

PD-AAW-656  
52909

AGENCY FOR INTERNATIONAL DEVELOPMENT  
WASHINGTON, D.C. 20523

DATE: 10/27/87

MEMORANDUM

TO: AID/PPC/CDIE/DI, room 209 SA-18  
FROM: AID/SCI, Victoria Ose *VO*  
SUBJECT: Transmittal of AID/SCI Progress Report(s)

Attached for permanent retention/proper disposition is the following:

AID/SCI Progress Report No. C7-151  
PR for June 87 rec'd 10/27/87

Attachment

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PD-AAW-650

THE HEBREW UNIVERSITY OF JERUSALEM  
Institute of Earth Sciences  
Department of Physical Geography

22 July 1987

US-Israel AID/CDR Program C7-151

FLOODS IN EPHEMERAL STREAMS: EVALUATIONS BASED ON GEOMORPHOLOGY

Contract number DPE-5544-G-SS-6029  
Hebrew University reference number 030.7096

PROGRESS REPORT, JANUARY-JUNE 1987

In January Principal Investigator Schick visited Botswana. He discussed the project with Co-Principal Investigator Shaw and other staff members of the University of Botswana, with officials of the Botswana Department of Water Affairs, and with US AID personnel in Gaborone. A number of sites in Eastern Botswana were examined in terms of their potential as experimental sites and as water resource points. An initial selection of three experimental sites on the Metsemotlhaba, Taupye and Bonwapitse Rivers was made.

In March Co-Principal Investigator Shaw visited Israel to meet the project team based at Hebrew University. Currently operated experimental sites were visited and an additional site, on Nahal Shiqma, was selected; it parallels the conditions likely to be found in the Botswana streams. This site will be used to duplicate the experiment under different hydrological parameters.

During the report period the following tasks were also accomplished:

- (1) All relevant available field measurements and bibliographic material relating to Eastern Botswana have been accumulated;
- (2) The Metsemotlhaba has been selected as the main experimental site on the basis of appropriate field conditions, ease of access, and importance to future water development. The river has been examined in detail between Moshupa and Thamaga and an injection point chosen. The Taupye and Bonwapitse are to be used as secondary sites, with a fourth site still to be selected.
- (3) Preparations have been made for the Israeli research team to visit Botswana for the commencement of the first field season in August. The main objective of this visit will be to install and calibrate equipment, to inject the tracers, and to accomplish the necessary background

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observations, in time for the start of the experiment with the 1987-88 rainy season.

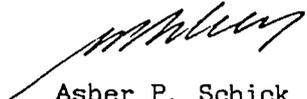
(4) Equipment ordered includes a GA-52 magnetic detector and numerous components for a streamflow monitoring system designed for the Metsemotlhaba, to be supplied by Environmental Monitoring Systems, California. Shipment of all items is timed for availability in August.

(5) A simple automatic multiple-stage suspended sediment sampler, especially designed for the conditions of the Botswana sand rivers, is under pilot construction at the Hebrew University Fine Mechanics Workshop. We hope to be able to take a prototype with us to Botswana in August, for subsequent duplication there.

(6) The production of magnetic tracer particles was begun at the Hebrew University Laboratory of Geomorphology. The 900 small (16 mm) and 300 large (30-80 mm) particles to be injected into the riverbeds in Botswana are scheduled to be ready for the forthcoming field season.

In Israel, the sediment tracer monitoring studies in Nahal Hebron and Nahal Og continued. To provide a link with non-magnetic tracing methods, a dose of magnetized particles was introduced into Nahal Yael.

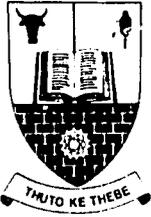
Formal problems of a non-scientific nature arose during the first part of the report period, and were successfully dealt with by US-AID and Embassy personnel. We are grateful to Messrs. Rock (Tel Aviv), Hummon and Elliott (Gaborone), and Asher (Washington) for the resolution of these problems. The resulting revised framework of cooperation necessitated a budget rearrangement which was submitted for approval on 24 May.



Asher P. Schick  
Principal Investigator

Attachment: Progress Report by Dr Paul Shaw,  
(Co-Principal Investigator)

CC: Dr Shaw, Botswana  
US-AID, Gaborone



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Department of Environmental Science  
31st May 1987

## US-Israel CDR Programme C7-151

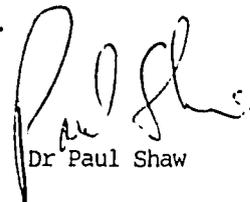
### Floods in ephemeral streams: Evaluations based on geomorphology

#### Progress report 1

The following progress has been made to date on the implementation of the above project in Botswana:

- 1: In January Professor Schick visited Botswana to discuss the project with the University of Botswana, The Department of Water Affairs and USAID, Gaborone. A number of sites in eastern Botswana were examined in terms of their potential as experimental sites and as water resource points. An initial selection of 3 experimental sites on the Metsemotlhaba, Taupye and Bonwapitse Rivers was made.
- 2: In March I visited Israel to meet the Project Team based at the Hebrew University. A site was selected on the Nahel Schikma which parallels the experimental conditions likely to be found in the Botswana streams. This site will be used to duplicate the experiment under different climatic and hydrological parameters.
- 3: To date the following tasks have also been completed:
  - a. All available field measurements and bibliographic material relating to eastern Botswana have been accumulated.
  - b. The Metsemotlhaba River has been selected as the main experimental site on the basis of good field conditions, ease of access and importance to future water development. The river has been examined in detail between Moshupa and Thamaga and an injection point chosen. The Taupye and Bonwapitse are to be used as secondary sites, with a fourth site still to be selected.
  - c. Preparations have been made for the visit of the Israel team to visit Botswana in August to install and calibrate equipment, in time to commence the experiment with the 1987-88 rainy season.

cc: Professor Schick, HWJ  
USAID, Gaborone

  
Dr Paul Shaw

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