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Increasing Stakeholder Capacity Field Disaster and Environment in Subtraction Risk Disasters and Conservation Environment

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Abstract

Indonesia is a country that has vulnerability high disaster. This matter No regardless from condition geographical. Apart from being prone to natural disasters, in Indonesia there are also many non-natural disasters (due to human behavior). Therefore, Human Resources (HR) who manage disasters in Indonesia must always have updated knowledge and skills related to comprehensive disaster mitigation in order to have adequate capacity and competence. The aim of this service is to map the need to increase personal knowledge specifically in the field of disasters and society in general while increasing their understanding regarding disaster mitigation. The method for collecting data for this activity is through discussions in the form of a Disaster and Environmental Management Seminar Based on Education for Sustainable Development (ESD). The results of this activity showed that 93.8% of participants stated that the characteristics that are generally needed and should be facilitated in higher education include: systematic analysis; risk assessment capabilities; public policy understanding; data analysis skills; inter-sector collaboration; advocacy skills; ability to design policies; understanding of system strengths and weaknesses; social and environmental awareness; and the ability to resolve conflict and tension”.

Keywords: capacity; knowledge; mitigation disaster

INTRODUCTION

Indonesia is one of the countries that has it level vulnerability disaster natural Enough tall. BNPB noted throughout 2010 to with in 2020 there were 24,969 incidents with number of fatalities as many as 5,060,778 people and as many as 4,400,809 houses, as well as facility general damaged as many as 19,169 facilities (Azizah et al., 2022) . Condition environment such physical and social conditions in Indonesia diverse, making Indonesia's territory have vulnerability high disaster (Wardyaningrum, 2014; Yulianto et al., 2021) . Countermeasures disaster is form not quite enough answer government in protect every its citizens as form security human every individual in a country (Indrajit, 2020; Yulianto et al., 2021) . Countermeasures disaster will can walk effective if There is collaboration and cooperation from all parties, that is institution government, sector private sector, and society (Agustina, 2017; Kodar et al., 2020) .

However so, still found a number of problem in handling disaster, like Still low performance system countermeasures disaster, to put it mildly awareness to mitigation disaster, and still is lack of involvement institution education in introduction education possible disaster contribute to its realization resilient society disaster. Besides, still low competency / capacity Human Resources (HR) in handling disaster, is also necessary get attention. Improvement internal human resource capacity management disaster can done through various one way through formal education .

Permanent education be one most effective method For increase awareness risk disaster in society vulnerable and constitute method fastest For give satisfactory result in mitigation risk disaster. Colleges or universities have role important in promote safety and learn mitigation strategies risk

disaster (Baytiyeh, 2018) .

Several universities in Indonesia have established and implemented master's level education for disaster management. Apart from that, various University Tridharma activities with the theme of disaster have also been carried out. The existence of the disaster management study program and various activities related to disasters are dedicated to producing reliable human resources in disaster management both before a disaster occurs, during a disaster, and after a disaster occurs.

The Master's Study Program in Disaster and Environmental Management which will be implemented at Semarang State University (UNNES) focuses on conservation values, both environmental conservation, social culture, Indonesian local wisdom values and the intensification of school functions, namely the development of a school-based disaster education model. as a forum to ensure that disaster response knowledge is provided from an early age to all levels of society.

Based on research that has been carried out regarding the feasibility study of opening a master's program in disaster and environment, this shows the future challenges faced by partners in carrying out disaster management. Therefore, methods or techniques are needed on how to provide soft skills that can connect various aspects of taboo so that there are no misunderstandings in disaster management.

According to UNESCO, Education for Sustainable Development (ESD) is basically a concept that carries a new vision of education, namely empowering people of all ages to take responsibility for creating a sustainable future (Vilmala et al., 2022) . Increasing the capacity of disaster and environmental stakeholders in reducing disaster risk and environmental conservation is carried out by implementing Education for Sustainable Development (ESD) based seminars.

METHOD

Central Java, as a large province in Indonesia, is one of the centers of concentration of community activities in the Java Island region. Disasters and environmental problems also often occur in Central Java, such as floods, landslides, droughts, environmental pollution and others. However, there are still problems related to human resources regarding their abilities and competencies in regional disaster mitigation. Employee turnover in Central Java Province is one of the factors that makes it necessary to increase knowledge and skills for disaster management human resources. The aim of this service is to map the need to increase personal knowledge specifically in the field of disasters and society in general while increasing their understanding regarding disaster mitigation.

Data collection activities in this activity were carried out in the form of a seminar discussion organized by the Semarang State University Postgraduate School Service Team on Saturday, August 26 2023 using a hybrid method. The offline implementation is located at the UNNES Postgraduate Building on the Kelud Campus, Semarang. Meanwhile, participants who take part online are facilitated via the Zoom application.

RESULTS AND DISCUSSION

Coordination of the Service Team

Coordination of the service team is carried out online to prepare and divide the tasks/roles of each member for the hybrid implementation of the Seminar. In this coordination, various matters relating to the implementation time, resource persons, invitees and participants, publication of information, location of implementation and implementation methods are decided.

Based on the results of the coordination, it was determined that the Seminar would be held in a hybrid manner (offline and online), by presenting speakers from 4 different agencies. The participants who were invited to attend offline were representatives of the Regional Disaster Management Agency (BPBD) of City Districts around Semarang City, the Environment and Forestry Service, the Education Service, the Ministry of Religion/Pendais, and representatives of sub-districts from all over Semarang City.

Implementation of Disaster and Environment Seminars (Hybrid)

The Seminar on Disaster and Environmental Management Based on Education for Sustainable Development (ESD) was attended by 177 people consisting of pupils, students, teachers, lecturers, government employees, private employees and others. In the Seminar activities, there were 4 (four) resource persons, namely Dr. M. Saparis Soedarjanto, S.Si., MT (Director of Planning and Supervision

of Watershed Management, Ministry of Environment and Forestry of the Republic of Indonesia), Bergas Penanggungan, S.Sos., M.Si. (Head of Daily Implementation of the Central Java Province Regional Disaster Management Agency), Sorja Koesuma, S.Si., M.Si. (Secretary General of the College Forum High for Disaster Risk Reduction - FPTPRB, Sebelas Maret University Surakarta), and Prof. Dr. Supriyadi, M.Si. (Professor of Geophysics, Semarang State University).

During the ESD-Based Disaster and Environmental Management Seminar, resource persons from the Central Java Province BPBD explained the various potential disasters that exist in Central Java, as well as the efforts that have been made to increase community preparedness through various disaster risk reduction forums, the formation of disaster resilient villages. (Destana), and the involvement of volunteers in pre, during and post disaster management.

Resource persons from FPTPRB highlighted the impact of various disaster events on education (loss of lives among educators and students, as well as damage to educational infrastructure). The resource person from the Ministry of Environment and Forestry explained the importance of research (academic studies) and the integration of the use of technology in managing the River Watershed (DAS) environment, as a first step in identifying disaster vulnerability in an area.

Meanwhile, the resource person from Semarang State University (Prof. Supriyadi), provided more explanation (socialization and promotion) about the new study program that would be opened by the UNNES Postgraduate School, namely the Masters in Disaster and Environmental Management.

After delivering the material by 4 (four) resource persons, seminar participants were then asked to fill out a Need Assessment regarding their interest in the Disaster and Environmental Management Master's Study Program via Google form.

Need Assessment for Master of Management Study Program Disaster and Environment

A total of 176 respondents of the 177 seminar participants filled in need assessment for the Master of Management Study Program Disasters and the Environment. On questions first, 99.4% of respondents fill in agree to statement "Indonesia is a country whose territory own various type type disaster, fine disaster natural nor non- natural disasters. Therefore That required understanding public related disaster through education disaster".

On questions second, as many as 100% of respondents agree to the statement " education disaster need given to the unit education basic, education intermediate, or education high, for give understanding disaster, formation character, and formation public tough disaster".

On questions third, " education disaster at levels College is better more directed at", obtained results as many as 86.4% of respondents choose policy disaster, practitioner disaster, and education disaster The same importance.



Figure 1. Results chart need assessment question First

Pendidikan kebencanaan perlu diberikan pada satuan pendidikan dasar, pendidikan menengah, maupun pendidikan tinggi, untuk memberikan pemahaman kebencanaan, pembentukan karakter, dan terbentuknya Masyarakat Tangguh bencana, terhadap pernyataan ini

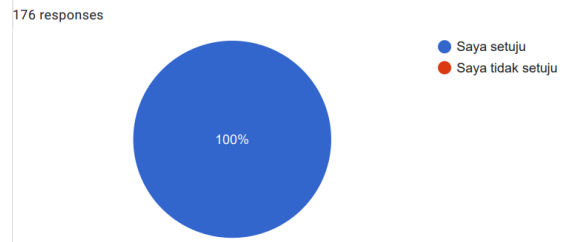


Figure 2. Results chart need assessment question second

Pendidikan kebencanaan pada tingkatan perguruan tinggi sebaiknya lebih diarahkan pada

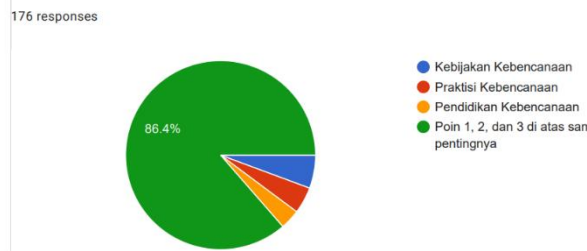


Figure 3. Results chart need assessment question third

On questions fourth, “ if you want to continue education in the field disasters and the environment in universities high, things competence what do you want you get ”, get results as many as 58.5% of respondents choose all points 1,2,3, and 4 as follows figure 4.

On questions fifth, “ some general character built in education tall disaster for taker decision policy disaster including: analysis systematic; ability evaluation risk; understanding policy public: skills data analysis; collaboration inter-sectoral; ability advocacy; ability designing policy; understanding to strengths and weaknesses system; awareness social and environmental; and abilities overcome conflict and tension ”, obtained results as much as 93.8% respondents choose very interested and want own all character and competence the .

On questions sixth, “ some general character built in education tall For print practitioner disaster including: skills technical: ability analysis and solving problem; understanding knowledge disaster; Skills communication; collaboration inter-disciplinary; ability managerial; understanding to policy public; resilience and preparedness; ability face diversity and needs public; ethics and responsibility answer social; ability manage information and data; understanding policy international; and understanding about change climate ”, obtained results as many as 93.8% of respondents choose very interested and want own character and competence the .



Figure 4. Results chart need assessment question fourth



Figure 5. Results chart need assessment question fifth

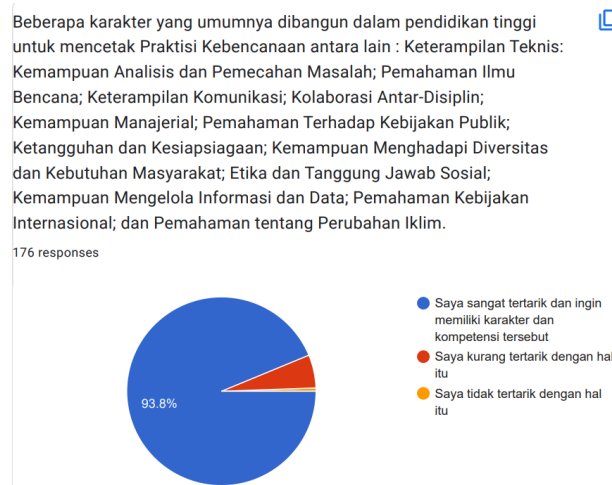


Figure 6. Results chart need assessment question Sixth

On questions seventh, " some general character built on education tall in print practitioner education disaster including: toughness (resilience); alertness (awareness); ability assessment (assessment skills); Skills responsive emergency (emergency skills); ability collaboration; own empathy; leadership; adaptation with disaster; and understanding system countermeasures disaster ". As many as 93.8% of respondents who chose were very interested and wanted it own character and competence the .

On questions eighth, as many as 94.3% of respondents were very interested and wanted it own competence related critical and responsive to change environment; care with damage environment; creative and solution For prevent or reduce damage environment ".

On questions ninth, " if the Management Study Program is opened at Semarang State University Disaster and Environment for Master Degree (S2), according to you competence what is most needed and useful for brother ", as many as 58.5% of respondents choose all stated competencies that is competence policy disaster, competence practitioner disaster, competence education disaster, and competence expert environment .

On questions tenth, as many as 54.5% of respondents interested, 36.9% very interested, and 8.5% less interested For continue education in the Management Study Program Disaster and Environment at UNNES. Most of the respondents who fill in not enough interested reasoned factor age, medium operate studies others, and want operate study in different study programs .

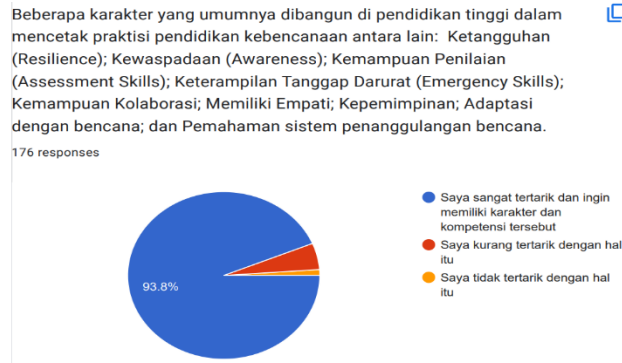


Figure 7. Results chart need assessment question seventh



Figure 8. Results chart need assessment question eighth

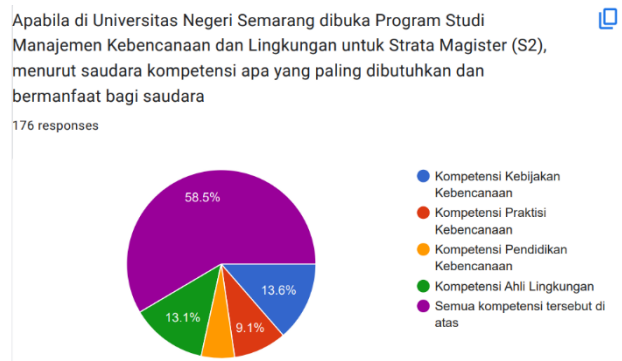


Figure 9. Results chart need assessment question ninth

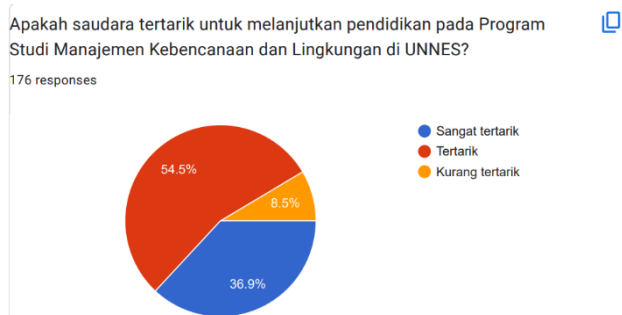


Figure 10. Results chart need assessment question tenth

Based on results need assessment, required understanding public related disaster through education disaster in the unit education basic, education intermediate, or education high, for give understanding disaster, formation character formation public tough disaster. Disaster and environmental education in higher education is necessary directed For own competence policy disaster, practitioner disaster, education disaster, and experts environment .

Increase chance learning and capacity teaching at institutions education tall in field Subtraction

Risk Disaster (PRB) is precondition main No only For increase knowledge individual, but also for form resilience public (Samarakkody et al., 2023; Scolobig & Balsiger, 2024) . Disaster education is hope that participant educate taught knowledge and skills preparedness and mitigation disaster so that capable involved in a way proactive in activity subtraction risk disaster as well as give appropriate response when happen disaster (Canlas, 2023; Nakano & Yamori, 2021; Seong et al., 2023) .

Preparedness face disaster works as an important strategy For reach objective development sustainable 2030. Empower student in subtraction risk disaster through system education No only increase resilience moment this, but also improve continuity in Century front (Wang et al., 2023) . Knowledge and skills acquired student about mitigation disaster can transmitted to more society wide (Baytiyeh, 2018) .

Increase management disaster involve collaboration with various holder interests (stakeholders) (Barbarossa et al., 2023; Cuthbertson et al., 2019) . Countermeasures disaster No only carried out by the government but also necessary collaborate with society, entrepreneurs, media and academics (Barbarossa et al., 2023) . The implementation of disaster education requires the support of stakeholders as an effort to reduce disaster risk (Kunguma & Mapingure, 2023) .

CONCLUSION

Stakeholders field disaster in the region Central Java Province followed suit series activity This understand will importance use Knowledge Knowledge and Technology (IPTEK) in management disaster in Central Java, Use of science and technology in management disaster in Central Java can implemented at the time stage pre disaster, at times responsive emergency, and at the moment post disaster form recovery in form rehabilitation and reconstruction. By General characteristics that are needed and should be facilitated in higher education include: systematic analysis; risk assessment capabilities; public policy understanding: data analysis skills; inter-sector collaboration; advocacy skills; ability to design policies; understanding of system strengths and weaknesses; social and environmental awareness; and the ability to resolve conflict and tension". Possible recommendations given is opening of study programs new related disaster need consider with carefully need stakeholders (stakeholders interests) fields disaster, society affected public, experts disaster and Reduction Forum Risk Regional Disasters.

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