

Strategy of the Regional Disaster Management Agency in Tackling Disasters in Sukabumi City

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ABSTRACT

Sukabumi City Regional Disaster Management Agency as an autonomous unit that was previously based on field level, which was followed up by Sukabumi Mayor Regulation No. 77 of 2020 concerning the Main Duties and Functions of BPBD located in Sukabumi City. Regional disasters that occurred in Sukabumi City were dominated by floods and landslides, in 2022 in January-March there were 54 hydrometeorologically controlled disasters. Types of disasters consist of floods, tornadoes, extreme weather, fires, and landslides. The results of the data are based on information derived from the Disaster Data Electronic Information System or called Si Edan. This research uses (Mintzberg et al., 2003) including goals/objectives, policies, and stages/programs. Qualitative research methods with a phenomenological approach, data collection techniques, namely observation, interviews and documentation. Data validation using triangulation techniques. Data analysis used includes 1). Data reduction; 2). Presentation of data; 3). Drawing conclusions. The Sukabumi City Regional Disaster Management Agency uses the concept of penta helix or multi-party where there are various elements that help in disaster management, The strategic policy of the Regional Disaster Management Agency is always seen from the index of areas that experience disaster-prone potential. Supporting factors in the stages of activities / programs are the many parties and volunteer communities that are ready to participate in disaster management activities.

Keywords: Disaster Management; Disaster Risk; BPBD.

INTRODUCTION

Based on Law No. 24 on Disaster Management of 2007 states that disaster management is any action or activity related to prevention, countermeasures, preparedness, emergency response and recovery carried out before, during and after a disaster. In an effort to minimize the impact of natural disasters, an organization that overcomes regional disasters that occur in each of their respective regional environments is needed (Amagai et al., 2014; Bragg et al., 2018; Elvas et al., 2021; Ha, 2020; Olshansky et al., 2012; Smith & Ariyachandra, 2022).

Sukabumi city government in the form of Sukabumi City Regional Regulation Number 16 of 2012 on the Organization of regional apparatus, where the Sukabumi City Regional Disaster Management Agency was formed as an autonomous unit that was previously appropriate based on the field level, which was followed up with Sukabumi Mayor Regulation No. 77 year 2020 about the main tasks and functions of BPBDS located in Sukabumi City. The main tasks, functions, and work procedures BPBD based on Mayor regulations. With the existence of government regulations that regulate and set the main task BPBD Sukabumi it is expected that the organization can help cope with various regional disasters that occur in the city of Sukabumi although it can not be avoided because of disaster factors not only due to human but natural conditions are also a major factor in the occurrence of disasters. Always on standby, prevention and mitigation as well as quick emergency response when disaster occurs. Countermeasures are carried out to protect the community from the dangers of disasters that will cause victims and

handle when disasters occur in affected areas. Therefore, countermeasures must be realized with a planned, structured and evenly to achieve the common goal of minimizing the impact of disasters that arise both natural and non-natural disasters

The government established the National Disaster Management Agency (BNPB) in an effort to deal with disasters that hit Indonesia, both natural and non-natural disasters. The National Disaster Management Agency, hereinafter abbreviated as BNPB, is a Non-Departmental Government Institution based on Law Number 24 of 2007 concerning Disaster Management which is now replaced by Presidential Regulation Number 1 of 2019 concerning national disaster management agencies. for the Provincial, Regency and City levels the Government forms existing Agencies in Indonesia. Based on the IRBI (Indonesian Disaster Risk Index) in 2021, BNPB ranks Sukabumi City in 265th place out of 514 regencies/cities calculated based on earthquake risk, or double disaster risk in 24th place out of 27 city districts in West Java in the Moderate disaster. with an IRBI score of 102.67. Regional disasters that occurred in Sukabumi City were dominated by floods and landslides, in 2022 in January-March there were 54 hydrometeorologically controlled disasters. Types of disasters consist of floods, tornadoes, extreme weather, fires, and landslides. The results of the data are based on information derived from the Disaster Data Electronic Information System or called Si Edan. The most affected area is caused by flood disasters, reaching an area of 528,926 m² followed by landslides covering an area of 8,715 m² then extreme weather covering an area of 6,599 m² and the two lowest disasters, namely Residential Fires covering an area of 2,502 m² then for Transportation Fires covering an area of 26 m².

In addition, the number of victims and the number of disaster losses experienced by Sukabumi City from 2019 to 2021 are shown in the chart below:

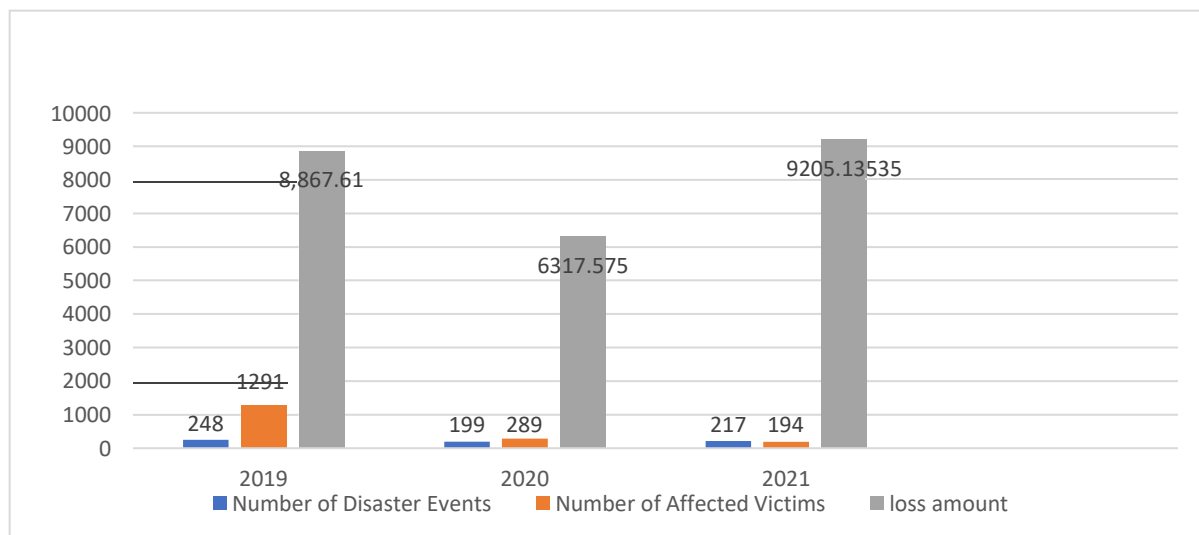


Figure 1 Number of incidents, victims and disaster losses in Sukabumi City 2019-2021
(Source: Sukabumi Regional BPBD, 2023)

Based on the graph above, the number of disasters in 2019 was the most in 248, followed by 2021 by 217. Then the number of victims affected in 2019 took 1291 lives and for 2020 it was 289 people and the lowest in 2021 was 194 people. The number of losses each year also experienced ups and downs from 2019 to 2021. However, it can be seen from the graph that the number of victims in 2019 of disaster events and affected victims is greater than in 2021. However, on the chart it is explained that the losses in 2021 were greater than in 2019. Thus how BPBD strategy in Disaster Management Sukabumi in tackling natural and non-natural disasters.

Based on the above problem, it can be interpreted that to achieve the goals / objectives of the Regional Disaster Management Agency (BPBD) is still experiencing constraints from the facilities and infrastructure in Disaster Management in Sukabumi. Disaster management policies undertaken by the Regional Disaster Management Agency (BPBD) still lack the ideal human resources 125 people but there are only 45 BPBD employees. The program is still lacking in budget allocators cause the implementation of disaster management is still low is not in accordance with its function the ability of resources both from facilities and infrastructure and Human Resources is not optimal. In this case, according to (Hamid et al., 2017; Nyberg et al., 2014) strategy is the way an institution or organization achieves its goals in accordance with the opportunities and threats of the external environment, as well as its capabilities and resources. Management itself is an art to organize things, both people and work. In practice, management has subjects and objects. The subject is the one who governs, while the object is the one who governs. So in this case the ability of BPBD Sukabumi in achieving the target or goal berlum optimal running due to limited human resources, facilities and infrastructure, and budget.

METHOD

The Strategic Research of the Regional Disaster Management Agency (BPBD) in overcoming the Sukabumi City disaster uses qualitative research methods with a phenomenological approach. Researchers are trying to design research based on social phenomena in the Sukabumi City environment. Because the object of research to be studied is how the management policies carried out by the Sukabumi City Regional Government, namely the Regional Disaster Management Agency in overcoming disasters that occur, as an organization or regional apparatus agency that has the right, authority, obligation to regulate, is responsible for disaster management. The design of this study involves the conduct of interviews, in this case qualitative research seeks to build the meaning of a phenomenon based on the views and opinions of informants regarding the research. From the informant's view, that will be the answer later from the research results. The analysis unit that is the object of research will be carried out by researchers at the Sukabumi City Disaster Management Agency (BPBD) as a regional apparatus organizational institution that can help overcome various regional disasters that occur in Sukabumi City.

In collecting and obtaining data in this research, data collection techniques are needed. Researchers will use several data collection techniques, including the following: **1) Observation;** According to Creswell (2016:254) mentions the notion of observation that: "Qualitative Observation is when the researcher goes straight down and goes into the field to observe the behavior and activities of individuals at the research site. In this observation, the researcher recorded/recorded-both structured and semi-structured (for example, by asking a number of questions that the researcher really wanted to know) the activities at the study site". Based on the

explanation above, researchers can interpret that observation is an activity that is carried out directly into the field in obtaining data for research by observing individual activities at the location of the research site. Where the researcher records and asks questions to informants related to the research focus. observation is carried out by observing the strategy of the Regional Disaster Management Agency (BPBD) in overcoming regional disasters in Sukabumi City. **2) Interviews;** According to (Creswell & Creswell, 2017) states regarding the interview that : "Researchers can conduct face-to-face interviews or interview participants directly with participants, interview them by phone or engage directly in focus group interviews consisting of six *to* eight participants per *group*". Research in conducting interviews in *face-to-face* interviews or telephone interviews with informants about the strategy of the Regional Disaster Management Agency (BPBD) in overcoming regional disasters in Sukabumi City. The researcher asks several questions based on interview guidelines with semi-structured interviews where the informant under study can express free and unrestricted answers, but the subject under study should not go outside the topic set by the researcher. **3) Documentation;** Data collection with documentation will be carried out by collecting data based on the research focus, namely the strategy of the Regional Disaster Management Agency (BPBD) in overcoming disasters in Sukabumi City. Presenting weighty data as written evidence, the data produced by the document is very accurate for research.

Validation is one of the strengths of qualitative research that is based on determining whether the results are accurate (correct) from the point of view of the researcher, participation (Creswell, 1999, 2010; Creswell & Poth, 2018). The way to validate research data is by triangulating data. Data validation of this study uses data triangulation. Triangulation is qualitative cross-validation. it assesses (evaluates) the adequacy of data according to several data sources or some data collection method or procedure (Creswell, 2013; Creswell & Clark, 2017; John W Creswell, 2013). Triangulation in this study was carried out to check data from various sources to prove its validity so that there is no misinformation and to match the context. The triangulation used in this study is the source triangulation technique and the triangulation technique.

1. Triangulation Source

Source triangulation can be done by checking and digging and collecting information about the data. For this study, data sources were obtained from laws and regulations related to research, then data came from interviews with informants, data from observations in the form of pictures and writings, as well as documents related to natural disaster research in Sukabumi City.

2. Triangulation Technique

Triangulation technique is used in research to ascertain the same data source by using different checking (testing) techniques through interviews, observation and documentation.

3. Time Triangulation

Time triangulation is a framework for testing the credibility of data that can be done by checking with interviews, observations or other techniques in different times or situations. If the test results produce different data, it is carried out repeatedly so that until certainty of the data is found.

Based on the various triangulations above, this study only uses 2 triangulations, namely source triangulation and engineering triangulation, both of which are in accordance with what

will be done by researchers who want to know how BPBD's strategy in overcoming disasters that occur in Sukabumi City. This study also did not use time triangulation in validating data.

According to (Creswell & Creswell, 2017) mentions the notion of Data Analysis that:

"Data analysis in qualitative research occurs in conjunction with another part of the development of qualitative research, which is collecting data and writing findings. During the interview, for example, the researcher can analyze previously collected interviews, write notes that are eventually included as a narrative in the final report, and structure the report".

Based on the explanation above, the researcher interprets that data analysis is an activity to analyze or develop research from data obtained from research results. So that the results of the study can be the result of the final research report. The data analysis used in this study is based on a model that is associated with the needs of research data analysis, namely the Miles and Huberman model data analysis technique (Miles et al., 2014) namely 1). Data reduction; 2). Presentation of data; 3). Drawing conclusions. With this data analysis model, it is hoped that it will answer the researcher's research focus so that it becomes the final result of the research. The explanation of the Miles and Huberman Model is as follows: **1) Data Reduction;** Data reduction is about focusing, creating, and understanding relevant and meaningful data that will lead to problem solving and research answers. while simplifying and organizing systematically. In the process of data reduction, only data surveys or observations that are relevant to research questions are reduced. The data is regulated. presents data to help researchers draw conclusions. **2) Data presentation;** The presentation of data is carried out to find meaningful patterns and provide the possibility of drawing conclusions and providing action. Data presentation can include various types such as matrices, graphs, images, charts or other forms. The presentation of the data is useful for combining information that is easy to compile and cohesive and can see what is happening to draw conclusions. In this case, the researcher as a whole strives to manage good information in the presentation of the data obtained. **3) Conclusion;** Conclusions are made during the research process or data reduction process, if the data collected is sufficient, a temporary conclusion or preliminary conclusion is drawn, and after the data is complete, the final conclusion is made.

RESULT AND DISCUSSION

Disaster management is any action and effort to reduce disaster risk which includes disaster prevention, emergency response and rehabilitation activities. Disaster management is carried out during pre-disaster, during disasters and post-disaster. Where disaster management carried out before pre-disaster is like increasing socialization to people from various circles to be aware of disasters and be able to know what should be done when a disaster occurs, although it is undeniable that disasters are things that cannot be completely prevented by humans. However, at least with socialization, community development that participates in disaster management activities will minimize the impact of risks after a disaster.

In this study to measure the strategy of the Regional Disaster Management Agency (BPBD) in overcoming disasters in Sukabumi City, researchers used 3 (three) dimensions put forward by (Quinn, 2003), the three dimensions are: 1) Goals / Objectives 2) Policies, 3) Stages / Programs. The presentation of the three dimensions is as follows:

Goals/ Objectives

In order to achieve these goals/ objectives, the Sukabumi City Regional Disaster Management Agency has collaborated with various local governments, namely the Regional Apparatus Work Unit, communities and volunteers in Sukabumi City in overcoming regional disasters in Sukabumi City. In fulfilling these goals, the first step that BPBD Sukabumi City has taken with Pentahelix is an expansion of the triple helix strategy (single triangle) by involving various elements of society and non-profit institutions in order to realize innovation. Through this synergistic collaboration, it is hoped that an innovation will be realized that is supported by various resources that interact synergistically. The Pentahelix concept in disaster management requires the role of not only the government but also involves the cooperation of five elements of society, namely the government, entrepreneurs, communities, media, and academics.

The policy direction and strategy of BPBD is the result of the identification of the strategic environment of BPBD carried out on the internal and external environment. Based on the results of external and internal strategic environmental studies and synchronization of policy and strategic directions in the field of disaster management. The disaster indicator index is seen from the potential for disasters and areas that do not have the potential for disaster.

BPBD Sukabumi City in achieving the targets that have been set, is mandated to carry out one Main Performance Indicator, namely the Disaster Capacity Index and three SKPD Performance Target Indicators, namely (1) Percentage of Disaster Information Prone Services; (2) Percentage of Disaster Prevention and Preparedness Services (3) Percentage of Disaster Victim Rescue and Evacuation Services.

Policy

Policies are made to guide the actions that are most likely to obtain the desired results such as increasing socialization, fostering communities, expanding the Disaster Risk Reduction Forum (FPRB) so that there are more and more Sukabumi City volunteers to help in tackling disasters in Sukabumi City. As well as cooperation with border areas so that they can work together in disaster management.

The strategic policy of the Regional Disaster Management Agency is always seen from the index of which areas are experiencing potential disaster prone and always adjusts to regional emergencies that require serious attention in overcoming disasters such as when a flood disaster occurs in Baros City, the speed of response, communication and fast movement are needed in acting on flood disasters at that time.

A supporting factor in carrying out this disaster management policy is the opening of space for volunteers to participate in disaster management in Sukabumi City so that there are many potential people who care about disaster management. Government support in this case is also a supporting factor in this regard. The inhibiting factor of BPBD in carrying out disaster management policies is the lack of human resources people who are proficient and understand disasters.

BPBD Sukabumi City employees are only supported by the presence of 45 employees with the following details:

Table 1. BPBD Staffing Conditions Based on Employment Status

No.	Employee status	Sum
1.	Civil Service	09
2.	Non Civil Service	10
3.	Volunteers	26
Sum		45

**As of December 31, 2021 (Source: BPBD, 2023)*

It can be seen from the table above that BPBD personnel with 45 personnel are still a factor in obstacles in overcoming disasters that occur in Sukabumi City because the number above is very lacking in the implementation of disaster management both for secretarial needs and for technical in each Section Head for field tasks. Based on workload analysis, the need for the number of personnel in the BPBD Sukabumi City environment should ideally be 125 (one hundred and twenty-five) people.

The lack of expertise in disaster is also a hindrance factor in the implementation of Sukabumi City disaster management. Because everything without knowledge will make the person unable to take policies and strategies how to carry out disaster management, both disaster mitigation, disaster occurrence, post-disaster, rehabilitation and reconstruction. Then people who are proficient in disaster management are urgently needed.

Stages /Program

Stages or programs are giving direction in steps to achieve the main objectives through the necessary actions that have been previously set, guided by policies as limitations in carrying out stages and programs.

As a step to operationalize the direction of policies and strategies by taking into account the scale of priorities based on the vision, mission, goals, and objectives that have been set, the programs to be implemented by BPBD Sukabumi City are classified into general programs and special programs. The general program is a program that exists in each SKPD, while the special program is a program that directly supports the implementation of the targets of increasing understanding, awareness, preparedness and increasing the capacity of government officials and the community in disaster risk reduction.

As for the realization of several strategies in order to achieve each goal, operational steps were made in the form of BPBD Sukabumi City programs which will be implemented in the next 5 (five) years. The main program is determined by taking into account the priority scale which is based on the formulation of the vision, mission, goals, and objectives that have been set that have a relationship with all aspects of the functioning of the work unit within the BPBD. This includes the following:

1. **General Programs**, which include, among others:
 - a. Office Administration Service Program;
 - b. Apparatus Facilities and Infrastructure Improvement Program;
 - c. Apparatus Discipline Improvement Program;
 - d. Apparatus Source Capacity Building Program;
 - e. Performance and Financial Reporting System Development Improvement Program;
 - f. Program for Improving the Management of Goods/Services and Assets;
 - g. Planning and Budgeting Improvement Program.

2. **Special Programs**, which include, among others:
 - a. Early Prevention and Management of Natural Disaster Victims Program;
 - b. Housing Improvement Program Due to Natural / Social Disasters;
 - c. Fire Hazard Improvement and Prevention Program.

In accordance with the Regulation of the Minister of Home Affairs of the Republic of Indonesia Number 90 of 2019 concerning the Classification, Codification, and Nomenclature of Regional Development and Financial Planning, all the nomenclature of the Activity Program in the Development Planning document since 2021 in Sukabumi City is integrated, aligned the nomenclature with the regulation in question. Thus, the BPBD Strategic Plan changes the nomenclature (2021-2023), the Programs/Activities are divided into two, namely the Affairs Support Program and the Government Affairs Program.

1. Local Government Affairs Support Program consisting of activities
 - a. Planning, Budgeting, and Performance Evaluation of Regional Apparatus
 - b. Regional Apparatus Financial Administration
 - c. General Administration of Regional Devices
 - d. Procurement of Regional Property to Support Local Government Affairs
 - e. Provision of Supporting Services for Local Government Affairs
 - f. Maintenance of Regional Property Supporting Local Government Affairs
2. Disaster Management Program consisting of activities.
 - a. Disaster Prone Information Services
 - b. Disaster Prevention and Preparedness Services
 - c. Rescue and Evacuation Services for Victims
 - d. Structuring the Disaster Management System

The Sukabumi City Regional Disaster Management Agency has a socialization and Communication program, Educational Information or abbreviated as IEC Disaster in various places. This socialization and IEC is carried out to encourage and provide information about the alert attitude towards disasters that must start from oneself and be owned by all elements of society in Sukabumi City. This activity is also an effort to build a paradigm of community-based disaster risk reduction. Usually this socialization is attended by all elements and volunteer communities with the hope that all coordination is active in disaster management and all parties who synergize in information on disaster events in Sukabumi City. This socialization activity is also carried out to all communities both in all educational institutions and various other disaster activities.

The supporting factor in this stage /program activity is that many parties and volunteer communities are ready to participate in disaster management activities. However, if it is not accompanied by an understanding of disaster, it will be an obstacle factor when carrying out the program because if you only participate in tackling disasters without any expertise when in the field, you will determine what actions will be taken.

Discussion

As for the results of this study with previous research has a relationship to natural disaster management. The difference with the latest research with research conducted by current researchers as an example of research by (Astarita et al., 2020; Ivkov et al., 2019; Sharma et al., 2022) with current research is related to the disaster aspects discussed in the study, in this study

meganalyses the strategy of the Regional Disaster Management Agency (BPBD) in tackling regional disasters in general. Where the disaster in question can come from earthquakes, floods, storms, moving land, to typhoons. While the previous research discusses the focus of land fire disaster.

In addition, the results of this study showed that the handling of natural disasters requires collaboration between elements, such as communities, NGOs, and other disaster care communities in handling natural disasters that occur. It is also in previous research in overcoming natural disasters some elements are needed in order to minimize the impact of disasters that occur so that collaboration between elements is needed in natural disaster management. In addition, good human resources resources, infrastructure and budget resources are needed in natural disaster management. As for the program, education to the public about emergency response is one of the factors to reduce the risk of natural disaster victims, some things that can be done, one of which is education in theory and practice of disaster response.

CONCLUSIONS

Based on the results of research that has been carried out by researchers with the title Strategy of the Regional Disaster Management Agency in overcoming disasters in Sukabumi City using Quenn's theory: 2033 about Strategies with dimension 1). Goals/Objectives, 2). Policy, 3). The stages/programs are found with the following results:

1. Goals/Objectives

In achieving goals/ objectives, it cannot only be done by the Regional Disaster Management Agency, but must use the concept of penta helix or multi-party where there are elements of the government, academics, agencies or business actors, the community or community and the media unite to coordinate and commit to developing knowledge innovations that have the potential to be capitalized or transformed into products and services that have economic value. BPBD Sukabumi City in achieving the targets that have been set, is mandated to carry out one Main Performance Indicator, namely the Disaster Capacity Index and three SKPD Performance Target Indicators, namely (1) Percentage of Disaster Information Prone Services; (2) Percentage of Disaster Prevention and Preparedness Services (3) Percentage of Disaster Victim Rescue and Evacuation Services. 1)

2. Policy

The strategic policy of the Regional Disaster Management Agency is always seen from the index of which areas are experiencing potential disaster prone and always adjusts to regional emergencies that require serious attention in overcoming disasters. A supporting factor in carrying out this disaster management policy is the opening of space for volunteers to participate in disaster management in Sukabumi City so that there are many potential people who care about disaster management. Government support in this case is also a supporting factor in this regard. The inhibiting factors of BPBD in carrying out regional disaster management policies are the lack of human resources who are proficient and understand disasters, and the lack of expertise in disasters is also an obstacle factor in the implementation of Sukabumi City disaster management because everything without science will make the person confused to take policies and strategies how to carry out disaster management, both mitigation Disasters, disasters, post-disaster, rehabilitation and reconstruction, so people who are proficient in disaster management are needed.

3. Stages/Programs

The Sukabumi City Regional Disaster Management Agency has a socialization and Communication program, Educational Information or abbreviated as IEC Disaster in various places. This socialization and IEC is carried out to encourage and provide information about the alert attitude towards disasters that must start from oneself and be owned by all elements of society in Sukabumi City. This activity is also an effort to build a paradigm of community-based disaster risk reduction. Usually this socialization is attended by all elements and volunteer communities with the hope that all coordination is active in disaster management and all parties who synergize in information on disaster events in Sukabumi City. This socialization activity is also carried out to all communities both in all educational institutions and various other disaster activities.

The supporting factor in this stage /program activity is that many parties and volunteer communities are ready to participate in disaster management activities. However, if it is not accompanied by an understanding of disaster, it will be an obstacle factor when carrying out the program because if you only participate in tackling disasters without any expertise when in the field, you will know what actions will be taken.

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