
3-2-5. Understanding needs for promoting information technology for management of disaster reduction-a survey with questionnaire

In order to grasp the needs for the promotion of information technology for disaster mitigation in each member country, a survey with a questionnaire was conducted among the counterpart organizations of the member countries. The result illustrated needs in each country. The questionnaire forms were sent out, together with an invitation for the Fourth ADRC International Meeting, to the counterpart organization of each member country requesting a response. The questions were asked in relation to current situations and problems in each organization in terms of promotion of information technology for the management of disaster reduction efforts. It also asked what they expect ADRC to do to help the promotion activities. The respondents were provided with multiple choices to answer the questions. (multiple selections allowed).

In total, 14 countries returned their responses out of the twenty member nations and two observer countries that attended the International Conference. The responses are shown in Table 3-1-3-2.

The result of the survey indicates that almost all organizations have some kind of database for the purpose of managing disaster reduction. Especially, records of past disasters are kept in the databases by more than half the organizations. However, financial problems as well as the lack of technology and information have kept roughly 60% of the respondents from making the information available to the public. While ADRC promotes information sharing by use of worldwide common ID numbers (GLIDE) given to disaster data, we consider it necessary to sort out such information that is currently held by each country to prepare for shared access.

Use of remote sensing data and geographical information systems (GIS's) for management of disaster mitigation has been attracting interest from many organizations and already more than half of them started using such methods, however, it is clear that there still are many difficulties in making effective use of them. While the organizations wish to promote the use of such technology, the high costs involved in obtaining necessary data and equipment/software presents a large obstacle in terms of finance. Additionally, there are still unknown factors concerning how effective the use of such information technology can be to provide good results in disaster reduction, emergency assistance, and disaster measures, thus it seems that the use of information technology at the present time is given a low priority in relation to the small return on the investment.

Among Asian countries, many have not sufficiently developed their access environment to the network and voiced requests with ADRC for support in preparing the necessary infrastructure. So far, as a means to resolve problems in the use of data caused by insufficient hardware and software, the ADRC has promoted a provision of "VENTEN", an Internet-based GIS service. However, we think it is necessary to consider the preparation of an infrastructure to use such Internet services from now on. Furthermore, active provisions for training occasions to enable effective use of disaster reduction technology will be required in the future.

Table 3-1-3-2 Result of Survey

Q1. Concerning the Disaster Information Database					
(1) Do you have a database of information concerning disaster reduction?		Yes	93%	No	7%
(2) What kind of information is kept in the database (select all that applies)?					
	Disaster Management Information (Organization, Laws, Plans, Measures).	54%			
	Past Disaster Data.	62%			
	Personnel Information.	31%			
	Training Information.	31%			
	Hazard Map.	54%			
	Others.	8%			
(3) Is the database open to the public?		Yes	43%	No	53%
(4) If the database is not open to the public, why?					
	Lack of technical knowledge and/or expertise.	13%			
	Lack of finance.	25%			
(5) Are you receiving any assistance from other organization(s) to allow public access to the database?		Yes	29%	No	71%
Q2. Remote Sensing Data					
(1) Do you use remote sensing data from satellites and aircraft for disaster management and/or database?		Yes	62%	No	38%
(2) If you answered "yes" to (1) above, what applications do you use it for?					
	24-hour monitoring.	50%			
	Understanding the situation when an emergency occurs.	88%			
	Planning disaster management.	50%			
	Creating a hazard map.	50%			
(3) If you answered "no" to (1) above, why do you not use it?					
	It has lower priority than other technology.	17%			
	There is technical problem(s).	50%			
(4) What are the problems in using remote sensing data (select all that applies)?					
	Not enough information available.	22%			
	Lack of technical personnel.	22%			
	Lack of technical knowledge and/or expertise.	67%			
	High cost of obtaining data.	67%			
	High cost of software to use data.	78%			
	High cost of hardware to use data.	67%			
(5) Would you use remote-sensing data more if the problems above were resolved?		Yes	71%	No	29%
Q3. Use of Geographical Information System (GIS)					
(1) Do you use GIS for managing disaster information?		Yes	64%	No	36%
(2) If you answered "yes" to (1) above, what applications do you use it for?					
	Understanding the situation when an emergency occurs.	56%			
	Planning disaster management.	33%			
	Creating a hazard map.	78%			
	Recording past disasters.	78%			
(3) If you answered "no" to (1) above, why do you not use GIS?					
	There is not enough need for it.	40%			
	There is technical problem(s).	60%			
(4) What are the problems in using GIS (select all that applies)?					

	Not enough information available.	44%			
	Lack of technical personnel.	67%			
	Lack of technical knowledge and/or expertise.	44%			
	Digital geographical data not available.	56%			
	High cost of building database.	67%			
	High cost of software to use data.	56%			
	High cost of hardware to use data.	44%			
(5)	Would you use remote-sensing data more if the problems above were resolved?	Yes	64%	No	36%
Q4. Concerning VENTEN System					
(1)	Have you used "VENTEN"; a GIS developed by ADRC?	Yes	7%	No	93%
(2)	If you have not used it, why (select all that applies)?				
	Did not know it was available.	46%			
	Network environment not ready for use of the Internet (insufficient infrastructure)	38%			
	Insufficient number of computers.	15%			
	Method of use too difficult.	15%			
(3)	Do you wish to use VENTEN if it was available as a stand-alone system (such as on CD-ROM)?	Yes	64%	No	36%
(4)	We need more data to improve service provided by VENTEN. Can you cooperate with us in this regard?	Yes	64%	No	36%
Q5. What do you expect ADRC to provide for more effective use of information technology in the future (select all that applies)?					
	Occasions of training.	79%			
	Provision of user-friendly system.	64%			
	Data provision (remote sensing data, GIS data).	71%			
	Support for infrastructure preparation for IT promotion.	64%			
	Support for hardware and software preparation.	64%			
	Development of monitoring system.	57%			