

# A Study on the Improvement of Practical Martial Law Stability Evaluation System

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## Abstract

*The purpose of this paper is to present an improved method for practical evaluation of martial law stability, which is the basis for effective martial law enforcement. Although martial law is an important act of national rule, it contains institutional irrationality and redundancy and does not reflect the changes in the environment of the times. In particular, martial law stability evaluation is a key procedure for determining whether to continue or stop martial law, but there were many difficulties in applying it in the field due to the lack of objectivity of the evaluation system and insufficient evaluation method. Therefore, in order to resolve these limitations, related laws and research papers were previously studied, and similar systems (Integrated defense operations and Stabilization operations) were compared and reviewed. In addition, in order to present a practical evaluation method, the evaluation system was reestablished by applying the Analytic Hierarchy Process (AHP) and Delphi techniques that reflect the opinions of relevant experts and deriving evaluation factors, indicators, and evaluation criteria. Based on the results of this study, it will be possible to qualitatively and quantitatively establish a practical martial law stability evaluation system for the efficient implementation of martial law.*

**Key Words:** *Martial law, Martial law stability evaluation system, Evaluation factors and indicators, Integrated defense operations, Stabilization operations, AHP, Delphi*

## **I. Introduction**

The key of martial law is to guarantee success by perfecting the performance posture of the national total war. But when analyzing the meaning of conditions and procedures for declaration of martial law under Article 77 (1) of the Constitution and Article 2 (2) of the Martial Law Act, the martial law enforcement system based on Articles 5, 7, 8, 9 and 10 of the Martial Law Act, a comprehensive review is required for a fundamental understanding of the nature of martial law, the establishment of a mission execution system, and the establishment of specific plans for the execution of wartime martial law. In addition, when analyzing the contextual factors of martial law, it is difficult to enforce martial law under the leadership of the military. Thus, to induce national consensus and voluntary participation and enforce martial law successfully, it is necessary to supplement the system by concentrating the nation's total power during wartime and peacetime and establishing a system that evaluates martial law stability based on the linkage of martial law-Integrated defense operations-Stabilization operations.

To provide an improved evaluation method for martial law stability, this study will revisit evaluation factors and indicators, set priorities (weights), and detail evaluation methods. First, taking into consideration regional characteristics (urban area, farming and fishing village area) and operational environments (Integrated defense operation area, Stabilization operation area, forward-contacting area, increase in terrorism and cyber threats), this study will add, remove, and modify the evaluation factors and indicators of the martial law stability evaluation system that is currently in place. By comparing and analyzing the stability evaluation factors and indicators in the integrated defense operation area and the stabilization operation area, martial law stability evaluation factors and indicators in the relevant area are re-established. Second, this study weights the stability evaluation factors and indicators to calibrate the current evaluation index. The current evaluation indicators have been ranked. However, admittedly, a uniform evaluation index cannot accurately take into account the circumstances and conditions, and questions about its objectivity have been raised repeatedly. Therefore, collecting expert opinions and making adjustments through a qualitative method will help establish a practical evaluation standard. Last, this study will present an improved evaluation method concerning the evaluation factors and indicators. Since currently there is no method that assesses the evaluation factors and indicators of the current martial law stability system, practitioners have evaluated those factors and indicators according to arbitrary criteria during on-site evaluation; as a result, evaluation results vary across regions, and the accuracy of the stability evaluation accuracy suffers. Moreover, the evaluation results were hardly reliable because inconsistent evaluations were made due to limited cooperation with related organizations, frequent changes of evaluators, and differences in disposition. Therefore, it is believed that it is possible

to create a more accurate and consistent evaluation system by presenting an objective evaluation method.

Due to the specificity of the content and the limitations of the field of application, prior legal and institutional analysis was strongly required for this study. In addition, this study used the policy analysis data of the relevant institutions to remedy the lack of research data in the field that limited the scope of the previous studies. This study adopted Delphi through a survey of former and current experts to analyze select evaluation factors, indicators, evaluation grades, and evaluation methods and the AHP method to weight those factors and indicators.

## II. The gap in the evaluation system between the situation of Martial law system and operations system

Stability evaluation can be understood as a procedure to determine whether a policy continues or not through assessment of the implementation results when a policy is implemented. In the case of martial law, there is a system that determines whether martial law continues through the evaluation of the stability of martial law, and there is a system similar to the integrated defense operation and stabilization operation. However, in consideration of the factors that change martial law in terms of the times and environment, an additional review is needed in the field of martial law. In consideration of regional implementation conditions, it is also necessary to analyze conditions for implementing martial law in the areas of integrated defense operations and stabilization operations that have similar characteristics as shown in <Table 1> and judge whether or not they are redundant.

<Table 1>

Element	Martial law	Integrated defense operations	Stabilization operation
Basis for implementation	Article 77 of the Constitution, Martial Law and Enforcement decree	Integrated Defense Act and Enforcement Decree	Operation plan
Implementation timing	National emergency	Integrated defense situation occurred	Wartime
Target of implementation	Nation	Enemy soldiers and residents in the area where the integrated defense was declared	Enemy forces and residents in the operation area

Resident control scope	<ul style="list-style-type: none"> <li>• Some restrictions on basic rights</li> <li>*Arrest, detention, seizure, and search</li> <li>• Residence, transfer, press, and publication</li> <li>• Assembly, association, or group action</li> </ul>	<ul style="list-style-type: none"> <li>• No entry, restriction, and eviction from controlled areas</li> <li>• Evacuation order</li> </ul>	<ul style="list-style-type: none"> <li>• Public security among the five functions of civil affairs</li> </ul>
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### ***1. Martial law and stability evaluation***

Martial law is a type of national emergency right that aims to maintain public welfare and order with military power. It is divided into emergency martial law and security martial law. Emergency martial law is declared by the President to comply with military needs or to maintain public order in the event of war, incidents, or equivalent national emergencies; that is when the social order is extremely disturbed and it is remarkably difficult to perform administrative and judicial functions. Security martial law is proclaimed to maintain public order in the case of war, incidents, or equivalent national emergencies ; in such events, social order is disturbed and security cannot be secured only by general administrative agencies. When the situation of martial law pursuant to the declaration of martial law is restored to its normal state, or the National Assembly requests the cancellation of martial law, the President shall cancel martial law without delay and announce it (Law No. 14839 Martial Law Article 11).

To determine whether or not martial law should be removed and the normal state should be restored, it is necessary to evaluate the result of martial law stability. Martial law stability evaluation determines whether martial law should continue to be enforced through evaluation of the five functions (Safety, Legal affairs, Mobilization, Press, and Aid) related to martial law in each region after the declaration of martial law; depending on the evaluation result, the enforcement of martial law or the cancellation of martial law is implemented. It is an activity that implements measures under martial law case by case. The Martial Law Command comprehensively evaluates the stability of martial law in each district and region by applying the operational evaluation method. The evaluation results are reflected in the results of the operational evaluation to achieve the JCS operational objectives. The goal of martial law is to support military operations and maintain public order. The enforcement effect is divided into the fields of Safety, Legal affairs, Mobilization, Press, and Aid in consideration of martial law missions. Evaluation is conducted at the level of the administrative units of cities and provinces. However, district and regional martial law commands are based on the “city” administrative units, but county administrative units may be added in

consideration of the conditions within the jurisdiction. The evaluation result is divided into 4 stages (stability(●), instability(○), serious(●), paralysis(●)), input using KJCCS and ATCIS-R or integrated defense information-sharing system. The martial law command will finally evaluate the stability of each martial law function based on the contents of the report of the operation and cooperation with the state agencies.

When considering the evaluation procedure, the following operational restrictions were derived along with structural restrictions that the military command and control systems (KJCCS, ATCIS-R) and the integrated defense information-sharing system cannot be interlocked. First, when martial law is declared, 15 evaluation factors and 46 indicators that evaluate the five functions of martial law in each region are subdivided. But battlefield areas (contact or rear areas, urban and rural areas), characteristics of administrative districts, and changes in new battlefield environments (terrorism warfare, cyber warfare) are not taken into consideration. Second, the district and regional martial law commands are required to evaluate the evaluation factors and indicators for each of the five functions in each city and county, but there is no quantitative or qualitative evaluation method for each indicator. Third, as the evaluation result is divided into only four stages (stability(●), instability(○), serious(●), paralysis(●)), it does not properly reflect the actual situation of the field and, thus, would this produce “false” results as it doesn’t take in account the situational variables. Fourth, it is difficult to grasp the key points for the conclusion, as the weights for each indicator within each evaluation factor are distributed evenly and assigned points. Therefore, overall supplementation of the martial law stability evaluation system is required to solve operational limitations as well as structural problems.

Research related to martial law was mainly conducted on the direction of improvement of the martial law and implementation plan, and studies related to martial law stability evaluation were limited. Regarding the development of martial law, Yun-seon Song (2016, pp. 553-554) suggested “emergency martial law, resetting of the standard for security martial law, and the effective implementation of martial” as “three directions”. In his article, he proposed four action items including setting the scope of command and supervision between martial law and government agencies. In particular, the importance of the martial law command's ability and system arrangement for cyberspace control was emphasized in consideration of the changing environment of the times. Moon-Hyun Ko and Moon-Cheol Ko (2020, pp. 117-118) considered martial law in Britain, the United States, France, and Germany, which have martial law systems as state emergency rights from a comparative perspective, said that there is a need to reorganize laws related to martial law to have a systematic consistency through a review of the unconstitutionality of martial law procedures and effects.

## **2. Integrated defense operations and stability evaluation**

An integrated defense operation refers to a defense operation in which the head of the integrated defense headquarters or the commander of the regional armed forces, the commander of the fleet, the head of the local police agency integrates the elements of national defense to command and control in areas where the integrated defense situation is declared (Act No.17689 Integrated Defense Act Article 2, Paragraph 4). There is a fundamental difference from martial law in that it is a command system for integrated defense elements and there is an object of enemy.

The integrated defense situation shall be declared by classifying it as the Gapjong situation, the Euljong situation, or the Byeongjong situation. When an incident corresponding to a situation occurs, the person concerned shall immediately go through the Prime Minister and make a recommendation to the President to declare the situation of integrated defense. Upon receiving a recommendation, the President may declare a state of integrated defense after deliberation by the Central Council and the State Council. If the state of integrated defense is restored to its normal state or the National Assembly requests it to be canceled, the President will immediately lift the state of integrated defense, must announce that fact (Law No. 14839, Integrated Defense Law Articles 11-14).

**<Table 2>**

Evaluation factors	Evaluation indicators
1. Maintaining government /local government functions	• 2, including the normal operating rate of the administrative organization of public officials
2. Social confusion/crime occurrence	• 2, including preparing growth rate for peacetime, such as sabotage, strike, illegal demonstration, testament
3. Securing ground, sea, and public transportation routes	• Sea/port/airport normal operation rate
4. Local residents	• 3, including maintenance of economic order and stability of public sentiment
5. Mobilization of manpower and materials	• 5, including the increasing rate of illegal immigration
6. Maintain the function of social facilities	• 3, Electricity, gas, oil, communication utilization rate
7. Medical support activities	• 3, including medical personnel, medical support facilities, and drug security rate
8. North Korean defectors, refugees management	• 2, including accommodation facilities and securing relief products

Even between integrated defense operations, it is necessary to evaluate the stability of the level of stabilization of the region only in the region where the operation is performed. This is because additional measures can be made in the area where the operation was conducted only after such stability evaluation. As for the stability evaluation factors and indicators judged by the rear area, there are 21 evaluation indicators in 8 evaluation factors as shown in <Table 2>.

The biggest problem with the integrated defense operation stability evaluation system is that there is no guideline for evaluation. Stability evaluation for martial law is included in the Guidelines for the Stability Evaluation of Martial Law, and for the stability evaluation of the stabilization area, guidelines for stability evaluation are included in the “Practical Guidelines for Civil-Military Operations. Although some parts of the guidelines need to be supplemented, it can be seen that there is a guideline, and the evaluation is concreted around the content.

In comparison, there is no accurate guideline for the stability evaluation of integrated defense operations. The relevant practitioner or person in charge of each element evaluates subjectively with only the evaluation factors and indicators and inputs the results. Although the guidelines must be clearly presented due to the characteristics of integrated defense operations carried out by the civil, government, and military together, the current system is inadequate. Therefore, the use and importance of martial law stability assessment will be enhanced only when there is a guideline on the part that is linked to it.

Research related to integrated defense operations is also limited and organized by research reports through research services provided by related organizations. Won-young Jung (2000, pp. 87-111) argued that to develop integrated defense functions in the era of local autonomy, integrated efforts of the private sector, government, and military are needed in 1) planning and budgeting, 2) mobilization and administration, 3) defense council operation, and 4) execution support. Jong-seop Choi and Young-do Kim (2017, p. 6) argued that it is very important to respond quickly to the initial situation in the event of a national crisis, and for this purpose, rapid information sharing among the various organizations is essential. Therefore, in order to ensure streamlined information-sharing and perform tasks for integrated defense, measures such as improvement of the organizational system, improvement of the operational execution system, improvement of the compatibility of resource operation, reorganization of laws, and reinforcement of practice training are necessary. In particular, to solve the problems of the current integrated defense system, it is necessary to make it possible to use it at all times when improving the system. In addition, it is said that an integrated disaster and safety information system is necessary because the redundancy at the national level should be minimized and a standardized system at the national level should be used.

### ***3. Stabilization operation and stability evaluation***

Stabilization operations are 'all military activities in which the military cooperates with the government and the private sector to provide humanitarian assistance, restore infrastructure, and establish a civilian safety and control system in order to create a stable environment and establish a governing order in the liberalized zone.' Stabilization operations are conducted in the region north of the military demarcation line, according to Korean standards, and rear region operations or integrated defense operations are conducted in the areas below it.

In order to convert the stabilization area to the government, as the first military-led stabilization operation, the stability evaluation system for stabilization operations evaluates whether or not stabilization has been achieved based on the evaluation field (task). The stability evaluation system is conducted at the level of the administrative unit in the liberalized area (by the unit responsible for stabilization operation), and the evaluation result is reported to the upper-level units using the KJCCS or the method available for each discharge. The final evaluation result is carried out by the stabilization operation team in the Joint Operation Front Office of the JCS.

The stability evaluation system for stabilization operations is divided into advantages and disadvantages as follows.

First, detailed tasks were selected for each task, and weights were applied. For example, 'Elimination of brutal hostile activities in the region' is awarded 9 points. Here, 5 points, 2 points, and 2 points were assigned again for each subtask 1 to 3, and weights were applied to determine which is more important between each subtask. This is a part that has emerged as a problem in the martial law stability evaluation system, and reference is needed to calculate the weight based on this. Second, the evaluation elements and criteria were set for each detailed task. Martial law and integrated defense operation evaluation systems calculated the results based on the judgment of the relevant business officer. However, the stability evaluation system for stabilization operations can be objectively judged to some extent by specifying the evaluation criteria.

However, in the case of stabilization operations, some supplements are needed. First, it is difficult to properly grasp the detailed reality by fixing the evaluation results in only three stages (●, ●, ●). The stability evaluation system consists of a total of 84 detailed tasks, and it is difficult to express the actual details of the actual details by fixing the results to simply express them in three stages. Second, the difference in evaluation scores for each level is excessive (20 to 30 points), which limits accurate stability evaluation. If the difference in evaluation scores by level is not further subdivided, the JCS, which conducts a comprehensive evaluation, can determine that there is a high possibility of misunderstanding the situation of the relevant city and county.

Research related to stabilization operations has relatively many results

compared to martial law and integrated defense operations, but data related to the evaluation system are insufficient Bo-seon Jang (2017, pp. 149-150) referred to the occupation policies that North Korea and South Korea implemented on the Korean Peninsula during the Korean War, and outlined plans to conduct stabilization operations on the Korean Peninsula in the future.

### **III. Research design and method**

The research concepts and procedures for conducting this study are shown in <Figure 1>, and detailed research was conducted as follows. First, the current martial law and martial law stability evaluation system are analyzed. For this purpose, laws and research papers such as the Martial Law Act and the Emergency Preparedness Resource Management Act, and guidelines for evaluating martial law stability were discussed. Second, it analyzes the current integrated defense operation, stabilization operation, and stability evaluation system. For this purpose, reference was made to the Integrated Defense Act, the Integrated Defense Operations Practice Guide, the US Army's FM 3-07(Peace, Stability Operation), and the Civil-Military Operation Practice Guide. Third, to establish evaluation factors and indicators in consideration of changes in the operational environment and regional characteristics, research reports on laws such as the Martial Law Act, Integrated Defense Act, and Reserve Military Act, and measures for early restoration of public order in the war were examined. Fourth, to establish an evaluation system linked to other operations (Integrated defense operations, Stabilization operations), research reports such as understanding of laws and martial law such as the Reserve Army Act, Civil Defense Act, Road Traffic Act were referred to. Fifth, to establish the evaluation method of the evaluation factors and indicators, the information and communication network law, the e-government law, the electronic financial transaction law, ship control regulations, airport control center regulations, the Ministry of Justice foreigner's stay guide manual, and the standards of the blood management headquarters. General Broadcasting Facility Standards (EBS) were referenced.

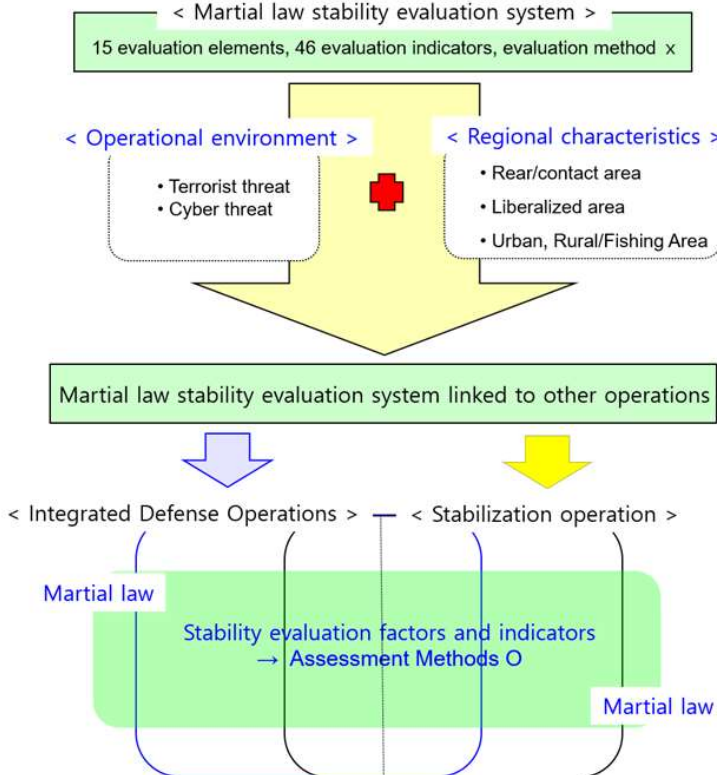
The analysis methods applied to re-establish the evaluation factors and indicators for establishing the regional stability evaluation system and to derive weights and evaluation methods are the Delphi method and AHP method using experts.

To reset the evaluation factors and indicators, first, the direction of the experts is set through blind questions, and the research team's proposal is presented by synthesizing the survey results. Through the 2nd and 3rd questionnaires, evaluation factors and indicators are specified and confirmed, and a questionnaire that determines the weight of each variable is conducted. Since the weight is to reflect the relative priority of the evaluation factors and indicators to be compared, it is indexed using the AHP technique.

Since there is no evaluation method for evaluation indicators in the current system, there is a limit to conducting a questionnaire directly to experts. Therefore, a proposal for the research team is first derived by referring to methods in similar cases and evaluation methods for stability evaluation in stabilization operations in liberalized areas. Based on the derived proposal, the evaluation method could be specified through the 2nd and 3rd questionnaires.

An important factor in applying this research method is the composition of the expert group. In particular, since there is a shortage of experts on the subject of martial law including integrated defense operations and stabilization operations, both internal and external personnel with comparable experience were considered. The practitioners and supervisors who currently engage in related tasks are considered for the internal personnel while the external personnel consists of professors and graduate students who had previously worked in comparable positions or conducted research as reserve workers and civilians who had handled related research and regulations.

<Figure 1>



## **IV. Problems and improvement directions of the martial law stability evaluation system**

### ***1. Redefinition of evaluation factors and indicators of the martial law stability evaluation system***

The absolute majority (89.7%) agreed on the need to improve the martial law stability evaluation system. This is because it is recognized as one of the most important matters to prepare for martial law, given that the Republic of Korea has maintained its division for 70 years since 1950, and tensions on the Korean peninsula remain in the Korean peninsula after the armistice agreement. However, although the importance of martial law is palpable, and the Korean Martial Law Act has been revised nine times since it was enacted, there were no more substantial revisions after the 1981 lift of martial law 1949 and it has been viewed as being easily abused as a political tool, losing its original purpose as a last resort for maintaining the state system.

65% of the respondents pointed to the lack of objectivity, generality, specificity, and reality of the current evaluation system as the need for the improvement while 35% thought a lack of connectivity with other operational evaluation systems called for the improvement. This is a pragmatic opinion that the current system should be supplemented so that the subjectivity of decision-makers should be excluded by reflecting the reality as it is rather than an abstract concept of martial law stability evaluation. It is believed that this is because they expressed sympathy for the need to supplement the evaluation factors and indicators in consideration of the operational environment and regional characteristics. Therefore, in this study, the evaluation factors and indicators reflecting the changes in the operational environment and regional characteristics were first supplemented. In addition, sequential analysis was conducted to improve the martial law stability evaluation system linked to other operations (Integrated defense operations, Stabilization operations).

#### **a. Complement of evaluation factors and indicators in consideration of changes in the operational environment**

The operational environment for martial law enforcement is rapidly changing. The representative ones are the expansion of urban functions, the development of transportation networks, and knowledge and information. The expansion of urban functions is a rapid increase in urbanization due to industrial development, and the population of urban areas is increasing rapidly, caused by the concentration of infrastructure. Such an increase in urbanization rate caused the concentration of urban infrastructure, industrial facilities, and information and communication systems in urban areas, and mass damage was expected, so successful execution of urban operations emerged as an important factor in the victory or defeat of the war.

The development of the transportation network is also playing an important role in the operational environment. With the roads that have been dramatically improved compared to the past, the whole country has become a daily living area, and the development of the transportation network leads to an increase in the threat of distribution lines, and changes to the existing distribution line management concept are required. Due to this phenomenon, it was necessary to analyze the increase of IED threat by enemy special operations forces and the effect of roads on operations in multiple dimensions. Knowledge informatization has its vulnerability in that the infrastructure is connected by a complex network and has high interdependence. Infrastructure facilities are monitored and operated by a remote monitoring and control system based on an information system, but they contain a vulnerability that can cause great confusion in the country when the systems and networks that control the infrastructure are destroyed.

In the analysis of the survey result, the need to cope with damages caused by recent major disasters (Covid-19, surprise heavy rain, etc.) and various threat changes (drone attacks, etc.) and the need to prepare for cyber and terrorist threats were noted. In particular, anticipating cyber and terrorist threats, the government should devise practical alternatives that consider the capabilities of martial law while recognizing the need to adjust evaluation factors and indicators that reflect the operational environment and the importance of definitions of concepts and terms. In addition, the analysis suggested the necessity of the system maintenance of military and local governments and the establishment of the scope of responsibility for a practical evaluation system.

When the expansion of urban functions, development of transportation network, knowledge information, and survey results, which are the factors of change in the operational environment, supplementation of evaluation factors and indicators according to the operational environment change is summarized as counter-terrorism and cyber threat as shown in <Table 3>.

**<Table 3>**

Evaluation factors	Evaluation indicators
Terrorist threat	<ul style="list-style-type: none"> <li>• Foreigners' inspection and search and arrest rate of suspect</li> <li>• Domestically, the rate of inspection and search for illegal molecules and arrest of suspected persons</li> <li>• Maintenance of boundaries and protection systems for infrastructure, multi-facilities, and critical facilities</li> <li>• Terrorist dangerous tools management (terrorism tools, chemical substances, etc.)</li> </ul>
Cyber threat	<ul style="list-style-type: none"> <li>• Cyber-attack detection and blocking activities</li> <li>• Cyber protection posture of major national infrastructure systems</li> <li>• Cyber incidence rate and action</li> </ul>

In other words, the threat factors for terrorism include the rate of foreigners entering overseas, the rate of detection and detection of suspected persons, the rate of detection and detection of suspected persons, infrastructure, multiple facilities, critical facilities, and maintenance of a protection system, and dangerous tools (terrorism tools, chemical substances, etc.), and as for the evaluation index for cyber threats, three kinds of cyber-attack detection and blocking activities, cyber protection posture of major national infrastructure systems, cyber accident incidence rate and measures were set. The supplementation according to the development of the transportation network was reviewed in connection with the supplementation of evaluation factors and indicators in consideration of regional characteristics.

b. Complement of evaluation factors and indicators in consideration of regional characteristics

Along with changes in the operational environment, regional characteristics and environmental changes are also occurring. In particular, in the case of the Korean Peninsula, since the two Koreas are in a cease-fire state, it is necessary to consider regional characteristics that are incomparable with any other region in the world. The representative regional divisions are the contact area, the metropolitan area, the rear area, and the liberalized area.

When martial law is declared, martial law missions are performed concurrently with close combat in the contact area. Given the two specified tasks of supporting military operations and maintaining security order, the available capacity to perform parallel tasks may be limited. In addition, it is expected that cooperation with government agencies will be difficult due to the withdrawal of administrative and judicial institutions, changes in various martial law environments, changes in combat lines, and withdrawal of residents and administrative agencies in the contact area. As close combat progresses, the need to support military operations such as requisitions increases. The metropolitan area is a center of politics, defense, economy, society, infrastructure, and information, and important facilities are concentrated. In addition, the importance of strategic value is increasing day by day as it plays the role of a control tower, with about 34% of the mobilization resources for branch offices being concentrated due to the concentration of national industries and exhibition mobilization companies. Such an urban environment has a high concentration of population and infrastructure (urban infrastructure and industrial facilities, information and communication systems) due to the expansion of urban functions, and an advantageous military environment for conducting conflict due to the remarkable expansion of the transportation network (subway, road) is being built. In order to carry out the strategic and national task of ensuring integrated defense posture, stabilization of the rear area, and guaranteeing the ability to sustain war, the rear area must eradicate enemy infiltration and provocation, and maintain the functions of disaster and disaster recovery and social infrastructure normally. In

addition, it plays an important role in protecting industrial and military facilities, securing distribution lines, and supporting NEO and RSOI operations. However, in the rear area, major facilities are expected to be destroyed by enemy special warfare units, interfere with NEO and RSOI, and block supply lines. And it is an area that is highly likely to create social confusion and weaken the ability to sustain war due to paralysis of urban functions due to air and missile attacks, terrorism, and cyber-attacks by coordinating forces. Therefore, it is an area that requires close cooperation between the public, the government, the military, and the government to effectively control major cities and mountainous areas. In the liberalized zone, industrialization and communication and transportation systems are underdeveloped due to the prolonged period of the closed economy, and the road network is poor and uniform, and it tends to take too much time to recover in the event of destruction of major key points. C4I system and information sharing system are underdeveloped due to weakened information system technology competitiveness, and many difficulties are expected between friendly operations due to social and cultural heterogeneity. In addition, in the poor health and medical environment, there is a possibility that a large number of patients are caused by various diseases such as infectious diseases.

Complementing the evaluation factors and indicators that consider regional characteristics when the results of the division of the contact area, the metropolitan area, the rear area, and the liberalized area, which are the factors of change in regional characteristics, are supplemented by selecting the related evaluation factors and indicators as shown in <Table 4>.

In the security function, the evaluation factors of the land, sea, and air transport function security are divided into rear inland areas and coastal areas, and control airports and ports, and control of incoming and outgoing aircraft and ships, and the evaluation index was supplemented with the rate of securing means of transportation in rural areas.

In the factors of prevention of social confusion and security of people's livelihood, the indicators are divided into cities and rural areas and applied, and in the maintenance of the function of the correctional management institution of the legal function, the indicators for the protection of the accommodation facilities and the maintenance of the capacity were reinforced in the rear inland area. In the factors of immigration management and control, the detection rate of illegal immigration, such as troops and mobilization evacuees, and the registration rate and trend monitoring index of foreigners staying in the rear inland and coastal areas, are adjusted to be applied.

<Table 4>

Evaluation factors	Evaluation indicators		
	Contact area	Rear inland area	Coastal area
Land, sea, and public transportation functions guaranteed	<ul style="list-style-type: none"> <li>Main road operation and control rate</li> </ul>	<ul style="list-style-type: none"> <li>Main road operation And control rate</li> <li>City: Transportation network utilization rate, major airport utilization rate, entry/exit aircraft control rate</li> <li>Rural and fishing villages: rate of securing means of transportation</li> </ul>	<ul style="list-style-type: none"> <li>Main road operation and control rate</li> <li>City: Transportation network utilization rate, major airport utilization rate, entry/exit aircraft control rate</li> <li>Rural and fishing villages: rate of securing means of transportation</li> </ul>
Social confusion prevention	<ul style="list-style-type: none"> <li>City: Residents/workplaces/groups Control rate compared to the occurrence of group activities such as protests and strikes</li> <li>Rural and fishing villages: protest occurrence and participation rate</li> </ul>		
Maintain the function of the calibration management agency	<ul style="list-style-type: none"> <li>Operation of a legal and civil complaints counseling center</li> <li>Maintenance of prosecution function</li> </ul>	<ul style="list-style-type: none"> <li>Operation of a legal and civil complaints counseling center</li> <li>Maintenance of prosecution function</li> <li>Protection of accommodation facilities and maintenance of capacity</li> </ul>	<ul style="list-style-type: none"> <li>Operation of a legal and civil complaints counseling center</li> <li>Maintenance of prosecution function</li> </ul>
Immigration management and control	<ul style="list-style-type: none"> <li>The arrest rate of illegal immigration, such as troops and mobilization evacuees</li> <li>Monitoring of foreign resident registration rates and trends</li> </ul>		

c. Establishment of evaluation factors and indicators linked to other operations

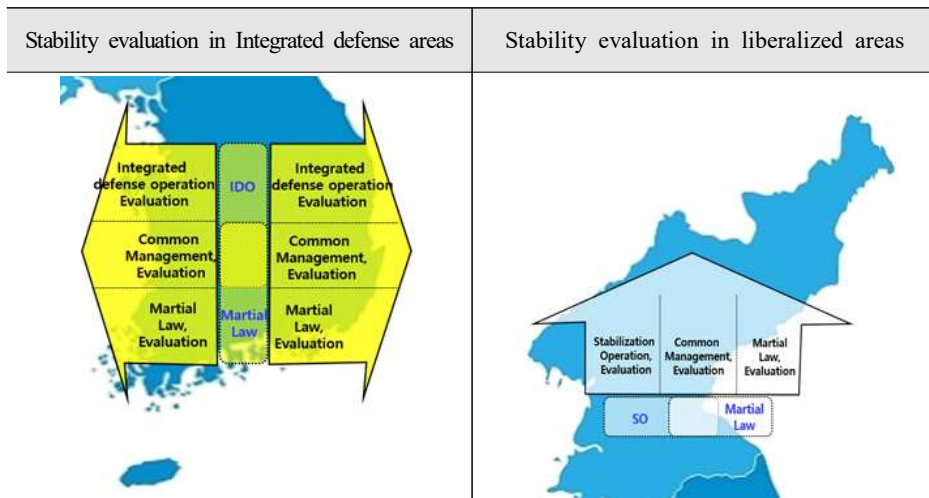
In conjunction with other operations (Integrated defense operations, Stabilization operations), the establishment of a system for martial law enforcement and integration of efforts are required. Currently, there is a system that assesses the stability of martial law and each operation, but stability is evaluated separately due to the characteristics and regional differences between martial law and other operations. However, in the case of operational elements performing missions in the field, the same or similar evaluation factors must be evaluated in the same manner and

reported to the top. Therefore, there was a possibility that due to the different evaluation methods for each evaluation factor, not only confusion but also errors could occur when making important decisions.

As a result of collecting expert opinions on the necessity of improving the martial law stability evaluation system linked to other operations (Integrated defense operations, Stabilization operations), the majority (89.7%) agreed. In the areas requiring improvement, the integration of evaluation factors and indicators with similar content and unification of evaluation methods were 75%, and 25% of the information sharing system was supplemented. To ensure favorable conditions for martial law enforcement in connection with other operations, the following directions were devised to establish a stability evaluation system based on the opinions of experts and the data studied so far.

First, currently the same or similar evaluation factors and indicators (detailed evaluation elements) match terms and concepts. In other words, as shown in <Figure 2>, the evaluation factors and indicators (detailed evaluation elements) for each operation are compared, divided into common indicators and classified and applied indicators. Currently, martial law stability evaluation concerns 5 functions, 15 evaluation factors, 46 evaluation indicators while integrated defense operation stability evaluation uses 12 evaluation factors and 22 indicators, and stabilization operation stability evaluation scrutinizes 18 tasks in four areas and 81 sub-tasks. Therefore, through the adjustment of evaluation factors and indicators, they are classified into common factors and indicators.

<Figure 2>



Second, the currently different or absent evaluation methods are complemented. Although the current martial law stability evaluation system weights the evaluation criteria, objectivity is insufficient and evaluation criteria are absent, and the integrated defense operation stability evaluation has no weights and evaluation criteria for evaluation. Therefore, it is necessary to improve the method for martial law stability evaluation by reviewing and adjusting evaluation weights and criteria, which are evaluation methods for martial law and other operations. Third, it is necessary to reorganize the method for inputting evaluation results. In the case of the same evaluation factors and indicators, by simplifying the procedure so that they can be commonly applied to the evaluation results of the related system by entering only once after evaluation in the subordinate unit, the quality of evaluation and efficiency can be improved. In addition, it is possible to include additional technical information along with a quantitative indication of the evaluation result.

## ***2. Improving the evaluation method of the martial law stability evaluation system during integrated defense operations***

### **a. Evaluation level setting**

Martial law stability evaluation results must be presented by evaluating the values and status (●, ●, ●, ●) of evaluation factors and indicators (JCS, 2018, 『Martial Law Stability Evaluation Guideline』). However, due to the difference in the application range of evaluation scores by level (20~30 points), accurate stability evaluation is limited. Therefore, it is expected that subordinate units will take situational measures without considering the field in the process of judging, deciding, and responding to the situation. In addition, as the Martial Law Command responded with the stereotype of quantitative evaluation, it was necessary to devise a stability evaluation method that can efficiently utilize quantitative and qualitative evaluation. In this study, based on the analysis of the survey results concerning the evaluation methods and various research reports that were conducted at public institutions, discrete evaluation grades (3, 4, 5, 7) were assigned as follows. Therefore, expert opinions were collected on matters deemed appropriate for the evaluation grade and review contents, and the results are shown in <Table 5>.

<Table 5>

Grade	Institution of use	Review	Survey (%)
3	Central Personnel Committee Integrated Defense Operations	Simple but limited accurate evaluation	9

4	Safety Administration, Martial Law Evaluation grade for alliance / joint operation	Simple and widely used as an evaluation grade for policy decisions Operational judgment and consistency can be maintained	46
5	Office of the Prime Minister, Office of Government Coordination, Health Insurance Assessment Service, AHP	Applied in many institutions and institutions, Appropriate as an evaluation grade for policy decisions	27
7	Joint Chiefs of Review	A detailed evaluation is possible, but excessive grade classification	18

According to this result, the judgment on the value and status of the evaluation factor/indicator is made into 4 grades, but the criteria for each evaluation grade need to be adjusted as shown in <Table 6> for the evaluation in connection with the alliance / joint operation that the majority agreed in the questionnaire.

**<Table 6>**

level	● G	● Y	● R	● B
Now	80% or more	79 ~ 50%	49 ~ 30%	Less than 30%
Adjust	90% or more	89 ~ 75%	74 ~ 50%	Less than 50%

b. Resetting the weight of evaluation factors and indicators

**<Table 7>**

Function	Evaluation factor	Weight		Rem
		from	to	
Safety (100)	Land, sea, and air transportation unctions guaranteed	15	10	adj
	Prevention of social confusion and security of people's livelihood	35	30	
	Countermeasures against enemy threats	30	20	
	Security maintenance activities such as crime prevention and crackdown are guaranteed	20	20	

	Measures to identify signs of enemy terrorist threats	0	20	add
Legal affairs (100)	Martial law military court's smooth execution of judicial affairs	50	40	adj
	Maintain the function of the calibration management agency	30	30	
	Management and control of outbound and entrants	20	30	
Mobilization (100)	Effective implementation of manpower mobilization	45	40	
	Effective implementation of material mobilization	45	30	
	Smooth requisition execution	10	30	
Press (100)	Positive war situation reporting, public sentiment stabilization, and public relations implementation	45	55	
	Censorship and control of unwarranted performances, reports, and publications	55	45	
Aid (100)	Seamless infrastructure damage recovery and function maintenance	59	40	
	Securing war box treatment facilities and medical support	36	35	
	Displaced people relief and accommodation management	15	25	
Cyber (100)	Maintaining countermeasures against cyber attacks	0	60	add
	Blocking cyber incidents	0	40	

The weight of the martial law stability evaluation system is given in units of martial law functions. That is, the sum of the weights of the four evaluation factors of the safety function is 100, and the sum of the weights of the evaluation indicators for each evaluation factor is the weight of the evaluation factors. Since the martial law situation room of the Martial Law Command conducts stability evaluation for each martial law function, the weight of this evaluation system is valid. Therefore, when evaluating the stability of each martial law function, the weight of the evaluation factor and indicator can be an important factor. However, in the guidelines for evaluating martial law stability, the weights of evaluation factors and indicators are set without explanation. Therefore, institutions and units that are in charge of martial law stability evaluation in the field have consistently proposed to improve weights as well as the validity of evaluation factors and indicators. In addition, the necessity of re-establishing the weights for newly added cyber functions along with the supplementary contents of the evaluation factors and indicators reviewed previously

emerged. To this end, the contents of the correction of the summarized results by synthesizing the opinions of experts and analyzing them using the AHP technique are shown in <Table 7>.

c. Establishment of evaluation methods for evaluation factors and indicators

Martial law stability evaluation result should be presented by evaluating the evaluation factor • indicator and divided into four grades (●, ●, ●, ●), but there are only points for evaluation, and there is no evaluation standard or method for calculating the score. Therefore, it was necessary to establish a standard for evaluating the evaluation indicators and to suggest a method for calculating the score. Accordingly, the results of collecting expert opinions on how to enter the evaluation results for martial law stability evaluation by comprehensively analyzing the stability evaluation system and related research data included in the 『Practical Guidelines for Civil-Military Operations,』 are shown in <Table 8>.

<Table 8>

Contents	Survey results
① Enter qualitative judgment results in all evaluation results	14 %
② Enter qualitative judgment results only for necessary evaluation results	58 %
③ Enter a qualitative evaluation in consideration of the importance of each evaluation factor in the comprehensive evaluation	28 %

In addition, the evaluation method of the evaluation index was specified so that it could be applied by converting it into a specific score in the field as shown in “Example” below, and the evaluation criteria and weights were subdivided and presented.

<Table 9>

Current evaluation method	Adjusted evaluation method																											
<table border="1"> <tr> <td colspan="3">Violent and war crimes occurrence and arrest rate (10)</td> </tr> <tr> <td>● G</td> <td>● Y</td> <td>...</td> </tr> <tr> <td>10</td> <td>7</td> <td>...</td> </tr> </table>	Violent and war crimes occurrence and arrest rate (10)			● G	● Y	...	10	7	...	<table border="1"> <tr> <td colspan="3">Violent and war crimes occurrence (7)</td> <td colspan="3">Violent and war crimes arrest (3)</td> </tr> <tr> <td>35% or more</td> <td>34~21%</td> <td>...</td> <td>90% or more</td> <td>89~70%</td> <td>...</td> </tr> <tr> <td>30</td> <td>40</td> <td>...</td> <td>30</td> <td>25</td> <td>...</td> </tr> </table> <p>* Violent crimes: crimes committed by violence or using weapons * War crimes: Violation of laws and regulations on wartime battles crimes such as inhumane acts and wartime treason</p>	Violent and war crimes occurrence (7)			Violent and war crimes arrest (3)			35% or more	34~21%	...	90% or more	89~70%	...	30	40	...	30	25	...
Violent and war crimes occurrence and arrest rate (10)																												
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35% or more	34~21%	...	90% or more	89~70%	...																							
30	40	...	30	25	...																							

## V. Conclusion

The results of this study can be summarized by revisiting evaluation factors and indicators, setting priorities (weights), and concrete evaluation methods.

Re-selection of evaluation factors and indicators is to add and delete the evaluation factors and indicators of the martial law stability evaluation system currently in effect in consideration of regional characteristics (urban areas and farming and fishing villages) and operational environments (rear operation areas, contact areas). It was re-established as an evaluation factor and indicator of martial law stability in the relevant area by comparing and analyzing the stability evaluation factors and indicators in the integrated defense operation area and the stabilization operation area.

The priority of the stability evaluation factor and indicator was to adjust the current weight. Although the current priority indicators are designated, they are uniformly distributed without taking into account the exact environment and conditions, and since continuing questions have been raised about the feasibility, the opinions of experts have been collected and re-established through a qualitative method.

This study was particularly meaningful to summarize the evaluation system, a core field of martial law that has not changed for more than 60 years, from a realistic point of view, including related laws and regulations, and changes in the times, and it is judged that policy reflection is necessary. In addition, in a system where the criteria for evaluation are unclear and there is no evaluation method, the evaluation weight is objectively established, and the evaluation method is presented to enable realistic evaluation in the field. However, some follow-up measures are required for systematic execution in the future. First, it is necessary to present an evaluation method for each evaluation factor and indicator for the stability evaluation of stabilization operations. Most of the previous studies were the improvement of the stability evaluation system that should be implemented in connection with integrated defense operations. However, unlike integrated defense operations, stability evaluation in liberalized areas must be conducted by setting different weights and evaluation methods of evaluation factors and indicators in consideration of the characteristics of the North Korean region and the characteristics of stabilization operations. Therefore, additional research is required to reflect the characteristics of the stabilization operation and to establish an evaluation method suitable for the North Korean region. Second, it is a supplement to the guidelines for evaluating martial law stability. The current guideline lacked content and objectivity, and some essential content was omitted, which was insufficient as a practical evaluation guideline. Therefore, based on the results of this study, the martial law command should work to transform it into a decision support system that can make rational and timely decision-making. Third, it is complementary to the computerized system and

program to implement martial law stability evaluation. The process of evaluating martial law stability is carried out through a computerized system. However, the current system, such as KJCCS, ATCIS-R, and the government administration network, are inadequate for interworking and harmonization. Fourth is the preparation of education and textbooks for martial law officers. Martial law work plays a part in nationally important policy, and it requires quite specialized knowledge and insight from officers working in related fields. It is necessary to have the ability to understand and control both the military and the private sector. However, it is a serious concern that the field where professional insight and cooperation are required is rather neglected and perceived as a burden. Therefore, regular training is required for related organizations and officers, and a booklet that can be referred to in normal practice is needed as well as a role as a textbook for education.

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