

SIMON FRASER UNIVERSITY
Office of the Vice-President, Academic

MEMORANDUM

TO: Senate Committee on Agenda and
Rules

FROM: John Waterhouse
Vice-President, Academic

RE: Ad Hoc Committee to Review the
Eastern Indonesia University
Development Project

DATE: February 13, 2001

On April 6, 1998, Senate approved the following motion (Paper S.98-38):

"that Senate review the Eastern Indonesia University Development Project following the final CIDA evaluation of the project. The purpose of the review is three-fold:

1. To determine what academic benefits SFU has accrued as a result of the EIUDP;
2. To see if the Simon Fraser University Policy on International Activities has been adhered to by the EIUDP;
3. To see if the stated goals of the EIUDP have been met with respect to SFU's interests

On May 15, 2000, Senate approved the establishment, including the composition and terms of reference, of the Ad Hoc Committee to Review the Eastern Indonesia University Development Project (Paper S.00-46).

Three people carried out the work of this Ad Hoc Committee:

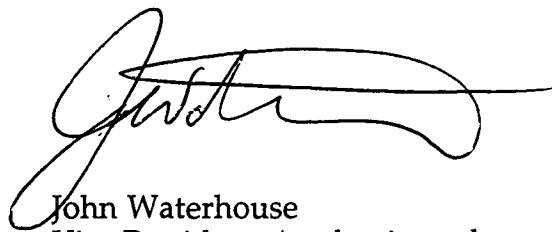
- Dr. Robert Anderson, Professor, School of Communications (and Chair of Ad Hoc Committee)
- Dr. John Chant, Professor and Chair, Department of Economics
- Ms. Lorena Jara, Graduate Student and Member of the Senate Committee on International Activities

The Senate Committee on International Activities (SCIA) met with members of the Ad Hoc Committee on several occasions and reviewed both the draft and final reports prepared by the Committee. SCIA has concluded that the Ad Hoc Committee's Report substantively addresses Senate's three questions. SCIA finds the Report to be

thorough, thoughtful and comprehensive, and also believes that the Report addresses the concerns about the EIUDP, which have been expressed over a number of years at the University. The Ad Hoc Committee has accomplished this in part through wide ranging consultations across the University community, and by speaking with individuals and groups who have been critical of the Project.

SCIA proposes that it consider carefully the recommendations contained in the Report, and to return to Senate at a later date with its advice on how SFU should respond to and act on these recommendations.

SCIA is pleased to transmit this Report to Senate for information and discussion.

A handwritten signature in black ink, appearing to read "John Waterhouse", is written over a horizontal line.

John Waterhouse
Vice-President, Academic, and
Chair of the Senate Committee on
International Activities

**REPORT TO THE SENATE COMMITTEE
ON INTERNATIONAL ACTIVITIES**

**Committee to Review the Eastern Indonesia
Universities Development Project**

by

Robert Anderson, John Chant, Lorena Jara

**February 2001
Simon Fraser University**

Table of Contents

1 Executive Summary of Findings & Recommendations	1
Conclusions about Benefits	3
Conclusions about EIUDP's Adherence to SFU Policy	4
Recommendations	6
2 Acknowledgments	10
3 SFU's Instructions to the Committee to Review the Eastern Indonesia Universities Development Project: The Approach and Method of the Review Committee	11
The Structure of the Report	12
4 Profiles of Members of the Committee	14
5 List of Persons Consulted by the Review Committee	15
6 List of Terms and Acronyms	20
7 Chronology of Significant Events in EIUDP, 1984-2000	22
8 Co-evolution of SFU Policies, and EIUDP Procedures and Practices	26
EIUDP, Indonesia, and SFU Values	31
Objections to the EIUDP	35
An Assessment of Objections to the EIUDP	37
9 Origins of SFU Involvement and Initial Conditions of EIUDP	40
10 Emergence of New Initiatives in EIUDP	43
Forum	44
Faculties of Mathematical and Natural Sciences	46
English Language Training Centres	48
Linkage Projects	50
Supplementary Budget	50
Women in Science and Technology (WIST)	52
Education for Sustainable Development	56
11 Achievement of the Stated Goals of EIUDP	58

12 Benefits of EIUDP to Simon Fraser University	61
Academic Benefits	62
Outlook and Approach to International Activities	66
Reputation and International Activities	67
13 Views of Indonesian Observers and Participants in EIUDP	68
Selection of Fellows and Preparation in English	70
Experience of Returned EIUDP Fellows	71
Teaching Methods At Home and Away	75
Laboratories for Teaching & Research	81
The Tool Kit	83
Professional Networking	84
EIUDP Resources in Member Universities	85
Local and National Government	87
Language for Science	88
Science and Culture in Indonesia	91
14 Conclusions of Review Committee	97
Conclusions on the Seven Conditions Established by SFU for Phase II	101
Innovation in the University	106
Conclusions on Management of the Project	107
Project Safety and Reasonable Risk	107
The Personality of the Project	111
Accountability	112
Recommendations	114
15 Appendices	112
Appendix A - SFU Policy on International Activities	112
Appendix B - Data on SFU Participation in EIUDP	116
Appendix C - Managing EIUDP's Responsibilities: The Death of Joyce Dangeubuan	122
Appendix D - List of Current Linkage Projects	129
Appendix E - An Account of the 1993 Review of the University of Guelph's Sulawesi Project	134
Appendix F - EIUDP Performance Report 1987-2000	137
16 References	152

1 Executive Summary of Findings & Recommendations

SFU has been the Canadian Executing Agency for the Eastern Indonesia University Development Project since 1987, and was involved for two previous years in its design. The project had two expressed objectives. The primary objective was to strengthen teaching programs, primarily in the basic sciences that support the role of applied sciences in regional development at five campuses of four eastern Indonesian universities (at Manado, Ambon, Kendari, Jayapura, Manokwari). The second objective was to promote long-term linkages between Indonesian and Canadian institutions. Focused on the development of eastern Indonesia's human resources, the project looked to the role of the sciences in the societies and economies that surround these five campuses.

This Review Committee was charged by SCIA with determining what benefits had accrued to SFU through the EIUDP, whether the project was operated in a manner consistent with SFU's Policy on International Activities, and whether the project's stated goals were met with respect to SFU's interests and values. SCIA was, in part, responding to expectations in the Senate and the wider SFU community that a Review should occur prior to EIUDP's termination.

To achieve the project's objectives, SFU and the EIUDP involved the skills and resources of a number of other Canadian universities and colleges, as well as four Indonesian universities. The project also was intended to build the capability of scientists to use the English language in these universities, and to establish a field-oriented anthropology program at the university in Jayapura, in West Papua. Later, after renewal of the project in its second phase in 1994, the project built a special dimension of education for sustainable development into all its work, intended to further the ability of these universities to use basic science to support the role of applied science. It also decided to deepen a program for enhancing the conditions for women in science and technology. Also after 1994, a program that linked

universities and NGOs in a focus on human rights and the environment was supported by EIUDP, at the specific request of SFU's Senate. Over its life, CIDA allocated \$52m in a contribution agreement for the EIUDP.

The concentration of the project was on training young lecturers at the graduate level in Chemistry, Biology, Physics, and Mathematics. In its early stage, the EIUDP also provided fellowships in applied sciences and linguistics. But there were other concentrations. Given its objectives, the EIUDP deployed a complex form of engagement between partners. A special combination of Canadian and Indonesian planning and evaluating methods emerged, and this Review finds that a change in the approach to university governance and planning in eastern Indonesia is one of the major outcomes of the project. Within the lifetime of the project, full Faculties of Mathematics and Natural Science have emerged. Indonesian government funds were used to build new teaching laboratories during the life of the EIUDP, thus providing a new working environment for Fellows trained in Canadian, Asian, or Indonesian universities. Other projects helped strengthen libraries and equip laboratories. The installation of sustainable development concepts and evidence will have as great an impact in Indonesia as in Canada, when achieved. Enhancement of conditions for women in science and technology will be as important to eastern Indonesia's society as it will to Canada. Anthropology will play an important role in West Papua, bridging the gap between the University and surrounding societies.

Even after a fourteen-year length, the EIUDP has considerable unfinished business. This is entirely appropriate, because the project undertook to support and enhance the potential that lay in these universities. Young lecturers in science, trained abroad and in Indonesia, with new capacities in English, and new networks of contacts, are currently building new faculties in their disciplines. Recent changes in Indonesia have made the relationship of the universities to the development of their surrounding economies more critical, because of the national policy of regional and local decentralization, and legalized autonomy for the universities. The EIUDP has been a leader in supporting the capacity to respond to these changes. Moreover, it helped to find creative methods to adapt to the

economic crisis that began in Indonesia in 1997 and to use project resources to build new linkages between universities, between universities and NGOs and other institutions, and to enlarge the opportunity for further Indonesian-Canadian cooperation.

Conclusions about Benefits

The Review Committee concluded that EUIDP brought clear academic benefits to SFU. A tangible and important benefit was in the form of additional resources in a time of financial constraints. The project brought a number of other less tangible but still important benefits, some of which accrued to the University as a whole. In the eyes of some, SFU added to its reputation and capacity for complex international projects, and initiated the practice of Canadian universities working with community colleges as a consortium. The EIUDP also gained new linkages with universities and NGOs in Indonesia. In an unintended way, the EIUDP permanently raised awareness of human rights issues in projects at SFU. By bringing Indonesian faculty and graduate students to the University for study and collaboration, and by adding to the diversity of experience and a more cosmopolitan atmosphere, the project made SFU more international.

The project also brought benefits to individuals at SFU. It allowed some graduate students opportunities to undertake research with supervision that would not have been possible in its absence. It also benefited individual faculty in a variety of ways. Some acknowledge that the project forced them to constructively reassess their approach to teaching with beneficial results. Others gained experience in a new environment that enriched both their teaching and research. The Committee recognizes that there are concerns regarding academic standards of some Fellows admitted in the project, but is unable to judge the severity of the problem. It also recognises the project's systematic efforts to ease the problems facing students in an unfamiliar setting.

Conclusions about EIUDP's Adherence to SFU Policy

The Review Committee elected to arrange the values and objectives contained in the SFU Policy on International Activities in three logical groups. The first group of values is closest to the University's historic role, namely its mission and academic standards, academic freedom, protecting safety of university personnel, ensuring participation of ethnic minorities and women, guaranteeing control over access of students and selection and administration of personnel. With the exception of academic standards where we are unable to judge definitively, the project met the objectives set out in the policy in all cases to varying degrees. In some cases, the issues are complex and required continuing thoughtful judgment by project planners and advisors. For example, supporting 'the participation of minority peoples' or 'ensuring benefits to local people' in Indonesia, as expected by the SFU policy, has many many dimensions. Still the project met this condition by securing participation of peoples already marginal in Indonesia including those considered as 'minorities.' Project administrators paid close attention to the needs and situations of various groups in the societies surrounding these universities. For example, in supporting the equitable participation of women, the project brought the issue of women in science and technology into focus for Canadians.

The second group of values and objectives concerns legal and human rights within and outside the university and includes upholding legal rights in international law, mitigating the violation of human rights, and assisting participants to make informed judgments about human rights. This group also includes three injunctions: that projects not be the instrument of human rights abuse, not further penalize people who live under an abusive regime by denial of access to assistance, and not have a connection with an agency known to abuse human rights. EIUDP conformed with international law and worked most closely with DIKTI and universities. We have no evidence that DIKTI and the universities were directly involved in human rights abuses identified with the military, the police or the Ministry of Home Affairs. By its very concept, the project offered, rather than denied, access to people subject to an oppressive regime.

The final group of values and objectives concerns relations between a project and the environment outside the university by providing benefits to local people and advancing partnerships with them. Though the issue is complex, the Review finds that great care and thought was taken to ensure that there were benefits to people outside the university by providing benefits to local people and advancing partnerships with them. Advancement of partnerships between SFU and the target universities has been fundamental to EIUDP from the beginning. The Review finds emphatically that these partnerships, and the dignity inherent in them, have been achieved. The project had at least a neutral effect on the environment in that, as an educational project, any negative impact would be minor and incidental. Balanced against this, the project made sustained efforts to raise ecological concerns in Indonesia and Canada. Some of the linkage projects are specifically intended to have beneficial effects on the environment, and will engage SFU and Indonesian universities in the joint study of common global problems. The development of a new kind of applied anthropology can also be of great environmental and cultural value to the societies surrounding the university in West Papua, and link them more closely with the University, with which they have had only a distant relation for a long time.

This project was an innovation in a university that prides itself on being innovative. In doing so, it lays the way for similar innovations if the opportunity arises. It has established at SFU a credible capacity for management of such projects. The project is not unique in reaching out beyond the confines of the University: the tradition of training young scientists as teachers and researchers has been established at SFU for many years.

Recommendations

Our recommendations are fully explained in Chapter 14: They are grouped into those related to SFU Policy (1-5), to project management (6-9) and those related to partnerships with Eastern Indonesia.

1. Revisit the SFU Policy on International Activities with an eye to grouping its values and objectives in logical groups, possibly in the way it is done in this Report.
2. Discuss the principle of ‘minimal impairment’ and see how it applies to the Policy, particularly as a tool for SCIA to appraise projects planned for societies in conflict.
Develop a position paper on implementation of the policy, based on University experience, particularly in the EIUDP. Circulate a draft to experts, and then circulate a subsequent draft more widely for community discussion.
3. Study a change in the policy to extend safety to ‘participants’ from ‘personnel,’ as is currently provided.
4. Continue to use extensive methods of consultation about projects, and try to establish a dialogue about international activities (involving methods like forums and advisory committees). Could the Centre for Dialogue be used for the purpose?
5. Sort out the respective responsibilities of project advisory committees with respect to SCIA and/or the VP Academic. This could be done by the reconsideration of 2.0 in the SFU Policy (policy purpose) and 4.0 (assessment guidelines). An effective balance of advice and management functions should be found. Advisory committees should have adequate arm’s-length faculty representation, in addition to ex-officio representation. SCIA should consider appointing one of its members to serve as liaison on project advisory committees.
6. In the context of international projects, SFU should make optimum use of existing arrangements so that project participants can make a progressive transition toward qualification for graduate study (e.g. post-baccalaureate diploma, special student status, and qualifying status).
7. SCIA should encourage and ensure that instructors and supervisors who work closely with students involved in international development projects ascertain that the research methods and technologies used are appropriate to the socio-economic conditions facing students on their return home.
8. In international projects where SCIA mandates a policy or process that is also new to SFU (eg developing environmental sciences, promoting women in

science and technology), SCIA should consider whether such a mandate could compromise other objectives of the project. SCIA should also address possible perceptions of the participant-recipients with respect to objectives that SFU itself is only beginning to implement.

10. Find ways to continue SFU's connection with eastern Indonesia – an annual event at SFU, and an annual event in eastern Indonesia (among the EIUDP universities). Continue to encourage basic science links between younger Fellows and SFU on an annual basis, build on the emphasis on sustainable development in the sciences.
11. Encourage and facilitate reflection on and analysis of the history and lessons of the EIUDP, including published historical narratives by key managers and participants from Indonesia and Canada, a symposium of reflections involving participants and observers who conduct research on such projects, and a dissertation on the history and evolution of EIUDP, perhaps by Special Arrangements.



Chemistry laboratory in a sugar refinery, Java, 1924



Students with microscopes, Eastern Indonesia, 1989



Workshop participants in the field, 1989



English Language Training Centre, Manado, 2000



Biology laboratory in UNCEN, Jayapura, 2000

2 Acknowledgments

We are most grateful for the time and patience given to us by all the persons listed in the “List of Persons Consulted” [*see Chapter 5*]. This list includes people who had never met any of us before, as well as some we have known for a long time. We were selected for this Review Committee because we had little contact with the EIUDP, so this necessarily imposed a burden upon the project staff and participants who had to inform us of many matters that are routine to them. We thank in particular Noory Meghji and Mary Hehn. For logistical support in Indonesia, we relied upon the long experience of the Jakarta office of the EIUDP (particularly Ivonne Rawis, Maya Marlani, and Suwandi). To keep an arm’s length with respect to a person so well known in Indonesia as Chris Dagg is not easy, but he has from the beginning recognized the appropriate relation of the Review and the Project, while providing us with valuable logistical advice. We also thank Denise Dallaire of the Financial Office, SFU. Our skillful interpreters were David Lotulung in Manado, Syahir Mappe in Kendari, and Pieter Upessy in Jayapura. Our Indonesian hosts were attentive and flexible, proving again that their reputation for hospitality is well founded. Their thoughtful observations were invaluable to the Review, and we could not have achieved what we have without their insight, for which we are grateful. Given that there have been hundreds of people involved in this project, conversations were possible with only a fraction of them. We have taken pains to meet and hear the views of a wide range of people. We sometimes challenged and probed. If anyone is personally diminished by anything said here, it is not intended by us, and we apologize. Though we have also benefited greatly from the thoughtful comments of numerous readers of an earlier version of this report, errors that remain in the text are our responsibility.

3 SCIA's Instructions to the Committee to Review the Eastern Indonesia Universities Development Project: The Approach and Method of the Review Committee

Simon Fraser University has been managing the CIDA-funded Eastern Indonesia Universities Development Project since its inception in 1987, acting as the Canadian Executing Agency. This Review Committee was asked to report to the Senate of SFU regarding the EIUDP. In order to benefit from information and discussions generated by a CIDA evaluation undertaken by Salasan Associates, this Review Committee was to work at the same time as the final CIDA evaluation of the project. Senate approved this Review in 1998, and defined its terms of reference on 6 April 2000. SFU instructed the Review Committee to fulfill three purposes: 1) to determine what academic benefits SFU has accrued as a result of the EIUDP; 2) to see if SFU's Policy on International Activities has been adhered to by the EIUDP; 3) to see if the stated goals of the EIUDP have been met with respect to SFU's interests and values.

The Senate Committee on International Activities, chaired by the Vice President, Academic of the University, further defined the work of this Review Committee on 26 April 2000 following Senate's approval of a motion to conduct the EIUDP Review. The Committee was asked to consult widely with individuals and groups, in Canada as well as Indonesia but also in Indonesia; it was also to Review project documentation. The Review Committee's membership was approved by the Senate Committee on International Activities, and the Senate Committee on Agenda and Rules.

The approach of the Committee was first to plan its response to these instructions in consultation with University and EIUDP officials and staff. Robert Anderson attended the evaluation planning meetings in mid-June in Makassar, Indonesia where he first met many of the people consulted in this Review. Indonesian partners in the EIUDP were introduced to the idea of a concurrent CIDA Evaluation and SFU Review. In July and August, the

Committee met with a number of people at SFU about the project. Between 22 August and 10 September, Lorena Jara and Robert Anderson visited the EIUDP universities in Indonesia, omitting only the Ambon campus that was burned and looted in July 2000, and Manokwari, for logistical reasons. They managed to meet some people from Ambon in other cities. The Committee had group meetings, tours of laboratories and language centres, and individual discussions about all aspects of EIUDP. Some of these discussions were translated/interpreted from Bahasa Indonesian to English, and they occurred at both the highest and lowest levels in the universities. Though John Chant was unable to accompany Anderson and Jara, he was active in the discussions in Canada. The names of all the people we consulted during the Review are listed in Chapter 5. The Committee emphasized our role as a Review, as distinct from an Evaluation, explaining that our responsibility lies in understanding how SFU had discharged its responsibilities, and what lessons should be conveyed to the Senate for future international activities.

The Structure of the Report

We have enlarged our purview under 3) above to include values as well as interests. Early discussions about our mandate with SCIA revealed that it would not be easy to meet our charge by reference to SFU's interests independently of its declared values. It would be presumptuous for a special purpose Review Committee to judge and define the University's interests. That said, the tasks assigned to the Committee are clearly not independent from each other. There is a very strong interplay among all of them. The international policy referred to under 2) above itself reflects SFU's interests and values. Academic benefits can be judged only from the perspective of these interests and values. The achievement of the project's stated goals in Indonesia is deeply related to SFU's traditions and mission. This interplay among our tasks inhibits us from dealing with them in isolation in our concluding chapter. We have attempted to narrow the scope of our conclusions in the Executive Summary.

In the sense of the foregoing, our report must be read as a whole. The background and chronology convey real concerns with the project and its environment, and also the difficulties and dilemmas with which the project grappled. Still, some chapters of our report are identified more closely with some of the goals than others. Objective 1) above is largely described in Chapter 12. The adherence to SFU's policy on international activities is dealt with in several places. Indeed, the policy itself did not exist at the inception of the project. The co-evolution of the project and the policy is discussed in chapter 8, as are the objections raised in its early stages. The Report returns in Chapter 14 to assess the project from the perspective of the international activities policy. The project itself evolved and is still evolving. Our description of new initiatives in Chapter 10 thus is essential to understanding the project's success. Chapter 11 and Appendices B and F provide further basis for drawing conclusions, particularly with respect to faculty and student enrichment, faculty research links, and broadened research horizons. In many respects, those best placed to judge the value of the project's achievements are Indonesian participants and observers, and their views are discussed in Chapter 13. What's more, the SFU policy itself enjoins us to systematically consider the Indonesian context of the project, which is why Chapter 13 is lengthy.

We have **searched for scholarly publications** on the subjects of this report, namely university development, the relation of science and scientific institutions and their surrounding societies in Indonesia, basic science and sustainable development in Indonesia. There is surprisingly little published (in English) about the basic sciences in Indonesia, or the recent interaction between Indonesian scientists and universities with foreign institutions. Nor is there publication on working conditions inside Indonesian universities [see References]. Pyenson's *Empire of Reason* examines one hundred years of Dutch science and scientists (particularly astronomers, vulcanologists, botanists, radiologists, geophysicists) and their relationship with scientific institutions such as the Institute of Technology at Bandung, but its story ends in 1940. The Kentucky project to develop the sciences (particularly agriculture) at Bogor and Bandung began in 1955 and ended in 1966, resulting in Beers' 1971 book about Indonesian and American perceptions of the operations and

effectiveness of the project. We do not yet have a study of scientists and their institutions in relation to dissent in Indonesia, such as Miller's 1996 work on Chinese scientists after the mid-1970s. The writing of anthropologist Tania Murray Li (1999, 2000) about Sulawesi, helped us to understand how community, ethnicity, land and identity are deployed in the struggle over development. But we do not have for the EIUDP region a recent regional study of history, politics, and society of the type done by Audrey Kahin, *Rebellion to Integration: West Sumatra and the Indonesian Polity, 1926-1998*. Although there certainly are photocopied reports on aspects of the EIUDP as a project, and there may be dissertations, answers to our enquiry through e-mail networks of scholars in Indonesian Studies and Southeast Asian Studies confirm that there is relatively little available to a Review Committee such as this one. This is both a surprise and a disappointment.

4 Profiles of Members of the Committee

Robert Anderson is Professor of Communication in the Faculty of Applied Sciences, and has studied/worked Asia since 1961. He has been a faculty member at SFU since 1977. He has studied, among other things, rice cultivation systems and tropical forestry. He is also an historian of scientific institutions in modern India, and other parts of Asia. He also has studied communication and development under military governments. He has reviewed numerous international research and development projects in Thailand, Bangladesh, Jamaica and the Caribbean, China, and the Philippines. Since 1972 he has been involved in the development of NGOs in Canada and Asia, and is responsible, with others, for the establishment of the legal aid associations for human rights in Bangladesh. At SFU he was responsible, with others, for the creation of the Community Economic Development Centre and was its first Director. Anderson also was Chair of the President's Advisory Committee on the China Council for International Cooperation on Environment and Development He was trained as an anthropologist at the University of Chicago. [contact "randerso@sfu.ca"]

John Chant is Professor of Economics in the Faculty of Arts, and previously taught at Duke University, Queen's University, and Carleton University. He was Chair of the Department of Economics from 1990 to 1995 and is serving in this position again in 2000/01. His interests are focused on financial systems and their regulation. He has participated in various reviews of financial regulation, most recently as Research Director of the Canadian Government's Task Force on the Future of the Financial Services Sector, and Director of the Financial Markets group at the Economic Council of Canada. He has been a resident scholar at the Bank of Canada. His interest in the financial sector has involved him in South East

Asia, including Indonesia from 1986. He is also doing research on the economics of universities and higher education in Canada. He received his PhD in economics at Duke University. [contact "chant@sfu.ca"]

Ms Lorena Jara is a Graduate Student in the School of Communication, Faculty of Applied Sciences. She is a member of the Senate Committee on International Activities. She has a BA from the Faculty of Applied Sciences at SFU, with a double major in Communication and Latin American Studies. She received the SFU Graduate Fellowship and the SFU Open Undergraduate Scholarship. Her focus of study is the relationship between international communication and economic development policy. She worked as a policy analyst for the BC Government's Contract Reform Project Team, has extensive experience in policy development and community outreach, and worked as a community radio producer. She participated in community development projects for women shantytown dwellers in Mexico and in Chile. [contact "jara@sfu.ca"]

5 List of Persons Consulted by the Review Committee

[note: the names listed here are without degrees etc. for reasons of brevity]

In Canada

Ian Andrews, Faculty of Education, SFU

Nello Angerilli Director of Cooperative Education, SFU

Richard Barichello, Department of Economics, UBC

John Borden, Department of Biosciences, SFU

Harry Cummings, Professor of Rural Planning and Development, University of Guelph

Chris Dagg, Director, EIUDP, SFU

Larry Dill Professor of Bioscience, SFU

Jon Driver, Dean of Graduate Studies, SFU

Mary Hehn, Financial & Administrative Officer, EIUDP, SFU

Michael Howard, Department of Sociology & Anthropology, SFU

Colin Jones, former Dean of Science and Executive Director, Office of International Relations

Michael Kenny, Former Chair, Department of Sociology & Anthropology, SFU

Doreen Kimura, Department of Psychology, SFU

Jan Kwak, EIUDP advisor in Ambon, (Dalhousie University)

Joe Knockaert, Office of International Cooperation, SFU

Penny Lacouture, Department of Chemistry, Capilano College, North Vancouver
Audrey Leatima, EIUDP & WIST Fellow, SFU [UNPATTI]
Jack Loughton, CIDA evaluation of EIUDP, Salasan Associates
Gregg Macdonald, Executive Director, Office of President, SFU
Noory Meghji, Secretary to the Director, EIUDP, SFU
John Moore, EIUDP Advisor in Manokwari & Jayapura
Jock Munro, VP Academic, SFU
Tom O'Shea, Faculty of Education, EIUDP Advisory Committee member, SFU
James Rahe, Professor of Bioscience, SFU
Colin Rankin, CIDA evaluation of EIUDP, Salasan Associates
Klaus Rieckoff, Professor Emeritus, Physics, SFU
Svend Robinson, Member of Parliament, Burnaby-Douglas
Roger Ross, Training Coordinator, EIUDP, SFU
Robert Russell, Professor of Mathematics, SFU
William Saywell, former President of SFU
Leo Siregar, EIUDP Fellow in Anthropology, UNCEN
Michael Smith, Professor of Biological Sciences, SFU
Sam Smith, CIDA evaluation of EIUDP, Salasan
Lalit Srivastava, Professor Emeritus, Biological Sciences, SFU
Rosye Tanjung, EIUDP Fellow & WIST participant, SFU [UNCEN]
Cyril Thong, Department of Biological Sciences, SFU
Audrey (Nanne) Tirajoh, EIUDP & WIST Fellow, SFU [UNSRAT]
John Webster, Biological Sciences & Chair of Advisory Committee, EIUDP, SFU
Larry Weldon, Professor of Mathematics & Statistics, SFU
Mark Winston, Professor of Biological Sciences, SFU
Jerry Zaslove, Institute for the Humanities, SFU

In Indonesia

[note: all Fellows we met were currently working as Dosen, instructors in their discipline, in the university listed by their name. Those Fellows in Canada with whom we communicated are listed in terms of the university where they are presently studying. Some of the individuals consulted have other roles and we have listed those which are most closely related to the project. The site of the discussion is listed in brackets if it differed from the person's normal address.]

La Aba, EIUDP Fellow in Physics, UNHALU, Kendari

Wirdhana Ahmad, EIUDP Fellow in Biology, UNHALU, Kendari

Isaac Ajomi, Vice Rector Academic, UNCEN, Jayapura

Ansjaar, Professor of Mathematics. Institute of Technology, Bandung

Silas Anto, Dean of Education, UNCEN, Jayapura

Armid, EIUDP Fellow in Chemistry, UNHALU, Kendari

Verena Augustini, Vice Dean, FMIPA, UNCEN, Jayapura

Siegfried Berhimpon, Dean, Fisheries & Marine Science, UNSRAT, Manado

Satryo S. Brodjonegoro, Director-General, DIKTI, Ministry of National Education, Jakarta

Mochtar Buchori, retired Professor of Psychology, advisor to Megawati Sukaernoputri

Iqbal Djawad, Director of Marine & Fisheries Sciences Marine Station, UNHAS, Makassar

Fahmiati, EIUDP Fellow in Chemistry, UNHALU, Kendari

Radi A. Gany, Rector UNHAS, Makassar

Elizabeth Holle, EIUDP research grant recipient, and WIST coordinator UNCEN, Jayapura

Darwin Ismail, EIUDP Fellow in Chemistry, UNHALU, Kendari

Rimba Hamid, EIUDP Fellow in Chemistry, UNHALU, Kendari

Stephen Hill, Director & Representative of UNESCO, Jakarta

Noor Jalaluddin, Dean, Faculty of Mathematical & Natural Sciences, UNHAS, Makassar

Ronaldo Kho, EIUDP research grant recipient, UNCEN, Jayapura

Karlina Leksono, Professor of Philosophy, University of Jakarta

Betty Leuhery, Dean of FMIPA, UNPATTI, Ambon [in Manado]

Alowisya Liem, EIUDP Fellow in Chemistry, UNCEN, Jayapura

Asrun Lio, Head of UPT Bahasa Language Centre, UNHALU, Kendari
Abdul Manan, Head of Environmental Study Centre, UNHALU, Kendari
Geraldine Manoppo-W, Dean, Letters, and Former Head of ELTC, UNSRAT, Manado
Feky Mantiri, EIUDP Fellow in Molecular Biology, UNSRAT, Manado
Maulidiyah, EIUDP Fellow in Chemistry, UNHALU, Kendari
Felix Monharapon, EIUDP Fellow in Biology, UNPATTI, Ambon [in Manado]
H.B. Moningka, former Vice Rector Academic and EIUDP coordinator, UNSRAT, Manado
Muntaha, Vice-Dean Academic, Social & Political Sciences, UNHALU, Kendari
Julian Murray, CIDA representative and Head of Aid, Canadian Embassy, Jakarta
Nasaruddin, EIUDP Fellow in Biology, UNHALU, Kendari
Nohong, EIUDP Fellow in Chemistry, UNHALU
Patrice North, former coordinator of English Language training in EIUDP, Jakarta [in Makassar]
Oetomo, former Deputy-Director General, DIKTI, Jakarta
Eva Papilaya, EIUDP Fellow in Physics, UNCEN, Jayapura
Jopie Paruntu, Rector UNSRAT, Manado
Henny L. Rampe, EIUDP Fellow in Physiology, UNPATTI, Ambon [in Makassar]
Agus Renyoet, Fellow in Biology, UNCEN, Jayapura
Johan Rombang, EIUDP Fellow and Vice-Dean, FMIPA, UNSRAT, Manado
Saartje Rondonuwu, Dean, FMIPA, UNSRAT, Manado
Hadijah Sabarwati, EIUDP Fellow in Chemistry, UNHALU, Kendari
Robert Sembiring, Institute of Technology, Bandung (conducted Mid-Term Review Phase II)
Saparinah Sadli, Deputy Director of the Human Rights Commission, Jakarta
Naffi Sanggenafa, Vice Dean of Faculty of Social Sciences, UNCEN, Jayapura
Asrui Sani, EIUDP Fellow in Mathematics, UNHALU, Kendari
Adam Sebastien, EIUDP Fellow in Education, UNCEN, Jayapura
Dantie T. Sembel, Dean of Agriculture and former EIUDP coordinator, UNSRAT, Makassar
Peter Setiniapessy, former Vice Rector, UNPATTI, Ambon
J.W. Siagian, Vice Rector, Academic, UNSRAT, Manado
Sudarmo, EIUDP Fellow in Physics, UNCEN, Jayapura
Nana Sumarna, EIUDP Fellow in Chemistry, UNHALU, Kendari

Ken Sundquist, Canadian Ambassador to Indonesia, Jakarta
Supiyanto, EIUDP Fellow in Mathematics, UNCEN, Jayapura
Suwito, EIUDP Fellow in Chemistry, UNCEN, Jayapura
Alam Syah, Dean, FMIPA, UNHALU, Kendari
Tasman Taewa, Vice-Dean Administrative, Social & Political Sciences, UNHALU, Kendari
Herlina D. Tanguman, EIUDP Fellow in Organic Chemistry, UNPATTI, Ambon [in Manado]
Arifin Wasaraka, Vice-Dean of FMPIA, UNCEN, Jayapura
W.J. Waworotoe, former Rector, UNSRAT, Manado
Frans Wospakrik, Rector & Dean of FMIPA, UNCEN, Jayapura
Alibas Yusuf, Dean Faculty of Social and Political Sciences, UNHALU, Kendari

6 List of Terms and Acronyms

ADB	Asian Development Bank
BAPPENAS	National Development Planning Board
Basic Science	Term used in the project to connote sciences which are at the base of many fields, and embodied in the English name of the Faculties developed through the EIUDP, 'mathematics and natural science.'
DIKTI	Department of Higher Education, Ministry of National Education
Dosen	The title of most lecturers, until they become professor
ELTC	English Language Training Centre
ESD	Education for sustainable development
Exact science	In Indonesian "eksakta" (probably of Dutch origin) referred to fundamental or pure science, as distinct from the 'social sciences': high school students must chose between "eksakta" (and arts/social sciences) in first year of high school.
FMIPA	Faculty of Mathematical & Natural Sciences (translated from Indonesian "Fakultas Matematika dan Ilmu Pengetahuan Alam "FMIPA").
HB	Hibah Bersaing (Competitive Grants)
ICHRDD	International Centre for Human Rights and Democratic Development
IPB	Institut Pertanian Bogor (Bogor Institute of Agriculture)
ITB	Institut Teknologi Bandung (Bandung Institute of Technology)
LBH	Lembaga Bantuan Hukum (Legal Aid Foundation)
Magang	Being attached to a university for one semester to take a scheduled course
MU	Member University - A university in eastern Indonesia that is the main focus of the EIUDP.
Obor	"Torch" - The International Book Institute
OLA	Open Learning Agency
RU	Resource University - A university in Indonesia that contributes knowledge/skills to the EIUDP.
PACIC	President's Advisory Committee on International Activities, SFU
SCIA	Senate Committee on International Activities, SFU
SFU	Simon Fraser University, Burnaby
UNCEN	Universitas Cendrawasi, Jayapura

UNHAS	Universitas Hasanuddin, Makassar
UNHALU	Universitas Haluoleo, Kendari
UNRAM	Universitas Masaram
UNSRAT	Universitas Sam Ratulangi, Manado
UNPATTI	Universitas Pattimura, Ambon
UPT	“Technical service units” in Indonesian universities that are administered by a Rector, and not by a Faculty Dean; used alone, or in conjunction, as in “UPT Bahasa” (language unit)
URGE	University Research and Graduate Education (Project)
WIST	Women in Science and Technology

7 Chronology of Significant Events in EIUDP, 1984-2000

		SFU and Project History	Project Environment
1985	<ul style="list-style-type: none"> • SFU faculty already working in distance education project in Jakarta • President's Advisory Committee on International Activities (PACIC) established, with representation from all faculties 	<ul style="list-style-type: none"> • DIKTI and BAPPENAS ask CIDA for assistance with higher education component of 5-year plan • CIDA carries out Human Resource Development study within Country Program Review 	
1986	<ul style="list-style-type: none"> • Indonesian university Rectors visit SFU, among other universities in Canada • Meeting in Vancouver coinciding with Expo 86, announces Design Mission with SFU as the executing agency • Design Mission team from SFU together with CIDA officials and consultants tour all eastern Indonesian universities. 	<ul style="list-style-type: none"> • Joint statement of CIDA and Government of Indonesia sets terms of reference for design of project directed toward Eastern Indonesian universities to be focused largely on Sulawesi (where CIDA concentrated many of its projects, including regional development studies carried out by Canadian university projects). 	
1987	<ul style="list-style-type: none"> • PACIC recommends that the President accept EIUDP • Design mission to Indonesia, decision taken to include universities in Manado, Ambon, and Irian Jaya (Manokwari and Jayapura campuses) in terms of laboratories, English-language, Anthropology, libraries, teaching capacity, etc. • Two resource universities designated at this time: Gajah Mada and Bogor Agricultural Institute • Contribution Agreement signed in Vancouver with a grant of \$22m • PACIC disbanded, replaced by committee of Vice President Academic plus Deans for general international matters and the 		

	EUIDP Advisory Committee (chaired by the VP Academic) for project supervision.	
1988	<ul style="list-style-type: none"> First Canadian project advisors arrive in Indonesia UNHAS, Makassar is included as a resource university Initial mission for women in development 	
1989	<ul style="list-style-type: none"> Anthropologist completes 'Review of needs' with UNCEN, and SFU anthropologist visits UNCEN to make the first link with SFU anthropologists. 	
1990	<ul style="list-style-type: none"> WIST policy for EIUDP approved by CIDA 	<ul style="list-style-type: none"> Guelph University established a policy for involvement in international activities
1991		<ul style="list-style-type: none"> November - 'Dili cemetery massacre' by Indonesian troops in East Timor Immediate suspension by CIDA of 3 projects in final approval stage in Indonesia, other project planning is stalled. Indonesia suspends work of Netherlands official aid agency.
1992	<ul style="list-style-type: none"> Governor of Irian Jaya approves program to select candidates for science training from interior communities so as to increase Irianese participation in science; this parallels similar program in Sulawesi SCIA is created when Board of Governors adopts "Policy on International Activities" 	
1993	<ul style="list-style-type: none"> SFU discusses extension of 	<ul style="list-style-type: none"> Commencement of external

	<p>EIUDP for Phase II; 30 written submissions by people/groups of whom 14 made live presentations. SCIA approves by vote the extension for Phase II on specific conditions.</p> <ul style="list-style-type: none"> • Inception Mission for Phase II • End of EIUDP Phase I financing, interim financing required for six months • Memorandum of Understanding, and Contribution Agreement for Phase II signed • Indonesian participants in EIUDP re-define 'development education' as 'education for Sustainable development' • Establishment of 'Faculty Human Rights Group' at SFU 	<p>consultants' study of Guelph University project</p> <ul style="list-style-type: none"> • Meeting in Jakarta to prepare for MoU, involving DIKTI, Bappenas, Cabinet Secretariat, Foreign Ministry; officials discuss draft work plan, which refers to Canadian concern for human rights. Government of Indonesia commits to supporting 20% of project costs.
1994	<ul style="list-style-type: none"> • Phase II begins, with a grant of \$30m • University of Indonesia becomes resource university for anthropology program • Institute of Technology Bandung becomes resource university • Design Mission for 'education for sustainable development' in EIUDP, and local coordinators appointed. 	<ul style="list-style-type: none"> • Guelph's project team begins to leave Sulawesi following circulation of external consultants report; Guelph's SCIA does not recommend termination.
1995		<ul style="list-style-type: none"> • DIKTI issues criteria for formation of FMIPAs in Member Universities
1996	<ul style="list-style-type: none"> • Implementation of WIST graduate fellowship • ESD curricula incorporated into first year science courses 	<ul style="list-style-type: none"> • Team Canada visit led by Canadian Prime Minister to Indonesia
1997	<ul style="list-style-type: none"> • Forum on Human Rights in 	<ul style="list-style-type: none"> • Sharpening of the economic crisis

	<p>Indonesia held at SFU by EIUDP and Institute of Humanities</p> <ul style="list-style-type: none"> • All ESD curricula revised 	<ul style="list-style-type: none"> • in Asia, and in Indonesian currency and banking • Flowering of the Bre-X gold-mining fraud in Canada and Indonesia
1998	<ul style="list-style-type: none"> • Commencement of EIUDP discussions to adjust budget and timing of the following years • Formal approval by DIKTI of the change to Faculties of Mathematics & Natural Science from Basic Science Units, in four EIUDP member universities • SCIA & Senate approve current SFU Policy on International Activities • SCIA approves formation of EIUDP Review Committee 	<ul style="list-style-type: none"> • Resignation of President Suharto, replaced by BJ Habibie
1999	<ul style="list-style-type: none"> • Nine Fellows identified as having remained in Canada to work for degrees long after their EIUDP entitlement expired 	<ul style="list-style-type: none"> • Resignation of BJ Habibie, replaced by Abdurrahman Wahid • Social unrest in Ambon, East Timor becomes independent
2000	<ul style="list-style-type: none"> • Beginning of final CIDA evaluation and SFU Review • Project addresses question of status of EIUDP Fellows from destroyed Ambon university • Appointment of EIUDP Review Committee 	<ul style="list-style-type: none"> • Continuing devaluation of rupiah • Trials of political leaders • Enquiries into military conduct • Destruction of Ambon campus

8 Co-evolution of SFU Policies and EIUDP Procedures

When the EIUDP was planned, there was no SCIA and the Board of Governors did not have a specific policy on international activities and projects. There were numerous international projects initiated and managed by individual faculty members, and these were examined with respect to university policies and practices through the President's Advisory Committee on International Activities from 1985 onwards. But the University had no project of this scale by 1986-87, and therefore policies in the University and procedures in the EIUDP evolved together, through mutual influence. This chapter examines that mutual influence, and addresses the criticisms made of the EIUDP in and outside SFU.

SCIA was formed in 1992 to replace and formalize the earlier advisory committees. When the first Policy on International Activities was approved by the Board of Governors, EIUDP had been operating for about four years. The University of Guelph had already adopted a similar policy and created SCIA in 1990, and the external Review of Guelph's project had begun in 1992. Guelph's experience was carefully considered by SFU long before the termination of the Guelph project in 1994. Criticism of the EIUDP was also expressed at SFU well before the creation of SFU's policy, and before the hearings on the transition to Phase II. The values and objectives stated in the first SFU 1992 policy focused on how to assess the desirability of entering into an international activity agreement, in particular the human rights considerations. A dialogue was thus established between members of SCIA and the EIUDP, as there had been a dialogue between members of PACIC and the EIUDP. Both criticism and support of the project was expressed in or to SCIA beginning in 1992, during the project's first phase. Some members of SCIA took a personal interest in the EIUDP project.

As the Chronology above shows, another Canadian project, also with involvement in planning in Sulawesi, was reviewed for the Senate of the University of Guelph in Ontario in 1992-1993. That Review, and the University of Guelph project team's subsequent departure

from Indonesia in late 1993, were influential in planning the start of Phase II of the EIUDP, although the conditions were established for the EIUDP's renewal six month's before the Guelph Review was completed. Criticism of EIUDP made at this stage is examined below. In order to decide whether Senate should recommend approval of the second phase of the EIUDP, SCIA held a vote and the result was described, depending on who we talked to, as divided or unanimous. The final decision was to recommend Phase II to the President on seven conditions and recommendations:

- 1) that 'education for sustainable development' be made a central component in all EIUDP activities, and that Project documents make explicit reference to this fact;
- 2) that EIUDP's annual budgets designate sufficient funds to support the 'education for sustainable development' component;
- 3) that the EIUDP include specific provision for the participation of non-government organizations in project activities;
- 4) that a Coordinator be appointed for 'education for sustainable development' in EIUDP, and this person provide a detailed annual report to SCIA;
- 5) that SCIA would revisit its recommendation of Phase II if the report of the Coordinator for education for sustainable development is considered by SCIA to reflect unsatisfactory progress;
- 6) that SFU's involvement in the project should include greater participation from other disciplines than science across the university; and
- 7) that the entire text of SCIA's recommendations should be broadly communicated with the campus community.

The most recent version of SFU's policy [*see Appendix A*] may be said, then, to closely reflect the context of the EIUDP, both in Indonesia and in Canada, and which created an expectation for a framework for organizational conditions in new projects. The policy's role has become particularly significant over time because of the expansion of international entrepreneurial activities in some parts of the university. By this time Phase II had been running for four years. Changes approved by Senate in 1998 to the earlier version were

minimal, except for Clause 6.3.2 which directs SCIA “to ensure broad consultation prior to the final approval of any proposal covered by this policy for which human rights considerations are likely to be a concern.” Planning of Phase II of EIUDP was very responsive to the debate about EIUDP in SFU, and when the SFU policy was most recently amended in 1998, new initiatives underway in EIUDP reflected the University community’s concerns. It is in this sense that we say that there has been a co-evolution of SCIA’s interpretation of SFU’s policy and EIUDP’s procedures and practices. The policy defines the accountability that must be met by those carrying out international activities, upholding the University’s values and ensuring a balance of benefits to the community. They must also be accountable to groups outside the University with whom they work in these activities, upholding their values and ensuring that they, too, receive a balance of benefits. The EUIDP had a third form of accountability; it had to be accountable to Canadians for upholding their values and for fulfilling the terms of its obligations to CIDA.

In keeping with this view of accountability, the Review Committee elected to group the values and principles of accountability expressed in SFU policy documents into three broad groups.

1. The **first group** includes values and principles which are most strongly and historically associated with **the culture and conduct of university life**. These include the University’s mission and academic standards, academic freedom, ethical conduct in research, protecting the safety of project personnel, ensuring equitable participation of ethnic minorities and women in the project, and ‘taking the cultural context into account’ when upholding academic freedom.
2. The **second group** concerns **legal rights and human rights**, within and outside the University. These include upholding legal rights in international law, mitigating the violation of human rights, and assisting participants to make informed judgments about human rights. There are also three injunctions for international activities – that projects not be the instrument of human rights abuse, not further penalize people who live under

an abusive regime by denial of access to assistance, and not have a close connection with an agency known to abuse human rights.

3. The third group concerns relations between a project and the environment outside the University, namely that benefits should accrue to local people and should advance partnerships with them, that projects should contribute to the dignity of local people, and that projects should have a neutral or beneficial effect on the environment.

SFU's prescriptions for international activities reflect the "Values and Commitments" arrived at through numerous consultations, conducted by the President Jack Blaney, Professor Nancy Olewiler, and Gregg Macdonald at SFU in 1999-2000, and which the Board of Governors adopted in 2000.

We are an open, inclusive university whose foundation is intellectual and academic freedom. Our scholarship unites teaching and research: we celebrate discovery, diversity, and dialogue. Our students and communities can expect teaching that is personal and learning opportunities that are lifelong. We champion the liberal arts and sciences, and pioneering interdisciplinary and professional programs. We are a university where risks can be taken and bold initiatives embraced. Upon these foundations, we will engage all our communities in building a robust and ethical society.

In addition to the values associated with the culture and conduct of university life, the prescriptions in the SFU policy also include values and principles that emerge from Canadian social values and policy articulated over the past 25 years, such as actively fostering participation of women and ethnic minorities in SFU's international science projects. There is a consensus within SFU that these values are important, but it is also a key feature of university life that not everyone necessarily believes in or adheres to all them. The university operates on the assumption that these values exist in a consensual form, may not be universally accepted, or may be accepted with caveats. Indeed, there are members of Canadian universities (including SFU) who take issue with one or another of the values included in this group. Taking issue, seeking to persuade others, establishing recognition of

alternative ways of thinking are essential to the University, in terms of the first group of values above.

For example, an SFU professor was awarded a prize for controversy by the University during the Review of the EIUDP, an award specifically for her expression of disagreement with a value and policy embodied in the EIUDP – namely the deliberate promotion of favourable conditions for women in science. Professor Doreen Kimura was awarded the Sterling Prize for Controversy in 2000 for her work on employment equity initiatives in science. Participants in EIUDP from Indonesia would have been made aware of her views and exposed to the debates about the prize had they visited SFU in 2000. Professor Kimura says that engaging in social engineering to balance sex ratios in science may result in discrimination. If the EIUDP used funds to create favourable conditions for women to enable them to compete, she said, or to remove unfair hurdles to women's participation in science, that is reasonable in her view. But she opposes selecting people for appointments on any criteria other than merit.¹

It is a public expectation that the University show leadership in the achievement of many of these values, and that other public institutions should join in pursuing them. For example, the commitment in the University to create favourable conditions for women in science coincided and resonated with CIDA's policy favouring women in development in the 1980s. From the perspective of Indonesia, these two commitments (CIDA's and SFU's) were merged, and were considered to be both university values and general Canadian values. While SFU and CIDA emphasized this objective within eastern Indonesian universities, CIDA also promoted the role of women in development in other projects as an expression of Canadian values. In Canada, universities are not expected to be the only site for the achievement of these objectives, but are expected to share the responsibility with other institutions. In this sense, values outlined in the second and third groups above are more widely dispersed than those in the first group. The Review Committee thinks that the ability

¹ D. Kimura, "Summary of presentation at the ceremony awarding the Sterling Prize: Biological constraints on parity between the sexes." *Psynopsis*, Newsletter of Canadian Psychological Association, 2000.

of the University and the EIUDP to make these SFU values and principles operational would not be equal in each case, some of them being more familiar (and/or more intrinsic) to the University's mission than others. Nevertheless, these three groups of values, taken together, constitute a fair list of the expectations surrounding the EIUDP. But how they would be made operational, and when, was not specified.

EIUDP, Indonesia, and SFU Values

Evidence now available confirms that at the time of EIUDP's inception in 1986-87, there was corruption, coercion, and abuse of human rights in the government, the military, and the banking and business environment surrounding the universities. Large and wasteful public expenditures were made in the name of new technology, but the projects proved to have very limited utility. Budgets for military equipment were expanding, and official and unofficial military involvement in business and banking deepened. At that time, official and commercial loans were utilized for unstated purposes. Senior officials, including the President of the Republic himself, arguably knew about re-allocation and sequestering of funds, moving them from public to private purposes, sometimes in the name of "the benefit of the nation," sometimes for special initiatives. Important public appointments, and not only at the top, were made on the basis of personal loyalty and mutual opportunism. Opponents of this system, if they persisted or lost their protection, were treated harshly. Foreign agencies and institutions could not have been ignorant of these patterns. Although more evidence about the situation is now available, its outline was known in 1987. The system had enthusiasts, adherents, and opportunists, just as it had observers, resistors, victims, and exiles: in short, there was the full range of human responses to authoritarian power.²

² One can see how enthusiasts and opportunists worked together in the description of the Krakatau steel project, pp.112-13; telecommunication, the Palapa satellite project, and Satelindo, pp. 144-45; Gappri and the clove cigarette industry, pp. 153-57; IPTN aerospace project, pp. 86-89, in Adam Schwarz, *A Nation in Waiting: Indonesia's Search for Stability*. Boulder: Westview, 2000.

The extent to which this pattern of corruption and abuse was repeated within universities is not known.³ Observers of the period in which EIUDP began described the absence of political debate, the pressure for conformity, the uses of the 1978 Campus Normalisation Law to restrict student activity, and so on. But it is universally acknowledged that the centralization that ran the national university system was a mirror of the centralized system. Whether and how corruption, coercion and abuse occurred in universities at the time of the EIUDP's inception may be learned in the future. Individuals who met the Review Committee in Indonesia reminded us that the larger pattern was replicated in some parts of some universities, pointing to individuals or units in universities that engaged in it to their advantage. On one hand, we can say we have heard that, while there seems to have been an effective system of state surveillance in place in universities at the beginning of EIUDP, there is evidence that efforts were made to circumvent it. As one example, we cite the arrest in 1989 of three university students found in possession of a photocopy of a novel by Pramoedya Ananta Toer. Evidently a system of surveillance and censorship was in place, and evidently people were disobeying it. This is consistent with observations about universities in most authoritarian situations – people simply learn to read 'between the lines' and learn how to obtain alternate sources of information and thinking. There were protests against and contests with the system at many points during the evolution of the EIUDP.⁴

The Review Committee has, moreover, heard of acts of courage and commitment to high standards by people working in the Project, within the very environment just described. At every level of society, there were those who did not approve of or subscribe to the prevailing pattern, and found ways to express or uphold other standards, even in a compromised context. Canadian advisors and others appear to have understood the dilemma facing participants in EIUDP. Values and aspirations that would be familiar to members of a Canadian university were, in fact, not dead, and values expressed in SFU policies were latent

³ See discussion of interviews about negative conditions in universities with Gonowan Mohammed, December 1990; Kwik Kian Gie, January 1993 in Schwarz, 2000, pp. 236-37

⁴ Amnesty International, *Power and Impunity: Human rights under the New Order in Indonesia and East Timor*. New York, 1994.

in universities. They were like small boats harboured against a storm, still able to float. Thus a vision to build credible new Faculties of Mathematics and Natural Sciences (FMIPA) emerged in and resonated with other movements for change in universities in eastern Indonesia. Numerous individuals associated with EIUDP reminded us that their outlook and practice as scientists ran counter to state surveillance and censorship. For this, and other reasons, they were willing or determined to see the whole system change, and welcomed the changes in 1998. Some of them participated actively in the pressures for change, particularly for decentralization.

The Review Committee knows that with the beginning of the collapse of the 'New Order' about 1997, people in universities played a courageous and committed role in those changes. Students and faculty helped to express and realize long-concealed values. This collapse, however, affected the conditions in which universities had been doing business. The fluidity and uncertainty that characterized the period from 1997 to the present surely were reflected in the universities, and thus influenced the EIUDP, as will be shown in the section on Planning and Governance.

The Review Committee is aware that evidence may later come to light about patterns of corruption, coercion, and abuse of human rights, not only occurring in the past but also during the time while the Review Committee was working. There has been tragic and violent conflict in the case of East Timor in 1999, as well as in the island of Ambon in 2000 – the latter specifically a site of the EUIDP's work. An EIUDP doctoral student from Indonesia, Joyce Dangeubun, visiting her home region for research as an EIUDP Fellow, was murdered on a ferry en route to the Malukus in 1999; this was after having been specifically identified as a faculty member of the university on Ambon.⁵ The destruction of the university on Ambon (UNPATTI) occurred during the Review Committee's work.

On the island of Sulawesi and on West Papua, also sites of EIUDP-participating universities, there has been and continues to be conflict and struggle over resources,

⁵ For a complete account of this incident and EIUDP's response to it, see Appendix C.

opportunities, decision-making, and rights. The result of these conflicts is a large population of floating internally displaced people, so that by November 2000 the National Board of Social Welfare and Minister of Health and Social Welfare announced that there were 1,050,000 displaced people in Indonesia: 18,000 from the Maluku islands sheltering in West Papua, 220,000 Maluku islanders sheltering in their own region, and an unnamed number of thousands in the provinces of Sulawesi. This global figure includes displaced persons in West Timor, Aceh, and Kalimantan.⁶ It is a considerable increase over numbers released five months earlier.

The visible fault line for some of these conflicts has at times been religious affiliation, or 'local/outsider' distinctions. Universities themselves are the sites of this struggle. Moreover, differences between personnel in the university are used as 'fault lines' in internal struggles. EIUDP universities are located in societies composed of many different ethnic and linguistic groups, and these distinctions between people appeared sometimes to stand in for other distinctions which have less to do with ethnicity and more to do with occupation and education of parents, geographic location, religious affiliation, household wealth, etc. Even, for example, with respect to 'religious affiliation,' (speaking only of those classified in two major religious systems – Muslims and Christians), there are variations of Islam and Christianity in the societies surrounding these universities. Individuals also unite and marry across these boundaries.

Deciding which ethnic minorities needed assistance was (and is) different in each university of the EIUDP. For example, an EIUDP Fellow born outside Papua but who did his entire schooling in Papua and speaks local languages, is uncertain about his status and identity in Jayapura due to risk to his person. The risk of violence toward migrants now is high, in his opinion. But his consciousness, he says, "is more Irianese than anything else. I belong to both the outsider and insider groups, depending on who you ask." There is a long history of the mingling of peoples in Melanesia.⁷ The history of eastward migration from islands to the

⁶ Jakarta Post, 10 November 2000

⁷ Paul Sillitoe, *Social Change in Melanesia: Development and History*. Cambridge University Press, 2000.

west long predates the Government's transmigration policy; moved by poverty, pressures, and adventurous ambition. This pattern includes, but is not limited to, movement from Sulawesi to the Malukus, and from the Malukus to Papua. Within Papua also, there is movement and mingling. The SFU Policy provides no guidance on the question, "minority with respect to whom?" Making the policy operational in the complex Indonesian environment therefore required careful study, reflection, consultation with others, and great tact and fortunate timing.

Objections to the EIUDP

Three kinds of principled objections have been expressed by EIUDP's critics, and these were referred to both explicitly or implicitly in our consultations and documents. Both kinds of critique conclude with a "no" answer with reference to the question: "Should SFU have engaged in the EIUDP?" Some critics concluded that SFU should not have engaged in the EIUDP beginning in 1986-87, due to the conditions in the country at the time. Some said that it should not have been renewed from Phase I to Phase II. Other critics would have allowed the EIUDP if certain additional conditions had been met at that time. About a year after the start of Phase II, written debate was published in *Simon Fraser News* (23 February, 9 March, 23 March 1995); included are contributions by Russell, Zaslove, Zander, Sharp, Rieckhoff, Gatot Ilhampo, M'Gonigle, Sherwood and Griffiths. The Review Committee first describes its understanding of these written and oral critiques, and responds to them in the following section.

The first kind of objection relies on an assumption that support for universities like the EIUDP strengthens the 'performance competence' of the Government of Indonesia, and so is not acceptable for that reason. Support for universities, indeed strengthening them, has one of two undesirable results, according to this critique. One result is that it enables the government to do its job more effectively so that the authoritarian government in this case actually improves its competence, and thus exercises its competence more effectively (including its ability to resist pressure to change). The other undesirable result would be that

the credibility of the authoritarian government is increased in the eyes of its subjects because of enhancement of the legitimacy of universities through contact with the EIUDP. In this critique also, the contribution of the University to the government's performance (in this case its image) is paramount: the EIUDP deters the peoples' realization of the illegitimacy or weakness of the government. These results of EIUDP, whether alone or together, engaged SFU in a form of complicity with the government which is not acceptable, according to critics. SFU discussed the example of South Africa, where a strategy of isolation had been applied by most countries. It appears that some who objected to EIUDP favoured this approach.

A variation of this first objection agreed with the negative appraisal of the project's orientation to official institutions, but stated that the EIUDP might have been acceptable to Canadians if SFU had made public criticism of the conditions prevailing in the country. In short, this variation said that SFU should concurrently fulfill its role in Canada by **critically educating Canadians** about conditions around the EIUDP in Indonesia, and by involving non-government organizations in this effort. This effort would counter, to some extent, the enhancement that was inevitably made to the ability of the government to both pursue its policies and perform its routine tasks.

The **second kind of objection** states that Canadian aid would not reach its intended recipients in EIUDP because of the conditions prevailing within the government. In this case a department of the government is supplied with foreign exchange to do its work, and thus saves the government foreign exchange that can be utilized for other (unknown) purposes. The Canadian funds would be replaced with an equivalent sum of local currency, made available to EIUDP and DIKTI. This critique posits that the Canadian funds may possibly be diverted, and yet this diversion would not necessarily be due to malfeasance within the EIUDP or even the department itself.

A **third objection** focuses on the relationship between the EIUDP and SFU, and is motivated by the difficulties of working in Indonesia. When the project was first considered,

the University had few people knowledgeable about Indonesia to provide the context and background needed for its decision to participate. It was perceived that SFU's lack of knowledge made it too dependent on those identified with the project. Moreover, throughout the project's life, the University should have gone further to meet its obligation to monitor the project's impact on human rights, and in an independent manner. This was not so much a criticism of the project itself but of the milieu in which key decisions were made.

An Assessment of Objections to the EIUDP

We have considered these principled objections, and have discussed them at length with both Indonesians and Canadians. The Review Committee notes that SCIA took these criticisms seriously, including during the approval of Phase II in 1992-93. The Review Committee thus particularly sought the view of many Indonesians about these questions, both in and outside the EIUDP, in order to hear their perspectives. We acknowledge that it is difficult to decide when a project of this kind should be initiated in a country like Indonesia. There are reasons for starting earlier, before other changes occur, and reasons for starting later, when other desirable changes appear. There may not be an ideal starting moment, under conditions described above. This is not an easy issue to resolve: if it were, projects in Indonesia and many other countries would begin without elaborate calculation of pros and cons, and SCIA-type project scrutiny would be less important.

Our view is that either to have rejected the project before it began, or to have terminated it at the end of Phase One, would have been to deny an opportunity to people in eastern Indonesia already disadvantaged by the situation in the country. To do so would have meant contradicting an idea that became SFU policy, 1992. The thirteen-year length of the project was essential because the development of scientific capacity among young people in these particular universities inevitably took longer than many other projects. We conclude, following our consultation with most Indonesian participants and observers, that it was and

is essential to facilitate change in a place and time where circumstances are adverse, so long as the objectives are clear. According to a senior Papuan participant in the EIUDP:

Your Senate wants to know if the EIUDP has been beneficial to us? Tell them loudly my answer is "yes." We know SFU very well. We know Pak X, Pak Y, and Pak Z. We respect these people, and have come to like them. We also know the CIDA way of working, and we know about their influence. This science building project is not the only thing they do in Irian; we also know their socio-economic programs. We welcome what SFU can do. We can make up our own minds about this, don't you think? We would like more relations with Anthropology at SFU. We want to strengthen that. Yes the influence of EIUDP has been very good for us.

In the transition from Phase I to Phase II, a number of conditions were set by SFU and Senate so that the EIUDP integrated the broader concerns. These conditions had, in turn, become fairly standard objectives for most international projects. Would they perhaps have come about without the presence of EIUDP? Our view is that SFU's policy would have soon developed as a result of other trends outside the scope of EIUDP. CIDA's policy embodied most of these trends by the mid- to late-1980s. Other projects planned by SFU and approved in 1992 reflected these trends. SFU projects in China such as the IDRC-funded Lijiang project, two years after the Tian'anmen incident, also showed this same concern for human rights and NGOs. Another major CIDA project at SFU also began at this time, focused on environment and development in China. The Brundtland Commission's report promoting sustainable development was being discussed at Round Tables throughout British Columbia and Canada in 1990-1992, and sustainable development objectives were being planned for the university itself. In 1992 the Rio Earth Summit placed this issue again into popular consciousness. So there were ambient factors pushing SFU in these directions anyway. The role of the EIUDP's transition to Phase II was to crystallize the issues in one place and time.

EIUDP set out to train mostly younger science lecturers. These young people were moving beyond the applied sciences toward the basic sciences, and eventually into new Faculties with limited influence in their universities. Neither structurally nor individually were they best placed to manage confrontations with the old system and hierarchies. There

was and is inherent vulnerability attached to them, as would be recognized in a parallel situation in Canada. Yet these young people were identified universally in discussions as the most likely agents of important change in science and university life in Indonesia, as well as in the society, as they gain seniority. This confirms to the Review Committee that working with younger people had and will have a positive effect in universities and Indonesia as a whole.

The Committee thinks also that the personnel trained in and/or influenced by the project may not have been in any position to achieve what they did beginning in 1997-98 had this project not begun, despite adverse circumstances, in 1987. Most Indonesians we consulted stated that the capacity to respond to changes beginning in the wider system in 1997-98 would not have existed had the project not had a long gestation period, building the trust and standards that were necessary to it. The steady development of the capacity to plan and direct change put the project participants in a good position in 1997-98. The Committee thinks that for the project to confront the system about abuses in the earlier period would have put its participants and personnel at unreasonable risk. This would have put in doubt 'the safety of project personnel,' broadly defined, as it should, be to include all participants.

The critique concerning the diversion of project funds was investigated by the Review Committee. Five financial audits of EIUDP were conducted as required, and concluded there was no diversion of CIDA funds. Duplicates of all expenditures in Indonesia are received, checked, and stored in Burnaby. Moreover, project expenditures in Indonesia were managed through EIUDP's own office in Jakarta. The project developed a system of financial management and control that gave close scrutiny appropriate to the conditions of the EIUDP. It is true that EIUDP funds supported project activities in Indonesia which would allow DIKTI to reallocate its own funds for other purposes. But it is a large assumption to think that DIKTI could or would in fact meet those kinds of EIUDP-type expenses had the CIDA funds been unavailable. Most Indonesians we consulted, in universities and outside them, thought it highly improbable that the Government would have found equivalent funding for equivalent activities in eastern Indonesia. "At best," said one long observer, "they might have built some new buildings." Moreover the very significant EIUDP expenditures for the

fellowship program outside Indonesia meant the Government of Indonesia could not substitute any of those project funds to meet other objectives. [see p. 67 for table on financial distribution]

We state the above assessments to clarify a conclusion of the Review Committee, namely, that knowing the outlines of the negative pattern existing in Indonesia in 1987, the University proceeded with the EIUDP. It did not develop a close connection with an agency known to abuse human rights. Working in the universities, the EIUDP continued through the changes that began in 1997, and through the accompanying period of economic crisis and political upheaval. The project met and adapted to that uncertainty and fluidity. The rebudgeting process, allocating money where there had been government cuts, and expanding the links between project personnel and institutions outside the universities, are evidence of this adaptation. This conclusion is developed in Chapter 14.

9 Origins of SFU Involvement and Initial Conditions of EIUDP

In 1985, when discussions about a project in eastern Indonesia began at the University, SFU was in the midst of a period of provincial financial crisis precipitating a confrontation between the provincial government and university communities. Contingency plans had been made for cessation of some units of the University. President Saywell wished to give the University a more international orientation, and also to prepare SFU for the recruitment of a new generation of scholars. Founded only in 1965, many of SFU's programs had matured to achieve a credible international reputation, and numerous international projects were undertaken by individual faculty members. But there was no existing project which involved an institutional commitment like this.

Leading up to the Commonwealth Summit meeting of 1987, there was planning in 1986 to make Vancouver a home of international distance learning. Indeed, there already was a

project in this field at SFU, focused on Indonesia. Indonesian higher education delegates announced an EIUDP design mission with SFU as the executing agency. An individual who was a senior DIKTI official at that time told the Review "quite simply, SFU's proposal was the best one."

Prior to this, a Country Program Review had already focused on human resource development in Indonesia, and the under-development of the eastern universities was highlighted. SFU was identified in 1985 as a possible participant in a project through an 'executive search' among Canadian universities conducted for CIDA by Salasan Associates. President Saywell, and Director of International Cooperation Gregg Macdonald are reported to have expressed keen interest whereas most other Canadian universities were either too busy or their interest was lukewarm. SFU was enthusiastic on internationalizing, but had no institutional commitment in Indonesia. Although a few faculty already had experience in Indonesia, none were basic scientists. It is reported that the Office of President responded more strongly and thoughtfully to CIDA and Indonesia's enquiry, without mere reference to the possible magnitude of the project. At that stage, the eventual size of the project was not foreseen. When it was, some Canadian universities reconsidered their interest. An Indonesian delegation was attracted to SFU's unconventional approach, and thought this approach would succeed in eastern Indonesia.

From the beginning, SFU planners knew that because of the huge scale and complexity of the EIUDP, it could not be resourced entirely from SFU. Not only would other Canadian universities have to be involved, so too would Indonesian institutions like Bogor. Other than a small number of university planners, few people at SFU had any idea how large this project would be. Much of the planning was done quickly. One of the key decisions was to appoint Chris Dagg to help plan the project, and he soon became its Director. Some university officials now agree that there had been little consultation with the community at large in the decision-making leading up to the EIUDP. This led to criticism, and Chapter 10 on Governance shows that these criticisms had the effect of encouraging or propelling new kinds of participation in the project.

It was generally agreed by Indonesians and visitors at the time from SFU (and other first-time advisors) that initial conditions in eastern Indonesian universities were adverse to the development of the basic sciences. "These were our problem universities, and we knew it," said one senior Indonesian official. This adversity is not because they were totally neglected, but perhaps because attempts to change conditions had been piecemeal and of short duration. For example, Washington State University at Pullman had been involved with eleven eastern universities (some of which became EUIDP-member universities) in an effort to build their faculties of agriculture. This followed the massive concentration of resources to increase production initiated after the costly food shortages of the mid-1970s, and the commitment to the agricultural sciences followed suit. Thus in some fields, such as medicine, engineering, and agriculture (and to a lesser extent in forestry and fisheries), these universities had not been completely neglected. This massive government commitment induced an applied-science-led education, with basic science seen as an afterthought, and one without much support from DIKTI. Basic science was therefore very weak in these universities, all agreed. "We were just too far from the fire," said one long-time Indonesian EIUDP participant.

Late in 1986, a design mission from SFU and Indonesian universities traveled through the campuses of eastern Indonesia. This was soon followed by a Technical Design Mission in late 1987.⁸ The mission's report found that Science Lecturers rarely possessed undergraduate degrees in the subjects they were teaching, The curricula for the courses was largely out of date, and the course content unbalanced in favour of detailed facts and against the understanding of principles. High variation in exams and grades were found even for first semester classes at various campuses. Exams were studied and it was found that they tested memory of details, not comprehension of principles. Journals and text books were not available in libraries, and if they were, they were in English so that students relied entirely on Dosen to interpret them. Computers were rare and there was almost no computer literacy

⁸ SFU, *EIUDP Detailed Design Mission Report*, January 1987, and *EIUDP Technical Mission Report*, January 1988.

among lecturers in science. English was very difficult for most Dosen despite the preponderance of English material in their field. Career prospects of basic science lecturers were rooted in the applied sciences.

The mission investigated the physical arrangements for teaching science, and found that labs were served with poor electrical systems with few electrical outlets, and had weak water pressure with poor quality water. Previously donated equipment was still unused, but could be used after minor modification. Chemicals were poorly disposed of, including unsafe storage of volatile chemicals, and the mission found "surprisingly large volumes of established carcinogens." Under these conditions, lecturers spent little time in the labs. In classrooms, instructional aids like blackboards, chalk, overhead projectors, felt-tipped pens, desks, writing and erasing implements were not available. Telephones were rare, so communication on and off the campus was slow and unpredictable.

A few weeks following the technical design mission, the EIUDP contribution was signed and the project began. The EIUDP was at first, housed in DIKTI offices, but eventually found more space elsewhere. DIKTI created a Central Project Implementation Unit (CPIU), which was eventually run by a former Dean from Bogor. This unit was/is directed by a full-time counterpart to the Canadian Director, and this person also has his own office in the same building as the SFU/EIUDP office. The DIKTI officer manages and reports on Indonesian implementation of Project, utilizing Indonesian funds. The position was eventually called the "Coordinator of the Cooperative CPIU-Canada."

10 Emergence of New Initiatives in EIUDP

A most important characteristic of EIUDP is that it established a climate around it in SFU, CIDA, and Indonesia that permitted (and sometimes encouraged) adaptation and change. New initiatives thus became essential to enable the project to adapt and evolve in

changing circumstances, and to engage project resources and trained participants in new, meaningful ways. Our short list of new initiatives here is probably incomplete. In a project as long, large and complex as this one there have doubtless been other less-known initiatives which are genuinely new, and not foreseen by the earliest planners, but which enable the project to adapt along the way.

Forum

‘Forum’ was never imagined to play such a major role in EIUDP. It brought together senior university administrators, including (often) Rectors from nine universities, and from the beginning of the project it played a role in bringing MUs and RUs together for planning purposes. Known officially as Forum Kerjasama Sembilan Universitas, Forum’s enlarged role in long-term planning for EIUDP emerged in Phase II, and then became most crucial during and after the events of 1997–98. The EIUDP always had a biannual planning and reporting cycle involving the significant people in the field in the MUs and the project, and always had a Steering Committee chaired by the DG of DIKTI. The habit of doing these things together and thinking as a group took time to emerge. Forum is similar to these other bodies in that it brings together the senior university representatives, but in this case from all nine participating universities. Gradually Forum has come to consider policy and long-term planning issues for the region.

There is a consensus among project observers that it was an unstated objective to enhance the capacity for local planning and responsibility, thus decreasing centralization. Forum did not exist before EIUDP and so is an important innovation of the project. It is more important now than in the past, when decisions were ultimately all taken in Jakarta. EIUDP’s demand for long-range thinking, and its funds for communication and travel facilitated the strengthening of Forum. The EIUDP-assisted Forum in 1999–2000 in part because DIKTI made a commitment to support it wholly from January 2001. One senior official said in Jakarta, “Forum is unique, there is nothing like it any other project. I hope it succeeds, I want it to succeed. Due to the monetary crisis, it has a bigger job to do.” A certain Canadian-

Indonesian approach to consultation evolved in Forum, which is now considered by all participants to be an effective model even worth emulating in other spheres of university work. It is reported that other university projects elsewhere in Indonesia are emulating the style and leadership of Forum.

I praise the EIUDP because it met two of our weakness: one in basic science, the other one in English. But the value is deeper. What is unusual about EIUDP is that we have negotiated efficiencies in the use of funds with our partners. Even CIDA will listen to a reasonable argument. This is simply not possible with other donors.

Our relations with the resource universities are difficult. It is a public secret. They know we exist but pretend we are not capable. We are not on the research grant juries. Most consultants, even in the project, are from resource universities. But Forum will help us to overcome this.

Currently Forum is addressing a series of issues arising from further institutional development. These include, amongst others, avoiding the misuse of resources or the duplication of activities, for instance, by identifying existing leading programs in each of the six universities and strengthening their reach regionally. DIKTI will provide an "after-care" budget through Forum for EIUDP-type activities, responding to its commitment to decentralize. According to Forum participants, the combination of Forum and the EIUDP (including its targeted funds) created a new environment for governance.

The project brought us into closer relationship with other regional universities. This had never happened before.

The eastern parts of Indonesia are very dependent on the central government. It is good the EIUDP didn't end abruptly, or we would have had withdrawal symptoms. The EIUDP touches all the universities, and we became close because of the length of the project and its goals.

This is not the only forum involving senior university officials. In 1998 a larger Rectors Forum was established, and now involves 600 Rectors in public and private universities across Indonesia, including Rectors prominent in the EIUDP. In November 2000, this Forum decided to try to play a role in reducing inter-party conflict that surrounds the top political leadership: at its instuctions, its Jakarta-based coordinator met with senior Cabinet leaders and in the company of the Minister of National Education. The Rectors

Forum took these opportunities to remind senior political figures that their disagreements could be expressed and addressed without open public controversy, because the very institution of a reformed Parliament was being brought into disrepute.⁹

Faculties of Mathematical and Natural Sciences

The creation of Faculties was not initially the intention of EIUDP planners. The objective had been to improve the teaching of the basic sciences for the applied sciences through a new "basic science unit." Until then the basic science courses and lecturers were scattered across different faculties, such as medicine, and agriculture, etc. These new units were formed but lacked administrative status within the university. The need for a UPT (meaning, managed by the Office of the Rector) emerged over the course of Phase I. However, the issue that faced the EIUDP is that UPT manages administrative staff and facilities but not academic staff. Though there are many units like this on the campuses, in the case of the basic sciences, the academic staff were lecturers and their on-going career development inside the units was crucial to strengthening the unit's capacity. But the unit was seen as a dead end by the very people on whom it would depend, because there was no effective 'fakulti' (meaning department) which would appraise their performance and permit them to advance. They were simply being loaned from their home departments, where their allegiance really lay. Furthermore, from the beginning, the project realized that teaching basic science did not attract experienced people because it was not considered important in contrast to the applied sciences like medicine, engineering, agriculture, etc.

The first proposal for significant change occurred in Phase II (November 1995), and this was to create a special kind of UPT by changing the administrative regulations. The EIUDP Steering Committee discussed this and the plan was then brought to the attention of the MENPAN (civil service commission), which was not favourable to this change. In December 1995 DIKTI issued authority to universities instead to establish 'service faculties'

⁹. Jakarta Post, December 4, 2000

if they provided service science courses to the applied sciences, and if they met certain other criteria: graduates had to be employable in the region, staff had to have high standards, facilities had to be available and open, and academic programs had to be approved. Until then EIUDP had concentrated on establishing basic science 'service courses' in the first three semesters of undergraduate training. These courses were eventually organized in a 'basic science unit' followed eventually by the creation of 'Service Faculties of Science' that offered only early courses. These service faculties did not have their own students or Dosen, and had no resources to speak of. Talk of full Faculties (FMIPAs) was met by DIKTI's announcement criteria about employability, and the EIUDP was not keen to move quickly because the fundamentals were not well established and the Fellows were not returned home in sufficient numbers.

This issue was fundamental to the project, and so was discussed formally and informally from the campus up to the Steering Committee, with CIDA and DIKTI present. DIKTI permitted both service faculties and full faculties, allowing for a transition between them. Gradually, through negotiation and specific checks made at each Member University, and when Rektors made their commitments, the FMIPAs were approved, one by one, between 1997 and 1999. This required a complex interplay between the applied science faculties, which were about to yield some of their status (by sharing it) and some of their power (but lending their Dosen to the new faculties and releasing them to actually join those new departments as full members). One of the many observations heard by the Review was:

The EIUDP could use the old network already established among applied sciences. It was easy to pick up the phone and talk to people we knew in resource universities. They are very friendly with us despite certain religious and language differences. This worked in engineering and in agriculture. The network helped us overcome the negative economics of remoteness. It also helped us build the FMIPAs.

A senior Indonesian government official told the Review that the transition to FMIPAs would be difficult and therefore gradual, because many of the faculty saw themselves as civil servants fulfilling the regulations. Their motivation was not always strong

and they got the same salary whether they performed well or not. The Review heard a response to this condition:

The pre-condition to have staff interested in working at FMIPAs and students desiring a career in the field before establishing these faculties constitutes a circular argument. Neither students nor staff can be attracted to an idea, and clearly the FMIPAs have to be there first. We started at this university in 1973 with no staff nor students. Look at us now! We have a large FMIPA that offers undergraduate, and graduate degrees. The people of Jakarta speak of a 'human resource problem' when what we really have in this region is lack of opportunities.

Differences between universities are evident. In each case a particular Faculty and Dean and Rektor have been instrumental in promoting the FMIPA's position within the university. This involved overcoming resistance and negotiating the gradual transfer of material and human resources, privileges and opportunities from traditionally strong applied sciences and education. According to one EIDUP coordinator: "Yes, these FMIPAs are very expensive in the short run, but in the long run they are very necessary. It is more expensive not to have them." Only because of the long time horizon of the EIUDP could Canadian resources and project participants be engaged at the right places and the right times to help achieve this transition. The project funds (so-called 'shortfall funds') were restricted to supporting service courses at the lower levels, not advanced courses. The Review concurs with Indonesians who say that the transition is not over; it is just beginning.

English Language Training Centres

Language centres serving the whole university were not an intended output of the project in the planning stage. It was thought at the project design stage that special workshops and classroom training would establish "academic language proficiency," and that would be sufficient for Fellows going abroad. The population to be served also included faculty intending to do graduate studies at Indonesian universities, and other staff and faculty who wished to improve their English for professional reasons. These activities fell under the "Basic English Language Training" component of the project, which built on existing language labs and courses. This was broadened, before Phase II, to build full centres where this activity

would take place continuously, and thus became an effort in institutional capacity-building in all Member Universities. As recently as 1996, monitors stated that "lack of capacity in English is a formidable barrier for Indonesian university staff who wish to access international research findings, make use of English language textbooks and publications, and take advantage of a large number of international scholarship opportunities . ."¹⁰ Our visits to these centres showed well-built facilities and well-run programs, which now reach widely across and outside the universities.

Initially only lecturers received English training, now we offer our services to all the university students. We also provide classes to government personnel and other people from the community. This has become a way of generating income. We could expand commercially but priority is given to servicing the university.

These Centres were charged with finding revenue that is independent of the university, and so have successfully sought training relationships in the surrounding society

Our English language centre has grown enormously. But there are weaknesses. We have to stand on our own feet now, and have to look for clients. Our main clients are first medical students, second agriculture students, third fisheries students. Basic science students are few, but they will grow and we will serve them in the future.

Much emphasis was put on introducing Canadian and international methods of teaching English as a second language, and this innovation appears now to be established as an ongoing commitment.

Instructors are trained before they teach at the ELT because otherwise they only learn the old method of teaching when studying for their English teaching degree.

Indonesian journals do not have high status and there is pressure to publish abroad. For some of us, English is a barrier but the language centre has no program of assisting authors.

These Centres have also created an effective network among themselves to share experience, skills and resources. With CIDA they have established a coordinating centre for all the ELTCs. This coordinating centre has been moved from Ambon to Manokwari in recent months, due to destruction of the Ambon campus.

¹⁰ Salasan Associates, *Mid-term Performance Assessment*, February 1996.

Linkage Projects

As can be seen in the objectives on page 3, 'linkages' were part of the original project plan, and the main effort in the first phase was to build effective partnerships between Member and Resource universities. As result of building sustainability more deeply into the project, and even as a partial consequence of the debate in SFU and SCIA from 1992 onward, the broadening of participation in the project through new links between these, and other universities, and NGOs was planned. The idea of these links was proposed in the 1996 EIUDP Mid-Term and Sustainable Transfer Plan. This plan resulted from the still-embryonic state of the FMIPAs and ELTCs in relation to utilizing Canadian and Indonesian expertise. This program brought about links to other Indonesian institutions, including NGOs, and with other Canadian entities. Project funds and SFU personnel have been involved in recent new initiatives on subjects ranging from human rights-tracking soft ware development to marine biology research stations. What is remarkable is that this has been achieved during a time of great political change in Indonesia, and severe economic constraints. It proves the inductive fertility of a project like this. According to an observer of Forum:

More was taken from us than money by the old regime. Our self-reliance and initiative were also stolen. But in this project we learned to do something for ourselves, to think, plan, and decide for ourselves.

The current linkage projects are listed in Appendix D. As one observer remarked: "Linkages could have been minimized, but instead they were maximized."

Supplementary Budget

Beginning in 1997, the rupiah came under heavy international pressure forcing prices up, and thus the real value of project funds declined. Moreover DIKTI's budget was severely contracted under these conditions. This put the sustainability of the project's new linkages in question because funding new linkages was crucial to broadening the base of support to EIUDP's objectives in the final stage. Canadian advisors were already being phased out toward 1998, and Canadian funds were going into decline. This risked "a return to basics,"

according to an observer, because the new initiatives involving Resource Universities, NGOs and Member Universities were simply too costly to continue. Basics, in this instance, meant the training of lecturers for basic sciences. These problems were brought to CIDA's attention in a EIUDP memo of 27 December 1998:

The unfortunate co-occurrence of these significant Project outcomes with the economic and political crisis faced by Indonesia has created considerable risk for the continuing development and integration of the new bodies into the MUs educational and developmental role. Project and MU developmental planning has until very recently been carried out in a significantly different Indonesian economic environment and the new situation faced by the MUs during the Project's final years requires alternative and additional Project action.

The economic crisis poses new challenges to the sustainability of the Project's gains. However, the crisis and efforts towards recovery also offer CIDA and SFU strong opportunities to forge long-term, constructive and mutually beneficial partnerships in Indonesia by building on the relationships developed over the life of the Project. Significantly, as described below, these efforts and their outcomes, could also be valuable adjuncts to governmental and international efforts to mitigate the impact of the current crisis on several aspects of Indonesian life.

Under these circumstances, EIUDP negotiated a 'supplementary budget' with both DIKTI and CIDA in an effort to promote the sustainability of the project. As a result of the negotiations with CIDA, EIUDP was permitted in late 1998 to use \$1.4m in contingency funds attached to the project. This was effectively 'new money' added to SFU's Contribution Agreement. It was to address short- and medium-term risks posed by the economic crisis, and most specifically to the cost of the MU-RU linkages. Support for these relationships using EIUDP (short-falls) funds was conditional on DIKTI's contribution of funds, and the successful competitive Review of proposals using criteria they themselves had developed. Moreover, because EIUDP has generally run under budget due to economies and careful management, unspent project funds are now (November 2000) planned for linkage use into 2001. This is in addition to a prolongation of support for Fellows who arrived recently and are in their normal program of studies until 2003.

EIUDP universities can now compete for DIKTI-managed research and training funds. In the 1999-2000 DIKTI budget there is a "project budget" under the "competitive scheme" for which the EIUDP Member Universities can compete under an arrangement called "stratified competition" (in order that they are not unfairly compared to resource universities). Some of the funds are available as follows: the HB, US\$ converted to R 5 billion (source World Bank) for research only, and URGE, US\$ converted to R 65 billion (source World Bank) for graduate education and research.

All of these fiscal measures taken together, constitute a climate of innovative new initiatives. The Mid-Term Performance Assessment of Phase II had already recommended that MU staff members become able to compete consistently on the national level for DIKTI research funds. The Review frequently heard Indonesians speak with satisfaction that they were now doing so.

Women in Science and Technology (WIST)

WIST stands for the component of the project aimed at enhancing and developing the role of women in science and technology. This project component responded initially to CIDA's 1984 policy on Women in Development (WID) and later, to the 1995 policy on WID and Gender Equality. According to the Final Report of Phase I, WIST was "directed at situational analysis, both of the project and of the role of women at the target universities, to determine where obstacles to the continuing development and advancement of women in scientific careers might exist and how to best remove or minimize their effects." Joanne Prindiville of the University of Toronto, and an anthropologist fluent in Indonesian, carried out the situational analysis. Her recommendations were implemented including naming this component of the Project "Women in Science and Technology." The positions of Indonesian and Canadian WIST coordinators was maintained from 1990 onward. Along with her recommendations, Prindiville developed protocols for monitoring the progress of WIST, and

a year later after a second mission, she also provided guidelines and recommendations for the delivery of gender sensitivity training.

An important observation made by Prindiville was that after a year of its implementation, WIST was becoming an activity for women only whereas it was important for WIST to be understood as involving women and men with equal participation. This was important because, although comparatively women's participation in applied sciences in Indonesia is much higher than in Canada, this is not reflected in the appointments of senior academic or management positions. We found a consensus among observers and participants that this imbalance may reflect deeply rooted values in relation to traditional gender roles at the work place and at home. At the same time, there is less political sensitivity around gender issues that are so familiar to Canadian women, such as sexual harassment in the work place or violence against women. As one observer put it "these are issues Indonesian women just don't talk about, even though they are aware of them." The Review was told that even women in senior positions at prestigious universities in Java would not "stir the pot" or confront the system: they simply assumed these issues as "a fact of life" for women. However, as faculty and Dosen salaries are set in Jakarta according to a national scale, the Canadian women's demand of "equal pay for equal value" is a non-issue in Indonesia.

By 1990, a draft of the project's WIST policy was submitted to CIDA for approval. The policy was intended to ensure equitable participation of women in all project activities. *[Please refer to Appendix B, Tables 1(a) to 5(f) for WIST activities data.]* The Project Management team made a serious effort to meet the demands of their own policy. Some of these efforts required a lot of ingenuity and lobbying to allocate funds for the needs faced by female Fellows, especially when they were the primary child care providers. Similarly, the WIST Graduate Fellowship was created in 1996 when an imbalance was identified between male and female PhD Fellows. Since having a PhD increases greatly the possibility of obtaining senior appointments at Indonesian universities, this imbalance in the selection of PhD candidates ensured gender inequality at senior levels. Five female candidates, one from each member university, were awarded the WIST Fellowship. The beneficiaries were selected

on academic abilities and achievements, and they were required to promote the role of women in science and technology. These fellowships provided Fellows with a time extension to accommodate extra-curricular activities related to WIST throughout their study term. Of the five candidates awarded the WIST Fellowship, some who did not meet English-language requirements are at present in a university in the Philippines.

Since the WIST policy called for “equitable participation of women in all Project activities,” the Review team also looked into gender representation among academic advisors and supervisors. The implementation of the gender policy brought to light a paradox between theory and practice for Canadians. Notwithstanding the efforts of the Project Management team to find Indonesian female science faculty to participate, the reality in the Sciences across Canada is that women representation was, and one could argue is today, almost nil. The EIUDP management team found in 1988 that 35 percent of faculty and students in the Faculty of Engineering in Manado were women while in the same year at SFU there were three or four females in the entire Faculty of Science. In addition to this fact, the EIUDP found a very low number when most of those Canadian women invited to participate, whether on a long- or short-term basis, declined due to professional and/or family reasons. A case in point is one participant who, when approached by the team during Phase I, said she was the only female organic chemist in BC at the time. Despite her keen interest in the project, she could commit only to short-term assignments. This was a difficulty faced by the project with potential male participants as well.

Another development reflecting this paradox occurred when the Project Team decided to nominate scientists, instead of sociologists, as the WIST coordinators. As with the rest of project programs, WIST had both a Canadian and an Indonesian coordinator. The Canadian choice was a visiting faculty in the SFU Women’s Studies Department who was also a scientist and who accepted the request from the EIUDP to participate. Her Indonesian counterpart was elected from a list of several candidates by the Indonesian women scientists participating in the EIUDP, showing that there was genuine interest and competition to do this work.

It is difficult to measure the impact that the paradox of low Canadian female scientist participation might have had in the implementation of the WIST policy in EIUDP. But it would be naïve to assume it had none. Having said that, the Indonesians consulted said that there was considerable progress for eastern Indonesian women in the EIUDP.

At the beginning it was very hard for senior administrators to understand what WIST was all about, especially when we try to demand more senior positions for us. They just did not see what was going on. Now things are changing; not that much, but they are.

The numerous WIST workshops, teach-ins, community outreach and other similar activities held in Indonesia and Canada have, at least, raised the question of women equality and its related issues to a much wider audience than it would otherwise have if the WIST focus had been reduced to the Fellows alone. Furthermore, women who obtained their science degrees in Canada were exposed to the struggle that their Canadian counterparts – within their field and the society at large – are making to alter their own reality. Whether this influence occurred by osmosis or by the conscious effort made by WIST coordinators and participants, there is a sincere hope among the Canadian women advisors that these Indonesian female Fellows will ‘carry the banner’ and eventually become agents of change among scientists in eastern Indonesia. This optimism is also widely found among the Fellows and other Indonesian participants interviewed by the Committee.

There are not enough women in science and technology who can attend the workshops today, due to their workload, so now we are trying to introduce these issues in the curriculum. I do it during my lessons whenever I have a chance. At least students think about it for a little while. Afterwards, some of them may even talk to others. I hope so.

I’m learning various way on how to promote among young women the need to study science. Here in Canada I have attended workshops and meetings where different ideas are discussed. I know things won’t be easy when I return, but I’m looking forward to do whatever I can on this.

Things in Indonesia are different. We know that. So we have to adapt what women do in Canada to Indonesia. We go to the villages and encourage girls to continue their studies to improve their lives. At the same time, we show their mothers how to prepare food using what they have available in their area.

Education for Sustainable Development

The Education for Sustainable Development (ESD) program was created as a response to the conditions SFU established in order to approve Phase II. ESD's aim was to introduce sustainable development ideas and approaches into teaching and research at the Member Universities through their basic science courses (BU). Like the WIST component, it was to be built into all other components of the EIUDP. From this time, EIUDP worked closely with the Environmental Study Centres that had been formed in the 1980s in most Indonesian universities to serve as the home for all activities associated with the environment. Each Member University then appointed a Sustainable Development Coordinator to promote the development of ESD and organize activities in support of its objectives.

In 1994, Jock Munro was appointed to coordinate the ESD at SFU, and his counterpart in Indonesia was M. Soerjani from Universitas Indonesia in Jakarta. A mission visited Member Universities to assist the EIUDP in defining the scope of what was possible. The mission was composed of Canadian and Indonesian advisors, including Emmie Hafie from WAHLI, a very large environmental umbrella NGO in Indonesia. During the first two years, ESD activities were mostly related with field assessment and organization of the program within the EIUDP. In the following year, a series of workshops was held to introduce sustainable development into the role of universities at each of the five MU campuses, and the development of curriculum materials began.

In 1996, coordinator Soerjani oversaw the production of a vast amount of curriculum material for incorporation into basic science lectures. Testing of the materials in classrooms began in early 1997 but its adoption was low because of the limited time allotted to the basic science courses in Indonesia. For example, the course content of SFU's Chemistry 104, which is delivered in approximately 13 weeks x 3 days x 50 minutes of lectures plus 13 x 50 minutes of tutorials, is delivered in Indonesia in 16 x 2 hours. Understandably, little time is left to teach new concepts that may appear not directly related to the core Chemistry concepts. The

ESD's struggle was to show that sustainable development questions belong in the core of science teaching.

In 1997, a course content correction was implemented after consideration of the above-stated problem. After a series of consultations with ESD coordinators and reviewing the new curriculum materials, Milt McLaren from SFU proposed that the EIUDP limit the focus of the curriculum materials to three topics of environmental value that could be integrated more easily into a basic science courses. These topics were the greenhouse effect, ozone depletion and biodiversity. Relying on Soeriani's work, McLaren then developed course materials customized for each of the basic science courses at the introductory level. In 1998, these materials were introduced in a series of workshops for Dosen, and participants were provided with course notes, handouts, transparencies and hand-out masters for teaching.

Another element of the ESD was the promotion of liaison with government agencies and NGOs with roles in promoting sustainable development in the region. These liaisons, intended to facilitate the combination of environmental action and research, continue through the linkages program. Although EIUDP facilitated research on topics of importance in sustainable development (e.g. biodiversity), such research was not given top priority in the Member Universities. Most Canadian and Indonesian participants and observers think that the extraordinary workload Dosen face, including the necessity of working outside the university, inhibits their ability to develop their own research. This is compounded by their very limited accessibility to funds. Hence, the efforts made to promote sustainable development-related research faced the same structural limitations that similar efforts have faced in other areas. However, there are exceptions: for example the Environmental Studies Centre at UNHALU in Kendari has a strong presence: during our consultations, the work done through the ESD was fully acknowledged in other parts of the university. At present, this Centre has a series of research projects and exchange programs with two other Canadian universities. Another example of the combination of ESD and the Linkage Program is the creation of a network between marine biology research stations in BC and Indonesia, with a focus through the station just offshore from Makassar in Sulawesi attached to a resource

university, UNHAS. This station has been the site of SFU research work facilitated by EIUDP, and its dormitory is the home for a few weeks for all senior biology students at UNHAS.

The Project also included an ESD component in every short-term advisor's assignment and required an ESD impact statement for all project activities. Considering the short period of time the ESD operated within the EIUDP, it is difficult to assess its impact in the overall educational culture of the Member Universities. Moreover, sustainable environmental development is a fairly new concept everywhere and its implementation encounters resistance that goes beyond university life, even in Canada. [Please refer to *Appendix B, Table 6 for a detailed listing of ESD activities at the Member Universities.*]

11 Achievement of the Stated Goals of EIUDP

Quantitatively, the EIUDP can be described in a few tables, but the analysis of how these goals have been achieved and what their significance might be is much more complex. The original and primary objective was to enhance the capacity of basic sciences teaching in order to contribute to the strength of the applied sciences. All observers have concluded that this is being achieved, although few think the process is complete. A second, contingent objective was to improve the institutions that support basic scientists in eastern Indonesian universities, such as teaching laboratories, libraries, training in English, etc. Without such an alteration, it was thought, the capacity of the basic sciences to contribute to the overall development of these regions would remain almost static. This enhancement of the basic sciences and conditions for basic scientists involved study outside Member Universities, and for many participants, study outside Indonesia. Thus, the project had to prepare scientists both who traveled, and who returned to work in Indonesia, for work in science in English, a language little used by scientists in eastern Indonesia. A statistical record of the outputs of the project is presented in Appendix B and more data also is available in Appendix F, written

by the EIUDP Office. A study of the outcomes of EIUDP will be found in the CIDA-Salasan Associates evaluation recently completed in cooperation with Member and Resource Universities in the EIUDP.

From the project's inception, it emphasized the creation of conditions in science favourable to women. Women were among the first participants in the project in Indonesia, and the EIUDP sought female Fellows to send abroad. Still, when the first phase was reviewed, it was decided that more effort was required, and so the activities described in Chapter 10 regarding WIST were instituted. Results of these efforts had a variable effect in different campuses, and their outcome will probably take a few years to measure. There was a significant number of women in the applied sciences in these universities in 1987. A statistical record of gender distribution in EIUDP and WIST activities on Member Universities is presented in Appendix B, Tables 1(a) to 5(f).

There is now a significant number of women involved in the basic sciences in EIUDP universities. In order to understand this transition, it is important to consider a variety of explanations. First, few of these were appointments at senior levels. Second, until about 1999–2000, the teaching of basic science was somewhat uncertain, and was to be done in entirely new Faculties. Promotion in these Faculties was therefore somewhat uncertain. Young women scientists/Dosen were apparently willing to accept this uncertainty, reflecting their appraisal that they faced uncertainties about teaching and promotion elsewhere, too. They had experienced uncertainty, after all, in applied science. Moreover, unlike men, women had fewer opportunities to hold jobs outside the university so were prepared to move to a new opportunity like basic science.

From the beginning, the project had committed to building a field research-oriented kind of anthropology at Jayapura. Indonesian planners of the project recognized that this effort would be difficult, but thought it should be done (albeit with accompanying voices saying that this program should be expanded to other campuses). In the end, anthropology training occurred at Jayapura only, and Papuan observers were as insistent as participants

that this program, through the Department of Anthropology, provides a new and welcome kind of connection between the university and its surrounding communities. The Review was told that it is by this field-oriented approach that the various ethnic and linguistic groups in Papua will incorporate the university in their own planning for the future, and thus see the university as their own. A small number of Fellows were trained in Indonesia and Canada, and three Canadian students (two of them women) did research for their theses under the aegis of the EIUDP. A former Chair of the department did the original reconnaissance for this program, and one faculty member went seven times for training visits to Jayapura. The former Chair stated that other than this one faculty member, there was not a demand for SFU participation, and the program was not much discussed in the department.

Fellows have been sent for training from each university for undergraduate, Masters, and doctoral degrees. There have been 296 individual Fellows in all, and they went to Canada, Singapore, the Philippines, Thailand, and Indonesia. Counting their multiple use of fellowships, they were awarded a total of 313 fellowships for BSc, MSc, Meng, and/or PhD. One hundred Fellows are women, and 196 are men. A List of **Research Publications** is available from the Office of International Cooperation, and is summarized in the following table:

Research Publications of EIUDP Graduate Fellows in Canada (Phase I and Phase II)

Type of publication	Number of fellows	Number of publications
Journal articles and other	9	27 Journal 21 Other
Journal articles	9	11
Other publications	17	31
No publications	32	0
Total	67	90

Seven journal articles and two other research publications by SFU Graduate Students and Faculty were based on research carried out in Indonesia.

12 Benefits of EIUDP to Simon Fraser University

The Review Committee was explicitly charged with determining "what academic benefits SFU has accrued as a result of EUIDP." Unlike the benefits to the Indonesian universities, these benefits are less tangible and cannot and should not be measured solely in terms of the numbers of Fellows studying abroad or the number of short courses offered. Nor are many of these benefits set forth in planning or assessment documents produced by the project. A reason for this is that these plans and documents were prepared for CIDA, not SFU, and CIDA considered benefits to SFU to be of secondary consequence in the project.

The Committee's views of the benefits have been gained virtually entirely from interviews with staff and faculty at SFU. We have not confined our meeting to those participating in the project. We have also consulted administrators, members of departments participating in EIUDP who did not participate in person and other members of the university community. We have also held an open meeting where we outlined preliminary views and heard the responses of those present.

We believe that the circumstances of SFU at the time that EIUDP was first considered must be recognized in order to understand a motivation to participate. The provincial economy had been badly hit by the world recession to such a degree that the provincial government had announced severe cut backs in expenditures in general, and especially to its support for higher education. This, together with demographic trends, created uncertainty about future university enrolments, especially in the sciences. SFU responded to its financial instability by budget cutbacks that, although affecting all areas of the university, were especially severe in some areas, and with an extensive realignment of academic departments and faculties.

SFU was a very different place immediately before the project than it is today. Its commitment to international activities at that time was minor compared to the range of activities today. A new President arrived who had been focused on international, especially Asian, studies throughout his career. He believed that the University should take advantage of

its location to become more international in its outlook through increasing its ties, especially with Eastern and Southeastern Asia. To implement these plans, the University appointed a Coordinator of International Activities and established the President's Advisory Committee on International Cooperation .

In evaluating the EIUDP's benefits to the University, the Review distinguishes between benefits closely associated with and accruing most directly to participating individuals and academic departments, and benefits accruing more widely to the surrounding university community. We also recognize that some benefits did not come without costs.

Academic Benefits

The reaction to and participation of SFU academic personnel in the EIUDP program differed greatly among individuals. Participation was concentrated, though not exclusively, in the Faculty of Science faculty because of the Project's focus on the improvement in the capacity for science instruction at the target universities. The program directly involved SFU academic personnel in different ways. SFU staff participated directly with the project as long-term advisors; instructors in short courses; consultants and advisors in project design; and supervisors of Indonesian students coming to SFU. The project also affected those who were not directly involved. Faculty outside the project taught EIUDP students in their courses and were involved in supervision. Graduate students used EIUDP field facilities and received supervision from its staff for their research. Beyond these academic impacts of the program, the project touched a broad segment of the SFU community through the discussion of the issues that the project raised and through the presence of Indonesian students on the campus.

The project offered an opportunity to a broad range of faculty throughout the sciences and to a lesser degree in economics, education and anthropology. Many saw the project as outside their professional and personal interests and chose not to participate.

Others may have been interested but were reluctant or unable to make a commitment because of professional or family reasons. Some participated at one stage or another and chose not to continue, some as a result of unfortunate experience, others because of a lack of perceived advantage from continuing, and still others for personal reasons. Finally, others participated either for a long period (one as long-term advisor) or repeatedly at different times. As might be expected, it is this latter group who say they benefited most from the project. This group is concentrated in the Faculty of Science, especially in Biology, and also includes faculty from Anthropology, Economics, and Education. Our discussion draws from their experience.

Several participants related to us how their affiliation with the project broadened their perspectives on their research and teaching in various ways. Some found themselves exposed to new challenges in applying international science in a development context. Others found the opportunity to apply their research in a vastly different natural environment. Still others were encouraged to think concretely, in terms of teaching and research, about sustainable development and science. EIUDP also increased the capacity among scientists to engage in opportunities for collaboration with colleagues in Indonesia and Canada. Indeed, even scientists who were not formally involved valued their experience in supervising Indonesian graduate students and the enlarged horizons of the colleagues who had worked in Indonesia. The impact of the project on research varied among disciplines. For many biologists, the new environment presented a major opportunity that some welcomed and embraced. For some scientists, such benefits were not present to the same degree, if at all.

Participants from SFU translated their experience in Indonesia into the SFU context through their interaction with colleagues and students in a variety of ways. Some faculty drew on their Indonesian experience to enrich their classes through examples or through comparisons from an environment that sharply contrasts with Canada. Other faculty, after adapting their teaching to the needs of the project, subsequently modified their approach to teaching in light of the experience. SFU graduate students, even those supervised by faculty outside the project, were able carry on research in Indonesian, in some cases benefiting from EIUDP facilities or supervision and assistance from project personnel.

The project also brought Indonesian faculty and graduate students to SFU for short and longer periods of time. Their presence added diversity of experience into the classroom and, in general, contributed to a more cosmopolitan atmosphere and international institutional culture.

In addition to these contributions to individual research and teaching, the project provided financial resources through “overhead funds” for those departments taking part in the project, as shown in the following table. Some of these funds were to compensate for faculty services to the project and were used to engage TAs and lab assistants, and to create grants for graduate students. This inflow of additional resources to the university came at periods when there were shortages of funds for universities. These overhead funds have been described as providing predictable items in the Faculty and Department budgets in a time of uncertainty. Individual faculty also gained tangible benefits through the program from the financial resources of the program. Those who offered short courses in the program received teaching release in return. Faculty who supervised Fellows at SFU received grants in support of their research, in addition to the support provided for Fellows.

FINANCIAL IMPLICATIONS OF EIUDP- SECOND PHASE¹¹

1. ALLOCATION OF OVERHEADS

- a) Overheads on Burnaby-based full-time staff:
 - i) Jan 1/94 to Dec 31/94: overhead split 50/50 between General University Revenue (GUR) and Office of International Cooperation
 - ii) Jan/95 onwards: all overhead to GUR
- b) Overheads on long-term advisors - 100% to GUR
- c) Overheads on short-term advisors: 50/50 between General University Revenue and Faculty
- d) Fellowship instruction fees: 100% to Vice President - Academic

¹¹These data have been made possible through accessing the FASB accounting system. Comparable data were not readily unavailable for Phase I, 1988-1993.

2. ALLOCATION OF OVERHEAD + SALARY REPLACEMENT FOR JAN/94-DEC/99:

General University Revenues For Salaries	\$2,396,579
For Benefits	99,620
Int'l Co-Op (to Dec/94)	122,109
Dean Of Science	813,967
Dean of Arts	97,431
Dean Of Education	16,807
Dean Of Applied Science	16,985
Co-Op Education	38,176
TOTAL	\$3,585, 375

3. ALLOCATION OF INSTRUCTIONAL FEES FOR EIUDP FELLOWS JAN/94-DEC/99

Vice President Academic \$418, 559

These academic benefits must be weighed against a cost that the Committee heard about from some participants and others. They believe that the project brought some students to SFU who were not adequately qualified for the programs that they were undertaking. This perception may be the result of the intense cultural adjustment which faced the students and may have impeded their academic progress. To them, this aspect of the program had the costs of diluting academic standards, imposing costs on faculty and other students at the potential harm to SFU's reputation. At the same time, many, including those voicing this criticism, recognized that the program also brought superior students to SFU, some of whom have continued for further degrees beyond the project commitment. Some faculty withdrew from further participation in the project because of these concerns. For some faculty outside the project, hearing these concerns caused them to be skeptical about the university's commitment to the project.

We encountered this criticism from a sufficient number of sources to view it as a real concern about the project. It is one that should be taken seriously in the planning and the approval of similar projects in the future. We also believe that the adjustment of the EIUDP program to the background of Indonesian participants should also be instructive for future endeavours. At an early stage, it increased its emphasis on English training by initiating the language training centres in Indonesia. It also changed its expectations of the starting

placement of Indonesian students in SFU's programs to a more realistic level. The program also began to direct many Fellows to the resource universities in Indonesia and to other universities in south East Asia where their preparation was not appropriate for study at SFU.

Outlook and Approach to International Activities

The EIUDP project has shaped the university in ways that may have been unanticipated at its inception. The project was planned in a university with limited international activities, few faculty familiar with Indonesia or Southeast Asia, and no previous experience with a project of similar scale. Moreover, this planning took without a framework governing international activities, a deficiency apparently shared by other Canadian universities at the time.

SFU's role in EIUDP precipitated vigorous debates through the university at different stages. The project was criticized at an early stage on a number of grounds including its place in the university's mission and the apparent adding to the legitimacy for the undemocratic Indonesian regime. The plans for the second stage renewed the debate with increased emphasis on the political dimensions, as awareness of the Suharto regime's abuses of human rights was heightened by reports of the Dili massacre in East Timor in November 1991.

The debate that occurred around human rights and the EIUDP and the criticism of the University for managing the project may have produced divisions within the university community. Nevertheless, overall the debate was healthy and good for the SFU community and was carried on with a general respect so as to avoid the personal bitterness that followed similar debates elsewhere. The debate seems to have brought about a greater commitment to the EIUDP by the SFU community, although this was not universal. It also demonstrated to many that scientists can and should play an important role in sustainable development in adverse circumstances.

Over the course of the two phases, EIUDP evolved beyond being simply 'from' the university, where it was managed. The project became more 'of' the university, and therefore had certain broader effects. These effects were brought about, not by the project alone, but by its constant interaction with the SFU community, including the criticism of the project by those who disapproved of its location in Indonesia and those who accepted its presence in Indonesia yet wished it to broaden its directions.

The establishment of SFU and its Policy were partly a result of the presence of EIUDP in SFU. Consciousness was sharpened regarding human rights, and during the project period an increased number of faculty and students expressed an interest in human rights and development. The Institute for Humanities, and individuals in various departments, played a stimulating role in this sharpening of the community's consciousness. The project made possible new linkages with new institutions in Indonesia, such as NGOs that raised awareness of human rights concerns and developments in Indonesia. A legacy of this debate is that an enduring dialogue has been established, partly embodied in the SFU policy, within which new international opportunities can be assessed in terms of University values.

Reputation and International Activities

In the eyes of some people in Canada and Indonesia, SFU added to its reputation through EIUDP. In Indonesia, this reputation was more specifically in the eyes of those closely associated with the project at the senior levels, and less specifically among junior people in the field. Even though those studying at other Canadian universities might know SFU less than their own university. The University was the executing agency in Canada, and thus played a significant role, among other universities, in shaping Canadian academic relations in Indonesia.

Being a well managed project, EIUDP also established SFU's reputation and capacity for complex international projects – including communication, budgeting and planning, large-scale team management, and partner-building. This reputation will make SFU a candidate for participation in future development projects. At the same time, in Indonesia. A greater

consciousness of human rights issues together with these contacts will endure beyond the project's completion. In the eyes of some members of the SFU community, EIUDP tarnished the university's reputation through its participation in a project sited in an oppressive political regime, or enhanced the legitimacy of that regime. To others, any such effects were balanced by the project's emphasis in helping disadvantaged people within the regime. The university community has grappled with these very difficult moral and ethical issues in developing its policy on international activities. The project has grappled with them too. We believe the project meets the standards of SFU's Policy on International Activities.

13 Views of Indonesian Observers and Participants in EIUDP

We list here some of the questions in our minds when we held conversations about the EIUDP and basic science in Indonesia. Our primary questions concerned EIUDP procedures and practices – the selection of Fellows, preparation for studying in English, the value of short courses, development of science teaching methodologies, choice of destination for further studies, experience as a Fellow in EIUDP, publication of research theses, role of the 'tool kit' for returned Fellows, building a research network within and outside Indonesia, etc. Our next level of questions concerned the context in which EIUDP occurred, namely what has been the interplay between the EIUDP and the evolution of economic and political circumstances in the country? What has occurred to science and scientists in Indonesia since in 1987? What role was science expected to play, starting in 1987? What role is it playing now? What has been/is the relation of basic science and applied science, in the opinion of Indonesian observers and project participants? Applications of science, and their basis in scientific research, take different forms. Are the applications of science evaluated in the same way as the scientific research on which they are based?

It was interesting to observe in Indonesia the variety of understandings shown to us of what "SFU" and the "EIUDP" is. Through this we gained an understanding of the extremely varied knowledge of how the EIUDP was organized and by whom. There were a

significant number of younger participants who appeared not to know what SFU is, and only vaguely knew what EIUDP is. Others, including most senior people, knew very well what SFU is, including those who had not visited Canada. Although only one long-term advisor in Indonesia was an SFU faculty member, other advisors long associated with the project were clearly identified with SFU. A number of them went two or three times to EIUDP universities, and so awareness of SFU was delivered in that manner. Clearly also Fellows who had studied elsewhere in Canada knew less about SFU and more about their 'own' Canadian university. Awareness of the University's role in EIUDP is very uneven – well known in some quarters, scarcely heard of in others. This is consistent with the perception of the organization of other projects in similar situations elsewhere in the world. This is consistent with the ambiguous status of EIUDP at SFU, embraced by some as it is 'of' the university, and avoided by others as it is 'for' the university.

Before speaking about participants from specific ages and levels within the university, it is important to reflect on how the whole project (and SFU) might have been perceived by various participants in Indonesia. As for how the project is known in the country, we rely on the observation of Patrice North.

Talking about the names of the EIUDP, Indonesians love acronyms. These are often a play on words and in the Suharto era playing on words was a way of voicing political criticism. Many acronyms are also humorous. Long titles of government agencies and/or particular development programs are often shortened by combining different segments of the words e.g. BULOG (Badan Urusan Logistik) is the official agency responsible for the national importation and distribution of rice). Having its own acronym, the Project is, therefore, very Indonesian in its meta-language.

The Review found that the EIUDP is most commonly called 'Proyek Sida.' Other similar projects have been called 'Proyek-Australia,' 'Proyek Kentucky,' 'Proyek ADB.' EIUDP is difficult to say, and Indonesians are uncertain (says North) whether to pronounce it in Indonesian or English. 'Proyek Sida' is simpler, and also identifies the source of the funds. The EIUDP is not known as 'Proyek SFU.' "But see 'Proyek Kentucky' – the naming

‘system’ appears to be idiosyncratic, in a socio-linguistic sense,” says North.¹² Proyek Pengembangan Perguruan Tinggi Indonesia Timur is the full name of the EIUDP, and its acronym would be even longer than the English one.

Selection of Fellows and Preparation in English

The selection of Fellows for study in Canada and other countries was contingent on achieving a significant score in the TOEFL (test of English as a foreign language). The first phase of EIUDP intended to select all the Fellows to come to Canada (and most to SFU). But experience quickly showed that a minority of applicants was really ready for this, in terms of their language competence. This difficulty remained even after candidates had followed the language training arranged for them in a number of locations. To address this situation, EIUDP negotiated with CIDA to enable some Fellows to attend universities in South East Asia and Indonesia. It was also realized that Member Universities would ultimately have to have language training centres, and not simply rely on training in basic English for science.

At the same time, and in the cases of some individuals, there appeared to be a weakness in the academic preparation necessary to undertake graduate study. To respond to this deficiency, short courses were designed and delivered at all participating universities, conducted in a mixture of Indonesian and English, using two instructors. In these circumstances the superior students were invited to apply, and wrote the necessary tests. It is emphasized that most of these candidates had their BSc (in applied sciences) and were already Dosen in the basic sciences. According to a Vice-Dean, “Many Dosen could not reach the required TOEFL level, so we requested the Canadian advisor to make it possible for them to study within Indonesia.”

Although the EIUDP received the advice of experts in language for science that the TOEFL is not a good measure of potential in science, this test remained the standard in most science departments in Canada, including SFU. This situation is common to students from

¹² Patrice North, personal communication, 6 November 2000

many countries entering SFU.¹³ Some of the undergraduate Fellows living in Papua were children of migrants from Java and other islands, went to study in Makassar or Java, and returned to teach and work at universities in Papua. One would like to observe their long-term career patterns, beginning with their current position as brand new Dosen with fresh undergraduate degrees, required by regulation to work for at least two years in the university which they came from.

Experience of Returned EIUDP Fellows

By the time Indonesia was an independent country, returning home with a degree from a foreign university was profoundly important. A small number of foreign trained experts, mainly but not exclusively in Dutch universities, swelled, starting in the 1950s, to thousands of people mostly with American degrees. The objective of the EIUDP to train graduate students in science thus was connected to a long and influential tradition, but one which had not favoured universities in eastern Indonesia. Opportunities to study in a number of countries fluctuate with economic capacity and government policy, but there is no sign these opportunities will diminish, in part because foreign universities have become used to having foreign students, including from Indonesia, in part because of a growing unmet demand for their expertise. The prestige, value, and effectiveness of foreign training are almost universally acknowledged, even with those Indonesians who wished it were otherwise.

As one illustration of the influence of those with foreign degrees, we note that in the new 26-member Cabinet of the Government of Indonesia in Jakarta, ten have doctorate degrees from foreign universities (7 from USA, the others from Belgium, Cairo, Malaysia). As an indication of the influence within Indonesia of Javanese universities, nineteen of the twenty-six new Cabinet members have degrees from Bandung, Gaja Mada, Bogor, National Military Academy, and University of Indonesia. Fourteen of the Ministers in the new

¹³ The Review understands that 90 Indonesian students have successfully completed their degrees in a recent similar program at the University of Manitoba, where the TOEFL requirement was waived.

Cabinet are consulting experts or academics.¹⁴ This emphasis on university training and international experience is also found in the 1999 Cabinet selection. Even at the level of local government (Regency) graduates of the universities are now Governors and Mayors, creating new linkages for EIUDP participants.

Despite the strong tendency to central influence, the number of advanced degree holders in eastern Indonesia is not negligible. A recent estimate suggests there are 700 doctoral degree holders in the islands of eastern Indonesia (including universities not in the EIUDP), according to the Association of University Rectors of Eastern Indonesia. Those with Masters degrees number in the thousands, including those trained by the EIUDP, and they work not only in universities, but in government and industry. We note that this figure is small if compared to the size of the surrounding population. But there is a growing class of scientific experts on which Indonesia is starting to rely, even where their skill has no precedent, for example in eastern areas of the country. And the upper layer of this group is gradually including those trained in foreign universities. This is emphasized to say that though bold and unusual, the EIUDP's objective was consistent with a much larger and powerful trend. What is significant is that the EIUDP sought to re-direct one aspect of the trend in favour of the eastern Indonesian universities.

The first objective of the EIUDP was to enable young lecturers, then teaching with an undergraduate degree, to study for a Masters degree. That was thought to be the appropriate level for the project's other objectives. It also appeared to be the best role for a university like SFU, with a tradition of training scientists at the Masters level. Soon, however, it was clear that in some places for some people a good undergraduate degree would be necessary before foreign training could occur, and these people were prepared (with short courses and English) for study at Singapore, the Philippines, or Thailand. This, too, was a prestigious step, recognition of person's merit, even if it was not the step to the fabled 'West.' In these regional universities, Fellows met other systems, customs and class-mates, broadened

¹⁴ based on data provided in *The Jakarta Post*, 26 August 2000. One may compare this to the educational level of ministers in the Canadian Cabinet

horizons dramatically, challenged their abilities and set new standards. Despite difficulties, most of them completed their degrees successfully, and now work at the lower levels of the lecturer system. Some observers said that this group is better adapted to make changes in the system because they studied within the region. In fact they are precisely the people who, if the project were to begin now, would probably compete to go to Canada for graduate studies now. However, they now work in an environment where their seniors have already returned from Canada (and other countries). They do not work in the environment that obtained for their counterparts (lecturers with BSc degrees) at the beginning of EIUDP in 1987, because that environment is no more.

Fellows have been sent for training from each university for undergraduate, Masters, and doctoral degrees. There have been 296 individual Fellows in all, and they went to Canada, Singapore, the Philippines, Thailand, and Indonesia. Counting their multiple use of fellowships, they were awarded a total of 313 fellowships for BSc, MSc, Meng, and/or PhD. One hundred Fellows are women, and 196 are men, ranging in age from early twenties to late thirties. Their experience outside the region involved not only learning more English, but also living in other language environments with other regional cultural or religious influences. They met young scientists from other neighbouring countries, and in some cases maintain contact with them. It is important to note that over 90% of the Indonesians who travelled abroad for higher studies through the EUIDP have returned or are planning to return to their universities. This pattern is consistent with the general pattern for Indonesian students in other programs. There are many international agencies such as UNESCO, supported by Canadian agencies such as IDRC, that support regional scientific networks oriented to development and these Fellows could be participants.

Fellows came from poor and rich families, local and non-local, where they were the first to be educated, the first to be educated in basic science, the first woman to be educated, or just one in a long line of educated people stretching back two three or more generations. What stands out is that for most this was the first step in the sciences, because this has not

been an occupation prevalent in the eastern islands. This unprecedented step taken by Fellows presents uncertainty, but also opportunity for mobility and experimentation.

Undergraduate Fellows are naturally least certain about their profession and life chances. Most are still in their twenties. Even the attachment to their present university is uncertain. But for those we met the project was coming to an end before they had an opportunity for further study within it – others were already studying abroad. The emphasis on improving English, on experience in the laboratory as well as in the class room, and on building working relationships with other universities means that these undergraduates are more advanced and capable than those who did not participate in the EIUDP. For example, all the Chemistry BSc Fellows working at Kendari as Dosen had been to study in Makassar at UNHAS, in different years. They found it much more competitive than UNHALU. They have seen professors from all the Resource universities, but they chose UNHAS partially considering the costs involved. The differences they noticed between Kendari and Makassar were “more textbooks, more equipment in the labs for teaching, more big science classrooms, and better qualified lab assistants.” The project thus enhanced their mobility. In ten years from now we can see what are the career paths of these undergraduate Fellows, and how far they moved to become professional scientists.

The experience on returning is complicated by the fact that the Fellow is arriving in the same place she/he left, but the person is now in a changed condition. The Fellow bears a new qualification and outlook but is addressing the people who have known her/him a long time (including in some cases former teachers). Fellows spoke about their intention to apply what they have learned, but to do so in a fashion that does not bring them into full confrontation with more established practices, and not with their former teachers. All of this involves differences in age, personalities, and qualifications. The Fellows agree that they must proceed thoughtfully and respectfully if they are to succeed, although they seem differ in how much they think can actually be achieved in the longer run, just as universities seem to differ in how receptive they would be to such changes.

When we return they (our seniors) over-estimate our capabilities. So that is a challenge. At the same time, they are very sensitive about our views regarding changes that should be made.

A new leadership has been very hard to achieve, although now slowly we returned-Fellows are being accepted.

And finally, of course, not everything that can be learned in Canada can be successfully applied in eastern Indonesia anyway. There are limits, and knowing them can make the experience abroad more connected and effective:

While studying at McGill I learned to use old methods. I purposely avoided excessive automation. When EIUDP brought my supervisor here to give a short course, he became more aware of the limitations on research here, and he helped me to avoid using methods that could not work in Kendari.

This ambiguous experience is not restricted to Indonesia, and nor is it peculiar to returned scientists, and international studies in business and government have already shown.

Teaching Methods At Home and Away

The predominant teaching methodology in Indonesia is teacher-centred. Students are not encouraged to participate actively in class discussions nor are they expected to question the material “handed-down” to them by their educators, who by tradition read from notes called “diktat”. The key aspect of this type of learning is memorization as opposed to understanding. During our visit we found, even at the highest level of the Indonesian government, an awareness that this method short changes Indonesians by undermining their competitiveness at international levels. This phenomenon is not unique to Indonesia, and members of SFU will have experienced it in relation to students from other countries in Asia.

Our system of education is not developing critical thinking. It is still influenced by the Dutch thinking during the colonial period. This one-way method of thinking is still prevalent in universities today. This also has to do with the limited time Dossens have. They do too many things outside teaching. They have not time for research and improving themselves as Dossens.

This was the reality the EIUDP faced from the beginning. It appears that the project was uncertain how best and how fast to address it. Certainly by 1991 a critique to the project was made about insufficient emphasis on improving teaching methods in science. One observer said that the teaching methods in Indonesia "may be categorized as presentation-memorization-reproduction". He asked whether real and valuable change "will only occur when students are able and willing (I must add), to pursue scientific knowledge openly and enthusiastically. I understand that such change is not easy to effect...".¹⁵ Clearly at this stage there was disagreement in the Project on how much real and valuable change would occur unless there was increased emphasis on teaching methodology to the Fellows.

Considering the above, the Fellows who came to Canada abruptly encountered a completely different culture of learning and academic performance. This created an unexpected hurdle in the learning process since the principle of "learning amongst your peers" collided with the value of "loosing face". The first response was to provide group tutoring by discipline. The Project Management team eventually realized that this was not producing positive results because there was a mix of ages and social status amongst the Fellows, coupled to their traditional non-participatory way of learning. Sensibly, one-to-one tutoring was then implemented, improving their chances to succeed. This tutoring now involved older and more senior doctoral students. It also provided a space for students to express the problems they were facing in adapting to life on campus and in dealing with other personal issues. Even if this problem had been foreseen, methods to address it were not incorporated until after the planning stage was over. These aspects of different ways of learning and cultural adaptation might have underlined the perception of some members of the SFU community that many Fellows had limited academic capabilities. It may also be true that experiences with individuals were extrapolated to their cohort.

¹⁵ O'Shea, T. "An Alternative to the Fellowship Program of Phase I", August 1991.

The majority of Fellows consulted reported a strong appreciation of their experience of new learning and teaching methods in Canada. They have attempted to implement some or all of these approaches, not necessarily successfully, in their opinion. The difficulties they faced have not, however, diminished their long-term intentions to alter the conditions of learning and teaching in Eastern Indonesia. One example we encountered was a Fellow who established “office hours,” because he admired the idea of direct communication between teacher and student. He eventually gave up because most (not all) students were reluctant to come. However, he expressed his satisfaction because he felt he had influenced those who did come to approach the teacher differently, with less distance. Ultimately, Fellows settled for a middle ground approach in their methodology.

The Canadian teaching methodology is different. Students there challenged me when I was a TA, they asked me questions. The students and Dosen here have not experienced this ‘up to you’ approach, for example whether they come to class, and whether they ask questions. At first I tried this, and students did not respond. So I finally settled for a middle-ground approach, allowing for some independent thinking.

I worked as a TA at SFU two or three times, then I came here and had to teach Biology 101. This was a big challenge to me. Very few of the Fellows accept this kind of challenge, but I don’t mind. These are huge classes and the students are not prepared to handle the amount of information given to them.

Dosen who have not gone abroad want to keep what they know. They see us as a threat. They don’t even want to adopt a new diktat. So we have to slowly introduce new methods, so not to create resistance among our colleagues. All this takes time.

Early in the project, there were different views circulating of on how to achieve its objectives. The issue of changing the standard method of learning in Indonesia meant changing the method of teaching. Project participants, particularly Fellows coming to Canada, encountered at least two kinds of experience with Canadian teachers and supervisors. Some emphasized differences in learning as a central but subtle factor of project implementation. Others stressed completion and achievement in purely academic terms. A tension therefore emerged over changing the method of learning, which resulted in changing the method of

teaching. Resolving this tension would have required the flexibility to rethink the learning relationship between Fellow and Supervisor, something not everyone was ready to do

Laboratories for Teaching & Research

Difficulties in establishing and operating teaching and research laboratories are not unique to Indonesia. Although the establishment of productive teaching and research laboratories was/is not an EIUDP objective, it was a logical and contingent entailment. By this we mean that without these labs operating well, the capacity to teach basic science would be very very limited. The experience with old and new laboratories, according to Indonesians we consulted, has been very mixed. The ADB completed the construction of magnificent lab buildings in the late 1990s, and a number of donors and the ADB funded DIKTI to equip them. Actually the ADB project was rapidly promoted by DIKTI because it was feared that CIDA might actually suspend all projects after November 1991, including the EIUDP. When the EIUDP was signed for its second phase, the ADB lab project ran in parallel with it. We found a mix of sophisticated and basic equipment from different suppliers and different countries, posing the problem of effectively using and maintaining them.

We got very sophisticated German equipment, and a German physicist came to set it up. But she eventually ran out of time without completing everything. And we don't have a manual, and can't understand the instructions. Small parts can be made here, but we don't know which ones.

This involved scarce foreign exchange for parts, instruction manuals in many languages, interrupted power and water supply, trained personnel, etc. "The old labs equipped by Australia are still functioning, and the old laborans keep them running. But the new ADB labs, which are been built for the past four years are not yet used." In addition to these limitations, labs are also part of complex administrative culture, and do not stand apart from university structures. Therefore the experience with labs varies from university to university, and the EIUDP had to address these variations, albeit not always successful.

The conflict over access to the labs at X is an old problem. Repeated efforts have been made to change it, and many people have observed it. It has inhibited X's progress, and they could not make use of international opportunities.

There are basically three levels of technical lab staff: their titles are analis, laboran, and teknisi. A Senior Advisor on Laboratory Development who spent 18 months working in 1988-1989 could not figure out what the real difference was between these categories of staff. Terms seemed to be very loosely applied and meant different things at different Member Universities. Even ten years later observers said that titles did not always reflect differences in competence. Generally, however, the 'laboran' had the more menial tasks of cleaning surfaces; keeping inventories of equipment/chemicals etc. 'Teknisi' tended to have a diploma from a technical school (STM) and they set up and checked equipment. Observers were not always clear what the 'analis' did.

I learned how to do things myself, and not to wait for solutions from above. So I made my own tools, and began building a workshop, which is not finished. This is one of the big consequences of my studying abroad. I saw people do that all around me.

My professor from Saskatchewan visited me here, and said you have very good equipment. This is brand new equipment got through the SUDR project of the World Bank. But when the electricity stops or the water stops, the experiment dies and the data in the computer is lost.

Some of the original laboran were not well qualified, so the EIUDP implemented a series of lab development workshops with visiting instructors from Indonesia and Canada to address this. We found, however, that many good students worked as lab assistants due to their high academic performance, and these students have gone on to higher studies. Similarly, many of the BSc Fellows interviewed who were now becoming Dosen had already worked as lab assistants, so they 'graduated' from that experience. With the new ADB-built labs, the basic scientists have something to be very proud of and maintain at a high level. The Review found people well aware of this responsibility, but frustrated in discharging their responsibility. Maintenance as a continuing problem was noted by a number of participants and observers. What the laboratory is and what it does is not widely understood in the surrounding society and economy, because the lab is a relatively new institution in these

cities in eastern Indonesia. But there are some older analogies – for example, the hospital is an old institution and has had a lab for generations in which similar chemicals are used under scientific procedures like those used at the university. In this case, however, it is not just for testing but for training in procedure and possibly leading to discovery; in that sense it is quite new, and takes its place with a small number of labs in the applied science faculties.

The Tool Kit

Tool kit (a.k.a. Professional Development Fund) is the term given to the grant awarded to Fellows returned having successfully completed their degrees. They were invited to prepare a list of desired things in support of their research, and it was intended that those things (if equipment) would become University and then FMIPA property. This list was reviewed by project managers and advisors, and if approved, these items were to be delivered to them at home. Initially, the tool kit would not include a computer, but as computers became an important professional tool, a fixed amount from the tool kit was assigned for the purchase of a computer. The approved list contained items such as fees for professional membership, subscription for electronic journals, minor lab equipment, etc.

I have a subscription to an electronic journal in my field. I download it from the internet. This is paid by the Professional Development Fund, which I have had for one year. But when the money runs out, I simply cannot afford to continue the subscription.

Some of the items requested by Fellows were not approved, considerations such as cost and maintenance were paramount. These were among the issues that long-term advisors and project management had to deal with.

We encountered a case of a Fellow who wished to bring water distillation equipment back to his home university from his Indonesian supervisor's lab at a Resource University, using his tool kit funds. The distillator was designed and built by his supervisor, and costs one-quarter of the price of the imported equivalent: it could also be repaired and rebuilt

locally in the city where the Fellow lived. It thus had all the appropriate qualities of sustainable technology that the EIUDP values. Months passed while the Fellow awaited the equipment, and finally it was admitted that the existing version really needed improvement to a new version. This request from the Fellow, and the ability to pay for the equipment, appears to have finally driven the supervisor to improve the design and to commit to delivering it in a reasonably short time. If concluded successfully, this case may illustrate how a small amount of project money stimulates local technical innovation within universities and helps Chemistry labs to save money in the long run.

On the other side of the spectrum, two Fellows who were planning to combine their tool kit funds were frustrated due to the delay in obtaining their equipment. We asked how they would maintain the expensive piece of equipment they had in mind (a multi-media lab projector). First their answer was that there were technicians in the university able to maintain it, but eventually, with questioning, the Fellows agreed that "they [the administration] would not allow these technicians to assist us since they belong to another unit." During our tour of the labs and library, we became aware of the serious limitations everyone faced in relation to maintaining computer equipment, so we insisted for a better answer from these Fellows. They then said that the proposed equipment could be sent to Surabaya for repairs, but clearly they did not know how this could be done. This case represented for us an example of the impact the mystification of technology has had in some Fellows. We wonder if, in future projects, this situation could be minimized by making supervisors more aware of a country's reality and the limitations their students would face when returning so as to guide students throughout their studies.

Professional Networking

There was an expectation built into the project that studying overseas would provide Fellows with a network of support that they could continue building after they returned home. During interviews with former supervisors, we found a general agreement that

electronic communication gradually broke down after their students went back to Eastern Indonesia. In our visit we inquired about this and found that returned Fellows also expressed concern with the fading of communication with Canada. Some of their reasons are given below:

E-mail is inaccessible to returned Fellows because of the very high costs of the phone lines. Because lines are slow we can not use attachments, and can not freely search the web. We did not study abroad and our English is poor, so the good material is available on the net only in English.

I liked my time at McGill. It was informal. It was cosmopolitan. I met Indonesians there, people who have become important to me here. But I have only limited communication with Canada. I have the will for it, definitely, but the everyday pressures overwhelm me. I notice it is getting steadily more difficult to write and speak English. And the time and money for the e-mail is not there.

It was striking how dependent returned Fellows seemed to be on the use of e-mail to maintain these professional networks. In one way, e-mail accessibility is a basic assumption in a Canadian university, and all these Fellows had to engage in it, some for the first time. On the other hand, professional networks have developed in Indonesia without e-mail, for a long time, and those methods are still available to these Fellows. But the project objective was that these professional networks would be international in character, and these networks are dominated by e-mail. Taken together this focus on e-mail has a coercive effect. Returned Fellows have difficulties with accessing e-mail, experience frustration, and think that they are isolated.

EIUDP Resources in Member Universities

Even senior members of universities reported personal benefit from EIUDP beyond the occasional workshop or rare trip to Canada. They themselves took short courses, sometimes in their specialty or in management studies, and this kind of training helped them to organize

their Faculties or Departments. One or two also applied this knowledge to organizations outside the university. Insiders said this new kind of thinking showed up in the biennial planning cycle on which the EIUDP depended. It is true that participants received financial emoluments for their contribution. Said one EIUDP manager, "In Indonesia they have extra payments for everything in excess of their small salaries. X gets a basic professor's salary, then gets a Dean's allowance, then gets a special fee for coordinating this project on their campus. The payments are standard across the country. But gradually we are withdrawing those extra payments from the EIDUP because it is becoming part of their routine work." But among senior people there is a basic understanding that the project was really intended to change the world of young scientists, and the reason for allocating special resources to them was understood.

There is a subtle undercurrent in one or two places, however, not unfamiliar to Canadians, that centres, labs, department, and the special resources contained in them are in someone else's sphere of influence and difficult to use, whether informally or formally. The view over the wall, or through the wall, leaves some people in eastern Indonesia with a sense of exclusion and disappointment. "We did not get X. They did." This undercurrent was revealed in one faculty in relation to another, and showed in the regulatory distinction between UPT and Fakulti. The Review Committee thinks this 'end-of-project' competition (and unfortunately some of this disappointment) is inevitable when new resources are created or installed for special purposes. Of course there may be undercurrents of disappointment about personal advancement and success, the feeling that "I should have been able to go to Canada too." With new facilities comes new employment, and this certainly was the case with the EIUDP and the projects that ran parallel to it. Notwithstanding the above remarks, the cumulative resentment in some quarters has fixed a limit on the sustainability of the project, if not a detriment to its objectives. We point out that this cumulative resentment has both a personal and institutional grip, and may survive well beyond the project's life. It appears the EIUDP was generally sensitive to this undercurrent, and attempted, where

possible, to calm the competition and limit the disappointment by opening facilities and resources to more rather than fewer participants.

We suffer with the new project syndrome, that means we neglect old projects. The Rektor took the central laboratory into his own hands, made no delegation, restricted access, and now the equipment is obsolete. Nobody used it.

Local and National Government

One of the project's reasons for strengthening basic sciences was to assist applied sciences and enhance their application to development. Participants, both junior and senior, pointed to the constant need for trained scientists in the surrounding economies, and strong expectations of people outside the university. Clearly university officials are learning to adapt to the new relationships built in to 'decentralization' and 'autonomy,' and the university's role in the economy and importance in local government is being clarified. This clarification sometimes occurred in the very decision to create an FMIPA:

We cannot avoid basic sciences. We need to know them even to compete with other universities in other provinces. We have made a big decision. At the same time as the FMIPA was proposed so was a Faculty of Marine Sciences. Both are important here, to be sure. But as Rector I decided that we must have an FMIPA. And that is what we are building.

Officials are confident that local government will gradually learn to make greater and greater use of university skills:

The new Governor of the Province is a graduate of this university. The new Mayor is a graduate of this university. The Province is going to use our graduates more and more. That means we have to look carefully at our quality.

Rectors are well aware of the need to justify the expense of training in the basic sciences:

I meet the Governor all the time. He is a graduate of Gadja Mada, but he is also chairman of our Board of Trustees. Yes, he is very concerned with practical questions,

but I say to him: "If you want to know the volume and the value of the product of your province; if you need to keep records and accounts; if you have to make plans and budgets, then you need a lot of basic mathematics." The same goes for the role of Physics in engineering, the role of Chemistry in health and Biology in agriculture. We all need basic science.

Another Rector is confident that the Governor supports the university, but in his dealings with him continues to emphasize the applied sciences.

We just signed an MOU with the Governor about animal husbandry and also engineering. With autonomy our relationship will grow and will become more important, but we have always have good relations with the Governor, otherwise, the university would not have received 250 hectares of land without his strong support.

Some far-sighted people see that well-trained eastern Indonesian basic science graduates will be able to compete for the national level of the civil service, and compete for other university and/or private sector positions outside this region. But at the moment it is the regional and local society that is the focus of attention.

Languages for science

The EIUDP project was the ground for the mingling of the two languages of science in Indonesia – Bahasa Indonesian and English. Indonesian evolved as a lingua franca trade language, and so it was not 'regulated' until it became associated with the nation as its official language. At some point however, the Pusat Bahasa (language academy) got involved in regulation of vocabulary, but the Pusat appears to have been unable keep up with the infusion of new scientific terms. Bahasa Indonesian is not as rich as local languages, but it is national in intent and draws on an international vocabulary, including Malay, Sanskrit, Arabic, Dutch, and English. So the language has a complex history. This is important because the language in which people think is the language in which they might best express their scientific ideas, and express them better than in any other language:

When EIUDP began, positions were divided. Some wanted mostly English for the project, some wanted it to be flexible, some wanted Bahasa only in the project. The

relation between English and Bahasa is uneasy – the project participants switch back and forth – both languages are seen very politically. But doing science in Bahasa has been overtaken. English is prevailing.”

English standards were very low at the start, and project language experts found people teaching English in 1987 who hardly knew it. So the project realized it had to train these lecturers, and they would then prepare the science lecturers who were to go overseas. We wanted them to get into graduate school, but some did not have the 570 TOEFL score required by SFU. No admission was granted in most cases, and some students thus went to other Canadian universities.

SFU already had visa students who had scored 600 on TOEFL, yet could not speak a word of English. We said “trust us, we know these specific Indonesians are capable, trust us.” But they rejected our people. I always remember a case of bright woman who was rejected by SFU, accepted at Guelph, did outstanding work there, and her supervisor asked, “Why is this woman not studying at SFU, the real expert on this subject happens to be at SFU – why doesn’t she go there?”

At a seminar on evaluation methodology at Makassar, conducted in Bahasa, English terms like “confidence,” “quality-assurance,” and “reliability” were dropped in, naturally within the sentence. Socio-linguists call this code-switching. This gives rise to discussion about what capabilities a language has, and to comparison of the capability of Indonesian and English.

I agree we often transfer English terms, like “classifikasi” (classification), and “hierarki” (hierarchy). We have to do more than translate, we have to re-think and re-write the idea into Bahasa. It can be done.

And the attitude of Indonesian Dosen to English was quite complex, some serious, some casual. One English language training coordinator said:

When we began this project we found the attitude of many young technical people to be very adverse to English training. They said, ‘Of course, we can pick up English, we can muddle through, after all we are brilliant, our professors themselves have done the same.’ Well, they went abroad, and they hit the wall there. They could not improvise. Sometimes they were humiliated.

A senior Indonesian academic said scientists just have to make more effort with Indonesian, and said the Indonesian language would prevail in the end:

Bahasa is fully capable to adapt to and incorporate science, and scientific terms. Scientific language can mostly be 'Indonesianized.' However, yes, I agree with you that there are difficulties. Top Indonesian scientists often transfer English terms into Indonesian, like 'classifikas' (classification), and 'hierarki; (heirarchy). They also use key terms in English, like 'reliability,' and 'confidence' to discuss statistics. I see that a lot. I also agree that it is very difficult to describe 'average' in Bahasa, also whole ideas like 'gradual reduction to zero.' But it can be done. We have to do more than translate, we have to re-think and re-write the idea into Bahasa.

If these scientists had to use English, it is because they did not think hard enough in Bahasa, or don't know it well enough, or maybe they have used these English terms for too long. But I think the Akademi will succeed in the long run.

Most books on science available to Dosen in the EIUDP are in English. The Review was told that most EIUDP participants viewed Bahasa as a tool, and few people actively study it as a living language, particularly in eastern Indonesia:

Bahasa is uninteresting to them. Bahasa has been made uninteresting. Top students go to engineering and medicine, and do not work hard to learn the Bahasa terms. Consequently when these people and many scientists speak or write they import a lot of English and other foreign terms.

One project observer said some scientists might speak about using Indonesian, but actually do little about it. The Pusat Bahasa (language centre) tries to codify the language, and to keep up with scientific terms. Nevertheless terms like 'karsinogenik' are loan words, not translations. Some scientists told the Review that they wanted to be free to deal with science as they see fit, and, according to one philosopher, "not to conform to Pusat which is rather too sanscrit for their taste. A definite tension has arisen there."

Moreover, said one professor in Jakarta, "command of expression in Bahasa has been losing its importance. There is a real language mixture in science now." About four years ago Departments in some top universities fought for the right (and were pushed to do so from the outside) to award Masters degrees without a thesis. There were students in their departments with serious problems in writing, and they took too long, including those in the basic

sciences. To move things faster, some departments split into a course-only stream and a thesis stream. As a minimum replacement, these departments require a short paper (20 pages). Consequently, the standard of written argumentation and reasoning among those students is lower than before, according to professors. Still others argued that it would be only a matter of time before all universities followed suit with non-thesis degrees given the huge volumes of students entering graduate studies. The importance of Indonesian language in science would also decline, they said. They pointed to this as an issue for EIUDP universities.

Science and Culture in Indonesia

The value of strengthening teaching and research in the sciences was explained, by some Indonesians to the Review, as something that is less connected to utility and more connected to desired changes in culture. To these people, EIUDP is valued in ways that look beyond the project's objectives. They acknowledge, as a matter of course, the 'argument for utility' with respect to the value of basic sciences. They also express the desire that Indonesia should contribute to science on its world stage. But then they carry on to describe the benefits to their society of establishing a 'scientific outlook' and 'scientific habits' outside the laboratory, the classroom, or university. One mathematician called it 'the idea behind science.' Here they are really talking about something fundamental, in their minds, affecting all the cultures in the country, the political culture of the nation, and the future of all the individuals in it. Bringing 'the habits of science into everyday life' clearly moved these speakers as powerfully as the practical advantages of the EIDUP. Their arguments take various forms, all revolving around the importance of changing their culture and using scientific development to do so. It may be thought that some of their argument is idealist, suggesting to us that if people would only change their thinking patterns, the world around them would change. But at the very least, they assert that the way of doing science must itself change in Indonesia.

The Canadian Ambassador said: "President Wahid recently said to me that Canadian projects like EIUDP are 'teaching us to think, not memorize.' This is why higher education is crucial in this country." Said a senior human rights educator:

Education itself is political. This is where we see ideology at work. We see it in the school curriculum in science, we see it in the role of scientists in the long run. The new Minister of Research and Technology told me recently that the new emphasis will be on life-long learning in science. We need that approach, yes, but we must ensure this learning is all-round, not narrow like before. Therefore we must emphasize more science in public life.

A senior political advisor in Jakarta said: "Against falsification, science directs our attention to reason. We have a freedom now which we did not have before. It is time now to build a tolerant academic culture. If we can do that in the universities in Ambon and Irian Jaya, we can help those people to keep their hope."

Said an astrophysicist:

Frankly there are not many here who contribute to 'world science.' Many are strong contributors to the growth of their fields within Indonesia, but only a few are based here and maintain strong reputations outside the country. Habibie pushed engineering and high-tech applications. I asked him when we could expect to develop the basic sciences, and his reply was, 'I know what you want. Just you wait ten years, and then we will be more ready.' But he was already spending a fortune on his projects, and little for the basics. We have not had a Nehru, you know. None of our top leaders have done what Nehru did for India. Of course there are lots of influential people who realize basic science is essential, but if it is not understood at the very top, so it won't happen now. Actually Habibie's legacy is a kind of public skepticism about science, because of the failure of his high-cost technology ventures. He has given both basic science and applied science a difficult problem to overcome.

In the words of a senior government administrator: "We have invested in basic science and scientists for forty or fifty years. Maybe not enough, but we have supported them nonetheless. Yet I know of no Indonesian scientist who has been nomination short-list for the Nobel Prize in Chemistry, Physics, medicine or physiology. Should we not have at least one nomination by now?"

The Review heard about the importance of science for cultural change from young Dosen fresh with their Masters' degrees, senior academics and university leaders, and senior government officials and political advisors. These statements were sometimes unprompted, and sometimes in answer to the question: "What really is the value of the basic sciences?" People who raise this issue see it as an imperative because of the huge influence the educational system has in the development of a new political environment outside the universities.

Students are crucial in Indonesian politics. So the education of students is crucial in Indonesian politics. Thus science is deeply implicated. Science students and faculty have been deeply involved in the changes of the past two years. These are changes we must continue.

When asked about the justification of the cost of basic sciences, a senior administrator said that there wa not universal support:

Yes, people doubt the role of the basic sciences. Why? Because of their higher establishment costs, and because of the question of their sustainability – can we keep the basic sciences going in a poor country? If you think that we have 80% of our students in the social sciences and humanities, you can see that the basic sciences have a long way to go. We are behind. We need to catch up.

The reason given by those who argue for the value of EIUDP beyond its practical effects, is that it can change the culture of the nation, and thus enable it to compete more equally in the world. Symptoms of the problem in these peoples' minds are that there is no wide appreciation of the value of science, a coherent and effective scientific community is missing, and the culture of science is itself weak.

The problem is there is no dialogue within the scientific community, about 'what science is.' Each is sealed off separately. The exception is mathematics and Physics – where there is a deemed necessity between the two fields to communicate.

The whole idea of science is that it follows reason, not authority. So it is one way, not the only way, to alter the political culture in this country. The culture of science is very close to the culture of democracy. Why? Because science encourages systematic thinking, analytical thinking. Plus, because scientists have to work in networks or groups that rely on one another, science shows people how to work with one another, in teams. Finally, science also shows people how to argue without conflict, how to

disagree. I mean how to falsify a statement, arrive at the truth. It is thus important to think of science as culture, not just technique.

To answer one scientist's demand to make public life more scientific, the Review Committee mentioned that Germany was a great 'scientific nation' before the 1930s. "Yes, that is my point, the existence of science and scientific thinking does not guarantee democracy. This great influence of science – reason, etc. – must be joined with humanistic influences in education."

When pointing to the roots of the problem, the causes given to the Review were various and historical – whether in the history of the country or the history of individual students. People point to the 'underdevelopment' of curiosity and skepticism in Indonesian cultures, to encounters with 'foreigners' who did not particularly value curiosity or intellectual speculation, and to a curriculum that does not present science as a way of asking questions.

It is Islam of the 14th century which we encountered here, and it settled on top of us, on a largely Hindu and fluid social structure in Java/Bali. At that stage, Islam had already changed from a very science-sensitive movement to something that actually resisted non-revelatory sources of knowledge. It developed in a way that eventually insisted that science is un-religious, even anti-religious. It developed here so that memorization of knowledge took precedence over everything else. This 14th and 15th century was our unfortunate time to encounter Islam, too late.

Though some Dutch teachers and administrators selected brilliant students to go on for higher studies, and they certainly did go on, the colonial 'face' presented to most Indonesians was that they would be dependent on outside knowledge, and that they would be better off if they used that knowledge and followed the rules.

I just reviewed the entire curriculum from class 1 to 6. It is very poor in showing that science is based on questions. It provides no room for questions or critical analysis. The story of Archimedes in the bath is told, but without reference to his thinking through the problem. There is no mention that he asked the question because he was curious. No room is given for experience or experiment. What is there in the curriculum is emulation, asking questions only about the story as it is given to the students, nothing outside it. And as with the rest of the books in the curriculum, good models are shown, good families, good works, and it proceeds by indoctrination, by reinforcing norms. The curriculum further shows that if there is conflict it is because people did not follow the norm. No room is shown for legitimate disagreement in

these books. It is often observed in most classes, perhaps not all, that those who ask questions in class are made fun of – other kids clap, etc. So there are few questions asked, and that is the situation until they are 12 years old.

Approaches and solutions to this situation often are expressed as trying quite classical forms of encouragement, restraining the impulse to decide questions without evidence, and to stimulating (or even provoking) a skeptical challenge to assumptions. And the focus has to be at the top and bottom of the power structure, according to expert Indonesian observers.

I say we have to build a ‘methodical man’ because we are surrounded by politicians who ‘jump at conclusions.’ They do that around here, without evidence. Their response to me is that I am ‘an ivory tower man,’ and it can’t be done here. I don’t believe them. Good politics comes from systematic thinking, and that thinking comes from science. That’s what I mean by ‘methodical man.

You see science is different from the rest of life here. I try to explain to them (to the lecturers when I go on short courses to EIUDP). You must challenge me, and challenge the authority of science. It is not like a guru, who is not to be questioned in Indonesia. We have many gurus. Not like black magic either. We have a lot of that too. Yet these are the things that surround the people, so it is tough to get ordinary people into the idea behind science.

Thus in the minds of some people involved in EIUDP, ‘the idea behind science’ is as important as the ideas in science. Concerns about basic science and the Nobel Prize reached the Cabinet directly in December 2000 when the results of a 38-country study of school children’s performance in mathematics and science were released. The average score for 5800 twelve-to-fourteen year olds (half of them girls) from 150 junior high schools in Indonesia ranked 34th in mathematics and 32nd in science tests. Location of the schools is not reported. The study was done in Indonesia with the authorization of the Ministry of National Education (of which DIKTI is a component). The rank of school children in neighbouring Singapore was in the top two in both tests. The tests included content, performance expectations, and perspectives on mathematics and science. Contemplating these results on the day they were released, the Minister of National Education, Yahya Muhamimin, said that basic science, English, and mathematics would be strengthened in the core curriculum in all

school grades from elementary school: but, he continued, "the students have to learn science in a fun way instead of the old method that was too depressing."¹⁶

Some other people consulted, however, did not connect science to democratic values or to the formation of inquisitive minds when the opportunity was presented to them. Most simply pointed to the utility of science, and the importance that citizens know it. Some Dosen and most Fellows, for example, blamed the present teacher-centered school methodology, and pointed to the need of changing it as a method to get students to question their surroundings and achieve inquisitive minds. Changing this methodology is the focus of an in-service training program developed jointly between UNCEN and SFU Faculty of Education. Inquisitive minds are not necessarily understood by all Indonesians we consulted to be the product solely of scientific experience. The faculty member responsible for Anthropology in Jayapura said that empowerment of his people can be achieved in part by presenting 'local knowledge' or 'traditional knowledge' in university classrooms, therefore validating it within this context. "When an elder is brought into the university and talks about the history of his people or explain his traditions to first year students, he feels proud and the Irianese students begin to see themselves differently."

The Review Committee found that most participants, including most Fellows consulted, explain the difficulties faced by many kinds of education (including the basic sciences) in terms of the teacher-centered methodology which is at the core of the curriculum. There may be some who dream that 'thinking scientifically' in education will change everything else in the culture. The Review found, however, that the EIUDP has systematically explored the intervening variables and shown how much more patient, practical work is necessary to bring the basic sciences to a level where they can play an appropriate role in a sustainable economy and society. This dilemma is as familiar to Canadians as to Indonesians.

¹⁶ *Jakarta Post*, 6 December 2000. Although these tests certainly stimulated public debate, comparing school children in Singapore and Indonesia is, we note, like comparing apples and oranges.

14 Conclusions of the Review Committee

In this Review there were both breadth and depth requirements. The breadth requirement involved addressing the influence of external forces on the operation of the EIUDP, and therefore not construing our focus too narrowly. The depth requirement involved studying the operation and evolution of the project over thirteen years, as seen from inside the project and the University. The interdependence of the project and its immediate surroundings is thus also a major focus.

The SFU policy on international activity lists a number of objectives for any project. Though these objectives can perhaps be rewritten in a more economical formulation, the objectives named in the policy are each distinct, and not presumed to be consistent. It may be useful to analyze the EIUDP in terms of these objectives using a matrix, in which we can adopt a principle applied in constitutional questions by the Supreme Court of Canada. This is the **principle of 'minimal impairment,'** in which the Court (as we understand it) weighs the pursuit of one objective of the Constitution or the Charter of Rights against another objective. Efforts to achieve one objective should not impair efforts to achieve another objective, except 'minimally.' We can not state how SFU should interpret 'minimal' but the principle certainly directs our attention to the inter-relationship between one objective and another.

In addition to applying the Supreme Court's view, it is important to note that the pursuit of each objective has second-order effects (some intended, others not intended). The second order effects of one objective should not greatly impair the achievement of another. If they do, the situation is deemed to be unbalanced. In our view, this imbalance probably promotes the establishment of a hierarchy of objectives. Foresight about second order effects is therefore important. The example of financial management in EIUDP is relevant here: if concerns for financial control impaired the flexibility necessary to protect participants from

risk, or impaired creating conditions favourable to women scientists, then those controls should be re-examined, as in fact they were in EIUDP. But in addressing these second-order effects, the project could not unduly relax financial controls. How would this question of impairment and second-order effects apply to the SFU policy on international activities? Though it certainly devotes more space to 'human rights considerations' than it does to 'the environment,' for example, the SFU policy lists objectives sequentially, and does not state or suggest that one objective is more important than others. This is where the concept of 'minimal impairment' becomes very useful.

Conclusions on SFU Policy

The SFU Policy directs that "the practices of an international activity taking place within a country governed by an abusive political regime should be assessed on their own merits." This means a project should not be dismissed because it is to occur in such a country. Furthermore, objections to a project have to systematically account for "the cultural context" around the project. The policy thus declares that the University has special responsibilities in undertaking a project in these circumstances, and further lays out the way to meet those responsibilities. For clarity in preparation of our conclusions, we return to the grouping of values and objectives set forth in Chapter 8, all taken from the SFU Policy on International Activities.

1. The **first group** includes values and principles which are most strongly and historically associated with **the culture and conduct of university life**. These include the University's mission and academic standards, academic freedom, ethical conduct in research, protecting the safety of project personnel, ensuring equitable participation of ethnic minorities and women in the project, guaranteeing control over student access to study programs, the University's authority to select and administer its personnel, and 'taking the cultural context into account' when upholding academic freedom.

We conclude that the value and principles in the first group have been satisfied, with the possible exception of meeting academic standards. In that case we are uncertain and we accept that there is good faith on both sides of this difference, as we explain below. We deal with each feature of the policy (in the first group) in the order given above.

As for SFU's mission, it emphasizes uniting teaching and research, bold initiatives, and especially engaging all our communities in building a robust and ethical society. [see complete text in Chapter 8]. We view "all our communities" to be globally inclusive, and conclude that the EIUDP does meet these expectations.

We are less certain that the project met the University's academic standards in all cases. SFU has historically taken pride in its open accessibility to graduate students from around the world. The Review simply does not have the basis on which to form a judgment as to whether or not project Fellows entered and passed through programs at SFU with lower standards and capabilities than is expected of other graduate students. Our consultations lead us to think that this problem was greater in the first years of the project, and even then the project brought exceptionally good students to SFU. We understand that the problem of academic standards gradually diminished as a consequence of adjustments made within the project.

On the issue of academic freedom, research and ethical conduct, the policy makes it clear it is concerned only with the actions and decisions of the project itself. This issue is distinct from the practices of Member Universities, a matter to be considered separately. We interpret this condition to mean that the actions and decisions of the EIUDP should conform with SFU current university policy governing academic freedom, research and ethics.

Regarding the safety issue, from all the evidence available to us, we conclude that the project has protected the safety of university personnel. Moreover we find that it protected all project participants to the extent possible. Based on extensive consultations, the Committee thinks the risks to which people were exposed in the EIUDP appear to have been reasonable. No one, Indonesian or Canadian, involved in the EIUDP could have been unaware

of the variety of risks, and consistent measures were taken by the project to inform and alert participants to the means to deal with risk. There was one tragedy, and the EIUDP appears to have warned the victim of danger, and took steps to bring about a proper enquiry. The project is actively addressing the predicament of project participants displaced by the burning and looting of the university in Ambon. Our view of this issue is that a project should protect participants as well as personnel, and hence we examined this from a broader perspective.

Did the project support the equitable participation of women, as required by SFU policy? It is clear that the EIUDP made continuing efforts, through WIST, to establish conditions favourable to women in science, but it is difficult to measure the impact that low Canadian female scientist participation might have had in the implementation of the WIST policy. Having said that, the Indonesians consulted said that there was considerable progress for eastern Indonesian women in this project. The numerous activities held in Indonesia and Canada have, at least, raised the question of women's equality to a much wider audience than it would otherwise have if the WIST focus had been limited to the Fellows alone [*see Appendix B*]. Furthermore, women who obtained their science degrees in Canada were exposed to the struggle that their Canadian counterparts are making. There is a sincere hope among the Indonesian and Canadian women advisors that these female Indonesian Fellows will become agents of change among scientists in eastern Indonesia.

The Policy also asks whether the EIUDP supports participation of minority peoples. Indonesia is socially more complex than the language of the Policy admits because the term 'minority' is not defined, especially 'minority in relation to whom?' For instance, there is an extraordinary diversity and co-existence of linguistic and ethnic groups in Indonesia. By focusing on the eastern islands of Indonesia, the project met this condition by ensuring participation of peoples already somewhat marginal in Indonesia, among whom are those considered "minorities." The extraordinary diversity takes a special form in Papua, and the project managers took care to ensure appropriate participation there. Furthermore, the EIUDP made early and special efforts to build anthropology as a discipline which, according

to Papuan observers, has formed a special connection between the university and its surrounding communities. [See above, Chapter 8.] It is quite possible that the anthropology program may turn out to be as important in Papua as the basic science and education program.

The policy requires that a project must guarantee university control over student access to study programs so that selection is squarely within the project's authority. In addition, the policy requires full acknowledgment of the University's authority to select and administer its own personnel. Remembering that the EIUDP involved Canadians from outside SFU and supported Indonesians at other universities with their own authority, both these stipulations of the SFU policy have been met. For example, the EIUDP had no case of a qualified student who, having gained admission for graduate studies, was denied a passport or was prevented in any way from proceeding abroad as a Fellow. Furthermore, the project succeeded in resisting an Indonesian convention of awarding training benefits to favoured individuals.

2. The **second group** concerns **legal rights and human rights** within and outside the university. These include upholding legal rights in international law, mitigating the violation of human rights, and assisting participants to make informed judgments about human rights. There are also three injunctions for international activities – that projects not be the instrument of human rights abuse, not further penalize people who live under an abusive regime by denial of access to assistance, and not have a close connection with an agency known to abuse human rights.

According to our understanding and that of expert observers, the project has conformed to legal rights in international law, and in no case did any critical and knowledgeable observer point to EIUDP violations of international conventions. The policy requires that a project itself mitigates and does not abet the violation of human rights. We find that the EIUDP did not add to such violations, and because of changed circumstances in

Indonesia in recent years the project has been in a position to support those who mitigate violations of human rights [*see Linkages list in Appendix D*].

While the evolution of the human rights situation in Indonesia is important in a general sense, the Review could not do more than report the range of opinion (and evidence) about Indonesia on which we rely to reach our conclusion. This limit arises for the reason that it is a question of such proportion and complexity that it would, alone, consume all the time and energy available to the review. Our view is that an appropriate test of whether the project was consistent with efforts to improve human rights is to be made among those most affected by and implicated in it, including close observers of its effects.

The SFU Policy on International Activities specifies that projects must be consistent with efforts to improve human rights situations, asking whether or not a project 'mitigates the violation of human rights.' The EIUDP was not intended or designed to mitigate the violation of human rights situation in Indonesia, although when the project began the human rights situation there was unacceptable to most Canadians. While changes to and improvements in the human rights situation were not a planned outcome of this project, the question for the Review is what the project – within its sphere of operation – did with respect to human rights. But what primarily concerns the Review is the manner in which the relations of the universities in the eastern islands to their surrounding societies, enter and influence the conduct of the project itself, namely the strengthening of capacity in the basic sciences. To achieve this understanding, the Review asked both indirect and direct questions concerning the basic sciences, universities, and the values contained in the SFU Policy on International Activities.

SFU and EIUDP worked most closely with participating universities and DIKTI. DIKTI does have an ultimate technical check on all academic appointments, and remuneration is based on national standards. This check can be compared with central government approval of Canadian Research Chair appointments, and the centrally determined university salary scales of Australia, France, and the UK. The great majority of such decisions in Indonesia are,

however, effectively taken at the working level in the university. EIUDP Fellows were/are appointed by the project through consultation with local academics. EIUDP had a more distant connection to the Ministry of Foreign Affairs. Though many oppressive measures were directed at the university community, we have no evidence that DIKTI and the universities were involved in human rights abuses identified with the military, the police, the Ministry of Home Affairs, or other agencies, or that DIKTI and the universities had a close connection to those agencies for the purpose of furthering such abuses.

3. The third group concerns **relations between a project and the environment outside** the university, namely that benefits should accrue to local people and should advance partnerships with them, that projects should contribute to the dignity of local people, that projects should have a neutral or beneficial effect on the environment.

The Review finds that great care has been taken so that benefits have accrued to local people, and where possible, EIUDP argued for prolongation of programs to enable local people to utilize these opportunities. Even the multi-layered question of 'what is a local person?' has not been ignored by EIUDP, while acknowledging that the Indonesian constitution and practice is to minimize differences between 'local people' in support of 'national identity' when considering benefits in the societies of the eastern islands. Long-term advisors and project managers, we find, gave careful and systematic thought to this provision of the policy.

The advancement of partnerships between SFU and these universities has been fundamental to the EIUDP from its beginning, and has extended itself to building partnerships between Indonesian universities, using resources for the purpose which might not have been available otherwise. The EIUDP has even consulted its Indonesian partners before agreeing to the composition of the CIDA evaluation team, and it seems all parties, donor included, respect the implications of this partnership. The Review finds emphatically that these partnerships, and the dignity inherent in them, have been achieved. None consulted informed the Review of any programmatic or systematic way in which peoples' dignity had been

diminished through the EIUDP. Quipped one observer, "previously we only opened our mouths for the dentist." Finally, the Review found that the project had at least a neutral effect on the environment in that, as an educational activity, any negative impact on the environment would be minor and incidental. At the same time, this project made sustained efforts to raise awareness and consciousness of ecological concerns in Indonesia and Canada. Some of the linkage projects are specifically intended to have beneficial effects on the environment, and evidence will be available regarding their effectiveness and in time can be judged on their performance.

Conclusions on the Seven Conditions Established by SFU for Phase II

Conclusions on Benefits to the University

The Review Committee concluded that EUIDP brought clear academic benefits to SFU. An early tangible benefit was in the form of additional resources to teaching and research in a time of financial constraint, and the project brought a number of other less tangible benefits, some of which accrued not just to departments to the University as a whole. Clearly SFU added to its reputation and capacity for complex international projects, and initiated the practice of Canadian universities working with community colleges as a consortium; this had benefits in British Columbia as well as elsewhere in Canada. The EIUDP also gained new linkages with universities and NGOs in Indonesia. In an unintended way, the project raised awareness of human rights issues in projects at SFU by bringing Indonesian faculty and graduate students to the University for study and collaboration. Thus the EIUDP added to the diversity of experience and created a more cosmopolitan atmosphere, making SFU more international.

The project also brought benefits to individuals at SFU. It allowed some graduate students opportunities to undertake research with supervision that would not have been possible in its absence. It also benefited individual faculty in a variety of ways. Some

acknowledge that their involvement in Indonesia forced them to constructively reassess their approach to teaching, with beneficial results. Others gained experience in a new environment that enriched both their research and teaching. The project demonstrated to many scientists that their research can and should have a strong connection with the question of sustainability. At the same time, the Review Committee recognizes that there are concerns regarding academic standards of some Fellows admitted in the project, but is unable to judge the severity of the problem. We recognise the project's systematic efforts to ease the problems facing students in an unfamiliar setting, and believe that this is a capacity on which the university may call more and more in the future.

It also demonstrated to many that scientists can and should play an important role in sustainable development in adverse circumstances.

Innovation in the University

SFU prides itself on being an innovative university, and is seen by the public to be so. Clearly this project was an innovation in University practice and procedure. This lays the way for similar innovations, if the opportunity arises. Having said that, we should remember that SFU has been doing this kind of work since its creation, namely identifying potential graduate students and testing whether they are able to become professional working scientists. Of course this identification has not involved long-term advisors living abroad before, but SFU faculty abroad have long acted as screens to applications for graduate study. SFU faculty have long thought about how well-trained graduate students might act as emissaries for an SFU-style combination of research and teaching. Some faculty have also thought carefully about how one certain topic or methodology might be more appropriate than another for a foreign student. From time to time SFU faculty have, if possible, tried to establish longer term working relations with former students, if it could be achieved. They have gone half way, doing as much as possible, using existing Canadian resources. All this occurred before the EIUDP in an unstructured manner. So the innovation in EIUDP is not a

radical departure, and is more like an enlargement and deepening of a long tradition. This connects the EIUDP to SFU with a sense of continuity.

This sense of continuity stands in contrast, however, with the appearance of somewhat different conceptions of the University's ideal role. Some faculty at SFU are prepared to build beyond collegial relations in science, and accept or pursue a developmental role for the university, both at home and abroad. On the whole they embrace this kind of innovation. Others appear to think that such a role lies beyond the proper work of scientists and their departments, which is to contribute good research to the fields in which they work. Their view appears to be that such a contribution is difficult, and sufficient. The Review agrees with some commentators who point to these different conceptions as additional explanations of the tension around the EIDUP at various times in the life of the project. The Committee concludes that this innovation was good for SFU, and lies well within the ideal role of the university, at home and abroad.

“Progress” in economic development has even been traditionally measured by the size of mega-projects without much regard for environmental impact. This frame of reference is firmly rooted in the minds of governments and institutions in most societies. The introduction of sustainable environmental development concepts and values is an uphill battle that just started. Hence, the efforts made by the EIUDP management team to fulfil the SFU conditions should be considered against this content.

Conclusions on Management of the Project

Project Administration in Different Environments

From the beginning, the Project Management Team had the responsibility to develop a detailed operation plan. The planning entailed addressing the main tasks of the EIUDP, fielding long-term and short-term advisors, and initially placing Fellows overseas, expanding

over time to include placement of Fellows within Indonesia and in the Asean Region. Senior management and support personnel were distributed in seven offices:

Canadian Executing Agency Office, SFU

 Director

 Faculty Co-ordinator for each discipline

 Project Director for each campus

 Administrative/Financial Office

 Support Staff & Fellowship Co-ordinator

Central Project Implementation Unit, Jakarta

 Indonesian Project Co-ordinator, DIKTI

 Canadian Advisory Team Leader

 Indonesian Junior Project Officer (funded by Government of Indonesia)

 Local Support Staff

Local Project Implementation Unit (one office in each MU)

 Indonesian Senior Local Project Advisor

 Canadian Long -term Advisors

 Local Support Staff

The above list became the core positions while others were created as the project developed and needs arose. The Review Committee members found a general consensus amongst participants and observers that the Project Management team had been very creative in finding solutions to many of the challenges that it faced during the life of the EIUDP. The administrative network was imbedded in various cultural and bureaucratic environments. The EIUDP office personnel and the system they relied upon had to respond sensibly to local traditions and the particular culture of the faculty and staff in each university the offices were located. Notwithstanding this complexity, the EIUDP needed to deal with the participants, especially Fellows, on a more individual basis. The fact that key senior and support personnel stayed from the inception to the end of the project gave the EIUDP, as discussed above, a personality that set it apart from other international development projects. Furthermore, at the administrative level, the EIUDP passed all the CIDA audits with a clean bill of health. The Review Committee was therefore surprised to learn that the EIUDP administrative personnel had not been interviewed during any previous Review.

Supervised by the Financial Officer, the support personnel from all the offices provided an administration system of checks and balances developed over time and based on the knowledge and skills present in the staff originally hired. At the same time, the management information system implemented was sensitive to 'the technological divide' between SFU and Jakarta, and between these two offices and the field offices. Moreover, it was sensitive to CIDA requirements. Although funds to fit the project offices with the latest office equipment were available, a conscious decision was made not to do so because most of the field offices lacked the facilities needed, including electricity. Similarly, the use of software was limited to basic programs, easy to learn and manage. Consequently, the EIUDP offices used a combination of manual and technological tools accessible to all the personnel, also providing Indonesian staff with employable skills applicable beyond working for EIUDP. However, this sustainable approach to administration had to be balanced against the fact that the system used diminished efficiency in terms of Canadian expectations.

The Mid-Term assessment report commented on the difficulty of obtaining reports on request, particularly in field offices, and stated that "the absence of a management information system and a nimble accounting system means that inordinate amounts of time are spent producing reports – and they are not produced easily . . . While the system is accurate – the two CIDA audits have shown only minimal adjustments – it is hardly efficient." The Mid-Term Review recommended that at least the Burnaby office consider adopting a new accounting software package.¹⁷ When we raised this issue with project personnel in Burnaby they explained that their decision not to use such a software package was based on several factors, all of which would have exponentially increased the margin of error in data handling. For example, having an accounting package only in Burnaby would have meant re-entering large amounts of data produced monthly at each field office, and documents in Bahasa would have all to be translated. On the other hand, relying on new accounting software at all field offices would have been very seriously affected by data loss

¹⁷ See Mid-Term Performance Assessment of EIUDP-Phase II Report, 1996, p. 45.

due to power outages. In addition, training field personnel to use an unfamiliar accounting system would also have increased errors.

On the other hand, the administrative personnel skilfully dealt with frequent middle management changes among long-term Advisors and Coordinators. This required giving frequent briefings to a rainbow of people about the nature of the project and management system. It also required ensuring that the CIDA funding policy framework, which all participants had to work under, was understood and followed. This did not always go smoothly; tensions did arise due to some participant's unfulfilled expectations mainly as a result of misunderstandings of CIDA's policy restrictions on expenditure. However, the Review Committee's finding agrees with the general consensus that CIDA policies were expertly applied, providing the EIUDP management team with enough flexibility and adaptability to overcome challenges as they arose. This was achieved by maintaining very open communication with CIDA officers through the establishment of a six-month reporting schedule. As one of the senior managers expressed to the Committee: "Nothing that we did came as surprise to CIDA." This approach gave the EIUDP a reputation of always going an extra mile to respond to the needs of the participants, especially concerning the Fellows.

After I was selected, everything was done by the EIUDP office, including obtaining my passport and my visa. This is not common, I assure you. For instance, I also applied to go to Britain, but I had to do everything by myself. It was not easy, I did not know how. They called me to Jakarta for an interview with a British official. I didn't go, I couldn't afford the plane ticket.

When I was in the middle of my studies, my wife was diagnosed with cancer. The rules did not really permit early home travel in my circumstance, but the approval was obtain to allow me to go home, and then come back to Canada. When she took a more serious turn, I was allowed to travel again, and to remain there with her until the end. My supervisor and the project worked out the way to do this. It was very decent of them.

The Review Committee considers that the administrative wisdom accumulated in the EIUDP is of great value to SFU and Indonesian universities in the long run.

Project Safety and Reasonable Risk

The stabbing and disappearance of Joyce Dangeubun [*see Appendix C*] reinforced, again, the importance of Fellows (and short- and long-term advisors), consulting with the project office. Because there is indeed an element of risk, particularly in eastern Indonesia, the project took no chances. Project officials keep a very close eye on security issues and have cancelled or postponed several short-term assignments to Indonesia over the past two years because of security concerns. The project has taken steps to ensure that Ambon-based project Fellows studying in Canada, the Philippines, and other parts of Indonesia are not placed in the position of being forced to go home while the situation remains dangerous. A former long-term advisor is assisting the project in finding alternative academic pursuits for those who have finished their degrees to try to ensure they remain in secure academic situations until it is safe to go home. The changes introduced by the EIUDP and DIKTI to aid in the removal and resettlement of personnel, and plans to enable re-building of the university in Ambon are evidence that the EIUDP structure and personnel were flexible and useful in emergency conditions. Clearly the project's knowledge of Indonesian procedures and practices in emergencies is essential.

The Personality of the Project

Although much can be said of this project and many conclusions can be drawn without much direct reference to individuals, there has, in fact, been a profound influence by specific personalities, and they have created a certain 'personality of the project.' It is uncommon in projects of this duration and complexity, involving this amount of travelling, to find such continuity of direction and management. This would be unusual in most CIDA projects, which would have had by now many project officers, many on-ground directors (with different styles), and many changes in personnel. Indonesian observers also pointed to this phenomenon, contrasting EIUDP's continuity with the discontinuity of other international development projects in their midst. Experience in other countries strongly supports their perception. To have had the same person as project director for almost 14

years is rare, to have had the same financial and administrative officer, to have had people at SFU associated with and committed to the project for the entire period – this has given the EIUDP a very human personality. The continuities in Jakarta and the participating universities mirror the situation in Canada – with people who were Deans and have become Rectors, or lecturers and have become professors. A list of roughly the same names is regularly cited by both Indonesians and Canadians. This is a special kind of institution-building. Attaining and sustaining this recognized personality was, in the opinion of the Review, vital to the success of the project, and both Indonesian and Canadian observers confirm this. Some observers and participants report that the EIUDP has become an Indonesian-Canadian hybrid. The Review concludes that this is probably a case of what used to be called ‘hybrid-vigour.’

Accountability

EIUDP has been accountable in many dimensions to a variety of interests in the project. Outside the University, it has been accountable to CIDA for its administration and financial management through a succession of audits. It passed them all with minimal adjustment, sometimes in the project’s favour. The project has also been accountable to CIDA in the broader sense of whether its has realized the agency’s objectives and expectations for it. Here it has been subjected to a succession of reviews and evaluations. Its success under this scrutiny led to SFU’s selection as executing agency and to the renewal of the project for a Second Phase. Inside the University, the project team has been responsible to the EIUDP Advisory Committee for its management of the project. The project is also accountable within the University to the Senate through SFU for upholding the University’s values in its activities. After meeting concerns raised by this scrutiny through reshaping its activities, the project moved to a second phase with both academic and administrative approval.

The project has also been subjected to possibly its most vital assessment by a further forum through the consensus judgments and esteem of its constituency in the Indonesian

universities. Its has been assessed through a steering committee, an inter-university forum and through the everyday judgments of administrators, project participants, their fellow faculty and even their students. Here we have found an overall regard that speaks well of the management of the project, its accomplishments and of its multi-faceted concern for the well-being of the University community and those individuals that comprise it.

At its beginning, there was no channel through which the EIUDP project was accountable for maintaining these central values of the University. It was conceived, planned and brought into being in large measure at the initiative and under the direction of the University's administration. At the time there was neither SCIA nor a University Policy on International Activities. While those directly involved were certainly sensitive and respectful of the University's values, the policy did not face assessment under the type of criteria that now would be applied. This was unfortunate for both the University and the project. It was unfortunate for the project in that it did not gain the measure of legitimacy that it could otherwise expect because concern about the process obscured the project's content and later its accomplishments. It was unfortunate for the University because it divided the University in ways that might have been avoided. This division fed back to the project by depriving it of constructive feedback and support from some quarters and possibly some participation.

Our judgment here is based on the hindsight that comes with the passage time. The University, seeking to broaden its international activities, clearly faced a dilemma. A project was needed to motivate an international policy. But a project needed a policy to secure full legitimacy in the University community. Further, even though the University of Guelph – an acknowledged forerunner – had started developing an international policy in the early 1980s, its policy did not receive final approval until 1990. It may be too demanding for us to expect such a standard to have been present at the initiation of EIUDP.

In any event, the Policy and the project evolved together with the project a few steps ahead. This Review Committee itself has been part of this evolution as an instrument of accountability. Even though SCIA reviews annual reports of the project and did debate most

vigorously the project's second phase, this Review Committee is providing the first in-depth assessment directed toward the values expressed in SFU's Policy on International Activities. Still, we are surprised to be in this role at this time. The University's policy provided a framework for such a Review eight years ago. SCIA itself approved such a Review two years ago. Yet the Committee was only appointed and given its mandate in June 2000 together with a completion deadline just five months later. We find all this difficult to understand since EIUDP was of such a scale to the University that failure to embody the fundamental values expressed in the Policy would most certainly have severe repercussions for the University. We are surprised that the University itself did not set higher expectations for periodic accountability with respect to the University's own distinctive set of values.

Recommendations

1. Revisit the SFU Policy on International Activities with an eye to grouping its values and objectives in logical groups, possibly in the way it is done in this Report.
2. Discuss the principle of 'minimal impairment' and see how it applies to the Policy, particularly as a tool for SCIA to appraise projects planned for societies in conflict.
3. Develop a position paper on implementation of the policy, based on University experience. Circulate a draft to experts, and then circulate a subsequent draft more widely for community discussion.
4. Study a change in the policy to extend safety to 'participants' from 'personnel,' as is currently provided.
5. Continue to use the methods of consultation, and try to establish a dialogue about international activities (involving EIUDP methods like forums and advisory committees). Plan to use the Centre for Dialogue for the purpose?
6. Sort out the respective responsibilities of project advisory committees with respect to SCIA and/or the VP Academic. This could be done by reconsideration of 2.0 in the SFU Policy (policy purpose) and 4.0 (assessment guidelines). An effective balance of advice and management functions should be found. Advisory committees should have adequate arms-length faculty representation, in addition to ex-officio representation. SFU should consider appointing one its members to serve as liaison in project advisory committees.
7. In the context of international projects, SFU should make optimum use of existing arrangements so that project participants can make a progressive transition toward

qualification for graduate study (eg post-baccalaureate diploma, special student status, and qualifying status).

8. SFU should encourage and ensure that instructors and supervisors working closely with students involved in international development projects ascertain that the research methods, techniques and technologies used are appropriate to the socio-economic conditions that students face on their return home.
9. In international projects where SCIA mandates a policy or process that is also new to SFU (eg developing environmental sciences, promoting women in science and technology), SCIA should consider whether such a mandate could compromise other objectives of the project. SCIA should also address possible perceptions of the participant-recipients with respect to objectives that SFU itself is only beginning to implement.
10. Find ways to continue SFU's connection with eastern Indonesia – an annual event at SFU, and an annual event in eastern Indonesia (among the EIUDP universities). Continue to encourage basic science links between younger Fellows and SFU on an annual basis.
11. Encourage and facilitate reflection on and analysis of the history and lessons of the EIUDP, including published historical narratives by key managers and participants from Indonesia and Canada, a symposium of reflections involving participants and observers who conduct research on such projects, and a dissertation on the history and evolution of EIUDP, perhaps by Special Arrangements.

15 Appendices

Appendix A SFU Policy on International Activities

 <p>SIMON FRASER UNIVERSITY Policies and Procedures</p>	Date	Number
	September 22, 1992	GP 23
	Revision Date	Revision No.
	May 28, 1998	A

1.0 General

International activities at Simon Fraser University include: study-abroad programs for domestic students; an international student presence on campus; student and faculty exchanges with foreign institutions, credit and non-credit instructional program delivery; and customized education programs for international clients, delivered either in Canada or abroad. The University also engages in projects that contribute to an improved quality of life in host countries, complement the University's academic mission and support the University's role as a responsible and responsive international centre of higher learning.

These activities impose on the University and its members the responsibility to ensure that international activities are consistent with institutional values, especially when the policies and practices of a host government overseas may be subject to criticism.

2.0 Policy Purpose

Where international activities require approval by the institution, policy guidance is required to: safeguard the University's reputation; ensure the proper disposition of University resources; assist in making informed judgements about the desirability of specific international agreements; and ensure that these activities support the University's mission.

This Policy provides conditions, assessment principles and procedures to guide decisions affecting University participation in cases where the institution's name or resources are associated with an international activity.

3.0 Policy Applicability

3.1 This Policy applies to international activities that are undertaken in the name of the University and delivered either in Canada or abroad. All international activities undertaken by the University on the basis of a contract, contribution agreement, letter of understanding or similar document require the approval of the Vice-President, Academic, regardless of the delegated signing authority. Where Senate or the Board of Governors approval is required, such approval must also be obtained.

3.2 Appendix A provides an illustrative list of international activities to which the Policy applies.

3.3 International activities undertaken by individual faculty, staff or students on their own behalf are not covered by this Policy.

4.0 Assessment Guidelines

The following conditions shall be taken into account when assessing the desirability of entering into an international agreement:

- 4.1** the activity complements the University's academic mission and meets its academic standards;
- 4.2** the activity conforms to all current University policies with particular attention to those policies governing academic freedom, research and ethics;
- 4.3** the activity conforms to the legal rights and obligations enshrined in international laws, covenants and declarations to which Canada is a signatory;
- 4.4** the activity mitigates rather than abets the violation of human rights;
- 4.5** the activity has either a neutral or a beneficial effect on the environment;
- 4.6** the activity supports the equitable participation of women;
- 4.7** the activity supports the participation of minority peoples;
- 4.8** the activity, in both its planning and its implementation, embodies practices that advance partnership with the people most affected by the undertaking;
- 4.9** the activity is designed to protect the safety of University personnel on overseas assignment;
- 4.10** the activity guarantees University control over student access to its study programs; and
- 4.11** the activity acknowledges University authority to select and administer its own personnel.

5.0 Human Rights Considerations

From time to time, international activities will be proposed in countries where there may be ethical concerns about the possible denial of human rights. It is the University's responsibility to determine to the best of its ability that the activities it engages in contribute to the dignity and well being of its foreign partners and do not act as instruments of abuse.

When assessing the human rights implications of any international activity, the following principles shall apply:

- 5.1** The practices of an international activity taking place within a country governed by an abusive political regime should be assessed on their own merits.
- 5.2** The closer the connection between an international activity and a foreign agency that is known to abuse human rights, or the closer the connection to the offending practices themselves, the less acceptable the University's participation.
- 5.3** Individuals who live under an abusive regime should not be additionally penalized by being denied access to assistance through international cooperation.
- 5.4** The desirability of University involvement in an international activity should increase in proportion to the benefits bestowed locally on individuals and communities as a consequence of the activity.

5.5 Without abrogating the University's academic values, the culture of a host country should be taken into account and treated with sensitivity when assessing the human rights implications of an international activity.

5.6 While respecting cultural differences, the principle of academic freedom must be upheld in all international activities involving the University and a foreign partner.

5.7 International activities should assist local recipients of assistance to make informed judgements about human rights.

6.3 Terms of Reference

6.3.1 To ensure that proposals for international activities meet the conditions and criteria established by the University Policy on International Activities, and the University Policy on Service Contracts.

6.3.2 To ensure broad consultation prior to the final approval of any proposal covered by this policy for which human rights considerations are likely to be a concern.

6.3.3 To advise the Vice-President, Academic with respect to the desirability of entering into international activities that are proposed to be undertaken by the University on the basis of a contract, contribution agreement, letter of understanding, or similar document.

6.3.4 To maintain an overview and familiarity with international agreements that are entered into by academic or administrative units.

6.3.5 To report annually to Senate.

6.4 Procedures

6.4.1 The Committee shall be provided with copies of international activity proposals and whatever other information is needed to administer this Policy, based on procedures to be determined by the Committee.

6.4.2 Every proposal shall indicate that it has the approval of the appropriate Chair or Director, and Faculty Dean and shall contain a statement of goals and objectives, a clear disclosure of the proposed activities and a budget.

6.4.3 Proposals shall be accompanied by verification that the prospective parties to the activity have been given a copy of the University Policy on International Activities.

6.4.4 Proposals shall be submitted to the Secretary of SCIA for distribution to the Committee.

6.4.5 The Committee shall review each proposal to ensure compliance with the University Policy on International Activities and shall recommend acceptance, modification or rejection to the Vice-President, Academic. Where approval of the Senate or the Board of Governors is required, the Vice-President, Academic shall inform the appropriate body(ies) of the Committee's recommendation.

6.4.6 Where there is concern on the part of SCIA that any international activity which uses the University's name or resources may be in non-compliance with this Policy, the Committee shall be entitled to receive further information and shall report to the Vice-President, Academic regarding any violations that may be discovered.

6.4.7 Copies of international activity contracts or other agreements shall be provided to the Office of International Cooperation where they shall be kept on file and be open for inspection by members of the University community.

Interpretation

Questions of Policy interpretation or application shall be referred to the President whose decision shall be final.

Appendix B

Data on SFU Participation in EIUDP

This data summary was prepared by the Review Committee based on EIUDP records. All tables are in descending order.

Table 1(a): Fellowships Awarded

Type/location of long-term training	Total fellowships awarded	Women	Men	Total
Post-graduate study in Canada	90	31	59	90
Post-graduate study in senior Indonesian University	87	29	58	87
Post-graduate study in ASEAN region	29	12	17	29
Undergraduate study in senior Indonesian University.	107	34	73	107
Total	313	107	206	313

Table 1(b): Fellowships Awarded in Canada

Type of Degree completed or expected	Total fellowships awarded	Women	Men	Total
M.Sc.	54	20	34	54
Ph.D.	16	6	10	16
M.A.	9	3	6	9
M. Appl. Sc.	2	—	2	2
P.B.D.	2	1	1	2
M.Library Sc.	1	—	1	1
M. Aquaculture	1	—	1	1
Sub-Total	85	30	55	85
Incomplete	5	1	4	5
Total	90	31	59	90

Table 1(c): Fellowships Awarded in SFU

Type of Degree Completed or Expected	Total fellowships awarded	Women	Men	Total
M. Sc.	15	5	10	15
Ph. D.	4	2	2	4
M.A.	3	—	3	3
PBD	2	1	1	2
M. Aquaculture	1	—	1	1
Sub-Total	25	8	17	25
Incomplete	2	—	2	2
Total	27	8	19	27

Table 2(a): Individual Fellows who Received Fellowships

Type/location of long-term training	Total fellowship Recipients	Women	Men	Total
Post-graduate study in senior Indon. Univ.	87 ¹	29	58	87
Post-graduate study in Canada	76 ²	26	50	76
Post-graduate study in ASEAN region	29	12	17	29
Under-graduate study in senior Indon. Univs.	107 ³	34	73	107
Total	299	101	198	299

Notes:¹11 women and 19 men received supplementary funding only.²14 received fellowships for MSc or MEng and PhD degrees; 1 received fellowships for PBD and an MSc degree.³23 women and 45 men received supplementary funding only.

Table 2(b): Individual Fellows in Canadian Universities.¹

Canadian University	Total Number of Fellows	Women	Men	Total
Simon Fraser	24 ²	8	16	24
Guelph	9 ³	2	7	9
Saskatchewan	9 ³	4	5	9
UBC	8 ⁴	1 ⁵	7	8
Carleton	6	2	4	6
McGill	4	2	2	4
New Brunswick	4	1	3	4
Lakehead	3	3	—	3
Manitoba	2	1	1	2
TUNS	2	—	2	2
University of Alberta	2	1	1	2
Victoria	1	—	1	1
Western	1	1	—	1
B.C.I.T./McGill	1	—	1	1
Dalhousie	—	(⁶)	—	—
Total	76	26	50	76

Notes:

- ¹ Candidates who received more than one fellowship and switched universities for their second degree were counted in the first university they attended.
- ² Two fellows did not complete program.
One woman and two men received two fellowships each.
- ³ Two men received two fellowships each.
- ⁴ Two Fellows did not complete program.
Two Fellows received two fellowships each.
- ⁵ Two more women switched to UBC for a second degree after finishing their first degree in other Canadian university.
- ⁶ One woman switched to Dalhousie for a second degree after finishing her first degree at another university.

Table 3: Long-Term Science Supervisors

Type/location of long-term training	Total Number of Supervisors	Women	Men	Total
Canadian Universities	71	8	63	71
Asean Region Universities	30	8	22	30
Indonesian Universitas	56	6	50	56
Total	157	22	135	157

Table 4(a): Short-term Advisors

Origin	Total Short-term Advisors	Women	Men	Total
Canadian	178	30	148	178
Indonesian	359	103	256	359
Total	537	178	404	537

Table 4(b): Short-Term Advisors Assigned in/from Canada*

Institution	Number of Short-Term Advisors	Women	Men	Total
Simon Fraser University	74	12	62	74
UBC	19	1	18	19
Consultants	15	6	9	15
University of Saskatchewan	6	—	6	6
Capilano College	5	1	4	5
McGill University	5	—	5	5
Dalhousie	4	2	2	4
Trinity Western	3	—	3	3
TUNS	3	—	3	3
Lakehead University	2	—	2	2
Coquitlam School Board	2	—	2	2
Agriculture Canada	1	1	—	1
Algonquin College	1	—	1	1
B.C. Research	1	—	1	1
Bamfield Marine Research Station	1	—	1	1
Bird Observatory	1	—	1	1
Brock University	1	—	1	1
E. Kootenay College	1	—	1	1
Kwantlen College	1	—	1	1
Memorial University	1	—	1	1
Okanagan College	1	—	1	1
Open Learn. Agency	1	1	—	1
Minist/Environment	1	—	1	1
Okanagan College	1	—	1	1
Plant Biotechnology Institute (PBI)	1	—	1	1
Richmond International	1	—	1	1
U. of Alberta	1	—	1	1
U. of New Brunswick	1	—	1	1
U. of Calgary	1	—	1	1
U. of Guelph	1	—	1	1
U. of Manitoba	1	—	1	1
U. of Windsor	1	—	1	1
U. of Victoria	1	—	1	1
U. Coll. of the Fraser Valley	1	1	—	1
Total	161	26	135	161

Table 4(c): Short-Term Advisors from Simon Fraser University Assigned in/from Canada*

Faculty/Department /other	Number of Short-Term Advisors	Women	Men	Total
Faculty of Science:				
Biological Sciences	22	5	17	22
Faculty of Science:				
Math and Stats	11	—	11	11
Faculty of Science:				
Chemistry	8	1	7	8
Faculty of Education	5	—	5	5
Faculty of Science:				
Physics	5	—	5	5
Continuing Education	4	1	3	4
Management	4	1	3	4
Coop Program	3	2	1	3
Faculty of Arts:				
Sociology and Anthropology	2	—	2	2
Faculty of Arts:				
Economics	2	—	2	2
Computer Services	1	—	1	1
Fac. Applied Sciences:				
Kinesiology	1	—	1	1
Fac. Applied Sciences:				
NRM	1	—	1	1
Faculty of Arts:				
Archeology	1	—	1	1
Faculty of Arts:				
Geography	1	—	1	1
Faculty of Arts:				
Linguistics	1	—	1	1
Faculty of Arts:				
Women's Studies	1	—	1	1
Faculty of Science:				
Student	1	—	1	1
Faculty of Science:				
Post-doc	1	—	1	1
Total	74	12	62	74

Note:

* Some Canadian Short-Term Advisors were assigned to do work in/in Canada (only in Canada) while others served in Indonesia (from Canada) and some both (in/from).

Table 5(a): WIST ACTIVITIES ON MEMBER UNIVERSITY CAMPUSES, BY TYPE – 1988-2000

SUMMARY		MEMBER UNIVERSITY						
		Code	UNSRAT	UNCEN/J	UNCEN/M	UNHALU	UNPATTI	TOTAL
Research	1	7	7	12	3	6	35	
WIST group coordination	2	8	7	7	9	7	38	
Newsletter	3	8	5	6	5	3	27	
Community Outreach	4	7	8	8	4	5	32	
Training (e.g. Management)	5	10	9	12	11	12	54	
Technical Assistance*	6	12	12	12	12	12	60	
TOTAL		52	48	57	44	45	246	

(*- survey, design, needs assessment, advisory services, etc.)

Table 5(b): WIST ACTIVITIES IN UNSRAT BY YEAR

Member University	Year	Activity type						TOTAL
		1	2	3	4	5	6	
UNSRAT	1988-1989						1	1
	1989-1990		1				1	2
*	1990-1991		1	4		3	1	9
*	1991-1992		2	1			1	4
*	1992-1993	1				2	2	5
*	1993-1994		2				2	4
	1994-1995	2	1	1	1		1	6
	1995-1996	1	1	1	1	2	1	7
	1996-1997	2		1	2	1	1	7
	1997-1998	1			1	1	1	4
	1998-1999				2	1		3
**	1999-2000							
<i>Subtotal</i>		7	8	8	7	10	12	52

*Activities included focally managed activities funded from the WIST initiatives fund. These are not included.

** WIST activities henceforth carried out within the Women's Studies Centre.

Table 5(e) WIST ACTIVITIES IN UNHALU BY YEAR

Member University	Year	Activity type						TOTAL
		1	2	3	4	5	6	
UNHALU	1988-1989						1	1
	1989-1990		1				1	2
	* 1990-1991		1			2	1	4
	* 1991-1992		2	1			1	4
	* 1992-1993	1				2	2	5
	* 1993-1994		2				2	4
	1994-1995	1	2			2	1	6
	1995-1996	1	1	1	1	2	1	7
	1996-1997			1	1	2	1	5
	1997-1998			1	1		1	3
	1998-1999			1	1	1		3
	** 1999-2000							
Subtotal		3	9	5	4	11	12	44

* Activities included locally managed activities funded from the WIST initiatives fund. These are not included.

** WIST activities henceforth carried out within the Women's Studies Centre.

Table 5(f): WIST ACTIVITIES IN UNPATTI

Member University	Year	Activity type						TOTAL
		1	2	3	4	5	6	
UNPATTI	1988-1989						1	1
	1989-1990		1				1	2
	* 1990-1991		1			2	1	4
	* 1991-1992		1	1			1	3
	* 1992-1993	1				2	2	5
	* 1993-1994	1	2				2	5
	1994-1995	1	1			5	1	8
	1995-1996			1	1		1	3
	1996-1997				1	2	1	4
	1997-1998	2		1	1		1	5
	1998-1999	1	1		2	1		5
	** 1999-2000							
Subtotal		6	7	3	5	12	12	45
TOTAL		35	38	27	32	54	60	246

* Activities included locally managed activities funded from the WIST initiatives fund. These are not included.

** WIST activities henceforth carried out within the Women's Studies Centre

Table No. 6 : Education for Sustainable Development

**EDUCATION FOR SUSTAINABLE DEVELOPMENT:
ACTIVITIES ON MEMBER UNIVERSITY CAMPUSES 1994- 2000**

1994-1995

UNIVERSITAS CENDERAWASIH / JAYAPURA

Appointment of local ESD Coordinator
ESD Assessment Mission

UNIVERSITAS CENDERAWASIH / MANOKWARI

Appointment of local ESD Coordinator
ESD Assessment Mission

UNIVERSITAS HALUOLEO

Appointment of local ESD Coordinator
ESD Assessment Mission

UNIVERSITAS PATTIMURA

ESD seminars
ESD Assessment Mission

UNIVERSITAS SAM RATULANGI

ESD Assessment Mission

1995-1996

UNIVERSITAS CENDERAWASIH / JAYAPURA

ESD seminar
ESD Workshop

UNIVERSITAS CENDERAWASIH / MANOKWARI

ESD seminar
ESD Workshop

UNIVERSITAS HALUOLEO

ESD seminar
ESD Workshop

UNIVERSITAS PATTIMURA

Appointment of local ESD Coordinator
ESD seminar
ESD Workshop

UNIVERSITAS SAM RATULANGI

Appointment of local ESD Coordinator
ESD seminar
ESD Workshop

1996-1997***UNIVERSITAS CENDERAWASIH / JAYAPURA***

Community Consultation Workshop
ESD Materials Development

UNIVERSITAS CENDERAWASIH / MANOKWARI

ESD Seminar
BSU Capacity Building Workshop

UNIVERSITAS HALUOLEO

Community Consultation Workshop
BSU Capacity Building Workshop
ESD Workshop

UNIVERSITAS PATTIMURA

ESD Curriculum Development

UNIVERSITAS SAM RATULANGI

ESD Seminar
ESD Curriculum Review
Diktat preparation - ESD

1997-1998***UNIVERSITAS CENDERAWASIH / JAYAPURA***

ESD Attachment
ESD Materials Review

UNIVERSITAS CENDERAWASIH / MANOKWARI

ESD Materials Review
ESD & Biodiversity Research Linkage
ESD Research

UNIVERSITAS HALUOLEO

ESD Teaching Material Revision - BSU
Biological Indicators for Water Quality
Community Technology for Rural Area
Seminar on Wildlife Conservation

UNIVERSITAS PATTIMURA

ESD Materials Review
ESD Curriculum Development
ESD Teaching Units Development
ESD Research Projects
ESD: KKN Guidance

UNIVERSITAS SAM RATULANGI

Curriculum Development for ESD (Review)
ESD Awareness
ESD Community Services - ESD Awareness
KKN Guidance - ESD Awareness
Conservation of the Rare Plants of North Sulawesi
Conservation of the Coral Reef of Bunaken

1998-1999

UNIVERSITAS CENDERAWASIH / JAYAPURA

Material review and incorporation

UNIVERSITAS CENDERAWASIH / MANOKWARI

Material review and incorporation

UNIVERSITAS HALUOLEO

Material review and incorporation

UNIVERSITAS PATTIMURA

Material review and incorporation

UNIVERSITAS SAM RATULANGI

Material review and incorporation

Appendix C

Managing EIUDP's Responsibilities: The Death of Joyce Dangeubuan

Joyce Dangeubun was a fully-funded post-graduate fellowship trainee under Phase II of the EIUDP, one of 28 Fellows still in Canada. At Pattimura University (UNPATTI) in Ambon, one of the 'target' universities of EIUDP, she was in the Faculty of Fisheries and, on completion of her PhD, was slated to be transferred to the Faculty of Science at UNPATTI. She was studying for her PhD at Dalhousie in Halifax. At the point of completing research for her dissertation, she was on her way to her home island in southern Maluku to complete her research in September 1999. The Fellowship Grant that EIUDP is authorized to provide (which is administered in this case by Dalhousie) includes funds, if needed, for a trip home to do in-country research. Joyce had married a Canadian citizen just before her departure.

Concerning the circumstances of her trip, the EIUDP had advised Joyce to hold off her trip or to relocate her research from Tual (her home town) because of the security situation, but she departed without further consulting the project. According to her supervisor at Dalhousie, Joyce had originally decided to by-pass Ambon because of the violence but decided on the spot to go to Ambon with other family members to visit her mother, as they were concerned for her safety. EIUDP advised students to fly to their home universities on such visits because of security concerns on ferries. Joyce chose to travel by ferry because flights to Ambon were infrequent and unreliable that week. Joyce decided to travel in a large party of other family members. She took the inter-island liner (PELNI's KM Bukit Siguntang), which carries several thousand passengers. Joyce told her husband, according to his account, that she would be safe in such a large party and because the ship carried police and other security people.

The ship stopped at Bau Bau, where a large number of largely Muslim residents of Ambon, who were originally from the Bau-Bau area, had taken refuge from the violence in Ambon. According to witnesses, after the ship left Bau Bau a group of men attacked Joyce and her (all female) party, early in the morning of Saturday 18 September, 1999. According to an NGO account, one man asked if Ms. Dangeubun was a Professor of Fisheries at the University of Pattimura, and she said she was. At his insistence, she showed him her passport. The group then began to beat her and, according to the accompanying family members, Joyce was stabbed and dragged away. Other members of the party were then beaten and injured. According to the NGO report, police officers happened on the scene during the beatings but left. Joyce has not been seen since. Apparently no methodical search was carried out of the ship either when at sea or after it docked in Ambon. Police in Ambon allegedly took no action, reportedly on the basis that there had been no complaint from the ship's authorities. There are reports that other attacks occurred against Christian families on the same deck and a witness saw four bodies, one of a woman, being thrown overboard.

After learning of this attack and disappearance the EIUDP contacted the Indonesian Embassy in Ottawa, the Consulate General in Vancouver, the Canadian Embassy in Jakarta, CIDA, the DIKTI in Jakarta, and our Jakarta project office staff to seek information and action. The Jakarta project office was in regular contact with the family and with UNPATTI, and suggested that the Embassy contact the shipping line, PELNI for more information. EIUDP also contacted the husband (first) and Dalhousie University. The Indonesian Consul General in

Vancouver has told us that the national police in Jakarta, the armed forces headquarters, the governor of Maluku, the security coordination body in Ambon, the Foreign Ministry, and local police in Maluku have all been contacted.

UNPATTI officials subsequently confirmed that Joyce was missing and they were making enquiries. Apparently, the Embassy has contacted local officials in Ambon. The only information that local officials have produced so far, apparently, is that the attackers on the ship numbered approximately 100 in number.

The attack on the ferry seems to have been essentially a murder but, since her body was never found, the Indonesian police would probably describe it as a disappearance, and classify her as missing. By neither Indonesian nor Canadian standards does there appear to have been a thorough police investigation despite the project's, the Canadian Embassy's, and DIKTI's efforts. The police pleaded that the many cases of violence in Ambon made it impossible to pursue it. There were EIUDP procedures in place then, and there are now, to assess security situations carefully and to pass on information and advice to EIUDP participants planning travel.¹⁸ The EIUDP regularly assisted Fellows to avoid ship travel wherever possible, especially when the ship was on a route that touches at Ambon or other troubled areas. Edwin Nanere, son of the former Rector of UNPATTI, was killed by a group in seemingly similar circumstances less than a month before Joyce Dangeubun on the same ship. The Indonesian press stated shortly afterward that, over the past few weeks, "at least 31 passengers were allegedly assaulted on vessels and five others were also killed in an attack on a ship."

It should be noted that EIUDP participants were not alone in being exposed to such risks: the Rector of the State Institute of Islamic Studies in Banda Aceh was shot in his office by a young man posing as a student in September 2000. Dr. Safwan Idris was a respected participant in the McGill University-administered Indonesia-Canada Islamic Higher Education Project, a project funded by CIDA.¹⁹

¹⁸ EIUDP "Update of Travel to Indonesia" February 2000.

¹⁹ "Respected academic latest victim of Aceh tensions," *Globe & Mail*, 20 September 2000.

Appendix D

List of Current Linkage Projects [EIUDP Report, December 2000]

Linkage Initiatives Under Development

1. Tropical integrated pest management/environmental toxicology (UNSRAT and SFU).

Development of a centre for research and teaching in Integrated Pest Management and environmental Toxicology by SFU's Dept. of Biology and Sam Ratulangi University, in support of sustainable development. A 'sandwich' Masters degree program is being developed. A first group of UNSRAT students attended SFU in 1999, and a second group recently arrived to conduct research as part of a trial process, with partial funding from UNSRAT. SFU lecturers also give lectures at UNSRAT. A proposal for long-term cooperation will be developed.
2. Co-op education (SFU, UI, ITB, IPB, UNHAS, UNSRAT, UNPATTI, DIKTI/BAPPENAS).

Following completion earlier of a feasibility study completed in Indonesia, a 'magang' in Canada with SFU Co-op education took place in September 1999. Follow-up visits are planned followed by 'marketing' of the model in Indonesia in preparation for proposal development as part of the Asian Development Bank's 'Technological and Professional Skills Development Project.'
3. Marine Station Twinning (UNPATTI, UNSRAT, UNHAS, IPB, Bamfield).

A study tour by Indonesian Directors to western Canada took place in June/July 1999. The Bamfield Director accompanied by Robert DeWreede of UBC visited selected Indonesians stations in June/July 2000 and drafted a cooperative project proposal on research in marine resource, ecology, conservation and other areas for discussion with funding agencies, which is under Review.
4. Human rights information system (SFU/LBH/ITB/OBOR/ICHRDD)

Delegations from ITB and LBH and Canadian participants met at SFU in February 2000 to draft a project proposal on an information system that will enhance the institutional capacity of LBH and other human rights organizations. LBH has given this very high priority. It was agreed in July 2000 that a modest amount of funds would be provided to ITB to develop a trial system in partnership with LBH. This trial system is close to completion. It will be tested in mid-November, when further discussions will be held on the completion of

a long-term proposal for discussion with funding agencies. LBH's branches have held discussions with local human rights groups with which the network will be shared.

5. Library Information Technology Network (SFU, ITB, OLA, MUs, RUs)

This project will facilitate low-cost access to periodical databases and locally produced research information for Indonesian universities in support of research capacity and teaching quality enhancement. Funding has been obtained from IDRC to enter Indonesian dissertations and theses in a database, which will be made available to and by Indonesian institutions to gain access to international databases. A system proposal is in preparation.

6. In-Service Training Pilot (UNCEN/J, SFU)

In-service training for science school teachers in Irian Jaya, SFU Faculty of Education with Cenderawasih University, in support of the improvement of secondary education in Irian Jaya's school system. Trial upgrading of science school teachers in all four basic science disciplines have been carried out. A preliminary project proposal was prepared in June 2000 at meetings involving representatives of SFU's Faculty of Education and UNCEN. A final proposal is very close to completion.

7. MIPA Quality Control Initiative (MUs, SFU)

A project-planning mission took place in late March-April 2000. Member Universities will develop quality assurance programs in basic science education in September-December 2000 with a view to submitting proposals for competitive national funding on 2001. A proposal for QA/QC applications to Chemistry instruction from UNHALU is under review.

8. ELTC Network (NUESP) of all MUs.

The development of closer integration of the ELTC Commission of the Forum and NUESP is in process. A number of research and other initiatives have taken place. Longer-term cooperation with independent funding will be developed by the Network, with assistance from the EIUDP/SFU resource person.

9. FMIPA Management (UNCEN/J, Capilano College).

Dr. Penny Lacouture of Capilano Collage visited UNCEN/J in February-March 2000 to identify priority issues and establish on-going communications processes. Prospects for further development are under review.

10. Field School

A feasibility study has been completed and initial groundwork laid for a field school, which could take place at UNSRAT or UNCEN in such fields as environmental Biology when stable conditions are restored.

11. Research Consortium in Biotechnology (SFU, LIPI - Indonesian Academy of Sciences, CanAsean Centre).

To develop a consortium of Canadian and Indonesian scientists in biotechnology, involving a number of returned EIUDP Fellows in support of food and other agricultural production. A series of meetings, culminating in a meeting in July-August 2000, focused on the development of a proposal for competitive funding. The proposal is close to completion.

12. Publishing consortium: publications focusing on decentralization and regional development support. (Forum, SFU, Obor).

A new initiative to promote publication of works on development issues in eastern Indonesia, coordinated through the Forum of Nine Universities.

13. Technical support for the development of proposals for competitive funding.

National and donor funding for development at Indonesian universities will increasingly be competitive, based on proposals developed and submitted by universities. This includes the upcoming ADB Project, which will fund, on a competitive basis, sub-projects at selected Indonesian universities, who will be free to develop their own international linkages. Sustainability of development at Member Universities will depend in no small part on their success in accessing competitive funding through the preparation of high-quality proposals. Under consideration is a program by which SFU/EIUDP will provide linkage development funds in 2001 that will permit Member Universities to retain technical assistance from Member Universities and other sources in the preparation of such proposals as a means of improving their long-term capacity in project proposal development. Some initial assistance to Member Universities in self-analysis will be provided as a linkage development activity in November 2000 by senior Indonesian academics.

14. Biotechnology Study Program Network.

A proposal has been framed for the development of a new study program using networked resources involving the following universities: UNSRAT, UNRAM, UNHALU, UNCEN, UNPATTI. The proposal is being used as a 'model sub-project' by the Asian Development Bank for its new US\$280 million 'Technological and Professional Skills Development Project' (TAPSDP). Participating campuses are involved in self-evaluations for this and

other initiatives under TAPSDP with assistance from the EIUDP. It is anticipated that SFU would provide Technical Assistance resources in the event that one or more of the campuses is successful in acquiring funding under the TAPSDP.

15. Directory of Indonesian Biotechnology Research and Resources. (LIPI, ITB and SFU) EIUDP as manager of support funds from the Canada-ASEAN Centre are developing a revised version of an earlier publication to be mounted on the web. This resource will provide global internet access to Indonesian researchers and their research projects and will include all EIUDP MUs and RUs which will be linked through a virtual network.

Linkage Initiatives that have become Self-Standing

1. Forum of Nine Universities.

A 'Forum,' or consortium, of SFU's nine EIUDP partners in Indonesia has been established, and is now managing all on-going upgrading activities in basic science, ELT, and related services development at Member Universities, with support from the Resource Universities. Because of financial constraints due to the economic crisis, EIUDP/SFU has provided funds in 1999 and 2000 to cover shortfalls so that the activities undertaken by the Forum can continue. As of January 1, 2001, the Forum will be funded by Indonesian funds.

2. Publishing Support (OBOR, SFU, THE FORD FOUNDATION).

Training was provided by SFU's Canadian Centre for Studies in Publishing to Yayasan Obor Indonesia in 1996 and 1997 in publishing management. As hoped, this effort mushroomed into a number of important new initiatives to address the problems of the publishing industry in Indonesia, including an international conference (said to be the first ever) on the importance and problems of publishing in times of crisis and a seminar of leading Indonesian intellectuals on the role of books in civil society, both of which attracted outside funding. The latest initiative, funded by Ford Foundation, was a series of seminars involving the Indonesian Publishing Association and the donor community in September and October 2000 to develop approaches to support the role of books in reform. An SFU resource person acted as moderator of the September seminars and prepared a proposed strategy for the Indonesian Publishing Association following the donor seminar. This process could, *inter alia*, attract additional significant interest to the services provided by CCSP.

3. Ritual Feasting in TATOR (SFU, UNHAS)

Research by Dr. Brian Hayden of SFU in cooperation with UNHAS faculty members. Ron Adams (graduate student) preparing to undertake follow-up studies shortly in TATOR.

4. Pheromone Centre (ITB, SFU, CSIRO (Australia), HortResearch (NZ))

Now self-funding and receiving international visiting researchers. Joint research proposals are in development.

5. Center for Research on Engineering Applications in Tropical Agriculture – (CREATA, MCGILL, IPB, UNSRAT)

The project funded McGill and UNSRAT participation in ADC meeting to establish contact with IPB. Proceeding without further assistance.

6. Marine Biopharmacology.

Initial partnering in 1996/97 by EIUDP of UBC (Dr. Raymond Anderson) with UNHAS marine scientists and facilities has led to an on-going research partnership pursuing pharmacologically active compounds from marine sponges. Research exchanges, publications and patents have resulted from this linkage which is active and on-going.

Linkage Initiatives in Conceptual Stage

1. Regional development in Sulawesi: in support of sustainable development and development of civil society.
2. Natural resource management and community and regional development: models for cooperation between natural resource industries and communities to develop natural resource management approaches sensitive to community and regional needs.
3. MIPA development in Indonesian Islamic universities: following discussions over a long period and a visit to SFU by rectors of Indonesia's two leading Islamic centres for higher education. Discussions will continue in November on the possibility of developing a new cooperative project drawing on EIUDP's experience and some of its resources.

Appendix E

An Account of the 1993 Review of the University of Guelph's Sulawesi Project

The first phase of the University of Guelph's involvement in the Sulawesi Regional Development Project (SRDP) began in the 1980s and was continued into a second phase through a Memorandum of Understanding signed in 1990. A Review by the University's Committee on Social Involvement had already concluded that the project satisfied the University's guidelines for international programs. The project trained and assisted regional planners in Sulawesi who were involved in specific development projects.

Soon after committing to the Second Phase, the University's Senate approved a new policy on University involvement in international activity. In October of 1990 Guelph's SCIA sanctioned an external Review of SRDP to determine its conformity with the new policy and the reviewers *modus operandi* was established in March 1991. The Review team, consisting of two respected Canadian figures in the human rights area, was appointed in 1991. It went to Ottawa and Indonesia in 1992, and submitted its report in September 1993.

The Review's terms of reference required them to determine the projects adherence to the University's Senate Policy on University Involvement in International Activities (hereafter referred to as the international policy). They were instructed to assess the project with respect to: i) possible violation of standards of academic freedom by the project through its compliance with the host country's policies and practices; ii) the possibility that the project's activities assisted human rights violations, and iii) the possibility that the project lent legitimacy to a government responsible for human rights violations such violations.

The reviewers used a wide variety of sources for their Review: i) interviews in the University, in Indonesia and elsewhere with human rights experts; ii) study of literature addressing issues surrounding human rights; iii) analysis of documents relating to the project, and iv) consideration of documentation provided by human rights groups and others with respect to human rights, law, environmental and gender issues.

Six months after SFU had approved EIUDP's continuation to Phase II, the Guelph Review was delivered to the University. The experts identified a number of infringements of academic freedom arising from the project. Indeed, they viewed specific terms of the contact with CIDA as conflicting directly with academic freedom. These included the right to publish remaining with the Canadian government; provision for Indonesian government approval of all project personnel; and contractual provisions that both prevent the University's international policy from overriding any contractual provisions and allow the contract to override the University's international policy in case of conflict. In this area, the experts made recommendations that would reverse each of the identified infringements on academic freedom.

The experts declared that they had not reached any determination that the project had "in any way directly or purposely [assisted] human rights violations or environmental degradation." Nevertheless, they suggested that the University should more actively support initiatives in these areas "to shift the 'proportionality' balance decisively toward the enhancement of these values." Among the measures suggested here were proposals to give greater

emphasis to the gender component of the project by linking more directly to activities at the University, by increasing the number of women on the field team and by involving the field team in increasing awareness of gender issues in Indonesia. In addition, they suggested the project should seek out greater involvement with NGOs and human rights groups in Canada and Indonesia.

Concerns about the legitimacy of the Guelph Project were viewed by the reviewers as matters of perception rather than of evidence or logical analysis, though this in no way diminished their importance. They also recognized that the impact on legitimacy differs among groups in Indonesia and Canada and in different groups such as governments, their officials, the public and the University community. The expert's concerns were the greatest with respect to the Canadian public and the University's own community. They recommended that the University reiterate the basic elements of its international policy to resolve contradictions between these principles and its relationship with the government; use a campus forum to debate issues arising from the University's involvement with Indonesia, and pay heed to the principle of "connectiveness" in the debates about the SRDP Project.

The reviewers also expressed concern about issues beyond their explicit mandate. They urged that the project be brought into the mainstream of academic life by establishing closer links between the SRDP field team and University faculty through greater engagement of the University's resources with the project; and by encouragement of research by faculty and students with respect to the project. While they judged the University's international policy to be sound, they observed weaknesses in its implementation. Their recommendations called for wider dissemination of the policy and measures to improve the quality of information about initiatives to be approved, broader cross-campus participation in reviews and effective selective monitoring.

The reviewers of the Guelph Project did not recommend that the University withdraw from the project. Nevertheless, they argued for stringent conditions for its continuation through Phase II. This should be conditional upon the University's "implementing important adjustments and undertaking certain specific initiatives both in Indonesia and on its own campus."

The reviewers and the Review were not without their critics. The Director and another member of the School of Rural Planning and Development (Babcock and Cummings) took issue with the many factual errors and "the lack of 'a due process' approach that attempts to assemble 'proof' of the actual commitment of fault." The factual errors they noted with respect to academic freedom included: i) the failure to separate the wording of the contract from its effect; ii) misinterpretation of the constraints on graduate student research, and iii) lack of appreciation for the scope for dissent in Indonesia. The critics also argued the reviewers understated the role of SRDP in the University and overstated the suppression of human rights in Indonesia. They also rejected the reviewers' views with respect to responsibility for the project, the status of the Guelph team, and the efforts undertaken to create more balance in the gender composition of the project. They criticized the Review's comments on the technical design of the project as outside its terms of reference. Claims that the project had no research program were, they said, not borne out by the fact that fourteen Masters and one doctoral degree were produced under the aegis of the project. Despite this, critics of the Review found some of the recommendations to be acceptable and worth implementing.

The President of the University journeyed to Sulawesi in December 1993 to meet the project team, and to Jakarta to meet officials and experts, including those concerned with legal

matters. He traveled with the Review in hand, having failed to persuade its authors to respond to criticism of this 'draft' and thus to submit a 'final' version. The reviewers declined to modify their draft text. His critical meetings with the project team in Makassar resulted in an ultimatum from the team, stating that if the University did not support the project team, they would leave the project. Concluding that the University would not support the project, the team appears to have made direct contact with officials of the government, asking for their intervention. They also appear to have made preparations to go home. The University delivered the Report to the Indonesian embassy in Canada in an effort to overcome the risk of selected leaks of its content, but it was now also in circulation in Jakarta.

Guelph's Senate Committee on International Activities (SCIA) considered the reviewers' report in light of the President's experience in Indonesia, the School's response, a meeting with one reviewer, critical commentary from Jakarta by a third panel member (McKinnon) in response to his colleagues' report, and documentation from the Guelph team in Indonesia. In its final consideration of this Review, Guelph's SCIA (February 1, 1994) was highly critical of the report and expressed four conclusions:

1. It contains useful analysis of the University policy and its application and a set of constructive recommendations, several of which SCIA accepted.
2. As one member of the Review team suggested, events had overtaken some of the analysis and some of the recommendations. Indeed it was SCIA's observation that significant progress occurred over the 18 months after the Review's visit to Indonesia in terms of some of the recommendations, collaboration with NGOs being a case point.
3. SCIA discerned serious flaws in the Review process, coupled with factual errors in the report; these factual errors involved the details of the University of Guelph Project and its relationships.
4. SCIA found a lack of balance in the report.

SCIA noted that all three reviewers (including McKinnon) commented on the negative effects of Guelph's withdrawal from the project. A few weeks after the signing of the Phase II Agreement for the EIUDP, Guelph's SCIA recommended in February 1994 that University involvement in phase II of SRDP continue to completion. By this time, however, the Guelph Project team had begun to disperse, and the Canadian members had planned to return home. As one member phrased it, "the project had already begun to disintegrate." Any doubts about possible continuation of the project were removed by the Indonesian government's decision to halt it, five months later, long after Guelph's Senate approved continuation. This decision to terminate Guelph's relation to the project occurred after the team had left and some elements of the government had tried to salvage the project. The Sulawesi Project was eventually passed to a German donor agency that stepped in to change and revive it.

Appendix F

EIUDP Performance Report 1987-2000 by Chris Dagg and Nello Angerelli

December 2000.

Note: The UNPATTI campus was largely destroyed in mid-2000. Labs and Library facilities were burned, damaged, or looted. Many faculty members are not currently in Ambon. While some classes have been reopened in unused school buildings, the number of courses offered, and the number of students and faculty attending classes will remain variable until security is restored in Ambon.

1. Faculties of Science at Member Universities

The basic premise of EIUDP was that there was a need for stronger foundation/basic science programs for the applied sciences and education programs of importance to regional development. Put another way, the Project's objective, as it related to basic science, was to improve basic science programs (first to fourth semesters, depending on the discipline) to promote stronger applied science (agriculture, fisheries, etc.) and education programs in those areas of regional relevance.

When the Project began in 1987-88, these basic science courses were being taught in each applied faculty, but quality was very poor. There were no standards or consistency, instructors were under-prepared, teaching materials were rudimentary, and support facilities were poor. As a result, applied science and education programs were very weak.

The teaching of basic sciences in the individual applied science faculties in 1988 fell primarily to junior lecturers in that particular applied science. Very few had any training as basic scientists. Most senior lecturers – in 1988 there were few who held Masters and PhD degrees – taught more advanced applied science courses. In Manado, for example, there was one physicist, one biologist and two chemists (no mathematicians and no statisticians). However, as these individuals were very senior, they actually did not do any teaching (one of the weaknesses of the 'team teaching' method that was being used at that time). One very positive outcome of the EIUDP has been the large scale abandonment of team teaching (at least at UNSRAT and UNHALU) in basic science courses

The Project's first approach was to organize basic science 'service courses' – well-developed courses in basic sciences, through which students from applied science and education faculties would pass before proceeding in their applied area, and that prepared them well for their future programs. These were later organized, institutionally, into a 'basic science unit' (BSUs, which were initially organized as special centres or 'UPT'). For reasons of institutional status and career path for faculty, however, the decision was taken that these Units would become 'Service Faculties of Science,' offering only these early-semester service courses to support the applied and education faculties. This was a fairly innovative approach, which has been replicated elsewhere. These have been established at all five Member University campuses.

All Member Universities, however, hope to go further and open 'full' faculties of science, i.e., faculties of science offering a full range of pure science courses with their own students that granted degrees in mathematics and pure science. The objective of EIUDP was never to open such 'full' faculties. Education authorities have said repeatedly that if the Member Universities can fulfill established criteria (employability of graduates, availability of programs, staff quality, facilities) they can open 'full' faculties. UNHALU (Kendari) has passed an inspection. Others are applying for 'full' faculty status, but have begun to accept degree students in the meantime [see Table 4B]. The Project has strongly supported this gradual approach, and, while a number of linkage development activities will relate to advanced study in sciences, project upgrading resources and activities have been directed towards the continued improvement of the service courses.

The data in Table 1 relates to the human resources that have been developed to provide improved 'service courses,' this being the Project's mandate. Table 1A shows the number of faculty teaching the 'service courses' within the Faculty of Science. Not many Project Fellows yet appear in these figures. Phase I science Fellows, who were for the most part applied science faculty members, were not obliged to join the basic science group, since the Basic Science Units were not formed until mid-way in Phase I. All Phase II science Fellows are obliged to join the Faculty of Science. Most have not yet completed their programs [see Table 1B]. The Project is monitoring returning Fellows in an attempt to ensure that the commitment to join Faculties of Science is honoured [Data: see Tables 1A and 1B]

2. Mix of Participants in Short Courses - 1988 to 2000

Participants in short-term training – short courses, workshops, attachments, mentorships, English language training – numbered over 6,900 Indonesian (teaching staff, library and lab personnel, and university leaders).

While project annual reports and base-line data list, in most cases, participants in short-term training, it would be a very substantial task to identify the degree held by each. The following presents in general terms a number of aspects related to participation and to the evolution of short-term training methodology from the 'rising tide' approach ('mass' training to improve general competency on an urgent basis) to more focused, individually tailored training.

Of all short-term training participants, approximately 35 percent were women, a number that reflects current participation rates of women in science. Trainers were obliged to include WIST and ESD considerations in their materials and training content.

During Phase I, most short courses were typically attended by 15-25 participants. With many scholars absent for long-term degree training, it was necessary to provide some 'crash' training to those tasked (often temporarily) with basic science teaching. The number of participants in any given activity was reduced in the later years of the Project and the training became more focused, as participant selection became more rigorous and related closely to Staffing plans and Individual Training Plans that identified individual training needs. In later years, more use was made of individual attachments.

Typically, basic science short-term training related to a specific discipline was attended during Phase I by junior faculty members with applied science Bachelor degrees, who were bearing the burden of basic science teaching during the early years. Training in English in Phase I was

directed exclusively to junior faculty seeking to take advantage of fellowship or other off-campus training activities. In later years, training was much more individually tailored and directed more at sharpening the skills or content knowledge of more experienced, better-prepared, permanent staff of the Basic Science Units. Training in management would typically be attended by more senior personnel, some with second or third degrees.

The five Member University campuses benefited equitably from Project Resources for short-term training. Allocation of resources to a particular campus was driven by bottom-up planning processes on each campus and absorptive capacity. The project supported on-campus activities involving personnel from all five campuses or only one campus' personnel. For a note on English language training, see No. 9.

3. Research Productivity by University in Applied and Basic Sciences – 1988 to 2000.

a) Non-project funds used for research [*Data: see Table 5*].

b) Library resources and use

All of the Member Universities have poor library collections. Funding was (and remains) inadequate, library management was poor, and a range of systemic problems limited the libraries' usefulness to student and faculty. Adding to holdings was outside of EIUDP's mandate – this was the focus of other international projects – although the Project did supply a large number of basic science texts and arranged a number of voluntary contributions. The Project's principal areas focus in respect to library development included long (degree) and short-term training for library managers and staff in order to develop a professional cadre of staff, cataloguing and other systems development, improved access to and usage of library facilities by student and faculty in their on-going course work and research, and provision of computer hardware for internet access and networking, cataloguing, and management programs, including training in their use.

To help offset continued weakness in library holdings and access to information, a linkage development initiative has been launched to facilitate low-cost access to periodical databases and locally produced research information for Indonesian universities in support of research capacity and teaching quality enhancement. Funding has been obtained from IDRC to digitize Indonesian dissertations and theses, which will be made available to the global library community via the web. A system proposal is in preparation [*Data: see Table 5*].

c) Labs and their use

When the Project began in 1987-88, laboratory facilities were very limited. The provision of laboratory facilities (building and equipment) was beyond EIUDP's mandate. Over the life of the Project, all campuses have received funding from other sources to build new basic science laboratory complexes and some projects have provided new equipment. EIUDP focused on training for lab managers and staff, safety program design and training, lab design, development of lab teaching materials, and the integration of lab and classroom teaching in basic science courses. As a result, most basic science courses now have lab components, improved lab manuals, and other teaching resource materials.

The CIDA Review Team identified continuing weaknesses in the laboratories. 'In-house' laboratory management structures, equipment shortages, inadequate funding, and overloaded and incomplete physical facilities continue to inhibit quality teaching of the

basic sciences and research. While all of these areas lie outside of EIUDP's mandate, these continuing weaknesses will be raised with senior university officials again at the January 2001 Steering Committee Meeting [Data: see Table 5].

d) **Change in curriculum (see No. 7 below)**

4. Return Rates and Retention Rates within Indonesia: EIUDP Universities' Retention of their EIUDP Fellows on Completion of their Degrees

Table 2 contains data on the number of post-graduate and undergraduate fellowships awarded to each Member University (and at UNRAM and UNTAD, which were 'participating' universities in Phase I), the number (and percentage) who completed their programs, the number (and percentage) who did not complete their programs ('drop out'), and the number (and percentage retention rate) who returned to their campuses. The disparity between totals shown here and total fellowships awarded reflects the number of Project Fellows granted two Project fellowships (e.g., for MSc and then PhD).

The total retained is therefore 220 of a grand total of 229 who completed their degrees (215) or 'dropped out' (14). The remainder (9) did not return to their campuses. The Project has urged the Member University concerned and DIKTI to trace these 9 individuals.

5. Number of Applicants for EIUDP Fellowships in Indonesia, by Year.

Most placements of Project Fellows in graduate programs took place in 1989-91 (for Phase I Fellows) and 1997 (for Phase II Fellows). Final selections were made by a Joint Selection Committee whose members comprised senior Canadian and Indonesian academics and Project Advisors. Whether a particular candidate was awarded a fellowship in Canada, in the ASEAN region, or in Indonesia depended, however, on his or her ability to meet universities' TOEFL requirements after advanced English training, as well as on the identification of appropriate programs and supervisors and other placement considerations. ASEAN region and in-Indonesia fellowships were not foreseen in the original design of the Project, but were added to take into account the fact that many worthy candidates could not meet Canadian TOEFL requirements or could not find appropriate programs in Canada. In Phase II, the in-Indonesia fellowship program was expanded to accommodate the preference of women to study domestically.

The award of fellowships for graduate study differed between Phase 1 and 2. In Phase 1, candidate Fellows were nominated by their department chairs and/or deans followed by screening for English language capability. The limited intake capacity of the ELT Centres required that only those nominees with TOEFL scores close to 400 could be accepted into the program. Cohorts for the first phase of ELT (BELT) usually numbered 16 and from that number about 4 would acquire an exit level TOEFL sufficiently high to get them into the next phase of ELT (EAP 1). Similarly, about 25% of EAP 1 participants would move on to EAP 2 and from that number, about 25% or fewer had TOEFL scores sufficiently high to enter a Canadian university.

While in ELT (this normally lasted at least 12 months), candidate Fellows were interviewed on several occasions to determine academic and related research interests in order to

determine where they might best study in Canada. While the selection process evolved significantly over time, ultimately, the first cohorts of Phase I Fellows ended up in Canada because they were able to score a high enough TOEFL score and then because they possessed some academic capability, measured by grade point average. Both of these measures were highly imperfect; Academic selection of Fellows from eastern Indonesia is very difficult and we are not aware of any donors that have not encountered difficulties.

By Phase 2, the project had developed a process that was fair and reasonably effective at ensuring that the most worthy candidates were given a good chance to demonstrate their abilities. The process involved local nomination, supported by Staffing plans and Individual Training Plans identifying individuals' training needs, followed by study in the 'Basic Science Bridging Program' (BSBP) at ITB in Bandung. The latter program was approximately 10 months long and involved general course work in a candidate's basic science discipline followed by intensive courses and seminars delivered by both Indonesian and international (Canadian and Australian) lecturers. The EIUDP used the final grades of this program (basic science discipline and English language) along with the individual detailed assessments of each candidate carried out by a joint Indonesian/Canadian/Australian team, as a measure of academic merit to guide the placement of individual candidates. Those who completed BSBP either returned to their campuses with a Certificate, went on to further English language training and, if they succeeded, to study in Canada, or if they appeared to be academic ability but did not meet English language requirements, continued to domestic graduate study.

A new program was introduced during Phase I to provide undergraduate scholarships to enable students from Member Universities to take BSc degrees at senior Indonesian universities so they could be appointed on completion of their studies as junior basic science lecturers at their home institutions. Special features of the undergraduate scholarship program, designed and delivered in cooperation with the Indonesian Resource Universities, included English Language Training (500–550 hours) and a special tutorial program in core basic science courses during the first four semesters to assist bright but under-prepared indigenous students from Eastern Indonesia to compete with their peers in Java and South Sulawesi. This highly successful program, involved several steps:

- i. nomination by departmental chairs of students in their second semester of study interested in pure as opposed to applied science;
- ii. screening with the Indonesian university entrance exam (a version from one or two years previous to the time of writing);
- iii. screening with a discipline-specific exam created by the SFU discipline coordinators;
- iv. oral interview with the Campus Program Manager/Advisor (CPMA);
- v. final selection by a large committee consisting of Resource University EIUDP Coordinators, EIUDP CPMAs, EIUDP Deputy Director and EIUDP/DIKTI Coordinator.

Students screened by this process were then given the opportunity to rank IPB, UGM or UNHAS as preferred universities and as far as possible, were given their first choice.

The graduates of this program are the 'core' of most of the FMIPAs with the exception of UNSRAT which did not take full advantage of the opportunity. UNHALU made exceptional use of the program and was very successful at ensuring that graduates were provided with an

opportunity to pursue a Master's degree. At present, the FMIPA at UNHALU is probably the strongest of the EIUDP-supported FMIPAs.

As the Fellowship program evolved, services provided by the Project to candidates and Fellows grew to include: familiarization of the candidate with suitable undergraduate and graduate institutions in Canada, Indonesia and the ASEAN region so as to facilitate the trainee's participation in the application and placement process; application for admission and placement of the candidate at a suitable institution; pre-departure orientation and training including ELT to the necessary level in the case of graduate study; travel; arrival orientation; monitoring; an enhanced research grant to help Fellows carry out a substantial and significant research project as part of their degree program; facilities to enable supervisors to visit students' home campuses; provision of supporting services as necessary including tutorials, and specialized tutoring as necessary; and return and reorientation of the trainee to the campus of origin. Successful graduate trainees receive a small professional development grant with which they can purchase supporting materials, specialized research supplies and reference literature that will assist them in maintaining the academic and research momentum gained while pursuing graduate studies [Data: see Tables 3A and 3B].

6. FMIPA Data - Number of Departments, Number of Faculty in Each Department.

[Data provided in Table 4(a).]

7. Number of New Courses Prepared for Teaching in FMIPSSs, per University.

The number of revised curriculum is large. The number of 'new' courses is small because:

- i. of the control that the national discipline consortia have over curricula - until recently, introducing new courses has been essentially impossible on an individual campus basis;
- ii. of the large number of courses being taught and continuous pressure from Jakarta to reduce degree completion time.

Revising existing courses was carried out routinely.

8a. Laboratory Curricula Completed and Taught

Generally, laboratory curricula support lecture material. Therefore, the EIUDP undertook to review and revise lab curricula in concert with review and revisions of lecture material. There were several instances (Chemistry 1 [largely inorganic chemistry] and 2 [largely organic chemistry], and Biochemistry) where 'laboratory sets' of exercises/labs were developed. These included the development of instructor's notes and instruction in carrying out the lab [Data: see Tables 4A and 4B].

8b. Library Improvements (see 3b above)

[Data provided in Table 5.]

9. English Language Training Centres –Number Established and Students Trained

The Phase I Contribution Agreement called for only two years of technical assistance in English Language Training on each campus. The project went very considerably beyond that in the following respects.

English Language Training accomplishments included the development of English Language Training Centres (ELTC) at each of the Member University campuses, comprising a physical structure and basic furnishings (supplied by the GOI counterpart budget), teaching resources including materials and language laboratories (SFU/CIDA budget), ESL curricula (Pre-Basic English Language Training (Pre-BELT) and BELT) and course content and the development of a cadre of trained ESL teachers to staff the ELTC. The staff were produced through the provision of long-term ELT advisors as well as on-site and off-campus short-courses, workshops and specialized training at regional language training centres. Each of the ELTCs was incorporated into the Universities administrative structure by Rectorial decree. As such, they became autonomous from any specific existing faculty, and could receive continuing funding support from the university in addition to any fund-raising (through provision of ELT courses to groups outside of the university) they were able to do on their own – a further substantial contribution in the area of institutional development at the target universities. The ELTCs continued to receive project support through Phase II.

English language training covered all levels of training: pre-BELT, BELT, English for Academic Purposes I (EAP-I) and EAP-II). EAP-I and EAP-II training was provided in a central location until late in the project, when some Member University English Language Training Centres (ELTC) gained the skills and experience to offer EAP-I. Entry into each level was strictly governed by placement tests. Also, English for Special Purposes training was provided to specific groups (e.g. English for Biology faculty, English for Computer users). English language training was also provided with project support to scholarship students studying in Indonesian universities.

ELT supported not only the Project's Fellowship program but provided opportunities for all lecturers to learn English which has become the vernacular for modern science and scientists. Ability in English provides access to the world body of scientific knowledge in support of teaching and research as well as to short-term training opportunities. In recent years, the ELTCs have also offered English language training to undergraduate students.

Thousands of students have been trained, now that undergraduates also receive instruction through the ELTCs. It would not be possible without a major effort to list the total trained by each ELTC.

Table 1A: Number of Faculty Members Teaching Basic Science Services Courses, 1988 and 2000 and Sources of Degrees

M.U.	1988		2000									
	No. of faculty teaching basic science service courses	Degrees held	BSc				MSc					
			Indonesia Java	Indonesia other	Indonesia Java	Indonesia other	Asia	Eur	Canada	USA	Other	Inc
UNCEN/J	Variable	Taught by applied science and education staff, 100% Bachelor's degree	8	5	18				2	2		
UNCEN/M	Variable	Taught by applied science staff	7	19	39	1	5	1	1	-	-	
UNHALU	Variable	1 MSc, rest-BSc	2	6	30	4			1		1	
UNPATTI	Variable	Taught by applied science & education staff. (see Note 1)	7	8	8							1
UNSRAT	Variable	Taught by applied science staff; 90% Bachelor's degree	5	5	18	2		1	1			
TOTAL			29	43	113	7	5	2	5	2	1	

Source: Faculties of Science, Member Universities, December 2000 (Rev. 14 December 2000)

Note 1: At UNPATTI, an additional 31 Faculty of Science teaching staff are currently not on campus.

Table 1B: Basic Science Fellows Still in Programs, Committed to Join FMIPA on Completion of Degree

MEMBER UNIVERSITY	BASIC SCIENCE FELLOWS STILL IN PROGRAMS				
	Masters/PHd Canada	Masters/PHd ASEAN region	Masters/PHd Domestic	Bachelor Domestic	Total in process
UNCEN/J	2	5	9	1	17
UNCEN/M	2	1	2	2	7
UNHALU	3	2	7	0	12
UNPATTI	6	1	5	2	14
UNSRAT	6	0	9	1	16
TOTAL	19	9	32	6	66

Source: SFU/EIUDP Data, November 2000

Table 2: Fellowships completed, in process, degrees completed, retention rate

Fellowships still in process				
	Masters/PhD Canada	Masters/PhD ASEAN Region	Masters/PhD Domestic	Bachelor Domestic
UNCEN/J	3	5	10	1
UNCEN/M	2	1	2	2
UNHALU	3	3	9	0
UNPATTI	7	1	5	2
UNSRAT	6	0	9	1
UNRAM*				
UNTAD*				
TOTAL	21	10	35	6

Fellowships Completed				
	Completed Masters/ PhD Canada	"Drop out" Program Incomplete	Returned to Campus	Did not return to Campus
UNCEN/J	6		6	
UNCEN/M	4		4	
UNHALU	5		5	
UNPATTI	13	2	13	2
UNSRAT	21	3	23	1
UNRAM	2	1	3	
UNTAD				
TOTAL	51	6	54	3

	Completed Masters/ PhD ASEAN Region	"Drop out" Program Incomplete	Returned to Campus	Did not return to Campus
UNCEN/J	0		0	
UNCEN/M	9	1	10	
UNHALU	2		2	
UNPATTI	3		3	
UNSRAT	3	1	3	1
UNRAM			0	
UNTAD			0	
TOTAL	17	2	18	1

Source: Faculties of Science, Member Universities, December 2000

* Participating Universities in EIUDP Phase II

continued.../

Table 2: (continued) Fellowships completed, in process, degrees completed, retention rate

Fellowships Completed 2000			
	Completed Masters/ PhD Domestic	"Drop out" Program Incomplete	Did not return to Campus
UNCEN/J	3		
UNCEN/M	13		
UNHALU	11	1	1
UNPATTI	8		
UNSRAT	12	2	4
UNRAM			
UNTAD	2		
TOTAL	49	3	5
	Completed Bachelor Domestic	"Drop out" Program Incomplete	Did not return to Campus
UNCEN/J	15		
UNCEN/M	20		
UNHALU	34		
UNPATTI	14	1	
UNSRAT	10	2	
UNRAM			
UNTAD	5		
TOTAL	98	3	0
Totals			
	Total Completed Program	Total "Drop out"	Did not return to Campus
UNCEN/J	24	0	0
UNCEN/M	46	1	0
UNHALU	52	1	1
UNPATTI	38	3	2
UNSRAT	46	8	6
UNRAM	2	1	0
UNTAD	7	0	0
TOTAL	215	14	9
Percentages			
	% Completed Program	% "Drop out"	% Retention Rate
UNCEN/J	100.00	0	100.00
UNCEN/M	97.87	2.13	100.00
UNHALU	98.11	1.89	98.11
UNPATTI	92.68	7.32	95.12
UNSRAT	85.19	14.81	88.89
UNRAM	66.67	33.33	100.00
UNTAD	100	0	100.00

Table 3-A: Fellowships awarded in Canada, by year

	Fellowships awarded at SFU	Fellowships awarded elsewhere in Canada	Fellowships awarded
1989	7	9	16
1990	3	18	21
1991	4	12	16
1992	1	2	3
1993	0	0	0
1994	2	4	6
1995	2	3	5
1996	0	0	0
1997	7	13	20
1998	1	1	2
1999	0	1	1
2000	0	0	0
TOTAL	27	63	90

Source: EIUDP Data, November 2000

Table 3B: Fellowships Awarded at SFU: Degrees Granted

Degree	Degree granted	Program still in progress	Duration of program (Average in Months)
MSc completed	12	3	
MSc expected			44.2
MA completed (Ling.)	2		
MA expected (Anth.)		1	
Phd completed	1		61
Phd expected		4	
PBD completed	2		21
TOTAL	17	8	
Resigned		2	

Source: EIUDP Data, November 2000

Table 4A: Service Courses Provided by Faculties, Member Universities

MEMBER UNIVERSITY	Basic science departments (providing service courses)	Number of service courses taught	Disciplines with lab component	Number of students taught service courses
UNCEN/J	Biology, Chemistry,	17	4	605
	Math/Stats, Physics	(for 8 Applied/Educ, Progs.)		
UNCEN/M	Biology, Chemistry,	30	4	623
	Math/Stats, Physics	(for 6 Applied Progs.)		
UNHALU	Biology, Chemistry,	48	3	1,749
	Math/Stats, Physics	(for 21 Applied Progs.)		
UNPATTI	Biology, Chemistry, Math/States, Physics	4 service courses for students in 4 faculties	3	435
UNSRAT	Biology, Chemistry, Math/Stats, Physics	5 service courses for students in 5 faculties	3	1,400
TOTAL				4812

Source: Faculties of Science, Member Universities, December 2000 (Rev. 14 December 2000)

Table 4B: Member Universities Receiving Basic Science Degree Students ('Full' Faculties of Science) Number of Faculty Members, and Numbers of Students, November 2000. Science Degree Students ('Full' Faculties of Science), Number of Faculty Members, and Numbers of Students, November 2000, Number of Students November 2000

MEMBER UNIVERSITY	PROGRAMS OFFERED	NO. OF FACULTY MEMBERS	NO. OF STUDENTS
UNCEN/J	CHEMISTRY BIOLOGY MATH/STATS PHYSICS	21	242
UNCEN/M	BIOLOGY	24	27
UNHALU	CHEMISTRY BIOLOGY MATH/STATS PHYSICS	44	249
UNPATTI	CHEMISTRY BIOLOGY MATH/STATS PHYSICS	55	68
UNSRAT	CHEMISTRY BIOLOGY	30	141

Source: Faculties of Science, Member Universities, December 2000 (Rev. 14 Dec. 2000)

Table 5: Research Productivity and Library Usage: Member Universities, 1988 AND 2000

MEMBER UNIVERSITY	RESEARCH GRANTS IN APPLIED		LIBRARY USAGE AND BASIC SCIENCE	
	1988	2000	1988	2000
UNCEN/J	Data not available	60 projects	Data not available	2,944 students
UNCEN/M	Data not available	11	3483 VISITS IN 1 YEAR (APPROX 15/DAY)	APPROXIMATELY 54 VISITS/DAY
UNHALU	0	8	Data not available	3499 PERSONS
UNPATTI	Data not available	(SEE NOTE 1)	Data not available	(SEE NOTE 1)
UNSRAT	Data not available	Grants totalling R 3.889 million	80 visits / day (April-Sept. 2000)	120,022 visits
TOTAL	0	19		

Source: Faculties of Science, Member Universities, December 2000 (Rev. 14 December 2000)

Note 1: UNPATTI'S Campus was destroyed in July 2000. Library and Laboratory facilities will need to be restored.

16 References

Adam, Asvi Warman. "The other side of RI history," *Jakarta Post*, 23 August 2000.

Amnesty International. *Power and Impunity: Human rights under the New Order*. New York, 1994

Beers, Howard W. *An American Experience in Indonesia: The University of Kentucky affiliation with the Agricultural University at Bogor*. Lexington: University of Kentucky Press, 1971.

Howard, Michael, and Naffi Sanggenafa. *Papers on Applied Anthropology, Irian Jaya*. Vol I (1997); Vol II (1998).

Human Rights Watch,. *World Report 2001*. Chapter on Indonesia, December 2000.

Kahin, Audrey. *Rebellion to Integration: West Sumatra and the Indonesian Polity 1926-1998*. Amsterdam: Amsterdam University Press, 1999.

Li, Tania Murray. "Compromising Rule: Development, Culture, and Rule in Indonesia." *Cultural Anthropology*. 14(3): 1-28, 1999.

—. "Articulating Indigenous Identity in Indonesia: Resource Politics and the Tribal Slot." *Comparative Studies in Society and History*. 42(1): 2000.

Miller, H. Lyman. *Science and Dissent in Post-Mao China; The Politics of Knowledge*. Seattle: University of Washington Press, 1996.

North, Patrice. "Short Courses and the Use of English." EIUDP, December 1994.

O'Shea, Thomas. "An Alternative to the Fellowship Program of Phase I." EIUDP, August 1991.

Pyenson, Lewis. *Empire of Reason: Exact Sciences in Indonesia 1840-1940*. Leiden, EJ Brill, 1988.

Schwarz, Adam. *A Nation in Waiting: Indonesia's Search for Stability*. Boulder: Westview, 2000.

Sillitoe, Allan. *Social Change in Melanesia: Development and History*. Cambridge University Press, 2000.

SFU. "Technical Design Mission Report." EIUDP, 1988

—. "Detailed Design Report" and "Detailed Mission Report." EIUDP, 1987.

SFU/EIUDP. "Update of Travel to Indonesia." February 2000.

"Silenced Voices: New Writing from Indonesia." *Manoa* 12(1), 2000. Special Issue edited by Frank Steward. University of Hawaii Press.

University of Guelph. "Information on the University of Guelph's Involvement in the Sulawesi Regional Development Project." January/February, 1994