

THE ANALYSIS OF THE DETERMINATION OF THE FUNDING BPBD PERDAERAH USING THE METHOD OF MFEP IN WEST SUMATRA

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Abstract

A natural disaster is a disaster caused by event or series of events caused by nature, such as earthquakes, tsunamis, volcanic eruptions, floods, droughts, hurricanes, and landslides. In this case the action of handling and natural disaster management is the responsibility of the central government and local government. Data budget or funding indicative SKPD BPBD West Sumatra that has been composed must be as effective as possible in its distribution. With the use of information and communication technology can help in penentuan funding in each area. This study analyzes the natural disasters that occurred in each region in West Sumatra to determine funding in tackling natural disasters. In this case, day this provide a solution to existing problems by creating a decision support system methods of Multifactor Evaluation Process (MFEP).

Keywords : Natural Disasters, BPBD, SPK, MFEP

INTRODUCTION

Information technology is the study of the design, implementation, development, support or Management of Computer-Based Information Systems, particularly hardware and software. The development of science and technology has shown progress very quickly to be applied in all fields. Decision support system is part from computer-based information systems (including knowledge-based systems) are useful to support decision making in an organization or company. The utilization of this technology can help BPBD West Sumatra in determining the estimated funding of an area in the face of disaster. These problems need a solution to solve it by creating a system of decision support methods MFEP.

METHOD

The methodology is very important in a research because it will be used as the rules of communication, reasoning and intersubjektivitas. To solve the existing problems, research methods that the author to do is as follows.

a. Research Field

In the early stages that the author conducted field observations, namely BPBD West Sumatra to collect and obtain data directly by presenting questions and collecting existing data.

b. Research Library

The method is carried out by finding, collecting and studying data and information from books, internet browsing, as well as the literature associated with the problems that made the object of research.

c. Research Laboratory

Is the stage of research done by research using a computer which aims to put into practice the direct result of the analysis to test the correctness of the designed system.

Problem Analysis

From the problems found in the initial research, and after the analysis of this problem, the alternative obtained to solve the problem, namely using software as a tool to facilitate BPBD determines the estimated funding of a region in the face of disasters.

Desain of Systems

The design of a system is a system that considers the wishes of the user. This design will also display the website page. The author also uses Unified Modeling Language (UML) to define the needs of the system to be built.

RESULT AND DISCUS

In the process using this method is the determination of the main factors is needed therefore to determine the quality of a factor that has been determined then the required weighting factors in accordance with the capacity the weight of each in accordance with the data obtained.

Data factors are used as follows:

1. Landslide (1)
2. Flood (2)
3. Flash Floods (3)
4. Earthquake (4)
5. Tidal Wave (5)
6. Whirlwind /Wind Cyclone Tornado / Typhoon (6)
7. The Mountain Erupted (7)
8. Forest Fires (8)
9. Dryness (9)
10. There Is No Disaster (10)

Table 1. Data Of Abundance Of Villages / Wards According To The Type Of Natural Disaster

District /City	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Kep. Mentawai	6	14	3	23	8	5	0	0	0	15
Pesisir Selatan	23	101	11	107	21	23	0	14	34	28
Solok	35	19	12	27	0	16	0	16	19	11
Sijunjung	21	29	5	1	0	3	0	18	18	16
Tanah Datar	33	5	6	18	0	12	9	9	31	15
Padang Pariaman	25	30	2	62	3	18	0	0	4	22
Agam	26	7	7	20	2	14	1	3	3	43
Lima Puluh Kota	30	32	6	16	0	24	4	38	40	12

Pasaman	13	29	10	11	0	7	0	4	2	21
Solok Selatan	11	28	12	9	0	1	0	5	7	6
Dharmasraya	3	24	0	8	0	4	0	8	7	19
Pasaman Barat	12	23	5	20	6	5	0	5	8	47
Padang	22	51	16	2	15	46	0	4	4	21
Solok	1	9	1	2	0	2	0	1	1	1
Sawahlunto	21	1	4	3	0	0	0	8	7	9
Padang Panjang	2	8	0	0	0	0	0	0	0	7
Bukittinggi	8	12	0	12	0	2	0	12	2	2
Payakumbuh	0	3	0	8	0	9	0	0	4	29
Pariaman	1	15	0	18	1	0	0	0	0	41

Based on the above data the next step is to analyze by the method of MFEP which can be seen in the table below:

Table 2. Calculation Method of the MFEP

District /City	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	Total
Kep. Mentawai	0.21	0.17	0.18	0.17	0.22	0.09	0.04	0.03	0.02	0.03	1.15
Pesisir Selatan	0.56	0.73	0.47	0.57	0.49	0.23	0.04	0.11	0.15	0.06	3.40
Solok	0.81	0.20	0.51	0.19	0.05	0.17	0.04	0.12	0.09	0.03	2.21
Sijunjung	0.52	0.26	0.25	0.07	0.05	0.07	0.04	0.13	0.09	0.04	1.52
Tanah Datar	0.77	0.11	0.29	0.15	0.05	0.14	0.33	0.08	0.14	0.03	2.09
Padang Pariaman	0.60	0.27	0.14	0.36	0.12	0.19	0.04	0.03	0.03	0.05	1.82
Agam	0.62	0.12	0.33	0.16	0.10	0.16	0.07	0.05	0.03	0.08	1.71
Lima Puluh Kota	0.71	0.28	0.29	0.14	0.05	0.24	0.17	0.25	0.17	0.03	2.32
Pasaman	0.36	0.26	0.43	0.12	0.05	0.10	0.04	0.05	0.03	0.04	1.48
Solok Selatan	0.32	0.26	0.51	0.11	0.05	0.05	0.04	0.06	0.05	0.02	1.45
Dharmasraya	0.15	0.23	0.07	0.10	0.05	0.08	0.04	0.07	0.05	0.04	0.89
Pasaman Barat	0.34	0.22	0.25	0.16	0.18	0.09	0.04	0.06	0.05	0.09	1.47
Padang	0.54	0.41	0.65	0.07	0.37	0.41	0.04	0.05	0.03	0.04	2.61
Solok	0.11	0.13	0.11	0.07	0.05	0.06	0.04	0.03	0.02	0.01	0.64
Sawahlunto	0.52	0.08	0.22	0.08	0.05	0.05	0.04	0.07	0.05	0.02	1.18
Padang Panjang	0.13	0.13	0.07	0.06	0.05	0.05	0.04	0.03	0.02	0.02	0.60
Bukittinggi	0.25	0.15	0.07	0.12	0.05	0.06	0.04	0.10	0.03	0.01	0.89
Payakumbuh	0.09	0.09	0.07	0.10	0.05	0.12	0.04	0.03	0.03	0.06	0.69
Pariaman	0.11	0.17	0.07	0.15	0.08	0.05	0.04	0.03	0.02	0.08	0.79

Based on the above table, it can be concluded that the South Coastal District requires funding of a major natural disaster than in districts and cities other. For more details can be seen in the table below.

Table 3. Ranking Methods MFEP

District/City	Total	Ranking
Kep. Mentawai	1.15	13
Pesisir Selatan	3.40	1
Solok	2.21	4
Sijunjung	1.52	8
Tanah Datar	2.09	5
Padang Pariaman	1.82	6
Agam	1.71	7
Lima Puluh Kota	2.32	3
Pasaman	1.48	9
Solok Selatan	1.45	11
Dharmasraya	0.89	15
Pasaman Barat	1.47	10
Padang	2.61	2
Solok	0.64	18
Sawahlunto	1.18	12
Padang Panjang	0.60	19
Bukittinggi	0.89	14
Payakumbuh	0.69	17
Pariaman	0.79	16

Following the appearance of the design of the system to be built :

PROSES PERHITUNGAN METODE MFEP

TAMBAH
EDIT
HAPUS

FAKTOR :

NILAI :

EVALUASI FAKTOR :

NILAI :

FAKTOR	NILAI	EVALUASI FAKTOR	NILAI

Figure 1. The process Calculation Methods MFEP

CONCLUSION

Based on the discussion that has been done can be taken several conclusions. The conclusion that can be drawn is :

1. Decision-making system are built by applying the method of Multifactor Evaluation Process (MFEP) have proven to be capable in making decisions to determine the size of funding available in a region. Because by using the method of MFEP, the data is processed the system can produce an information in the form of a decision.
2. By using the method of Multifactor Evaluation Process (MFEP) data and processed information it can produce the right decision with how to perform processing to the medical data of the patient as well as data processing other important factors.

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