the long periods.

The peat swamp forests are very useful for educational purposes and to provide an opportunity for research, other than its high potential as an eco-tourism site that provides recreation and exciting holiday experience for nature lovers and anglers. Biological diversity and the wilderness value are among the main attractions that would draw the attention of people to come, experience it and conserve it.

#### **Approaches of the study**

This study implemented qualitative approaches in obtaining the information especially regarding the matters of challenges and problems occurring in Tasek Bera Forest Reserve area. On 23 May 2012, a meeting was held in the office at Tasek Bera Ramsar Site Management Unit within the study area after a series of discussions by phone and e-mail. The responsible officer and a group of rangers and staff members joined the discussion and addressed the problems and challenges in the management of forest reserves based on the questions asked. Then on 24 May 2012, few staff and rangers escorted the research team for technical visits to view and experience the problems and challenges in the real situation. In the technical visits, a few selected encroaching sites were shown and the degradation problems witnessed and recorded. An interview was held between the head of the natives in these areas with the security of rangers and officers of Tasek Bera Ramsar Site Management Unit. All

Table 3. Potential benefits provided by intact peat swamp forests

General value	Specific benefits
<b>Uses</b>	
Commodity that can be directly harvested and has market value	Forestry Agriculture Recreation/tourism Research/education Water supply Wildlife production Fish production
<b>Functions</b>	
Indirect uses that provide services that are difficult to value but without which there would be substantial 'replacement costs'	Flood mitigation Prevention of saline water intrusion Maintenance of base flows in rivers Sediment removal Nutrient removal Toxicant removal Groundwater recharge Groundwater discharge
<b>Attributes</b>	
Benefits that do not have any monetary value (apart from tourism), but which are treasured for their historic, cultural and biologically diverse qualities	Biological diversity Cultural/spiritual value Historic value Aesthetic value Wilderness value

Source: UNDP (2006)

of the information gathered and discussed in this paper is basically derived from the interviews, a series of discussions and technical visits that have been carried out with the cooperation from the resource managers of Tasek Bera Forest Reserve and stakeholders.

**Challenges and constraints**

Although the diverse uses of peat swamp forests and their outstanding attributes are well known, the importance of their functions in the local and the wider ecological system has been often poorly appreciated. Land conversion to industrial and agricultural uses, hydrological problems resulting from irreversible lowering of groundwater tables causing the loss of essential nutrients required for plants; unsustainable timber extraction contributing to the loss of biodiversity and soil compaction leading to severe damage of

the peat swamp forest habitat; unregulated hunting contributing to the loss of animal species; forest fires resulting from current land-use practices are basically the problems faced by the resource manager of Tasek Bera forest reserve. These activities rapidly modify the ecosystem, frequently in an irrecoverable fashion.

Fallacious and uninformed intervention in the ecology of the peat swamp forest quickly destabilizes the system and frequently has serious, harmful results. Drainage that lowers the groundwater table deprives plants of essential nutrients and exposes combustible material. Unregulated and unsustainable timber extraction contributes to loss of biodiversity and soil compaction, radically changing the habitat and the natural processes of regeneration. Therefore, it is vital to implement and plan the sustainable management and conservation plan since the uncountable

benefits can be gained from the well managed peat swamp forest, the largest natural wetland of Tasek Bera wetland area.

Exploitation of environmental resources is a necessity in the development of human civilization and the survival of the economic activity. But the main question that overshadowed managers is to what extent the exploitation of resources can be done so that environmental resources are not tapped or swallowed unto development. Is it worth for these valuable natural resources to be sacrificed in the name of economic progress and development or conservation need to retain these resources so that future generations can enjoy it later? The importance of natural resources, particularly this forest reserve of Tasek Bera to the survival of surrounding communities and human life, is something that can be defined on an individual basis even though there is no formal information underpinning knowledge. It is undeniable that the issues and problems that overlap the matter of national biodiversity assets sparked some concern although not in a critical stage.

A reserve forest area that is rich in biodiversity is not spared from facing misfortune. Tasek Bera is currently facing a critical threat range and damage. Among them is illegal agricultural activities performed by such large scale deforestation for oil palm and rubber cultivation. Illegal encroachment is done by those who do not care about the negative impact on the environment and driven by business profits alone. Additionally, waste and chemicals flowing into the catchment forest reserves regularly and continuously is a consequence of the agricultural activities around the forest territory. Remnants of the resources believed to consist of compound pollution of chemical fertilizer residues and poisons are synonymously used in farming and commercial agricultural sector. Rampant illegal logging also occurring in the forest reserve is also severely affecting the existing ecosystems. Indirectly, the functions of lowland habitat are very significant to the

survival of flora and fauna as well as non-beneficial to society. Society is unable to function well and leads to destruction as in the case of bird habitats and extinction of species of dragonflies as reported by the researchers.

In essence, the deterioration of resources and pollution problems which are highly acute in the Tasek Bera Forest Reserve is closely related to natural resource management problems itself. Threats as described cannot be curbed due to several factors that have been and are being identified from the degradation sites that have been visited before. If the factors and causes that invite these resource degradation problems can be addressed, surely, the unique natural endowments can be conserved further. Among the factors that cause threats to biodiversity and cannot be properly managed are attributable to:

- ***Jurisdiction and administration problem***

Enforcement functions are not clearly divided between the responsible agencies or bodies. Tasek Bera Ramsar Site Management Unit is a unit established by the Department of Wildlife and National Parks which has been categorized as the federal law enforcement body while the Department of Forestry is responsible for the state of Pahang. Status quo for the administration of Tasek Bera Forest Reserve is based upon the fact that Tasek Bera has been gazetted as a forest reserve and under the jurisdiction of the state government but currently administered by the federal enforcement unit which then creates inconsistencies in the enforcement objectives and approaches.

- ***Shortage of enforcement personnel***

Shortage of enforcement personnel indirectly affects the enforcement activity problems. It may be due to the delirium jurisdiction in governing this area which was not clearly signed by the relevant agencies, followed by frequent denials of enforcement actions

ever taken by existing enforcement. The administrators also did not get the proper support from the parties concerned in some enforcement actions. Such things indirectly debilitate their dedication and commitment to further enforce which gave negative impacts on the provision of manpower and complicate the financial situation.

- ***External interventions problem***  
Poor-effectiveness of the law due to external factors such as the involvement of individuals or influential bodies, create some loopholes in the enforcement. There were many violations towards the law such as deforestation and illegal agriculture activities by settlers as they were not appropriately punished in accordance with law or the existing acts.
- ***Acts' redundancies problem***  
Acts especially related to forestry and environment by passed by the Aboriginal Peoples Act 1954. Defense to any action violating laws by the indigenous people without a proper justification such as due to the indigenous originality. They inherit the forest reserve area since age-old and for self-survival that is so irrational and complicated to be resolved. Therefore, the best solution will not be found as long as there are no plans for intensive legal implementations which are applicable and practical respectively.

### **Resource management and conservation options**

In general, the most appropriate and practical solution is through the improvement and alternative resource management and conservation options. The overarching solution may be framed, but very difficult to be realized because of issues associated with laws and policies. The attributes for resource management and conservation options need to be highlighted in order to resolve problems of this wetland area. A few suggestions in this paper may

be submitted for consideration by the parties involved in order to preserve and conserve Tasek Bera Forest Reserve which is facing critical issues such as being raised before.

- The number of different species of plants, animals and different habitats of these flora and fauna need to be increased for the survival of biodiversity existing in this area. Conservation programmes should be increased so that the quantity and quality of wildlife and plants are able to be protected and conserved. Some examples of programmes that can be implemented are the release of fish into the lake, seminar or talks to local residents about ways to extract the resources in a sustainable way and their involvement in the event of replanting trees.
- In addition, cleaning and continuous observation of the forest reserve especially the lake and peat swamp forest areas must be intensified, for example, clearing rushes trees that grew in the lake. This is because too much rushes can result in deterioration of quantity and quality of the lake water which has further impact on wildlife in the lake, especially on fishes.
- The uniqueness of Tasek Bera Forest Reserve is the local residents of Semelai indigenous aborigines. They need to be taken care of as these people are part of this wetland area from the earliest time. The cooperation between the Semelai and resource manager is capable of producing a positive impact on the management of this area as a whole. The natural resources of this area can be used together such as the expansion of ecotourism industry and other downstream economic activities that are not harmful towards environment.
- Appropriate facilities should be taken into account in developing this area in a sustainable way such as increasing the campground and other basic facilities. They are important attractions in encouraging the visitors so that they



feel comfortable to come to Tasek Bera wetland area and enjoy the biodiversity available there. The accommodation choices also need to be augmented to accommodate the arrival of the visitors and give them few alternatives for their convenience.

- The increasing numbers of land conversion for agricultural activities in this area also needs to be resolved. The law should be enforced more strictly and transparently, and collaboration between agencies and bodies involved in the management of wetland areas must be strengthened. Effective enforcement can only be implemented when the integration between departments can be established effectively.
- Outdoor activities are also important attributes that need to be considered as these activities such as educational jungle trekking, fishing and involvement with Semelai aborigines life routine are the main factors that are encouraging people to visit Tasek Bera Forest Reserve.

### **Conclusion**

Proactive and progressive plans are very important in conservation efforts. Dynamic integration especially those involving economic activities and conservation efforts is the most reliable governance solution that might be extremely beneficial for Tasik Bera conservation in the long run. Among other things, the explicit agreement and understanding in administration, either full centralization of administration is granted to federal or given to state authorities, should be clearly determined so that the responsibility for enforcing the law can be carried out effectively and efficiently. Coordination Act and related legal clauses possess such revised requirements especially for the Aboriginal Peoples Act 1954 which put forward the interests of certain segments of the society in this country than the interest of society as a whole. This is because the effectiveness of law

can be implemented when the confusion and conflict of interests can be adjusted in fair and well-being of society as a total be considered with full responsibility.

In addition, the existing enforcement systems should be enhanced and strengthened by adopting the latest technology such as the use of satellite mapping system for continuous monitoring for the intrusion detection in forest reserves. Modern technology is a part of an effective and efficient solution in the long run and very significant for the enforcement system. Provision of economic opportunities that are beneficial and profitable such as the development of eco-tourism industry and environmental friendly recreational activities are able to replace the direct exploitation that has already proven to be damaging to the environment. In fact, the natural resources attraction can be exploited in a sustainable manner and private sectors should be encouraged by the government to be involved in the sustainable development of natural resources by providing appropriate economic incentives that will benefit everyone.

Continuous exploitation without consideration of the economic aspects of resource and environmental impacts potentially eliminate the aesthetic natural resources such as is happening in the Tasek Bera Forest Reserve. Issues and problems often arise mostly centered on the problems of inefficient management of resources. Awareness of the importance of natural resources is useless if not able to be translated into action and Malaysians have a choice of whether to continue exploitation or apply conservation.

Further studies should be undertaken to determine the best mechanism in developing Tasek Bera Forest Reserve area in a sustainable way. This is because these programmes require factual consideration of the conservation and restoration as well as the accountability for the treasures of nature. The general recommendations as have been highlighted need to be verified

and empirically proven so that the resource management and conservation options will be resulting in line with resource manager's visions and societal friendly. Society should be based on rational consideration of environmental responsibility, legal lines and empirical studies that are significant.

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## Abstrak

Peningkatan yang besar dalam penyelidikan, kajian dan tindakan pertubuhan bukan kerajaan terhadap alam sekitar menunjukkan kebimbangan kerana berkurangnya sumber asli dan biodiversiti. Sikap kolektivisme dalam memelihara sumber masih tidak begitu menyeluruh dan proaktif, kerana nilai faedah kewangan yang boleh diperolehi daripada eksploitasi langsung telah menjadi keutamaan pihak tertentu. Persoalannya adakah lebih baik untuk mengurangkan sumber tanpa mengekalkannya atau mengeksploitasinya dengan cara yang sesuai dan munasabah? Harus diingat bahawa adalah penting untuk mengeksploitasi sumber secara mampan bagi tujuan agromakanan kerana keselamatan makanan merupakan agenda nasional yang kritikal. Tidak dinafikan terdapat konflik kepentingan antara industri pertanian dengan pengurusan sumber asli bagi memenuhi cabaran dan visi nasional untuk melonjakkan industri pertanian ke tahap yang lebih tinggi, dan pada masa yang sama memelihara sumber semula jadi yang tidak ternilai. Penulisan ini membincangkan isu dan masalah yang wujud seperti gangguan biodiversiti dan ekosistem dengan memberi fokus kepada kes Hutan Simpan Tasek Bera. Ia juga membincangkan perkara yang menyumbang kepada masalah dan secara umum mencadangkan strategi yang sesuai bagi mengekalkan dan memelihara khazanah negara yang tidak ternilai. Siri pemerhatian fizikal dan perbincangan dengan pihak-pihak berkepentingan telah dilakukan dalam usaha untuk mendapatkan maklumat yang penting dan masalah semasa yang wujud di kawasan itu.