

Recommendation Achievement Report

Foreword

In 1998, the Disaster Prevention Research Institute (DPRI), Kyoto University had an external evaluators' assessment for the first time in its fifty-year history. The External Evaluation Committee, which consisted of five DPRI Professors including the Director, invited eleven external examiners: seven from inside of Japan and four from abroad at that time. The result of the overall assessment is summarized in the Report of External Evaluation, published in April 1999.

At this point in time, just five years later, we are kindly asking our new external evaluators to perform the Second External Evaluation. Before this, the Self-Evaluation Committee, SEC, (chaired by Prof. Norio Okada) was established in April of this year and began examining the extent to which the 1998 recommendations for improvement have been addressed and implemented by DPRI over the past five years. The Committee acknowledges this set of valuable recommendations from an external perspective and made the decision to initiate our self-evaluation based upon it. However, it may be fair to point out that the recommendation list appears to include items may, at least in part, have arisen due to confusion and mutual misunderstanding. This was most likely due to a lack of available information to the 1998 evaluators, and also due to an insufficient time for explanations on the part of DPRI, as this was our first experience with this process. Furthermore, some items are not directly applicable or very difficult to manage because of externally imposed institutional constraints. Despite this potential for reinterpretation and reorganization, the Committee has decided to accept the entire list of the 1998 recommendations as provided, as long as the second evaluation is used to reassess and improve this former list, by allowing evaluators to add to or reduce from the list, as required.

The Committee conducted a questionnaire for our Director's executive committee, heads of our Divisions and Research Centers as well as, all research staff members. They were asked to answer the following questions in both Japanese and English. Each question is designed to assess how much the respective Division/Center has improved in terms of each item. Only one evaluation is selected out of the following 5 choices.

- S: Improved satisfactorily.
- A: Improved to some extent.
- B: Improved but insufficient.
- C: No improvement; or few improvement and many things to be done.
- X: Not applicable; or not in a position to answer.

Concurrently, the Committee asked the Director's three executives to answer the same questionnaire from the standpoint of each committee: Exploratory Committee for Future Plans (Prof. Toshiharu Kojiri); Research and Education Committee (Prof. Naoto Oshiman); and Public Relations and Information Management Committee (Prof. Hiromichi Kawai). Based on all questionnaire results, the SREC has digested, analyzed and made an overall evaluation. With further feedback from myself, the Committee has produced DPRI's self-evaluation report dated December 12, 2003, pertaining to the achievements made in line with the 1998 recommendations. Attached please find the guideline for your expected task.

Last, but not least, we appreciate your kind agreement to undertake this task and would like to respectfully thank you, in advance, for the time and effort that you will be dedicating to it.

Professor Kazuya Inoue
Director
DPRI, Kyoto University

December 15, 2003

G. General

Overall Evaluation: A

With the 1998 recommendations in mind, the Disaster Prevention Research Institute (DPRI), belonging to Kyoto University, has made significant efforts to improve its organizational systems and to initiate activities in order to create an improved research and educational environment as well as to make additional contributions to society. Since the institute is one of the largest organizational research units in the university, achievements may not occur rapidly enough to cover every aspect discussed in the report. For instance, achievements differ from division to division, and from center to center as well as individually. It is hoped to maintain and accelerate our process of self-improvement so as to pursue the ideal status for DPRI.

G- 1 Research cooperation between different divisions and centers and characterization of DPRI as a research institute affiliated with the University.

① Need to establish the research orientation of each division or center.

Evaluation: A

- Each research division and center has its own self-defined goals and objectives, and has been constantly conducting collaborative research and projects. However, from the perspective of DPRI as a whole achievement varies from unit to unit and, hence, there remains room for further improvement.

② Needs to promote cooperative research and interactions amongst different divisions, centers and sections (Periodic meetings between different divisions and centers).

Evaluation: A

- Field survey and research projects are cooperatively conducted among different divisions, centers and sections. Each research division/center holds periodic staff meeting.

③ Needs to overcome the limitations of internal hierarchy (Professor -Associate Professor -Research Associate) within each section.

Evaluation: A

- Sectionalism within Division/Center is being weakened. The internal 'Hierarchy' is being overcome. Some Divisions/Centers emphasize that the Professor-Associate Professor-Research Associate system is valuable in order to effectively undertake education, research and other activities.

④ Enhance communication with various faculties of the University.

Evaluation: A

- Research and projects are being implemented in cooperation with faculty in the Graduate Schools of Engineering, Informatics and Science.
- Professors and Associate Professors at DPRI are also belong to one of the main campus Graduate Schools and contribute to both undergraduate and graduate education.
- Personnel Exchange is done from time to time.

G-2 Clarify the missions and functions of ‘research divisions’ and ‘research centers’.

This item is interpreted to consist of two messages, one regarding the DPRI as a whole, and another regarding particular Divisions and Research Centers. As for the DPRI as a whole, it may be claimed that up to now, institutionally (by a ministerial ordinance) "Research Centers" have been provided with a special status of limited autonomy to have their own council presided by Head of Center and participated also by outside members; they have also been expected to pursue special research projects and thus have enjoyed a certain extra research fund. In fact some Research Centers have made considerable achievements of their own by use of such resources.

On the other hand due to deregulation, it is becoming much easier for us to internally set up new "Centers" in a flexible manner. As a first exemplification, the Landslide Research Center was established in 2003. In a near future DPRI will also be reorganized as a part of the independent agency of Kyoto University, which will enable us to develop more flexible administrative form options. For instance possibly some organizational units can be directed more towards application and implementation under a research project scheme than the rest. Also some may serve for activating communication among and mobilization of researchers within DPRI. In this respect there remains more room for internal effort to make further improvement.

As far as particular Divisions and Research Centers that were pointed out in the previous recommendations, progress has been made to a certain degree as claimed by respective organizational units (see below). However, external reviewing this time will offer us a good opportunity to mutually reexamine and redefine if these recommendation specifics are still applicable and if so, in which manner they should be more specifically interpreted.

① What is the difference between ‘research divisions’ and ‘research centers’ ? (How do IMDR (Division of Integrated Management of Disaster Prevention) and DRS (Research Center For Disaster Reduction Systems) differ from each other? Should they be merged into one division or one center?)

Evaluation: X

- As explained below, to date, significant efforts have been made by each division or center to improve the situation. However it is acknowledged that the roles and functions of divisions and centers should be more clearly defined. In the future, our objective is for well-defined role-sharing and new directives for change. As these changes have not yet been sufficiently agreed to within DPRI, for the time being we must reserve our judgment on this matter.
- Consensus is being built internally on the first-step trials to introduce a cross-appointment system for some professors with IMDR and DRS, thus enabling them to participate in management and research across the Division and Center. Further efforts are being undertaken in order to get this arrangement agreed to and authorized on all DPRI levels.
- Earthquake related Divisions and Centers are conducting research dealing different aspects. The Research Center for Earthquake Prediction aims to ascertain earthquake phenomenon in terms of

pure science, while the Division of Earthquake Disasters is conducting engineering research on structural issues to promote safety and relief against earthquakes. On the contrary, the Division of Integrated Disaster Risk Management is dealing with non-structural measures against earthquake and other various disasters including political decision-making and regional disaster prevention planning.

- Geo-Disaster Division conducts mainly fundamental research. RCL internationally promotes as COE in the field of landslides the Landslide Research Programmes, such as International Programme on Landslides (IPL) and UNITWIN Cooperation Programme.

② The mission of the volcano research center should be expanded to include at least one other research area.

Evaluation: B

- Reinforcement of the volcano research has not yet been realized though the Sakurajima Volcano Research Center. The Committee on Future Planning and Personnel Affairs, however, recognized the necessity of this Center as mentioned in the Mid-term Plan for 2004-2009. We are proceeding to reinforce volcano research.

G-3 Development of new research areas.

① Expand Disaster Prevention Research into comprehensive and integrated research areas, including interdisciplinary approaches.

Evaluation: A

- The Division of Earthquake Disasters is conducting comprehensive research including occurrence of earthquakes, advanced study on earthquake-resistant design, and enhancement of potential against earthquake disaster with strong collaboration among science, civil engineering and architecture.
- Not only physically-based approaches but also several attempts are done considering society and stakeholders by case studies and information dissemination in the Division of Fluvial and Marine Disasters.
- Staffs of the Water Resources Research Center have been engaged in mediating (interdisciplinary) work among the fields of water cycling, nutrient cycling, ecosystem conditions and social demands.
- Research staffs with different backgrounds such as psychology and sociology as well as natural science and engineering and cross appointment between Divisions and Centers.

② Promote research relating to social and economic aspects of disaster science, as well as research that is responsive to taxpayers, such as cost-performance analysis of disaster prevention investment measures.

Evaluation: B

- As stated below, some efforts have been undertaken and certain goals have been achieved, but more work is needed. It is in order to achieve consensus, this dimension of research must be extended and internal agreements must be reached.

- The Division of Integrated Disaster Risk Management is conducting studies on disaster risk, economical analysis, decision making of disaster victims for recovery of housing, and bottlenecks against recovery from disasters.
- The Division of Earthquake Disasters has dealt with prediction of strong seismic motion and damages and countermeasures for damage reduction with high accuracy that can be the base of reliable quantitative socio-economic and cost-benefit analyses on earthquake disasters. The research outcomes are highly evaluated by practitioners and the general public. Recently, the Division initiated studies on strategy of reinforcement of existing building structures and infrastructures in cities, considering life cycle costs.

 ③ Promote environmental science research relating to natural disaster science.

Evaluation: B

- As claimed below, some efforts have been undertaken and certain goals have been achieved by respective Divisions and Centers. Admittedly, however, a process for identifying a clearly-defined research focus has not yet been set up in DPRI.
- In the Division of Integrated Disaster Risk Management research has already been initiated to address environmental disasters.
- The Water Resources Research Center has staff in the field of ecology as well as staff in hydrology and water resources engineering. They perform intensive eco-hydrological field surveys and consider ecological engineering issues in depth.
- A Section in the Division of Earthquake Disasters is conducting natural disaster research as an urban environmental issue in cooperation with the Graduate School of Urban and Environmental Engineering.
- The Divisions of Atmospheric Disasters and Fluvial and Marine Disasters are dealing with environment-related issues in terms of atmosphere and water.

R. Research products and their evaluation

Overall Evaluation: S

Research level is regarded as very high since individual researchers have published their papers in international and domestic scientific journals. The number of papers submitted to international journals is increasing, though it depends on the divisions and centers. Papers written in Japanese have titles and abstracts in English and are informative to non-Japanese people. Research information dissemination in English through the DPRI web is not sufficient as a whole. Criteria and how to evaluate social contribution of individual researcher are not established.

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 R-1 Publication in major journals.

① Research results should be published in appropriate scientific journals.

Evaluation: S

- Many papers are published in peer-reviewed journals. More than two papers/year/faculty.
- Some researchers received awards by academic societies; for example, a Best Paper Award of the Japan Society of Civil Engineers (JSCE) in 2001 and two Awards of Volcanological Society of Japan in 2003.

 ② More papers should be published in major international journals.

Evaluation: A

- Six research divisions and centers replied that they are making efforts to submit scientific papers to international journals and the number of papers published in the international journals is increasing. However, others are not so active in this regard, although they are submitting their papers to international conferences.

 ③ English abstracts should be encouraged for papers written in Japanese.

Evaluation: B

- Papers written in Japanese have titles and abstracts in English and are informative to non-Japanese people.
- Research information dissemination in English through the DPRI web is insufficient as a whole.

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 R-2 Evaluating individual performance on the basis of their contributions to the public. (e.g., Contributions to public policy making through mass media, recommendation etc.).

Evaluation: A

- Various kinds of public service activities are carried out by researchers: acting as a member of governmental committees, taking part in TV and radio programs; and submitting articles to newspapers and public journals.
- These activities are explicitly not taken into account for promotion to the full professor position.

C. Allocation of funds and research staff for more effective external cooperative projects

Overall Evaluation: A

Effective financial allocation is implemented by using various sources such as DPRI Director's Leadership Fund, the Budget for cooperative research assigned to research projects, meetings adopted by the Cooperation Research Committee, and the budget for 21st Century COE Program. To avoid

overburdening particular members, jobs are shared by staff. Younger researchers are encouraged by being given more time and financial support, though this depends on laboratories to which they belonging.

C-1 Research funds should be more available for young researchers.

Evaluation: A

- The DPRI has a system for young researchers to apply for research funds in the framework of cooperative research.
- The 21st Century COE Program enables young researchers to apply for research opportunities in DPRI. 25 young researchers were accepted in 2003.

C-2 More emphasis on effective budget allocation to important research themes.

Evaluation: A

- Effective financial allocation is implemented by using various sources such as the DPRI Director's Leadership Fund, the Budget for cooperative research assigned to research projects, meetings adopted by the Cooperation Research Committee, and the budget for 21st Century COE Program.
- Prioritization is realized by getting competitive financial sources such as the Special Project for Earthquake Disaster Mitigation in Urban Areas, the Special Coordination Funds for Promoting Science and Technology, and the Core Research for Evolutional Science and Technology (CREST).

C-3 To maintain research potential and motivation, young researchers should be relatively unburdened from administrative obligations.

Evaluation: B

- It depends on the situation of each laboratory.
- Most of the laboratories are trying to avoid overloading younger researchers.
- National Universities are going to be corporated at the beginning in FY2004. This will make Professors and Associate Professors busier.
- Jobs on computer networks are highly dependent on Research associates and associate Professors. Technicians or out-sourcing is necessary.

E. Education

Overall Evaluation: B

As described below, DPRI is institutionally vested with a limited (auxiliary) role in university education. Despite this limited capacity and constraint we are actually aware of the need and importance of education thus have made considerable efforts to address educational issues, to the best of our ability.

Therefore, we rate on overall achievements as a “B”. This does not whatsoever neglect the importance of and need for DPRI taking educational initiatives, particularly in a social outreach capacity. On the contrary, we feel that “educational contributions” are one of our critical missions and roles, particularly in light of the ongoing organizational shift for the institute as it becomes incorporated into the independent administrative agency of Kyoto University.

Regarding the observation that the number of graduate students, post-doctoral fellows and foreign students is rather small for an institute of our size, we question its relevancy for the aforementioned reasons. Instead, it is argued that the number of students and post-doctoral fellows is appropriate, insofar as DPRI maintains its position as a research institute attached to Kyoto University. However, more efforts are needed to increase the number of students and post-doctoral fellows, by improving our educational support system; by enhancing education and research guidance for foreign students; and by accepting part-time working students.

E-1 Establishment of education policy.

Evaluation: X

DPRI, as a research institute affiliated with Kyoto University has long been challenged by its inherent difficulty. That is an institutional constraint imposed on national-university-affiliated institutes like DPRI such that research institutes are rather in a position to collaborate with graduate schools, and thus not entirely independent of other schools in university education. Moreover the disciplines of hazard research and disaster prevention are still considered "not established", and thus made it rather hard to offer students a self-inclusive undergraduate/graduate program. Given such constraints, DPRI has been making utmost efforts to accommodate both young researchers and students, and to provide them with research educational guidance and supervision to the extent possible. It has also received many students from overseas with a view to disseminating disaster prevention technology as well as to sharing research outcomes.

However, it can be argued that in light of upcoming changes to university administration, additional efforts should be undertaken to introduce DPRI’s own strategic educational programs as well as accepting a more diverse range students, by developing proactive initiatives to overcome traditional barriers.

- Education policy in the DPRI, “In order to establish the disaster prevention science, we show a comprehensive curriculum which covers humane and social studies, science and engineering studies related to disaster prevention”, is shown in the DPRI 6 Year Program.
- The Expert Committee for Education has been organized in the DPRI since 2003 in order to implement the educational program in the DPRI 6 Year Program. We have rearranged the curriculum in three graduate schools, the Graduate School of Engineering, the Graduate School of Informatics, and the Graduate School of Science to provide a total curriculum for disaster sciences. This will enable all graduate students affiliated with DPRI to take some of the courses. We also began to make preparations for proposing some new lectures and seminars on disaster sciences for all undergraduate Kyoto University students.
- Some research divisions and centers have their own individual education policies. For instance, to get practical research skills related to identifying mechanisms of earthquake phenomenon from a global perspective (Research Center for Earthquake Prediction); Theory and practice are stressed in order to unify basic and applied aspects in the research activities (Water Resources Research Center).

E-2 Students

① The number of graduate students, post-doctoral fellows and foreign students is small relative to the size of the institute.

Evaluation: B

- The numbers of students who finished their doctoral program and got a Doctoral degree were 7 in 2000 and 11 in 2001, respectively. Numbers of graduate students were 155 in 2000, 157 in 2001, and 181 in 2002. Those numbers are not small when compared with the total number of full professors and associate professors, 66. Numbers of post doctoral fellows were 23 (including foreign researchers: 6) as a DPRI COE researcher, 3 as a special-project research fellow, 3 as research-organization research fellow, 4 with the JSPS post-doctoral fellowship, and 9 with the JSPS post-doctoral fellowship for foreign researchers in Japan, respectively (in 2003).
- Some research divisions and centers have insufficient number of Japanese graduate students.
- There is an opinion that accepting all foreign students without uniformly high standards will result in a degradation of the research educational environment.

② More support and training are needed for foreign students.

Evaluation: B

- Each research division and center makes an effort to develop a system for supporting foreign students. However, as it depends on the individual professors, the supporting system of DPRI is not sufficiently developed. This problem cannot be solved by DPRI in isolation, but rather in consultation with the entire Kyoto University system. Coordinated efforts across the entire system are needed to effectively achieve this goal.
- The Expert Committee for Education in DPRI opened the Counseling Office for Foreign Students in order to provide social advice on life at DPRI, dealing with a range of routing issues, excluding mental illness.
- The three residences are: Shugakuin International House, Uji International House and Ohbaku International House in Kyoto University. However, the total number of rooms is insufficient for all foreign students. The environment for supporting foreign students, when they rent an apartment house and need a guarantor for the rental contract, are beginning to be arranged. However, our load for providing them with accommodation is still very large when we accept foreign students.
- This problem is serious at the detached small campus of DPRI.

③ Enhancement of education and research guidance to foreign students (e.g. Classes and lectures in English).

Evaluation: A

- Some lectures and seminars are made in English, if necessary. However it is believed that more lectures should be presented in English. Advising foreign graduate students and discussions on scientific topics are often carried out in English. Presentations and discussions in English are encouraged in the DPRI COE Researchers Bimonthly Seminar Series.

④ Accept more part-time working students.

Evaluation: B

- The Graduate School of Engineering already accepts part-time working students. However, the number of applicants is very small every year. There is an opinion that the system to receive applicants should be improved in order to increase the number of part-time working students.

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E-3 Should DPRI be a university-affiliated research institute or a graduate school?

① Modify the system so that associate professors as well as full professors can supervise PhD students.

Evaluation: A

- All full professors and associate professors affiliated with the Graduate School of Science can formally supervise graduate students in the Graduate School of Science. The graduate school of engineering will allow associate professors to be the head adviser of Ph.D. theses after April 2004.
- There is an opinion that young associate professors must take on additional work if the rule is changed. A research division and/or center objects to the change.

② DPRI should have its own graduate school.

Evaluation: X

- We concluded through detailed and wide discussions in DPRI that the DPRI should be one of the research institutes in Kyoto University to maintain its function as a collaboration research institute in Japan (for disasters), which is open to all researchers from other universities. We think that collaboration with all researchers from other universities should be continued. For these reasons, DPRI intends to remain a research institute in Kyoto University and not become a graduate schools in Kyoto University. Therefore, instead of establishing an independent graduate school, we should continue to redefine our educational and academic roles and functions and to establish a variety of possible linkages and collaborations with other departments, graduate schools, and research institutes within Kyoto University.

③ Considering the limited student enrollment, should DPRI be a research institute affiliated with a university?

Evaluation: A

- The number of graduate students in the DPRI is not always small, although the total number fluctuates yearly. In addition, we don't think that it is appropriate to evaluate the research institute on the basis of total students alone. We should take full advantage of DPRI's affiliation with Kyoto University as well as its unique characteristics as an institute with a disaster prevention focus.
- In addition to graduate education, we have also been making significant contributions to undergraduate education, such as the development of special classes.

O. Organization, Administration and Personnel

Overall Evaluation: B

To strengthen the administration, the introduction of three assistants and reappointment of the director is established. However, the supporting system, such as the technical section and administrative section, has not yet been established. As for the “inbreeding”, based on the system of the public offering, the number of external research activities is increasing. The number of teachers from outside of Kyoto University is increasing. Several female researchers are working as part time researchers and research support staff. In near future, we will try to educate female researchers. On the whole, the committee considers that this item is currently improving.

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O-1 The strength of director is insufficient. The director should have a longer term of service.

Evaluation: A

- The reappointment of the director has become possible. The power of the administration is enhanced by introducing three assistants to the director.

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O-2 Administration and technical support should be strengthened.

- ① Create an administrative section that supports foreign researchers.

Evaluation: C

- Because the problem is related with Kyoto University as whole, the administrative capacity to receive foreign scholars has not yet been developed. As well this issue is not currently considered to be on the agenda. However this problem is related.

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- ② Create an administrative section managing technology transfer, licensing, patent issues, etc.

Evaluation: C

- This section is highly desirable, but the section is related with the Kyoto University system in its entirety. The committee of public relations was established to manage technology transfer, licensing, patent issues, etc. Additionally, effective use of the newly opened International Innovation Center of Kyoto University (KU-IIC) should be made to promote technical transfers and patent application.

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- ③ Increase the number of secretaries and technical employees.

Evaluation: B

- Though currently insufficient, this situation is improving mainly due to inter-Division or individual efforts based on external financial resources and research projects that are introduced. Although

current national policy is to reduce the number of national public officers, part time staff are employed.

O-3 Faculty sabbatical leaves are necessary.

Evaluation: C

- Associate Professors and Research Associates are given opportunities to go abroad by using grants from MEXT or the Kyoto University Booster Club. The system of sabbatical leaves should be adopted in the whole Institute at once; otherwise any interruption would occur elsewhere.

O-4 DPRI personnel management

- ① Too much faculty inbreeding; thus, more open recruiting is needed.

Evaluation: A

- Personal affairs in the Center have been conducted through public offerings. This has consequently resulted in increase in “new blood”. The number of teachers from outside of Kyoto University is increasing. A number of staff have worked outside of Kyoto University. In several divisions, more than a half of the researchers graduated from other universities.

- ② DPRI should employ female researchers.

Evaluation: B

- The DPRI has employed a female Adjunct Professor and a Research Associate in past. It is simply a reflection of the small number of female researchers in this field. DPRI has never rejected females. Several female researchers are working as a part time researchers and research support staff members. In near future, we will try to educate female researchers.

O-5 Plans for remote observatories

- ① How should DPRI handle Research Associates doing routine monitoring work and stationed at remote facilities?

Evaluation: B

- This is one of the most critical issues for DPRI to resolve in the reorganization process. But until now, no clear-cut countermeasures have been proposed and implemented, although some temporary measures have been carried out. We also note that DPRI’s field stations in remote areas are considered still important and monitoring activities offer an important asset for disaster research. However, the number of technicians have been recently reduced, leading to an increase in the workload of research associates.

 ② Can some of the routine monitoring be contracted outside?

Evaluation: B

- Outside contracts for monitoring in some field stations has been carried out. However, it depends on the system being observed. For more than 30 years RCL has already employed personnel living in the area to monitor a large-scale landslide in Tokushima Prefecture. The observation component is entrusted outside.

S. Relations with society and outside organizations

Overall Evaluation: A

The institute has become a leader in the field of disaster research, particularly with the adoption of the 21st Century COE Program. DPRI has established productive collaborations with industry and government. In order to integrate public relation activities, a new public relations committee has been established. In addition to public lectures, new lectures in Tokyo and Kyoto have been carried out as events of the 21st COE Program. In light of the above changes, advertising of the institute and the public relations has already improved significantly.

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S-1 Roles and duties of DPRI as government funded research institute need to be reconsidered.

Evaluation: A

- Serving as a leading international research core should meet this requirement. Therefore our Division had made a substantial contribution by co-hosting with IIASA a series of international conferences called "DPRI-IIASA International Symposium on Integrated Disaster Risk Management". Some staff are making significant contributions to national and/or local governmental policies and related committees. Others are conducting pure scientific activities only, which is natural as university staff.

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S-2 Collaboration with Industries

① Promote collaboration with industries

Evaluation: B

- At least at the individual or Division/Center level, successful collaboration has been achieved through the introduction of University-Industry Research Cooperation projects. However, there still remains room for improvement in terms of making this a more strategic, systematic, and consistent DPRI policy.

- Collaborative research with industries has been implemented by using facilities of remote observatories and laboratories. A subcommittee was established in the committee of public relations to cooperate closely in a project with the industry and the government.

② Need to establish a Technology Transfer Center

Evaluation: C

- It is planned to establish a center for disaster mitigation in cooperation with local governments. A framework for technology transfer of the most recent research outcomes is now under discussion through UNITWIN Programme.
- UNITWIN Programme aims to transfer the most recent research outcomes. The 2003 Kyoto University Presidential Special Budget was allocated for construction of UNITWIN Headquarters building in Uji Campus. It will be completed in January 2004 and this will be the headquarters of technology transfer.

③ Need to foster disaster prevention-related industries, such as disaster communications and information industry.

Evaluation: B

- New observation methods and a number of simulation software have been proposed and provided to companies. However, university professors have been generous and relatively unconcerned with copyrights.
- An NPO, International Consortium on Landslides, has been established.

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S-3 Public Relations

① Need to transfer DPRI related research information to the public.

Evaluation: A

- A committee of public relations was established to respond quickly to various requests including DPRI visits. Uji campus, including DPRI, is open to the public every year. At least on the individual or Division level, contributions are significant and include our continued efforts to respond attentively to newspaper and TV journalists.
- Demonstration of geo-disaster model tests at the core event of civil engineering and the virtual museum project. Lectures of geo-disasters also take place in elementary schools.
- DPRI established a Q&A web for the general public beginning in 2003.
- The semi-real-time earthquake information by HP.
- HP of the research center for earthquake prediction

② More extension lectures are desirable.

Evaluation: S

- A one-day open seminar and symposium of natural disasters is held every year to open research products for the public. Extensive courses were developed at Kyoto and Tokyo satellite halls as a part of an activity of 21st century COE. COE-satellite offices have been opened in both Tokyo and Kyoto, and a series of open seminars and lectures have been made available to public. Books were published quite recently and the extracts of the open DPRI public lectures have been made accessible to public audience.
- Extension lectures for farmers in South East Asia.
- Water Resources Seminar every year.

③ Improve public relations through mass media

Evaluation: A

- We give publicity through mass media when a seminar, symposium or course is planed. When the Uji campus is open for public, we advertise in the newspapers and on TV.
- Interviews from Mass media on 2003 Tokachi-oki earthquake.
- The explanation of the earthquake information by the newspaper and radio.
- Mainichi Newspaper (every month, by staff of DPRI), Kyoto newspaper (every month), Nihonkai newspaper (every month), Mainichi broadcast (every Saturday)

④ Promote an public “open house” day at the institute

Evaluation: S

- We open our laboratory for the public every year. We open our research facilities and demonstrate experiments to educate the public on issues relating to disaster prevention. We are trying to meet with all requests for lectures and visitations.
- Short course for visiting high school students
- Ujigawa Open Laboratory carried out several experiments for citizens concerning flood and earthquake related disasters for the open campus ceremony

⑤ The Annals of DPRI, the Annual research report, should be restructured as a technology transfer document to the public.

Evaluation: X

- The Annals of DPRI is not a PR magazine but an academic journal open to our research activities throughout a year. Our newsletter and a DPRI catalog serves as technology transfer documents to the public.

⑥ DPRI should play a role as an information center to the public

Evaluation: B

- We are trying to open our activities to the public through seminars, symposiums and courses. These activities can be accessed on the web site. A public relations committee was established We are trying to open our activities to the public through seminars, symposiums and courses. These activities can be accessed on the web site. A public relations committee was established to respond quickly for various requests including DPRI visits. The handbook for disaster prevention was published for researchers, and a textbook for the disaster prevention course has been published to further enlighten the public.

S-4 Technology transfer to developing countries

① Participation in technology transfer projects in developing

Evaluation: A

- We do not have a special project to participate in technology transfer, but significant contributions to technology transfer can be made by harnessing the expertise of foreign scientists and students and by developing joint research projects with foreign research organizations and governments. Multilateral overseas research projects such as EqTAP and JSPS Core University Research Grant have been promoted, which have contributed to the transfer and dissemination of our research outcomes to China and Malaysia.
- Collaborative research on development of infrastructure in South East Asia
- Research agreement with Ministry of Mines and Energy, Indonesia (1993-2008), and JICA training course (lectures and trainees every year since 1990)
- The Research Centre on Landslides (RCL) is conducting technical transfer through joint research in the Lisha Landslide project, Xian, China and the landslide in the Inca world heritage "Machu Picchu" site. In addition, the Japan International Cooperation Agency and the Uzbekstan government has requested RCL to engage in cooperation with Uzbekstan for landslide risk mitigation beginning in 2004.

Review Items Suggested by Previous External Examiners			Overall Evaluation	Assistants To the Director			Ratings by Research Divisions and Centers							Research Divisions					Research Centers								
				Chair of Future Plan Com.	Chair of Res. & Edu. Com.	Chair of PR & Info. Disse. m.	S	A	B	C	X	S	A	B	C	X	Integ. MNGMT of Dis. Risk	EQ Dis. Prev.	Geo-Dis.	Fluvi al & Marin e Dis.	Atmos. Dis.	RC for Dis. Env.	RC for EQ Predi. c.	Volca no RC	Water Res. RC	RC for Dis. Reduc.	RC Land-slide s
G General	G-1 Research cooperation among different divisions and centers & characterization of DPRI (Disaster Prevention Research Institute) as a research institute affiliated with the University.	① Need to establish the research orientation of each division or center	G-1-①	A	A	X	X	6	4	0	0	1	0	A	S	S	S	A	X	A	A	S	S	S			
		② Need to promote cooperative research and interactions amongst different divisions, centers and sections (Periodic meetings between different divisions and centers).	G-1-②	A	X	X	X	3	6	0	1	1	0	A	A	A	S	S	X	A	C	A	A	S			
		③ Need to overcome the limitations of internal hierarchy (Professor-Associate Professor-Research Associate) within each section.	G-1-③	A	X	X	X	4	3	2	0	2	0	B	A	S	A	A	X	S	X	B	S	S			
		④ Enhance communication with various faculties of the University.	G-1-④	A	B	X	X	2	7	0	0	1	1	A	A	A	S	A	X	S	A	A	A	A	S		
	G-2 Clarify the missions and functions of 'research divisions' and 'research centers'	① What is the difference between 'research divisions' and 'research centers'? (How do IMDR (Division of Integrated Management of Disaster Prevention) and DRS (Research Center For Disaster Reduction Systems) differ from each other? Should they be merged into one division or one center?)	G-2-①	A	X	C	X	X	4	2.5	0	1	1.5	2	A	S	S	A	C	X	S	S	A	S	S		
		② The mission of the volcano research center should be expanded to include at least one other research area.	G-2-②	B	A	X	X	0	1	0	0.5	7.5	2	A	X	X	X	X	X	X	S	C/X	X	S	X		
		① Expand Disaster Prevention Research into comprehensive and integrated research areas, including interdisciplinary approaches.	G-3-①	A	S	X	X	1	4	0	0	4	2	A	A	X	A	X	X	S	S	A	S	X			

	G-3 Development of new research areas	② Promote research relating to social and economic aspects of disaster science, as well as research that is responsive to taxpayers, such as cost-performance analysis of disaster prevention investment measures.	G-3-②		B	X	X	X	2	3	0	0	4	2	A	A	S	A	X	X	S BC X	S BC X	X	S	X
		③ Promote environmental science research relating to natural disaster science.	G-3-③		B	A	X	X	0	4	2	0	2	3	A	B	A	B	A	X	S BC X	S BC X	A	S BC X	X
R Research Products and their evaluation	R-1 Publication in major journals	① Research results should be published in appropriate scientific journals.	R-1-①	S	S	X	A	X	5	4	1	0	1	0	S	S	A	S	A	X	B	A	A	S	S
		② More papers should be published in major international journals.	R-1-②		A	X	A	X	3	4	3	0	1	0	S	S	A	A	A	X	B	A	B	B	S
		③ English abstracts should be encouraged for papers written in Japanese	R-1-③		B	X	B	A	2	4	1	0	3	1	S BC X	X	A	A	A	X	A	X	B	S	S
	R-2 Evaluating individual performance on the basis of their contributions to the public (e.g., Contributions to public policy through mass media, recommendations etc.).	R-2	A		X	B	X	1	2	2	0	5	1	S BC X	A	X	B	X	X	A	X	B	S	X	
C Allocation of funds and research staff for more effective external cooperative projects	C-1 Research funds should be more available for young researchers.		C-1	A	A	S	B	S BC X	2	1	2	0	4	2	A	B	X	S	X	X	S BC X	S BC X	X	S	B
	C-2 More emphasis on effective budget allocation to important research themes.		C-2		A	A	A	S BC X	2	3	2	0	2	2	A	B	X	A	A	X	S BC X	S BC X	S	S	B
	C-3 To maintain research potential and motivation, young researchers should be relatively unburdened from administrative obligations.		C-3		B	A	A	S BC X	1	5	2	0	2	1	A	B	A	A	A	X	S BC X	X	A	S	B
	E-1 Establishment of education policy (e.g. Should we proceed with the "Shadow Curriculum" ?) .		E-1		X	A	A	X	0	2	2	2	3	2	S BC X	A	A	C	X	X	C	S BC X	X	B	B
		① The number of graduate students, post-doctorial fellows and foreign students is small relative to the size of the institute.	E-2-①		B	A	A	X	5	3	1	0	1	1	S	A	A	S	S	X	S BC X	B	S	A	S

E Education	E-2 Students	② More support and training are needed for foreign students.	E-2-②	B	B	C	B	X	1	3	2	1	3	1	A	B	A	B	X	X	SA BC X	X	A	C	S
		③ Enhancement of education and research guidance to foreign students (e.g. Classes and lectures in English) .	E-2-③		A	B	B	X	4	2	1	1	3	0	S	A	S	C	X	X	B	X	A	S	S
		④ Accept more part-time working students.	E-2-④		B	X	B	X	0	2	2	1	4	2	SA BC X	B	A	A	X	X	SA BC X	X	X	B	C
	E-3 Should DPRI be a university-affiliated research institute or a graduate school?	① Modify the system so that associate professors as well as full professors can supervise PhD students.	E-3-①		A	A	B	X	5	2.5	0.5	0	3	0	S	A/ B	A	S	A	X	S	S	X	X	S
		② DPRI should have its own graduate school.	E-3-②		X	C	C/X	X	0	1	0	2	6	2	A	X	X	C	X	X	SA BC X	SA BC X	X	X	C
		③ Considering the limited student enrollment, should DPRI be a research institute affiliated with a university?	E-3-③		A	A	A/X	X	1	3	0	1	6	0	A	A	X	S	X	X	A	X	X	X	C
O Organization, Administration and Personnel	0-1 The strength of the director is insufficient. The director should have a longer term of service.	0-1	A	S	X	X	1	2	0	0	5	3	SA BC X	X	X	A	A	X	SA BC X	SA BC X	X	S	X		
	0-2 Administration and technical support should be strengthened.	① Create an administrative section that supports foreign researchers.	0-2-①	C	SA BC X	X	X	1	0	1	3	4	2	C	B	X	C	X	X	SA BC X	SA BC X	X	C	S	
		② Create an administrative section managing technology transfer, licensing, patent issues, etc.	0-2-②	C	B	X	A	0	0	1	2	5	3	SA BC X	B	X	C	X	X	SA BC X	SA BC X	X	C	X	
		③ Increase the number of secretaries and technical employees.	0-2-③	B	X	X	SA BC X	0	1	2	2	5	1	B	A	X	C	X	X	B	SA BC X	X	C	X	
	0-3 Faculty sabbatical leaves are necessary.	0-3	C	C	X	SA BC X	0	1	1	1	4	4	SA BC X	A	X	B	C	X	SA BC X	SA BC X	X	SA BC X	X		
	0-4 DPRI Personnel Management	① Too much faculty inbreeding; thus, more open recruiting is needed.	0-4-①	A	S	X	SA BC X	2	2	2	0	3	1	SA BC X	A	S	B	B	X	S	X	A	X		
		② DPRI should employ female researchers.	0-4-②	B	S	X	SA BC X	1	1	0	3	3	3	SA BC X	C	A	C	C	X	SA BC X	SA BC X	X	S	X	

	0-5 Plans for remote observatories	① How should DPRI handle Research Associates doing routine monitoring work and stationed at remote facilities?	0-5-①	A	B	A	X	S A B C X	1	0	3	2	4	1	S A B C X	B	X	C	X	B	B	C	X	X	S
		② Can some of the routine monitoring be contracted outside?	0-5-②		B	C	X	S A B C X	0	1	2	1	6	1	S A B C X	B	X	X	C	X	B	X	X	X	A
S Relations with society and outside organizations	S-2 Collaboration with Industries	S-1 Roles and duties of DPRI as a government funded research institute must be reconsidered.	S-1	A	A	S	X	A	2	2	0	0	6	1	A	A	X	S	X	X	S A B C X	X	S	X	X
		① Promote collaboration with industries	S-2-①		B	B	X	A	2	5	1	0	1	2	A	X	S	A	A	A	S A B C X	S A B C X	A	S	B
		② Need to establish a Technology Transfer Center	S-2-②		C	C	X	A	0	2	0	2	5	2	S A B C X	X	X	C	A	X	S A B C X	X	X	C	A
	③ Need to foster disaster prevention-related industries, such as disaster communications and information industry.	S-2-③	B		C	X	B	0	3	2	0	5	1	A	X	X	B	X	A	S A B C X	X	X	A	B	
	S-3 Public Relations	① Need to transfer DPRI related research information to the public.	S-3-①		A	A	X	A	3	3	2	0	3	0	S	X	A	A	S	X	A	X	B	S	X
		② More extension lectures are desirable.	S-3-②		S	S	X	S	3	3	0	0	4	1	S	X	A	S	S	X	S A B C X	X	A	A	X
		③ Improve public relations through mass media	S-3-③		A	B	X	A	2	2	2	0	3	2	S A B C X	X	A	A	B	X	S	S A B C X	B	S	X
		④ Promote an "open house", public day at the institute.	S-3-④		S	B	X	A	3	2	1	0	3	2	S A B C X	X	A	S	S	A	S A B C X	X	B	S	X
		⑤ The Annuals of DPRI, the Annual research report, should be restructured as a technology transfer document to the public.	S-3-⑤		X	X	X	A	0	1	0	0	8	2	S A B C X	X	X	X	X	X	S A B C X	X	A	X	X
		⑥ DPRI should play a role as an information center to the public	S-3-⑥		B	A	X	S	0	2	2	0	5	2	S A B C X	X	X	B	A	X	S A B C X	A	B	X	X
S-4 Technology transfer to developing countries	① Participation in technology transfer projects in developing countries is needed.	S-4-①	A	S	X	A	3	2	3	0	2	1	S	B	S	B	X	A	S A B C X	A	B	X	S		

Review Items Suggested by Previous External Examiners			Overall Evaluation	External Evaluator's Comments/Views		
G General	G-1 Research cooperation among different divisions and centers & characterization of DPRI (Disaster Prevention Research Institute) as a research institute affiliated with the University.	① Need to establish the research orientation of each division or center	G-1-①	A		
		② Need to promote cooperative research and interactions amongst different divisions, centers and sections (Periodic meetings between different divisions and centers).	G-1-②			
		③ Need to overcome the limitations of internal hierarchy (Professor -Associate Professor-Research Associate) within each section.	G-1-③			
		④ Enhance communication with various faculties of the University.	G-1-④			
	G-2 Clarify the missions and functions of 'research divisions' and 'research centers'	① What is the difference between 'research divisions' and 'research centers'? (How do IMDR (Division of Integrated Management of Disaster Prevention) and DRS (Research Center For Disaster Reduction Systems) differ from each other? Should they be merged into one division or one center?)	G-2-①			X
		② The mission of the volcano research center should be expanded to include at least one other research area.	G-2-②			B
		① Expand Disaster Prevention Research into comprehensive and integrated research areas, including interdisciplinary approaches.	G-3-①			A

	G-3 Development of new research areas	② Promote research relating to social and economic aspects of disaster science, as well as research that is responsive to taxpayers, such as cost-performance analysis of disaster prevention investment measures.	G-3-②		B	
		③ Promote environmental science research relating to natural disaster science.	G-3-③		B	
R Research Products and their evaluation	R-1 Publication in major journals	① Research results should be published in appropriate scientific journals.	R-1-①	S	S	
		② More papers should be published in major international journals.	R-1-②		A	
		③ English abstracts should be encouraged for papers written in Japanese	R-1-③		B	
	R-2 Evaluating individual performance on the basis of their contributions to the public (e.g., Contributions to public policy through mass media, recommendations etc.).	R-2	A			
C Allocation of funds and research staff for more effective external cooperative projects	C-1 Research funds should be more available for young researchers.		C-1	A	A	
	C-2 More emphasis on effective budget allocation to important research themes.		C-2		A	
	C-3 To maintain research potential and motivation, young researchers should be relatively unburdened from administrative obligations.		C-3		B	
	E-1 Establishment of education policy (e.g. Should we proceed with the "Shadow Curriculum" ?) .		E-1		X	
		① The number of graduate students, post-doctorial fellows and foreign students is small relative to the size of the institute.	E-2-①		B	

E Education	E-2 Students	② More support and training are needed for foreign students.	E-2-②	B	B
		③ Enhancement of education and research guidance to foreign students (e.g. Classes and lectures in English) .	E-2-③		A
		④ Accept more part-time working students.	E-2-④		B
	E-3 Should DPRI be a university-affiliated research institute or a graduate school?	① Modify the system so that associate professors as well as full professors can supervise PhD students.	E-3-①		A
		② DPRI should have its own graduate school.	E-3-②		X
		③ Considering the limited student enrollment, should DPRI be a research institute affiliated with a university?	E-3-③		A
O Organization, Administration and Personnel	0-1 The strength of the director is insufficient. The director should have a longer term of service.		0-1	B	A
	0-2 Administration and technical support should be strengthened.	① Create an administrative section that supports foreign researchers.	0-2-①		C
		② Create an administrative section managing technology transfer, licensing, patent issues, etc.	0-2-②		C
		③ Increase the number of secretaries and technical employees.	0-2-③		B
	0-3 Faculty sabbatical leaves are necessary.		0-3		C
	0-4 DPRI Personnel Management	① Too much faculty inbreeding; thus, more open recruiting is needed.	0-4-①		A
		② DPRI should employ female researchers.	0-4-②		B

	0-5 Plans for remote observatories	① How should DPRI handle Research Associates doing routine monitoring work and stationed at remote facilities?	0-5-①		B	
		② Can some of the routine monitoring be contracted outside?	0-5-②		B	
S Relations with society and outside organizations	S-1 Roles and duties of DPRI as a government funded research institute must be reconsidered.		S-1	A	A	
	S-2 Collaboration with Industries	① Promote collaboration with industries	S-2-①		B	
		② Need to establish a Technology Transfer Center	S-2-②		C	
		③ Need to foster disaster prevention-related industries, such as disaster communications and information industry.	S-2-③		B	
	S-3 Public Relations	① Need to transfer DPRI related research information to the public.	S-3-①		A	
		② More extension lectures are desirable.	S-3-②		S	
		③ Improve public relations through mass media	S-3-③		A	
		④ Promote an "open house", public day at the institute.	S-3-④		S	
		⑤ The Annuals of DPRI, the Annual research report, should be restructured as a technology transfer document to the public.	S-3-⑤		X	
		⑥ DPRI should play a role as an information center to the public	S-3-⑥		B	
S-4 Technology transfer to developing countries	① Participation in technology transfer projects in developing countries is needed.	S-4-①	A			