

MEMORANDUM

TO: Peter Spain, AID S&T/ED

FROM: Jonathan Hodgdon

SUBJECT: Interim Evaluation Report, Indonesia Rural Satellite Program

DATE: 20 April 1985

cc: M. Calvano, AED
M. Morfit, AID/Jakarta
Contract Staff

This report reflects the observations over the last year of the Indonesia RSP (SISDIKSAT) but especially my observations over the last two months on-site from 20 February to 20 April in Ujung Pandang and seven other SISDIKSAT locations. The report is divided into four sections: 1) Project Observations; 2) Evaluation Activities; and 3) Feedback from Visits to Other Sites; and 4) Summary. The purpose of the report is to provide an evaluation update and to call early attention to serious problems that continue to exist in the SISDIKSAT project in Indonesia.

1.0 PROJECT OBSERVATIONS

1.1 Technical Observations. During the first month of observation (20 Feb. to 20 Mar.), the technical quality of Channel A was fair to poor and Channel B was poor. Channel A was plagued by noise and static on the lines, chopping of transmission from Palu and Samarinda, and frequent loss of transmitting capability at UNHAS, IPB (Bogor), and UNCEN (Jayapura). Channel B was, for the most part, unusable during this period, and transmissions over this line often caused crosstalk between the two channels. During the second month of observation (20 Mar. to 20 Apr.), however, the technical quality of Channel A was good and Channel B was fair to good. The dramatic improvement in both channels coincided with the end of the rainy season and also with the separation of the two channels by PERUMTEL (by replacing Channel B with a new channel not adjacent to Channel A on the PALAPA-B satellite). Crosstalk, noise, and loss of transmitting capabilities have for the most part disappeared. Only the chopping of transmissions from Samarinda and Palu, caused perhaps by proximity to earth stations, persist over the network.

Classroom facilities and equipment components are in good condition with only a few exceptions. Most sites have one or two microphones that need

to be repaired or replaced, and two sites still have problems with their Aregon units (the unit at Banjarmasin takes 20 minutes to warm up, and the unit at Jayapura can send--but not receive--graphics transmissions). Proper lighting and maintenance was observed at all sites visited and at least one air conditioner was observed in all classrooms except Bogor and Banjarmasin. Generally, however, the air conditioners are not used (perhaps for budgetary reasons) and temperatures above 80°F inside the classrooms are common, especially at Banjarmasin and Jayapura. Adequate soundproofing was observed at all sites visited except at Jayapura, where the two external speakers are not used due to sound reverberations. Power outages occur frequently at UNHAS project headquarters during the rainy months but have not hampered SISDIKSAT operations due to the low voltage required to recharge the system's battery packs. Equipment in the software studio at UNHAS is discussed in Section 1.4.

1.2 System Usage. The first full semester of system activity began on March 18th with 12 courses being offered over the SISDIKSAT network (see Figure 1). Student attendance thus far has fallen far short of the 4000 estimated by AED last December (see Indonesia Fact Sheet, 5 Dec. 1984, Anna Stahmer). The first four weeks of the semester may be summarized as follows:

	<u>Week 1</u>	<u>Week 2</u>	<u>Week 3</u>	<u>Week 4</u>
Total Attendance (Students)	196	294	618	454
Number of Sessions Completed	1	1	9	6
Number of Sessions Partially Completed	2	3	2	1
Number of Sessions Cancelled	9	8	1	5

The distribution of students by sites is shown below:

Student Attendance by Site for Week 3

UNCEN - Manokwari	246 (40%)	UNHAS - Ujung Pandang	25 (4%)
UNSRAT - Manado	148 (24%)	UNCEN - Jayapura	21 (3%)
UNTAD - Palu	98 (16%)	Other Locations	8 (1%)
IKIP - Ujung Pandang	72 (12%)	TOTAL - All Sites	618 (100%)

During this period, twelve sessions (25%) were cancelled due to the absence of the lecturer, five sessions (10%) were cancelled due to the absence of students, four sessions (8%) due to holidays or special SISDIKSAT meetings, and two sessions (4%) were cancelled due to technical problems.

Overall, 47% of the sessions were cancelled in the first month of the SISDIKSAT semester. Attendance at Manokwari, which accounts for 40% of the attendance overall, fell off markedly in week 4.

Based upon discussions with project staff and teaching faculty at various locations, the reasons for poor dosen attendance include:

Figure 1

KANTOR PUSAT

J A D W A L PERKULIAHAN SEMESTER GENAP
1984 - 1985

Hari.	Senin kode		Selasa kode		R a b u kode		Kamis kode		Jum'at kode		Sabtu kode		Minggu kode	
	A	B	A	B	A	B	A	B	A	B	A	B	A	B
6.00	UNCEN - UNPATTI - AUDIO CONFERENCES WITH MANOKWARI													
7.00	UNCEN - UNPATTI - FAX TO ALL SITES													
8.00	SYSTEM CHECK-OUT ALL SITES OUTSIDE JAVA													
9.00	HUMAN EKOLOGI Pb:5		ILMU PANGAN Pb:4 (FOOD SCIENCE)		STATISTIK II Pb:8		TEKNOLOGI KE- PENDIDIKAN Pb:8 (EDUC. TECHN.)		ILMU ALAMIAH DASAR Pb:7		EKONOMI SUMBER DAYA Pb:9 (RESOURCE ECON)			
10.00	ROLL - CALL ALL SITES / PENGIRIMAN BERITA													
11.00	(CATTLE BREED)		(FISHING GEAR)											
12.00	ILMU PEMULIAAN TERNAK Pb:11		ALAT PENANG- KAPANNIKAN Pb:11		PROD. TERNAK UNGGAS Pb:11 (POULTRY PROP.)						BASIC EKOLOGI Pb:10			
13.00	ROLL - CALL ALL SITES / PENGIRIMAN BERITA													
14.00	BASIC FORESTRY Pb:7		UNIV. TERBUKA Pb:12 (OPEN UNIV.)				UNIV. TERBUKA Pb:12 (OPEN UNIV.)				(POP. & ENV.) KEPENDUDUKAN LING. HIDUP Pb: 7			
15.00														
16.00														
17.00														
18.00														
19.00														
20.00														
21.00														

- Late notification. Many dosen were notified only days before that the semester would begin on March 18, and some dosen were not notified until the week after their course was scheduled to start.
- No orientation. Although the semester began on March 18th, training and orientation to SISDIKSAT was not offered to the teaching faculty until March 29th.
- No substitute contacted. Many dosen cancelled their class to attend a meeting which they felt was more important. Unfortunately, few of these dosen made arrangements to have another lecturer take their place.
- Poor student attendance. Some dosen failed to lecture one week because of poor student attendance the week before.

Reasons for poor student attendance include:

- No notification. Several locations, including IPB and UNCEN-Jayapura, did not invite their students to participate due to a lack of confidence in SISDIKSAT and a dissatisfaction with the absence of graphics/video. Most sites have yet to publicize SISDIKSAT effectively to dosen and students.
- Late notification. Since the SISDIKSAT semester began four to six weeks after most BKS universities began their semesters, students typically did not have the necessary time slot available to attend a relevant SISDIKSAT course. Also, the SISDIKSAT schedule was not sent to local coordinators until early March.
- Inappropriate course selection. Many of the courses offered via SISDIKSAT this semester were offered last semester at the BKS participating sites (and also next semester) and were, therefore, not made available to the students.
- No lecture materials. For most of the SISDIKSAT courses, handouts and lecture modules were not distributed to the sites until the fourth week of classes. Combined with the absence of graphics, students find it very difficult to follow the lecture without written materials.
- Inappropriate starting times. For morning sessions beginning at 9:00 a.m. in particular, many students find it impossible to attend the first 15 minutes of a SISDIKSAT class because their previous class ends at 9:15 a.m. or at 9:00 a.m. in a location 15 minutes away from the SISDIKSAT classroom.
- Insufficient classroom capacity. Since the local enrollments for some courses, such as Statistics II, exceed the capacity of the classroom, some locations such as Jayapura opted to teach face-to-face rather than to overcrowd the classroom or divide the class into two sections.

- Poor dosen attendance. Some students failed to attend class one week because of a dosen no-show the week before.

Successful courses attendance-wise include Statistics II, (IKIP-UP), Human Ecology (UNTAD), Cattle Breeding (IPB), and Poultry Production (IPB). Courses in danger of cancellation due to a lack of students include Basic Forestry (UNHAS), Science for Non-Science Majors (UNHAS), and Resource Economics (UNLAM).

The availability of SISDIKSAT for assisting in BKS administrative activities has not been widely utilized. There was a March 23rd meeting to plan courses for next semester, but this meeting was unsuccessful, since most of the Vice-Rektors were in Jakarta for other meetings on that day. One important administrative application of the system is the exclusive use of SISDIKSAT each morning before classes for communications between UNCEN-Jayapura and UNCEN-Manokwari. Without SISDIKSAT, these two branches of the same university would have to rely on ham radio, written, or face-to-face communications to conduct university business.

Since February 19th, the Open University of Indonesia has been using the system successfully to conduct tutor training at eight locations for four hours per week. Organizers of the sessions are very pleased with the satellite network and report 70 to 80 percent attendance rates among the nearly 200 tutors invited to participate. None of these training sessions have been cancelled for technical or other reasons.

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A two-day Eastern Islands Ocean Resources Seminar was held at UNHAS and over the satellite network on March 28-29, but it was unsuccessful as a tele-conference due to a failure of the Organizing Committee to inform the Governor, the UNHAS Rektor, and the Seminar Moderator that other sites were participating on the system. On the second day, invited dosen from seven of the seminar locations did not return to the SISDIKSAT classrooms because they felt excluded from the proceedings and did not have a copy of the seminar agenda. The failure to welcome and include participants from other sites dampened the enthusiasm of many local coordinators and senior dosen towards SISDIKSAT despite the good audio reception.

1.3 Management Observations. The absence of a Project Director continues to be the central management problem to which most other SISDIKSAT problems can be traced. In order to fill this management void the project staff at UNHAS have elected to share these responsibilities--often at the expense of their own duties. Technical problems remain unresolved, microphones remain unrepaired, and operators remain unsupervised because the chief technician has been preoccupied with project planning and funding decisions. Software activities are similarly put off and the duties of the UNHAS Local Coordinator (such as notifying dosen, tutors, and students when classes are to begin) are neglected in favor of system-wide management activities. Since there are no full-time senior SISDIKSAT staff, other than the AED field advisor, many project planning and administrative activities take place very late, if at all. During the two-week period prior to the beginning of the new

semester (from 3 March to 17 March), only one of the six senior project staff was in Ujung Pandang preparing for the start of the new semester.

A related problem facing SISDIKSAT Headquarters in Ujung Pandang has been a lack of local funds to pay for the development, reproduction, and distribution of lecture materials and user's manuals as well as other project expenses. Despite the assistance of AID/Washington in securing an \$80,000 budget for SISDIKSAT (1984/1985) from the Directorate General for Higher Education in October 1984, these funds have been released very slowly and usually after expenses have already been incurred. Uncertainty about reimbursement and inability to pay expenses up front has weakened project management further and caused lengthy delays in the distribution of training and teaching materials to dosen and students.

1.4 Software Report. UNHAS and AED project staff prepared a handbook of "Do's" and "Don't's" for SISDIKSAT teaching dosen, but this handbook has not been reproduced and distributed to the lecturers for this semester due to budget constraints. Two training sessions were held over the system on March 29th and April 1st for the approximately 30 dosen and 50 tutors involved in this semester's courses. Unfortunately, only one teaching dosen and 15 tutors attended the sessions due to late notification, no notification, and in some cases a lack of interest.

Training sessions for course materials development were held in November and December at all lecture sites, and lecture materials were prepared and submitted to SISDIKSAT Headquarters or to Senayan-Jakarta in February, with the exception of two IPB courses for which materials were submitted very late. Reproduction of the materials and distribution to each site has been delayed considerably, however, due to funding problems.

The software studio at UNHAS is still inoperative, with nearly all equipment in need of repair. Despite the satisfactory technical quality of Channel B and working condition of most Aregon units, no graphics training session has been offered or planned for dosen and tutors this semester, and no encouragement has been given to dosen wishing to test the graphics in their classroom sessions during April or May.

2.0 EVALUATION ACTIVITIES

2.1 Sites Visited and Persons Contacted. Between 20 February and 20 April, 1985, the Evaluation Contractor visited eight SISDIKSAT locations and held informal discussions with the following project participants:

UNHAS - Ujung Pandang

Ibu Hasyah Haneng, Coordinator
Dr. Willard Shaw, AED Advisor
Dr. Masud Junus, Basic Forestry
Dr. Soemalie, Ilmu Alamia Dasar
Pak Tahir Ali, Chief Technician

IKIP - Ujung Pandang

Pak Muis, Coordinator
Dr. I.N. Agung, Statistics
Pak Rahjab, Software
Pak Djaali, MIS/SIM Asst.
Pak Zubiar, MIS/SIM Asst.

IPB - Bogor

Dr. Hamdani, Asst. Coordinator
Dr. Emir Siregar, Information
Resources Center
Dr. Harimurti, Cattle Breeding
Dr. Sugandi, Poultry Production

UNSRAT - Manado

Pak Timboeleng, Coordinator
Dr. Pangalilia, Vice Rektor I
Pak Dan Sembel, Food Science

UNLAM - Banjarmasin

Pak Mirhanuddin, Coordinator
Dr. Ali Hasymi, Resource Econ.
Vice Rektor for Administration
Vice Rektor for Academic Affairs

Senayan - Jakarta

Dr. Michael Morfit, USAID
Ibu Suci, Open University
Coordinator
Dr. M. Husin, Consortium of
Health Science
Mr. John Taklock, Teleconsult

UNTAD - Palu

Pak Musyi Amal, Local Dr.
Coordinator
Dr. Mattulada, Rektor,
Human Ecology

UNCEN - Jayapura

Dr. Soedarto, Coordinator
Drs. August Kafiari, Vice
Rektor I
Pak Murdiyono, Assistant
Coordinator

Also numerous other SISDIKSAT staff tutors, and students.

2.2 Formal Interviews and Local Assistance. As of 20 April, formal interviews of teaching staff have only been conducted with last semester's instructors, Prof. Dan Sembel (Food Science) and Prof. I. N. Agung (Statistics). Formal interviews with this semester's participants will be conducted during the final round of site visits beginning about May 12th. To assist with these interviews (particularly for tutors and students), Abt Associates has enlisted the services two days per week of Dr. Husen Bedawang from the Faculty of Economics of UNHAS. Pak Husen is also assisting with classroom observation as described below.

2.3 Classroom Observation. Figure 2 shows the Classroom Observation Form developed and being used by the Evaluation Contractor and Local Consultant to record patterns of SISDIKSAT teaching, student attendance, and site participation. Information from the form is provided routinely to SISDIKSAT Headquarters for use in suggesting improvements to dosen teaching styles. Although it is not possible to observe all SISDIKSAT sessions, every effort is being made to observe classroom activity from each location visited and for each course currently offered over the system. In addition to the information recorded on this form, the Evaluation Contractor notes the ratings of technical quality and tutor/student attendance by site recorded by UNHAS in the MIS System Usage Log. Thus far, the most important general observations have been: 1) continual widespread misuse of the microphones, 2) insufficient communication between dosen and tutors (including backup procedures in the event of technical problems), and 3) a deterioration in student attentiveness for class sizes above 40 students and for lectures beyond 20 minutes with no break.

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SISDIKSAT CLASSROOM OBSERVATION FORM

1. Campus/Location: _____
2. Course/Session: _____
3. Dosen/Lecturer: _____
4. Local Tutor(s): _____
5. Date Observed: _____



TIME	TECH	SCAN	PREL	LECT	Q&A1	Q&A2	LOCAL	NO. OF STUDENTS
0.00 - 0.05	—	—	—	—	—	—	—	—
0.05 - 0.10	—	—	—	—	—	—	—	—
0.10 - 0.15	—	—	—	—	—	—	—	—
0.15 - 0.20	—	—	—	—	—	—	—	—
0.20 - 0.25	—	—	—	—	—	—	—	—
0.25 - 0.30	—	—	—	—	—	—	—	—
0.30 - 0.35	—	—	—	—	—	—	—	—
0.35 - 0.40	—	—	—	—	—	—	—	—
0.40 - 0.45	—	—	—	—	—	—	—	—
0.45 - 0.50	—	—	—	—	—	—	—	—
0.50 - 0.55	—	—	—	—	—	—	—	—
0.55 - 1.00	—	—	—	—	—	—	—	—
1.00 - 1.05	—	—	—	—	—	—	—	—
1.05 - 1.10	—	—	—	—	—	—	—	—
1.10 - 1.15	—	—	—	—	—	—	—	—
1.15 - 1.20	—	—	—	—	—	—	—	—
1.20 - 1.25	—	—	—	—	—	—	—	—
1.25 - 1.30	—	—	—	—	—	—	—	—
1.30 - 1.35	—	—	—	—	—	—	—	—
1.35 - 1.40	—	—	—	—	—	—	—	—
1.40 - 1.45	—	—	—	—	—	—	—	—
1.45 - 1.50	—	—	—	—	—	—	—	—
1.50 - 1.55	—	—	—	—	—	—	—	—
1.55 - 2.00	—	—	—	—	—	—	—	—

6. Technical Quality: _____

7. Other Comments: _____

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3.0 FEEDBACK FROM VISITS TO OTHER SITES

Many insights and suggestions were provided by project participants interviewed during visits to SISDIKSAT locations outside of Ujung Pandang. Listed in this section of the report are recommendations expressed by a majority of users and administrators for streamlining SISDIKSAT operations and planning the next semester. A more comprehensive account of the visits to other sites by the Evaluation Contractor will be provided in the final Indonesia trip report in June.

3.1 Technical Suggestions. Site users emphasize the importance of providing graphics capability by the start of the next semester. The tutor for Statistics I and II at UNCEN - Jayapura cited the absence of graphics as the primary reason for not enrolling his 96 students in Dr. Agung's Statistics II class this semester. Users at locations that do not have a graphics keyboard are unclear about procedures for storing lecture graphics (for which the keyboard is required). Some sites would like to purchase additional microphones and are likewise unclear about the procedures for doing so. Administrators generally feel that USAID support should continue until SISDIKSAT is fully operational.

3.2 Scheduling Suggestions. All administrators and local coordinators visited stressed the importance of planning courses and schedules at least six months ahead or, preferably, one year ahead. The courses should be selected carefully with BKS course offerings and expected class sizes in mind. The starting date for the semester and starting times for the class sessions should coincide with most BKS university schedules. The invitation to Vice Rectors to meet over the system and plan the next SISDIKSAT semester should be re-extended as soon as possible and should come from the BKS rather than from SISDIKSAT Headquarters. More special seminars and teleconferences like the Eastern Islands Aquatic Seminar should be encouraged but must be properly organized and conducted as telesessions.

3.3 Management Suggestions. Local coordinators and administrators in particular urge that the SISDIKSAT project be given the attention and priority it deserves from the BKS Rectors (who will meet in Jayapura on May 15-17) and officials in the Office of the Directorate General for Higher Education (DG/HE). A new Project Director for SISDIKSAT should be appointed well in advance of the start of the next semester and more local funds and full-time staff should be provided to SISDIKSAT Headquarters in Ujung Pandang. Local coordinators would like to meet more regularly over the system and with more advance notice. At least two local coordinators, however, appear to have insufficient time available at present to devote to the project. Administrators express dissatisfaction with their \$5,000 annual budgets from DG/HE for SISDIKSAT site support, particularly at Jayapura where they must share a single allotment equally with Manokwari.

3.4 Software Suggestions. Most of the suggestion from dosen, tutors, and students interviewed at many locations relate to the need for early preparation and distribution of lecture materials, and for more complete orientation to the SISDIKSAT network. Students from last semester's Statistics I course generally felt that the handout materials were too complex and some-

times used notations different from those in use on their own campuses. Tutors are often unclear about what to do in the event of technical difficulties with SISDIKSAT and would like more opportunities to interact with their students without interrupting lectures. Many dosen are anxious to begin experimenting with the graphics and would like to receive training in the use of the Aregon equipment as soon as possible.

4.0 SUMMARY

Technical problems with the SISDIKSAT network in February and early March of 1985 generated uncertainty and anxiety over the coming semester among project participants at all SISDIKSAT locations. Although these problems lessened considerably about March 20, the SISDIKSAT project staff were not prepared to coordinate a full semester of system activity. The absence of a Project Director, the absence of publicity, insufficient funds, late notification to dosen and students, and late distribution of lecture and training materials have all contributed to a disappointing first semester characterized by confusion and poor attendance. In this report, suggestions for next semester from project participants at eight SISDIKSAT locations are presented. Hopefully, these suggestions will be discussed and sound decisions regarding the SISDIKSAT Project will be made at the BKS Rektor's Meeting in mid-May 1985.