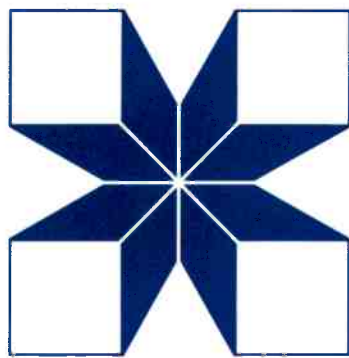


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C A N A D A

SMALL RUMINANT PRODUCTION SYSTEMS NETWORK FOR ASIA

PROCEEDINGS OF THE INAUGURAL
MEETING AND LAUNCHING OF
THE ASIAN SMALL RUMINANT
INFORMATION CENTRE,
KUALA LUMPUR, MALAYSIA,
21-23 AUGUST 1989

The International Development Research Centre is a public corporation created by the Parliament of Canada in 1970 to support research designed to adapt science and technology to the needs of developing countries. The Centre's activity is concentrated in six sectors: agriculture, food and nutrition sciences; health sciences; information sciences; social sciences; earth and engineering sciences; and communications. IDRC is financed solely by the Parliament of Canada; its policies, however, are set by an international Board of Governors. The Centre's headquarters are in Ottawa, Canada. Regional offices are located in Africa, Asia, Latin America, and the Middle East.

Le Centre de recherches pour le développement international, société publique créée en 1970 par une loi du Parlement canadien, a pour mission d'appuyer des recherches visant à adapter la science et la technologie aux besoins des pays en développement; il concentre son activité dans six secteurs : agriculture, alimentation et nutrition; information; santé; sciences sociales; sciences de la terre et du génie et communications. Le CRDI est financé entièrement par le Parlement canadien, mais c'est un Conseil des gouverneurs international qui en détermine l'orientation et les politiques. Établi à Ottawa (Canada), il a des bureaux régionaux en Afrique, en Asie, en Amérique latine et au Moyen-Orient.

El Centro Internacional de Investigaciones para el Desarrollo es una corporación pública creada en 1970 por el Parlamento de Canadá con el objeto de apoyar la investigación destinada a adaptar la ciencia y la tecnología a las necesidades de los países en desarrollo. Su actividad se concentra en seis sectores: ciencias agrícolas, alimentos y nutrición; ciencias de la salud; ciencias de la información; ciencias sociales; ciencias de la tierra e ingeniería; y comunicaciones. El Centro es financiado exclusivamente por el Parlamento de Canadá; sin embargo, sus políticas son trazadas por un Consejo de Gobernadores de carácter internacional. La sede del Centro está en Ottawa, Canadá, y sus oficinas regionales en América Latina, África, Asia y el Medio Oriente.

This series includes meeting documents, internal reports, and preliminary technical documents that may later form the basis of a formal publication. A Manuscript Report is given a small distribution to a highly specialized audience.

La présente série est réservée aux documents issus de colloques, aux rapports internes et aux documents techniques susceptibles d'être publiés plus tard dans une série de publications plus soignées. D'un tirage restreint, le rapport manuscrit est destiné à un public très spécialisé.

Esta serie incluye ponencias de reuniones, informes internos y documentos técnicos que pueden posteriormente conformar la base de una publicación formal. El informe recibe distribución limitada entre una audiencia altamente especializada.

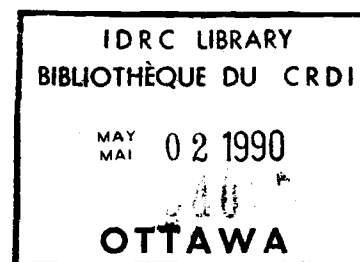
SMALL RUMINANT PRODUCTION SYSTEMS NETWORK FOR ASIA

Proceedings of the inaugural meeting and launching of
the Asian Small Ruminant Information Centre,
Kuala Lumpur, Malaysia, 21-23 August 1989

Editor:

C. Devendra
Senior Program Officer
Agriculture, Food and Nutrition Sciences Division
International Development Research Centre

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no. 47



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ABSTRACT

This publication presents the results of a meeting held in Kuala Lumpur, Malaysia, 21-23 August 1989, whose primary objective was to examine the formation of a network to support research and development activities for small ruminants in national agricultural systems and collaborative research programmes in Asia. There was consensus that a single network should be established for small ruminants in Asia whose name should be Small Ruminant Production Systems Network for Asia (SRUPNA). It was also agreed to establish a centralised information facility called Asian Small Ruminant Information Centre (ASRIC) to be based in the Central Sheep and Wool Research Institute (CSWRI) in Avikanagar, India. A three man Steering Committee was appointed to determine the location of the coordination unit to pursue the objectives, as well as future activities of SRUPNA and ASRIC.

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WINROCK'S NETWORKING EXPERIENCE IN ASIA

H.C. Knipscheer

**Winrock International,
Rt. 3, Morrilton,
Arkansas 72110,
USA**

The primary focus of Winrock International's programs in Asia is to reduce poverty by increasing agricultural production. In this manner, we hope to help Asian countries achieve food security. Winrock's focus is based on the following observations about future problems in Asian countries and other developing countries:

- 1) Irregardless of Winrock's efforts, many people will still be poor, as well as hungry. Much of that poverty will be linked to limited employment opportunities outside of and within the agricultural sector.
- 2) Asian countries and other developing countries are becoming more urbanised but, for most of them, the bulk of the population will remain rural and directly or indirectly dependent on agriculture for sustenance.
- 3) Production increases are possible, but large increases may require new approaches to agriculture in fragile environments.
- 4) Under pressure from growing populations, the environment is likely to deteriorate further.
- 5) In most of the developing world, the institutional structures necessary to support agricultural development will continue to be weak.
- 6) Agricultural development will be needed desperately in most third world countries, and many newly industrialised countries will have much to gain from sustainable agricultural development in the third world.
- 7) Funds for development assistance from American donors are limited and may not be adequate to meet the needs and opportunities that lie ahead.

The mission of Winrock International Institute for Agricultural Development is to reduce poverty and hunger through sustainable agricultural and rural development. It pursues that mission by working with governments, research and educational institutions, extension systems, operating agencies, and private and voluntary organisations. Winrock works with four groups that sometimes overlap:

- 1) **Beneficiaries:** the individuals who are ultimately served by Winrock's efforts.

- 2) Clients: the organisations Winrock works with to carry out activities that will help the rural poor.
- 3) Donors: the organisations that provide funds, making it possible for Winrock to work with clients.
- 4) Associated organisations: institutions with which Winrock collaborates to implement projects.

Winrock focuses on four lines of activity : strengthening agricultural institutions, developing human resources, designing and promoting sustainable agricultural systems, and encouraging the improvement of policies concerning agriculture and rural development.

Winrock is organised to facilitate the pursuit of these four program themes. It has a development studies centre to generate knowledge, four regional divisions to implement projects, and a public affairs and communication division to disseminate information. All of these divisions are supported by the finance and administration division.

WINROCK HAS MORE THAN 30 YEARS' EXPERIENCE IN ASIA

National and international development agencies throughout the Asian region are becoming increasingly articulate on the subject of agricultural research and development. In most countries however, perhaps not unlike the situation in the United States, there remain many scientists and development workers who, in spite of "official" policy, have little understanding of or sympathy for farmer income, profitability, or resource use efficiency. Winrock assists with staff training and management of key national training and research institutions to improve their impact on high resource production areas.

But, Winrock is increasing its involvement in the "downstream" development of upland, lower-resource areas of more fragile environments where social problems abound at the intersect of our expertise in crops, livestock, and trees.

Presently, Winrock has staff in Bangladesh, China, India, Indonesia, Nepal, Pakistan, the Philippines, and Thailand. All these projects involve collaboration with scientists at national universities or national research institutes. Winrock's first involvement in Asia was during the 1950s through the Agricultural Development Council (ADC), one of the three organisations that merged to form Winrock in 1985. The other two organisations were the International Agricultural Development Service and Winrock International Livestock Research and Training Centre. More than 30 years' experience has translated into an excellent awareness among Winrock staff about how the development process works.

As a consequence, Winrock aims at remaining actively involved in the ongoing exchange of ideas and information among participants in international development in Asia.

WINROCK MANAGES NETWORKS IN ASIA

Winrock is involved in four networks in Asia -- three national networks and one regional network. Networks are defined as:

informal or formal arrangements of cooperation between institutions or persons with similar conditions and problems but without the immediate resources for finding solutions to these problems individually (adapted from Burley, 1987).

National networks are operating in Nepal and Thailand. Another national one is in preparation for the Philippines. A large regional network exists for multipurpose tree crop research and is managed from our Bangkok office.

Thailand: TRIMNET and NORMNET

ADC worked for more than 30 years to strengthen the rural social sciences in Thailand through teaching, fellowships, and research. Building on ADC's efforts, Winrock launched the Thailand Natural Resource Management Program in 1987. The program, which was developed in close cooperation with Ford Foundation program officers, has an important objective : to share the results of applied resource management research undertaken at regional university centres supported by the foundation with the agencies responsible for managing Thailand's resources. Social science professionals trained by the foundation and by ADC represent the core around which current program activities are being built.

A Ford Foundation grant made it possible for Winrock to establish this program. The \$350,000 grant was approved for a period of 3 years and started on December 1, 1986. Funds were budgeted for 2 years (\$200,000 for 1987 and \$150,000 for 1988) on the assumption that substantial additional funding would be forthcoming from the USAID Mission to Thailand. Despite repeated assurances, funds were not provided.

Winrock provided nine fellowships at an estimated cost of \$300,000, in addition to meeting overhead and a share of local logistics costs.

In pursuing Winrock's mission of reducing hunger and poverty through sustainable agriculture and rural development this program seeks to assure more equitable access and more sustainable management of natural resources. By strengthening the capacity of Thai professionals to understand the local institutions and traditional arrangements which permit people to manage their natural resource systems, the program is establishing improved models for access to land, water and forests.

These models ensure that the benefits of sustained productivity are more equitably shared.

To conform with the objectives of the grant, Winrock has worked with two regional universities where the Ford Foundation has made sustained capacity-building investments during the past 20 years. Networks have been created to improve the linkages between researchers and action agency decision-makers. Two points have been emphasised:

- 1) Improving resource management by supporting research which validates alternative management strategies at the field level.
- 2) Assisting in training young Thai professionals to deal more effectively with natural resource issues.

Funds have been provided through Khon Kaen University to support the Thailand Research in Irrigation Management Network (TRIMNET) and through Chiang Mai University to support the Northern Thailand Resource Management Network (NORMNET)

Through these two networks, one resource focused, the other regionally focused, Winrock has tested the validity and acceptability of the network concept. Results to date have been encouraging. TRIMNET, established through a working partnership between researchers from five universities and the Royal Irrigation Department (RID), has held four workshops. Three of these workshops have combined the sharing of field research results on farmer managed small scale irrigation with actual site visits. These three workshops have involved Thailand's most experienced applied irrigation scholars in a sustained dialogue with RID officials on issues of farmer participation, water-user groups, collection of user fees, and the increasing responsibility for the operation and maintenance of RID-constructed systems being assumed by farmer groups.

NORMNET comprises northern regional representatives of the principal agencies concerned (RID, the Royal Forestry Department, the Department of Land Development, and the National Economic and Social Development Board) who collaborate with researchers from Chiang Mai University's faculties of social science and agriculture, the Social Research Institute, the Tribal Research Institute, and Payap University.

NORMNET has provided the first forum for assessing researchable issues and the resources needed to support the first locally directed applied research program. NORMNET has also sought to identify and involve social science graduates who are members of the Thai highland hill tribe in research related to upland and highland resource management.

Both TRIMNET and NORMNET have initiated programs that provide small research awards to young professionals to stimulate the study of resource management topics relevant to the needs of development agencies. Other activities have included extended program discussions with social foresters, coastal resource management groups, and scientists specialising in irrigated rice farming systems. The objective of these discussions was to determine future opportunities for extending the network approach. Also under discussion are plans for a Northeast Thailand Resource Management Network and a Southern Thailand Resource Management Network to be established during the second phase of this program.

The Philippines: Small Research Awards Program

Since the mid-1950s, ADC and later Winrock, have been involved in agricultural capacity-building strategies. Through the University of the Philippines, Los Banos (UPLB), Winrock had sponsored fellows, worked with UPLB research staff, and provided associates to fulfill

advisory as well as teaching functions in some of the UPLB agricultural units. The institutional relationship that was developed throughout the years revolved around agricultural economics -- understanding the internal dynamics of the agricultural sector, the external factors affecting it as well as policy issues that have a direct or indirect influence on the performance of agriculture, and the accompanying measures that may be employed by policy-makers in overcoming the problems in the sector.

The success of Winrock at UPLB provides a suitable model for similar though perhaps smaller scale, capacity building activities in institutions in other regions in the country. Winrock recently developed a small research awards program for the Philippines. With current issues of development closely allied to agricultural concerns and natural resource management, this program could engender more focused academic activity that is region-specific and more relevant to current policy issues. For several regional institutions, capacity building in this subject area has been minimal at best due to inadequate technical and financial support. Access to this support has been limited for several reasons including the lack or absence of contact with larger, more-developed institutions' academic resource bases.

The proposed Small Research Awards Program is essentially a mechanism to :

- 1) Provide individuals (especially young researchers, practitioners, planners, scholars, or field administrators) with the opportunity to undertake research on issues related to natural resource management in various regions.
- 2) Provide regional institutions with the capacity to assume lead roles in determining priority areas of concern, collaborating with action agencies (both public and private), and determining the operational procedures in addressing these areas of concern.
- 3) Encourage an integrated or inter-disciplinary approach in the study of natural resource management with emphasis on people's participation in the utilisation, conservation, and management of natural resources.

The following components of the awards program are proposed:

- a) Research.
- b) Fellowship and training.
- c) Seminars, conferences, workshops.
- d) Information dissemination and publications.

It should be noted that these components are all interrelated; each one complements the other. For example, initial seminars, conferences, and workshops may serve as forums for increasing awareness on natural resource management. A conceptual framework or a prioritised list of issues for the research component of the program could emerge from these discussions. Research awards will be given on

a competitive basis and will be open to UPLB, other academic and research institutions, and private and government sectors. The fellowship and training components include support for a degree program and non-formal training. The information and publications component will provide a forum for regular release of information on current and emerging issues or policy recommendations on natural resource management. A virtually identical network is already operating in Nepal with funding from USAID and Ford Foundation.

The Multipurpose Tree Species (MPTS) Research Network

The MPTS Research Network is part of the Forestry/Fuelwood Research and Development Project (F/FRED). The F/FRED Project is a 10-year effort designed to help scientists cooperatively address the needs of small scale farmers for fuelwood and other tree products. The project has helped to initiate and support the establishment of the Multipurpose Tree Species Research Network which has some 25 participating institutions in 12 countries in Asia. Mechanisms for network development include scientific and organisational meetings, cooperative research projects, training, travel grants, publications, and small research grants.

The MPTS Research Network is regional, covering most of the non-Communist countries in Asia. However, it is built upon informal, national-level networks which are being established through a series of National MPTS Research Meetings held annually in most of the participating countries. The two primary objectives of these meetings are to provide an open forum for discussion of research issues and to provide national-level links to the regional research network.

The field operations of the F/FRED project have been largely successful in establishing the MPTS Research Network (Butterfield et al., 1988). Activities have increasingly been initiated and managed by network participants with support from F/FRED. Formal and informal leadership of these activities by participants are crucial to long-term network success.

During the first 3 years of network establishment most network activities have been managed by the F/FRED Coordinating Unit housed at the Kasetsart University Faculty of Forestry in Bangkok, Thailand. However, several important subprojects such as a national level network of researchers working on *Azadirachta indica* and *Melia azedarach* and a regional research program on the *leucaena psyllid* have been initiated, coordinated, and managed by network participants.

The management role of the Bangkok-based coordinating unit has included two closely related, yet distinct projects: the F/FRED project funded by USAID and the MPTS Research Network which is largely funded by the F/FRED project. As cooperative relationships are built during network establishment, the tasks of the coordinating unit are shifting to emphasise network coordination and to broaden the base of network support. Symbolic of this effort was the change in the name of the network from the F/FRED Research Network to the MPTS Research Network. With this shift has also come additional co-sponsorship of activities with other donors, including the International Development Research Centre (IDRC), the German Agency for Technical Cooperation, Ford Foundation, the Food and Agriculture Organisation of the United Nations, the Australian Centre for International Agricultural Research,

the Finnish International Development Cooperation Agency, and the Commonwealth Scientific and Industrial Research Organisation.

TO BE SUCCESSFUL, NETWORKS MUST BE CONSTANTLY REEVALUATED

Table 1 lists the critical elements for successful networking (MacDicken, 1989). These elements can be summarised as follows:

- 1) An active core of participants.
- 2) Management of conflicts of interest.
- 3) Flexibility of project support.
- 4) Neutral institutional base.
- 5) Sustained, long-term support.
- 6) Strong scientific and professional interest.
- 7) Cooperative research.
- 8) Optimisation of compromise.
- 9) Appropriate grant levels.
- 10) Effective coordinating staff.
- 11) Donor cooperation and coordination.

All of these factors probably will be addressed during this meeting, but I would like to stress the need for donor cooperation and coordination. This need should be emphasised for two reasons. Firstly, each donor agency has strengths and weaknesses which determine the limits of its effectiveness. For example, in the area of psyllid research support, the IDRC has granted to the MPTS Network substantial funds for psyllid research, yet has been generally unable to encourage and support regional coordination of psyllid researchers. The F/FRED project, on the other hand, has little money for research grants, but has effectively used travel and workshop funds to support the development of a coordinated regional plan for psyllid research. Both agencies have recognised these niches and worked together to maximise their efforts. Thus, donors need to understand the strengths and weaknesses of their research support programs, and work together to bridge as many research gaps as possible.

TABLE 1. RESOURCES REQUIRED FOR SUCCESSFUL NETWORK ESTABLISHMENT

Stage of network development	Critical elements	Personnel requirements	Other resource requirements
Organisation	The focus of the network is a topic or problem that is clearly defined and is common to many countries	Subject matter specialists actively consult with network participants in designing network structure and activities	Adequate funds for initial infrastructure development and travel for organisational purposes
	Sufficient interest exists in network topic to warrant further development	This initial commitment is most likely to come from an institution with strong commitment, but without assurances of future funding	
Establishment	Adequate funding is allocated for a minimum start-up period of 5 years	Subject matter and training specialists, publications, and administrative staff are required	Funds for network meetings, publications and research are required
	Participants are willing to share both research results and training materials Participants are willing to commit resources for future network operations	Coordinating staff provide leadership in organising and implementing in the early years of this stage; this evolves to a "facilitation role" which supports leadership of network participants	

cont'd

Stage of network development	Critical elements	Personnel requirements	Other resource requirements
Operational	<p>Network is sufficiently well developed to operate with reduced funding requirements</p> <p>An effective secretariat is established in a "neutral" institution</p> <p>Staff from participating institutions have sufficient training and expertise to contribute significantly</p> <p>Networks are guided by strong and effective leaders who have the confidence of the participants and who have recognised skills in the areas of network focus</p>	<p>Subject matter specialists, publications, and administrative staff are required</p> <p>Personnel requirements during this stage should be less than those during the establishment stage due to increased activities between institutions with little need for core support</p>	<p>Funds for network meetings, publications, and research are needed; a greater share of the required funding support for network operations should come from participating institutions, as well as a broad base of donor institutions</p> <p>A major source of funds should be the regular operating budgets of participating institutions in the form of personnel support for in-country activities, publications, and communications costs</p>

Source: Adapted from MacDicken and Lantican (1988) by MacDicken (1989).

Secondly, I have to stress that Winrock is not a donor agency. Rather, our institute should be viewed as an active participant, who is keenly interested in learning, sharing information, and working with other researchers and institutions. Winrock can play the roles of facilitator, liaison, and technical assistant by sharing our experiences from other projects in Asia and other regions in the world.

Our institute has been involved in small ruminant research and training for a long time, and it remains committed to the advancement of small ruminant development. As research capacity in Asia has grown stronger, we firmly believe that research networking is a tool for addressing major research problems that makes maximum use of in-country research capacity. While developing networks, Winrock has learned several lessons about establishing networks and managing network activities. We have learned more through problem-solving and trial and error than through adherence to a well-defined methodology. Often, the management of these networks shifts over time from management of project activities by a centralised unit to management of activities by network participants. This shift reflects the need to adjust management strategies as the project and the network develop and to have participants take on greater responsibility for network activities.

Whatever strategy for an Asian small ruminant research network is decided on during this meeting, continued evaluation and reevaluation of the network's management structure is desirable.

ACKNOWLEDGMENTS

In the preparation of this paper, extensive use has been made of internal reports by Drs John C Cool, Kenneth C MacDicken and Richard R Harwood. The author also thanks Ms Polly Ligon for her review of this paper.

REFERENCES

- Burley, J. (1987). International forestry research networks objectives, problems and management. Unasylva, 39: 157-158.
- Butterfield, S., F. Ng, C. Hatch, A. Manzardo, D. Osborn and J. Palmer (1988). Forestry/Fuelwood Research and Development (F/FRED) Project Evaluation Report. Tropical Research and Development, Inc. Gainesville, Florida, USA. 170 pp.
- MacDicken, K.G. (1989). Managing MPTS Research Networks in Asia. F/FRED, Winrock International Institute for Agricultural Development, Morrilton, AR, USA. (mimeograph).
- MacDicken, K.G. and C.B. Lantican (1988). Resource development for professional education and training in agroforestry. Paper presented at the International Workshop on Agroforestry Education and Training, Gainesville, Florida, USA, December 5-8.