

Preliminary Inventory of Materials Available for Improving Irrigation Water Management in Asia*

The ASIA/TR/ARD Irrigation Team Studies of five Asian countries to identify major issues and strategies for the 1980's found a critical need for transfer of irrigation knowledge within and across countries,

In the field of Irrigation Water Management, ASIA/TR/ARD is making an effort to bring together relevant technical handbooks, manuals, and training materials which will be useful to Mission staff

and host country individuals. It is hoped that technical materials produced by projects and having potential transfer value will be added to this list over time. (The above text has been condensed from the original.)

*Evaluated and compiled by Max K. Lowdermilk of ASIA/TR/ARD staff as a resource to Missions and host countries, June 1981. These are to be updated periodically.

Table B-1.—Preliminary Inventory of Materials Available for Improving Irrigation Water Management in Asia^a

Type/name of materials	Technical Report No. (TR) ^b	AID: Project name and number
A. Technical Reports/Manuals		
1. Problem Identification Manual by Lowdermilk, et al., 1980	TR 65B	Pakistan Water Management Research Project Contract AIDIIR-c-1411
2. Development of Solutions Manual by Sparling, et al., 1980	TR 65C, 1980	"
3. Project Implementation Manual by Hautaluoma, et al., 1980	TR 65D, 1980	"
4. Analysis of Basin-Furrow Irrigation by Peri and Skogerboe, 1980	TR 61	"
5. Development and Design of Water Course Function Jet Pumps by Kemper, Trout, and Aust, 1980	TR 64	"
6. Recalibration of Small Cutthroat Flumes by Skogerboe, 1979	(Special report)	"
7. Watercourse Improvement Manual by Trout and Kemper, 1980	TR 58	"
8. Evaluation and Improvement of Basin Irrigation Systems by Peri and Skogerboe, 1979	TR 49A	"
9. Evaluation and Improvement of Basin Irrigation Systems by Peri, Skogerboe, and Norum, 1979	TR 49B	"
10. Summary of Skimming Well Investigations by Meworter, 1980	TR 63	"
11. Evaluation and Improvement of Border Irrigation by Peri, Norum, and Skogerboe, 1979	TR 49C	"
12. Matching Cropping Systems to Water Supply Using an Integrative Model by John Ruess, 1980	TR 62	"
13. Installation and Field Use of Cutthroat Flumes for Water Management by Skogerboe, Bennet, and Walker	TR 19	"
14. Design of Irrigation Drop Structures by Soon-Kuk Kwan	TR 33	"
15. Calibration and Application of Jensen-Haise Evaporation Equation by Clyma and Chowdhry	TR 40	"
16. Optimization of Lengths of Alternative Watercourse Improvement Programs by John Ruess, 1980	TR49	"
Type/name of materials	AID publication number	
17. Farm Irrigation System Evaluation: A Guide for Management by J. L. Merrian and Jack Keller	PN-AAG-745	
18. Water Requirements Manual for Irrigated Crops and Rainfed Agriculture by G. H. Hargreaves	PN-AAB-676	
19. Irrigation System Evaluation and Improvement by J. L. Merrian, Jack Keller, and J. F. Alfaro	PN-AAB-439	
20. Small Wells Manual: Location, Design Construction, Use and Maintenance by U. P. Gibson and R. D. Singer, U.S. Office of War on Hunger Health Service	AN-9351236	
21. Dryland Agriculture in Winter Precipitation Regions of the World: Status of State of the Technical Art by Oregon State University, Office of International Agriculture, 1979	PN-AAH-329	

Table B-1.—Preliminary Inventory of Materials Available for Improving Irrigation Water Management in Asia^a—Continued

Type/name of materials	AID publication number	
22. The Impact of Groundwater Development in Arid Lands: A Literature Review and Annotated Bibliography, Arizona State University, Office of Arid Lands Studies, 1977	PN-AAH-500	
23. Solar Energy, Water, and Industrial Systems in Arid Lands, Techno-ecological Overview and Annotated Bibliography by C. Duffield, University of Arizona, Office of Arid Lands Studies, 1978	PN-AAH-499	
Type/name of materials	AID Duplication number	AID project name and number
24. Technical Reports to Accompany Planning Guides under C2 to C6 heading will be made available on the topics of Precision Land Leveling, Small Pumps, Farmer Involvement and Small Structures by DS/AGR Water Management Synthesis Project (WMSP) during late 1981 and early 1982	TR 57	Water Management Synthesis Project AID DSA N-C-0058
25. Optimization of Lengths of Alternative Water Course Improvement Programs, by John Reuss		Pakistan Water Management Research Project AID/TR-C 1411
26. Trapezoidal Flumes for Egyptian Water Use Project by Robinson, 1980	Staff Report FC-1	AID/NE-c-1351
27. Cutthroat Flume Metric Equations by Helal, 1980	Staff Paper No. 6	
Type/name of materials	Available from	
28. On-Farm Water Management Field Manual, December 1980, Volume I Reference Manual on soils, inventory and planning, soil-water-plant relationships, agronomy, engineering, equipment, economics, and management	Water management wing ministry of food, agriculture, and cooperation, Government of Pakistan, Islamabad	
29. On-Farm Water Management Field Manual, Volume II, Precision and Leveling, 1980	"	
30. On-Farm Water Management Field Manual III, Water Course Equipment, 1980	"	
31. On-Farm Water Management Field Manual III, Volume IV, Irrigation Water Management, 1980	"	
32. On-Farm Water Management Field Manual Standards for Practice Materials and Studies, 1980	"	
33. Annual Reports which contain technical material and methods		
a) Pakistan Water Management Project, 1970-80	AID/Ta-C-1411	
b) Egyptian Water Use and Management Project, 1978	AID/NE-c-1351	
34. Technical Papers from Egyptian Water Use and Management Project	AID/NE-c-1351	
<i>Volume IV Technical Articles</i>		
a) Optimal Design of Furrow Irrigation Systems by J. Mohan Reddy and Wayne Clyma, 1980	AID/NE-c-1351	
b) Irrigation System Improvement Concepts by Wayne Clyma and Thomas W. Ley, 1980	AID/NE-c-1351	
c) A Data Management System for Interdisciplinary Research in Agricultural Water Use by J. C. Loftis and Wayne Clyma, 1980	AID/NE-c-1351	
<i>Volume III</i>		
d) STAFF PAPER #23: A Procedure for Evaluating the Cost of Lifting Water for Irrigation in Egypt by Hassan Wahby, Gene Quenemoen, and Mohamed Helal, June 1980	AID/NE-c-1351	
e) STAFF PAPER #28: Roller Bedshaper for Basin-Furrow Irrigation by N. Illsley and A. Cheema, 1980	AID/NE-c-1351	
f) STAFF PAPER #29: Economic Feasibility of Concrete Lining for the Beni Magdoul Canal and Branch Canal by Gamal Ayad, G. Nasr Farid, and Gene Quenemoen, April 1978	AID/NE-c-1351	
g) STAFF PAPER #30: Programs for Calculators HP-67 and HP-97 by Gamal A. Ayad, 1980	AID/NE-c-1351	

Table B-1.—Preliminary Inventory of Materials Available for Improving Irrigation Water Management in Asia^a—Continued

Type/name of materials	Available from	
h) STAFF PAPER #45: Optimal Design of Border Irrigation Systems by J. Mohan Reddy and Wayne Clyma, 1980	AID/NE-c-1351	
i) STAFF PAPER #46A: Irrigation System Improvement by Simulation and Optimization: 1, Theory by J. Mohan Reddy and Wayne Clyma, 1980	AID/NE-c-1351	
j) STAFF PAPER #46B: Irrigation System Improvement by Simulation and Optimization: 2, Application by J. Mohan Reddy and Wayne Clyma, 1980	AID/NE-c-1351	
k) STAFF PAPER #37: A Systematic Framework for Development of Solutions by Max K. Lowdermilk, April 1980	AID/NE-c-1351	
l) STAFF PAPER #39: Evaluation of Furrow Irrigation Systems by Thomas W. Ley and Wayne Clyma, 1980	AID/NE-c-1351	
m) STAFF PAPER #40: Evaluation of Graded Border Irrigation Systems by Thomas W. Ley and Wayne Clyma, 1980	AID/NE-c-1351	
35. Special Technical Reports from FAO on Irrigation and Drainage (order direct from FAO Sales Agents in your country or FAO, via della Terma di Caracalla 00100, Rome, Italy)	AID/NE-c-1351	

Type/name of materials	AID publication number	AID project name and number
B. Water Management Training Materials (manuals and audio visuals)		
1. Training Manual for Agricultural Water Management Specialists, edited by Westfall, 1980	TR 64	Pakistan Water Management Research Project AID/Ta C-1411
2. Monitoring and Evaluation Manual: Diagnostic Analysis on Farm Irrigation Systems (Volume 1, Systems Analysis Conceptual; Volume 11, Specific How-to-do Procedures)	TR 64	Water Management Synthesis Project AID-DSAN-C-0058
3. Investment in Water Management (137 slides and cassette tape, written script) by Kemper, et al., 1979	with ASIA/TR/ARD	Pakistan Water Management Research Project AID/Ta C-1411
4. Pakistan Land of Promise (slide show, cassettes, written script) shows system problems and potential, by Lowdermilk, et al., 1978	with ASIA/TR/ARD	Pakistan Water Management Research Project AID/Ta C-1411
5. Water Management on Small Farms (slides, cassettes, written script, strategy guide, and technical guide)	AID Southwest Research Institute 1980	AID/Ta-1479
6. Precision Land Leveling (16mm movie), 1970	with ASIA/TR/ARD	Pakistan Water Management Research Project AID/Ta C-1411
7. Technical Film on Survey and Steaking a Field for Precision Land Leveling, 1970	with ASIA/TR/ARD	Pakistan Water Management Research Project AID/Ta C-1411
8. Research-Development Process for Improvement of Farm Water Management, a Videotape Interdisciplinary by Colorado State University, Instructional-Media Division, Fort Collins, Colo., expected completion fall 1981 by Clyma and Lowdermilk in spring 1982	available from CSU	No project
9. Improving Agricultural Production through On-Farm Water Management by Lattimer, et al.	no number	Pakistan Water Management Research Project AID/Ta C-1411
10. Training Manuals for On-Farm Analysis of Irrigation Systems, Volumes I and II, summer 1981	no number	AID
C. Planning Guides for improved Water Management		
1. Planning and Implementing Procedures for Constructing Agricultural-Related Research Programs in Low-Income Nations by Lowdermilk, et al.	TR 46	Pakistan Water Management Research Project AID/Ta C-1411

Table B-1.—Preliminary Inventory of Materials Available for improving irrigation Water Management in Asia^a—Continued

Type/name of materials	AID publication number	AID project name and number
2. Planning Guide for Precision Land Leveling Programs (available summer 1981) by Clyma, et al.	No. 1	Water Management Synthesis Project AID-DSAN-C-0058
3. Planning Guide for Low-Lift Pumps in Irrigation Projects (available winter 1982) by Keller, et al.		Water Management Synthesis-Project AID-DSAN-C-0058
4. Planning Guide for Farmer Involvement in Irrigation Improvement Projects (available summer 1981) by Lowdermilk, et al.	No. 2	Water Management Synthesis Project AID-DSAN-C-0058
5. Planning Guide for Small Structures for Water Management Improvement (available spring 1982)	No.	Water Management Synthesis Project AID-DSAN-C-0058
6. Planning Guide for Water Management for Small Farmers (available fall 1981)	No.	Water Management Synthesis Project AID-DSAN-C-0058
7. A Research-Development Process for On-Farm Water Management by Clyma, Lowdermilk, and Corey, 1977	TR 47	Pakistan Water Management Research Project AID/Ta C-1411
8. Development Process for Improving Water Management on Farms by Skogerboe, Lowdermilk, Sparling, and Hautaluoma, 1980	TR 65A	Pakistan Water Management Research Project AID/Ta C-1411

D. Other Materials

1. **Social** Organizational Aspects of Irrigation Water Management: A Bibliographic Resource (write to Dr. David Freeman, Sociology Department, Natural Resources Group, Colorado State University, Fort Collins, Colo. 80523)
2. *Water Management News*: occasional Newsletter on WM developments around the world. Send request to be placed on Mailing List to Water Management Synthesis Project Coordinator, Engineering Research Center, Colorado State University, Fort Collins, Colo. 80521
3. *Asian Regional Irrigation Communication Network* (a newsletter of which the 10th issue was September 1980. Provides list of reports, monographs, and descriptions of new research projects, with a primary focus on socioeconomic dimensions of water management). Write to Agricultural Development Council Office, Bangkok, P.O. Box 11-1172, Bangkok 11, Thailand
4. *RR/NEWS*: Newsletter of the International Irrigation Center, Israel-Volcani Center, P.O. Box 49,50250 Bet Dagan or Canada, P.O. Box 8500, Ottawa K1G3H9
5. *WAMANA*: A quarterly newsletter on water management. Indian Institute of Management, 33 Langford Road, Bangalore, India 560027

^aFAO materials originally listed by AID have been omitted from this table, since they did not result from AID's Pakistan and other Asian irrigation projects.

^bTR denotes Technical Report. The AID Technical Reports and Manuals are gradually being placed in the AID/DIU file, and copies are made available through that office.

^cSee C section.

SOURCE: Max K. Lowdermilk, U.S. Agency for International Development, 1981,