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## Security management of national park security in the border of Indonesia - Malaysia

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**Abstract** Boundary is an important part of the state's sovereignty and becomes a fortress of all kinds of threats. The threat about security of natural resources is one of non-military threat which affects Indonesia's security. *Betung Kerihun* National Park adjoins to Malaysia in northern of Indonesia, so it can be vulnerable to threats. The purposes of this research are to analyze the threat of security toward management of *Betung Kerihun* National Park (TNBK), the efforts made to overcome the security threat, and the management of TNBK on the border of Indonesia and Malaysia. The research uses qualitative method using in-depth interviews and later analyzing the primary and secondary data. The results show that the security threats of TNBK are agarwood stealing, gold mining, illegal logging, wildlife distribution, lack of security staff, no security forces (*Satgas Pamtas*) on the northern boundary of TNBK, and border patrol inspection line construction. The efforts to overcome security threats are preventive, pre-emptive, and repressive. The management of TNBK on the border of Indonesia and Malaysia in order to protect border security are including management functions of planning, organizing, leading (directing), and evaluating. The recommendations to overcome the security threat of national parks on the border between Indonesia and Malaysia are the active role of security forces and the establishment of buffer zone management.

**Keywords.** Security threats, border threats, management, national park.

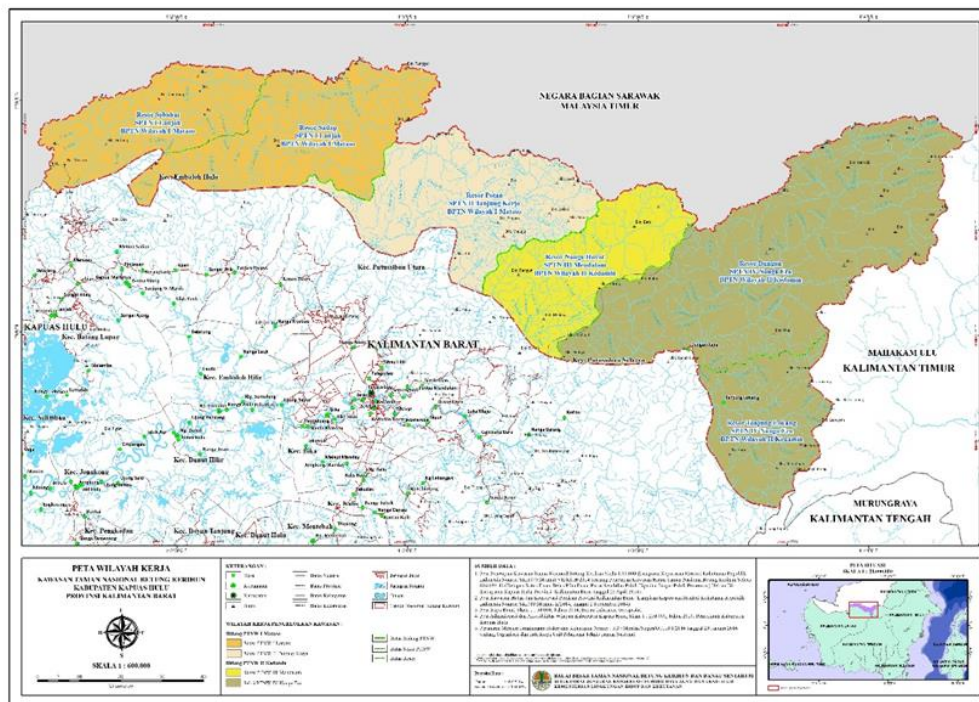
### 1. Introduction

State borders are an important part of the sovereignty of the country because it has dynamic relations with neighboring countries. Border security is an important concern for a country, especially Indonesia, that have direct borders with other countries. The border is the front porch of the country which becomes a bulwark of defense from all forms of threats that can interfere with national security. Threat to the security of natural resources is a form of security threat.

The natural resource management policy is contained in Article 33 of the Indonesia 1945 Constitution (UUD 1945), paragraph 3 which states "Earth, water and natural resources

contained therein are controlled by the State and used for the greatest prosperity of the people". The government has a responsibility to protect natural resources under the authority of its sovereign territory from all forms of threats. In addition, the increasing population coupled with globalization and industrialization affects the ecosystem on earth, causing extensive environmental damage (Swain, 2013). The high level of forest security disturbances has prompted the government to establish conservation area management. The establishment of a national park area is one of an example of managing the conservation area.

There is a protected area in the border area of West Kalimantan and Malaysia, named the *Taman Nasional Betung Kerihun* (TNBK) or *Betung Kerihun National Park*. Geographically, TNBK is located at coordinates 112 ° 10 '47 "East Longitude - 1 ° 36" 35 "North Latitude and 114 ° 12" 49 East Longitude - 0 ° 36" 26 "North Latitude. The TNBK area has an area of 816,693.40 ha.



**TNBK Area Map**

Source: BBTNBKDS Document (2016)

The topography of the TNBK area is mostly hilly and mountainous with a few plains (Santoso & Haryanto 1998). The TNBK area is divided based on the height group as in the table below:

Altitude (m asl)	Areas (Ha)	%
<250	74.964,81	9,18
250-500	303.078,82	37,11
500-750	214.210,36	26,23
750-1.000	129.751,76	15,89
1.000-1.250	66.450,20	8,14
1.250-1500	23.448,80	2,87
>1.500	4.788,65	0,59
<b>Total</b>	<b>816.693,40</b>	<b>100%</b>

**TNBK area based on altitude**

Source: BBTNBKDS Document (2016)

The ecosystem types of TNBK are: Lowland Dipterocarp Forest, Hill Dipterocarp Forest, Alluvial Forest, Swamp Forest, Limestone Rocky Forest, Sub-mountain Forest, Mountain Forest and Old Secondary Forest. This ecosystem is a habitat for endangered and protected species such as Orangutans (*Pongo pygmaeus pygmaeus*), Sun Bears (*Helarctos malayanus*), Kelampiau (*Hylobates muelleri*), include the bird species, especially hornbills (*Bucerotidae*). Apart from animals, there are also rare and protected plant species, including Ulin / belian trees (*Eusideroxylon zwagerii*), pitcher plants (*Nepenthes spp*), *Rafflesia* flowers (*Rafflesia sp*) and corpse flowers (*Amorphophallus sp*).

The potential of those natural resources have high economic value if they are managed optimally. Conservation areas are formally dedicated to the protection and maintenance of biodiversity and natural and cultural resources, also to promote peace and cooperation between the countries concerned (Ali, 2007). However, in reality, several forest areas in the Betung Kerihun National Park on the border in Kalimantan have been cut down and utilized for their timber. Many cases of timber smuggling to Sarawak come from conservation areas. TNBK is one of the conservation areas that has suffered significant damage as a result of illegal logging and illegal timber trade. This causes the amount of forest land cover in Kalimantan to decrease, which can cause environmental damage.

Based on this phenomenon, it is necessary to study what security threats are and how to deal with these security threats and how the management of national parks in maintaining the security of the Indonesia-Malaysia border.

## **2. Theoretical Framework**

### **2.1. Protected Area Management Theory**

Worboys et al. (2015) stated about the management functions that form the basic framework in the management of protected areas. These four functions are seen from the perspective of protected area organizations, namely the functions of planning, organizing, mobilizing and evaluating.

Worboy further stated that The planning function in protected area organizations consists of strategic plans, tactical plans and operational plans. The organizing function is structured efficiently and effectively by coordinating resource expertise in supporting protected area managers. The mobilization function involves the leader influencing others by motivating, communicating and teaming up in protected areas. The evaluation function reviews the progress of implementation against the goals and standards that have been determined in the management of protected areas.

### **2.2. National Park Management Theory**

Mackinnon et al (1990) stated that physically, the characteristics of National Parks are described as large, relatively undisturbed areas, having prominent natural values, high conservation importance, large recreational potential, good accessibility, and having clear benefits for the area.

Bismark (2006) buffer areas are important areas to support conservation areas and are areas with great potential to be managed in order to preserve biodiversity and national park ecosystems, both as natural tourism assets, buffer conservation areas, cultivation areas, sources of food production, firewood and drugs.

Based on Law no. 5 of 1990 concerning Conservation of Biological Natural Resources and Their Ecosystems, national parks are natural conservation areas that have native ecosystems, managed with a zoning system that is used for research, science, education, cultivation, tourism and recreation purposes. Meanwhile, according to the Regulation of the Minister of Forestry

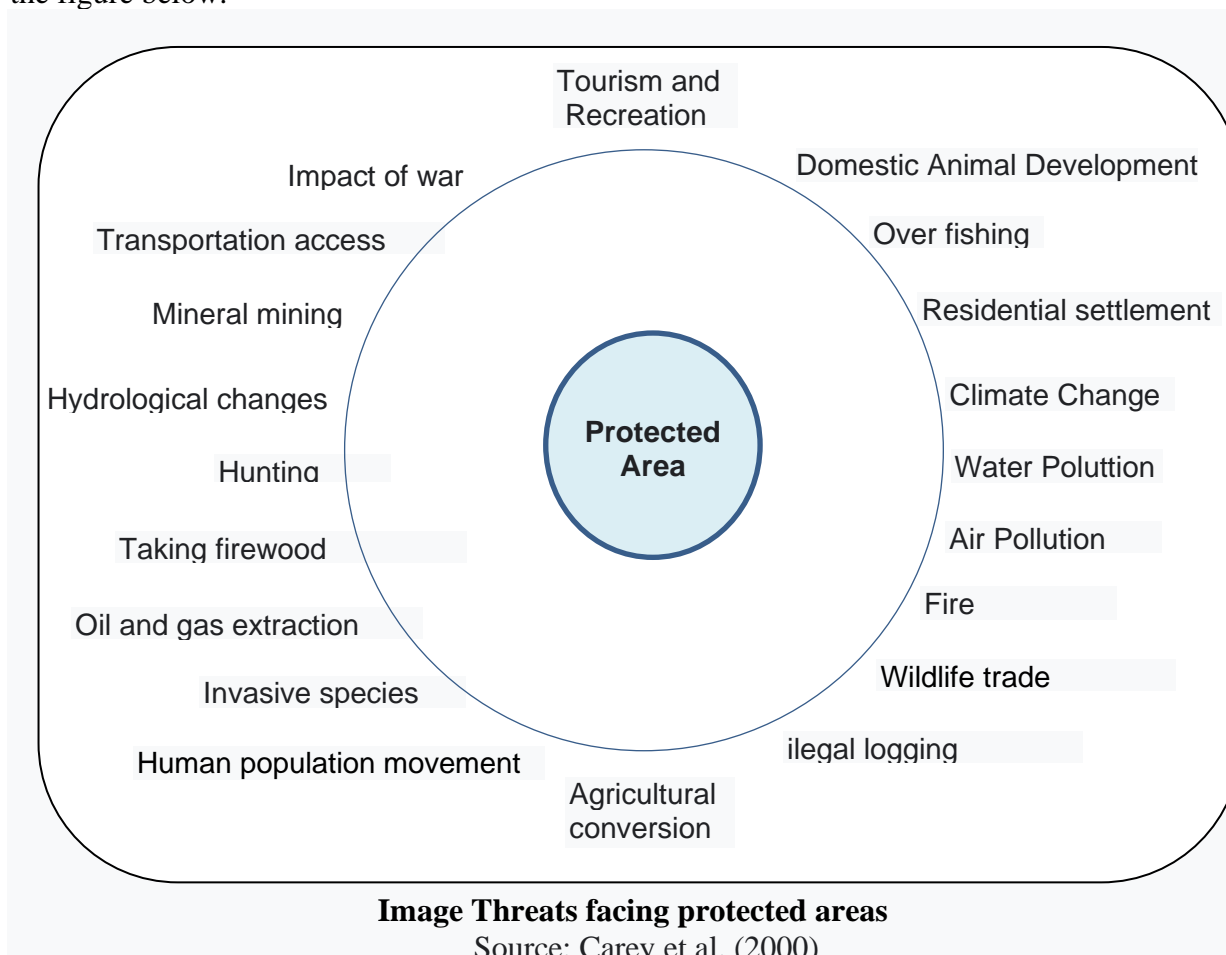
Number P.56/Menhut-II/2006 concerning guidelines for zoning national parks, the national park zone is an area within the national park area which is distinguished according to the functions and conditions of the ecological, social, economic and cultural community. The zoning of national parks in Indonesia includes core zones, jungle zones, utilization zones, traditional zones, rehabilitation zones and special zones.

### 2.3. Threat and Protected Area Security Theory

Barry Buzan (1991) states: "security, in any objective sense, measures the absence of threat to acquired values, in a subjective sense, the absence of fear that such values will be attacked". According to Buzan, there are five categories of threats, namely military, political, social, economic and ecological threats.

Brandon et al. (1998) stated that effective protected area management and law enforcement can reduce threats to biodiversity conservation.

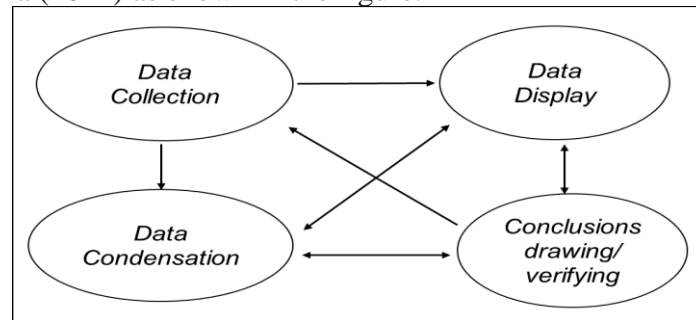
Carey et al. (2000) stated that the threats that protected areas tend to face can be illustrated in the figure below.



Based on Government Regulation Number P.75/Menhut-II/2014 that the duties and functions of the forest police are carried out in a preemptive, preventive and repressive form. Preemptive activities are carried out to prevent, eliminate, reduce, cover the intention of a person or group to commit forestry crimes. Preventive activities are aimed at preventing, eliminating, reducing, closing the opportunity for a person or group to commit forestry crimes. Repressive activities to reduce, suppress or stop forest crimes committed by a person or group.

### 3. Research Methods

This research uses descriptive qualitative methods with primary data sources and secondary data. Primary data sources were obtained directly from sources through interviews, while secondary data sources were from books, annual reports and other documents related to research. The data obtained in this study were analyzed using the interactive model of Miles, Huberman and Saldana (2014) as shown in the figure.



**Interactive model data analysis**

Source: Miles, Huberman and Saldana (2014)

### 4. Result and Discussion

#### 4.1. Security Threats in National Park Management

The appearance of the TNBK area can be seen in the attached picture. The TNBK area looks still natural with dense land cover. Mackinnon et al (1990) stated that physically, the characteristics of the National Park are described as a large area, relatively undisturbed, having prominent natural values, high conservation interests, great recreational potential, good accessibility, and having clear benefits for the area.



**Aerial photo of the TNBK area**

Source: TNBK Document (2016)

The security threat in the management of the National Park is the illegal extraction of agarwood by the community around the forest. The TNBK area also has the potential for high-value natural resources which can become a threat to the national park area. Illegal logging cases occurred in the TNBK area. The result of illegal logging in TNBK is indicated by the large number of logging road networks in the national park area that have penetrated into Malaysian territory. Disturbances in the TNBK area that often occur are the theft of agarwood and gold mining. This is in accordance with Carey et al. (2000), that the threats faced by protected areas are mining and theft of forest products. The disturbance was carried out by the society around the area. The society makes those disturbances for their daily needs. In accordance with the statement of Moore et al. (2018) that a higher threat occurs near more accessible roads as well as closer to human habitats.

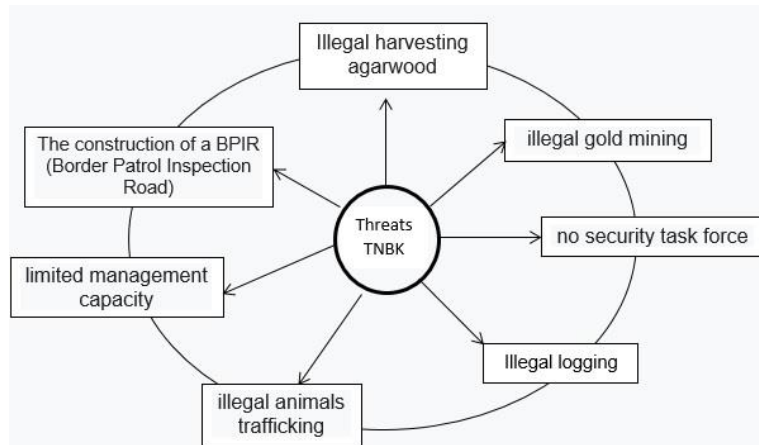
The disturbance which occurred in the TNBK area was gold mining without a permit. This gold mining can reduce water quality and cause pollution. This gold waste can cause turbidity in the water which can have an effect on health of the people whose lives use river flow. In the research of Yulianti et al. 2016 regarding the impact of unlicensed gold mining waste on river water quality, shows that river becomes muddy after mining and the quality of the water has decreased due to the disposal of the resulting waste which is directly discharged into river.

Another threat that can become a problem is animal hunting which then traded illegally. The high interest or interest in wild animals is one of the causes of illegal wildlife trade. The TNBK area has the potential for wildlife diversity in the form of birds, mammals, reptiles and *heperto fauna*. Carey et al. (2000) stated that if the local population is poor or the potential value of wildlife is high, hunting and poaching can become endemic and very destructive activities. At worst, the national park area can lose animal species. Hunting can also have an impact on the structure and function of communities in ecosystems and have the potential to affect the carrying capacity of ecosystems throughout the region.

Lack of management capacity is an important factor influencing the threats facing protected areas. Facts in the field show that the number of security personnel in TNBK is still insufficient. The number of forest ranger personnel greatly influences the threats facing the national park. According to Carey et al. (2000) lack of management capacity, one of which is a lack of staff. The insufficient number of forest police personnel has an impact on the threats facing the national park. With the number of personnel available, it can be one of the difficulties in carrying out effective security activities so that it will have an effect in overcoming any disturbances or threats facing the national park.

The absence of routine patrols at the northern border of TNBK could be a security threat to Indonesia. The real threat is the entry of Forest Concession Rights Malaysia by taking natural resources into the TNBK area. The construction of the Border Patrol Inspection Road in West Kalimantan could be a threat to the TNBK area. The threat can be formed as the disturbance to the preservation of forest areas due to the opening of roads that can disturb the habitat of animals or plants and easy access of parties carrying out illegal activities. Carey et al. (2000) argue that roads leading to protected areas promote destruction, through increased tourist pressure or through exploitation of illegal resources and settlements. There is a link between road construction and increased environmental damage caused by illegal hunting and illegal logging due to easy access.

Based on the results of the research, the security threats in the management of *Taman Nasional Betung Kerihun* (TNBK) or *Betung Kerihun* National Park on the border between Indonesia and Malaysia are illegal harvesting of agarwood, illegal gold mining, illegal logging, illegal animal trafficking, limited management capacity, there is no security task force in the northern boundary, and the construction of a Border Patrol Inspection Road (BPIR) which is contrary to the preservation of the TNBK area. The types of threats can be seen in the attached picture.



**Types of Threats at the Border between Indonesia - Malaysia**

Source: processed by researchers, 2021

#### 4.2. Efforts to Overcome Security Threats in National Park Management

Efforts to overcome security threats in the management of the National Park are carried out through preventive, preemptive and repressive activities. This is in accordance with the regulation of the Minister of Forestry of the Republic of Indonesia Number P.75 / Menhut-II / 2014 that the duties and functions of Forest Police are carried out in a preemptive, preventive and repressive form.

Preventive activities carried out in the TNBK area are through routine patrols, joint patrols and functional patrols. Preventive activities are activities aimed at preventing, eliminating, reducing, closing the opportunity for a person or group to commit forestry crimes. Preventive activities are carried out by among others: Patrols or tracing within the area and / or its jurisdiction; Safeguard according to orders from the leadership in the area and / or jurisdiction; and Identification of vulnerabilities, disturbances and threats.



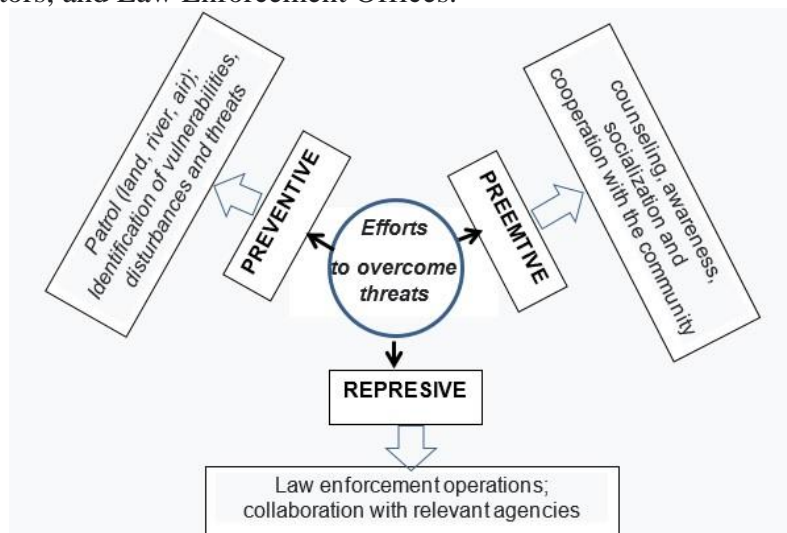
**Joint patrol activities of the TNI, forest rangers and communities**

Source: TNBK Document (2016)

Preemptive activities in the TNBK area are aimed at preventing, eliminating, reducing, blocking the intention of a person or group to commit forestry crimes. Preemptive activities are carried out by: awareness and counseling; as well as community guidance and assistance. In the TNBK area outreach, awareness, or community development activities are carried out actively. Illegal activities may still occur as a result of the society there has lack knowledge about conservation. Kempf (1993) says that many ecosystems and cultural landscapes that are in protected areas depend on traditional management systems. Therefore, the important role of preemptive activities is done, so that people will understand better about the importance of protecting the environment for a sustainable life.

Repressive activities carried out by law enforcement operations; collecting of information materials; safeguarding evidence; arresting the suspect in the event of being caught red-handed; managing of wildlife conflicts; Firefighting; and escorting of suspects, witnesses or evidence. This activity is in accordance with the statement of Brandon et al. (2008) that the effective management of protected areas and law enforcement to reduce threats is very important for the conservation of biodiversity.

Efforts to overcome security threats in the management of national parks at the border between Indonesia and Malaysia are through preventive, preemptive and repressive activities which are presented in the attached figure. Preventive activities are carried out by patrolling land, water and air and identifying vulnerabilities, disturbances and threats. Pre-emptive activities were carried out by providing counseling, awareness, socialization, and collaboration with communities around the TNBK area. Repressive activities are carried out by carrying out law enforcement operations and collaborating with related agencies such as the Indonesian Army, Police, Prosecutors, and Law Enforcement Offices.



**The Efforts to Overcome Security Threats in the Management of the National Park**

Source: processed by researchers, 2021

#### **4.3. National Park Management in Maintaining Border Security**

The management of the park at the border between Indonesia and Malaysia in maintaining the security of the West Kalimantan border is explained based on four management functions, there are planning, organizing, actuating and evaluation. In the TNBK Long Term Management Plan book for the period 2016-2025, there are strategic issues in TNBK management, one of which is the policy of accelerating development in border areas, encouraging the development of facilities and infrastructure (transportation, telecommunications and energy / electricity as well as defense and security for the sovereignty of the Republic of Indonesia). The TNBK area is the target of this policy because of its existence which is directly adjacent to Sarawak-Malaysia.

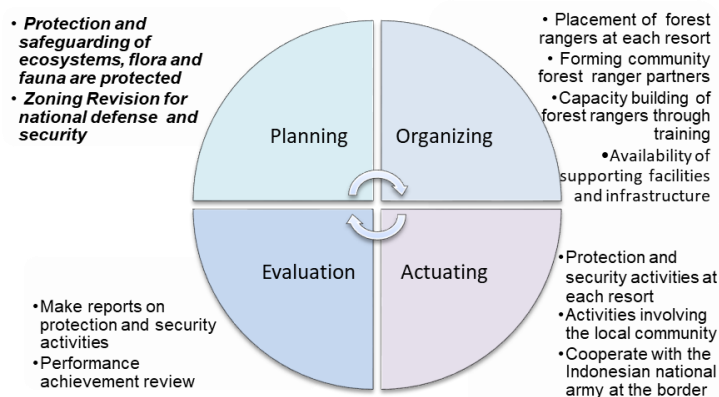
The planning function in dealing with this strategic issue TNBK managers prepare an area management plan by reviewing (revising) the zoning of the TNBK area. This zoning revision is influenced by national interests, local development interests and the interests of the community. The main factors that are considered for zoning revisions are the national interest for state defense and security which requires space for the construction of border security posts, border patrol inspection routes (BPIR), and the national interest in the construction of parallel border roads connecting West Kalimantan Province with East Kalimantan Province. The plan to build this border post is in the TNBK core zone.

The organizational function in the implementation of protection and security of forests, forest areas, forest products, wild plants and animals is the duty of forest rangers. The number of security personnel is not large, so the manager employs auxiliary officers (field contract workers) who are local indigenous people and then form community groups that are members of the Forestry Police Partners Community. Then to increase the capacity of security personnel, the TNBK manager also conducts trainings such as in-house training, comparative studies, technical guidance, sending officers to attend training at the provincial, national and even international levels.

The function of actuating in the protection and security of the TNBK area includes patrol activities carried out at each resort in the TNBK area. Then carry out guarding/luring at the resort's portals and posts, identifying vulnerabilities, disturbances and threats, conducting joint patrols between resort sections and with other agencies such as police, military, military command. Protection and security activities also involve the community around the forest area who are members of the Forest Police Partner Community. The aims of this community involvement is making the community more concerned about the sustainability of the area and can be a good partner for cooperation in terms of protection and security activities for the TNBK area. Besides patrol activities, other activities carried out include providing understanding and counseling to the TNBK supporting village communities regarding the regulations in the forestry sector as well as the rights of the communities that TNBK accommodates in accordance with the applicable regulations. This is done in order to increase the awareness of the community to not carrying out activities that are contrary to the preservation of the area. As the research conducted by Mustakim (2013) in *Alas Purwo* National Park which states that the success of preserving the *Alas Purwo* National Park is inseparable from good cooperation between the community and forest rangers in preserving the forest.

The evaluation function is carried out to review the progress of the implementation of activities that have been carried out. Every year TNBK produces a report on the achievements of the national work plan which is prepared to provide an overview and information on the achievements and obstacles faced in carrying out its main tasks and functions. This report can be used as an evaluation instrument for the achievement of targets for management activities in TNBK and can serve as a reference in preparing management plans for the coming year.

Based on the research results, the management of the national park in maintaining the security of the border between Indonesia and Malaysia is carried out through management functions, namely planning, organizing, actuating, and evaluating.



### **The Management Function in the Management of National Parks at the Border Area**

Source: processed by researchers, 2021

## 5. Conclusions

Based on the results of research and discussion, it can be concluded as follows:

- Security threats to the National Park area on the Indonesia-Malaysia border that can damage environmental sustainability, namely agarwood harvesting, illegal logging, gold mining without permits, trafficking of animals, limited management capacity, no border security task force and the construction of the Border Patrol Inspection Road
- Efforts to overcome security threats in the management of the National Park at the Indonesia-Malaysia border through preventive, preemptive and repressive activities.
- Preventive activities are carried out by patrolling land, water and air and identifying vulnerabilities, disturbances and threats. Pre-emptive activities were carried out by providing counseling, awareness, socialization, and collaboration with communities around the TNBK area. Repressive activities are carried out by carrying out law enforcement operations and collaborating with related agencies such as the TNI, Polri, prosecutors, and Law Enforcement Offices.
- Management of the National Park on the border between Indonesia and Malaysia in maintaining border security is carried out by using a management function, namely planning with activities Protection and safeguarding of ecosystems, flora and fauna are protected, Zoning Revision for national defense and security; organizing with activities Placement of forest rangers at each resort, Forming community forest ranger partners, Capacity building of forest rangers through training and Availability of supporting facilities and infrastructure; actuating with activities protection and security at each resort, Involving the local community, Cooperate with the Indonesian national army at the border; and evaluating functions with activities Make reports on protection and security, Performance achievement review.

## 6. Recommendation

In the framework of managing the security of the national park at the border. Indonesia and Malaysia to preserve the ecosystem is recommended the active role of the security forces in protecting the national park area with the use of drones due to difficult topographic conditions and the establishment of buffer zone management based on ecological, economic, and socio-cultural community, so that the buffer area has economic value which is able to improve the standard of living of the community in maintaining integrity Conservation area.

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