

Assessing Mbusyani:

Using Participatory Rural Appraisal
for Sustainable Resources Management

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... to equip development professionals from government and non-government agencies with skills and knowledge to function effectively in their work;

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**ASSESSING MBUSYANI:
Using Participatory Rural Appraisal
for Sustainable Resources Management**

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Foreword

This case study is part of a larger effort to bring sustainable development to rural communities in Africa. The narrative describes how a team consisting of staff from Kenya's National Environment Secretariat (NES), Ministry of Environment and Natural Resources, Clark University's Program for International Development, and field based technical officers from Machakos District engaged local leaders to assess problems and develop a village plan of action. The methodology, known as Participatory Rural Appraisal (PRA), builds on earlier approaches such as Rapid Rural Appraisal and offers a new means to help local communities to help themselves.

The virtue of PRA is that it provides structure and system to information villagers already have. It suggests ways in which systematizing village data will assist in mobilizing village organizations as well as attracting external assistance from extension officers, locally based non-governmental organizations (NGOs), and government and international agencies. The record to date has been intriguing and highly encouraging in a number of communities in East Africa.

Self-help, based on PRA, is working in Mbusyani. Since the adoption of the Village Resource Management Plan, local groups, in association with government extension officers and NGOs, have rehabilitated wells, terraced hillslopes, constructed cutoff drains, obtained handtools, installed a grain grinding mill, and rehabilitated and fenced one reservoir catchment area. Working in association with an NGO, village groups have raised funds to hire heavy equipment to desilt two reservoirs. Approximately three years after the original PRA, energy and activity for improved resources production continue.

In every instance, community organizations have provided leadership, labor, locally available materials, and project plans consistent with local priorities. Extension officers have organized technical design for terracing, water development, and forestry. NGOs have joined with local leaders to raise funds for training and implementation. This three-way partnership of government, NGOs, and local groups has resulted in accomplishments substantially greater than any of the groups, individually, could achieve.

Given the PRA experience in Mbusyani, donor agencies, international groups, and governments are now exploring adaptations of the basic PRA approach to fit local cultural, ecological, and economic settings. The inside back cover lists several sources which can provide information about these local adaptations.

In carrying out the Mbusyani study, we are indebted to many people including staff from the National Environment Secretariat, Kangundo Division technical and administrative officers, leaders from the Kenya-Africa National Union, The Ford Foundation, The United States Agency for International Development, The John N. Taylor Jr. Foundation, The World Resources Institute, The PEW Charitable Trusts, The African Centre for Technology Studies, and The International Institute for Environment and Development.

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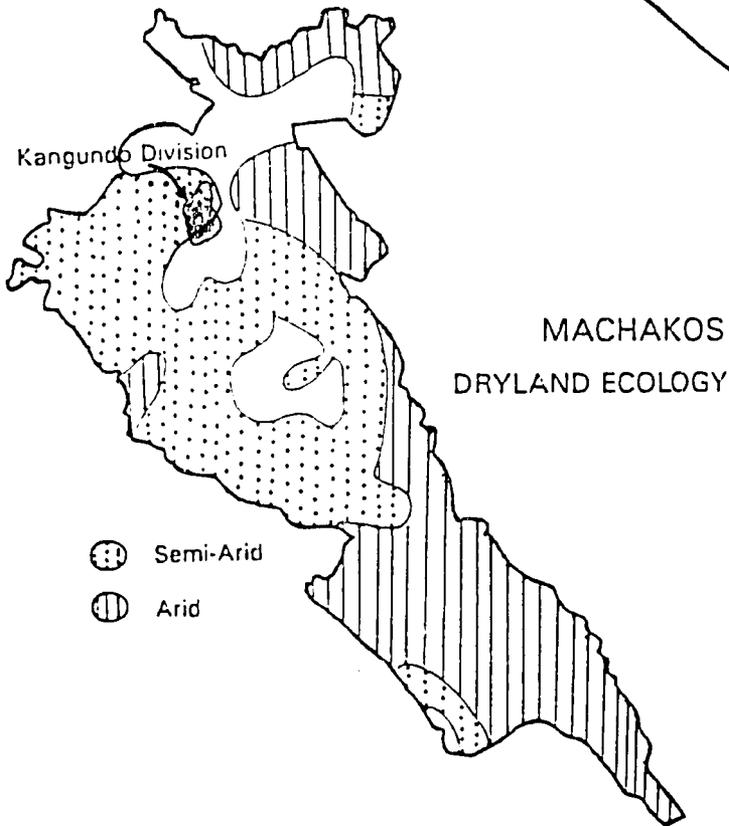
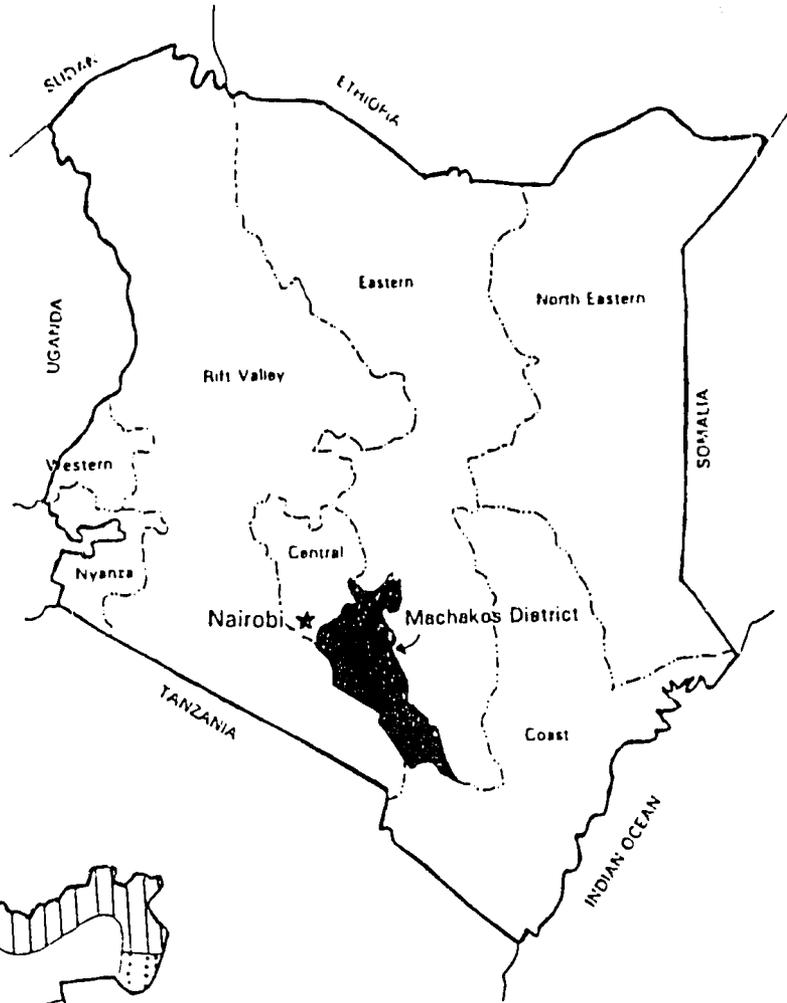
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KENYA



BACKGROUND AND SCOPE OF STUDY

Background

A combined team of officers from Kenya's National Environment Secretariat (NES) and Clark University, with assistance from technical officers from Kangundo Division, Machakos District, field tested Participatory Rural Appraisal (PRA) in Mbusyani Sublocation in July/August, 1988. While collaboration on resources management between NES and Clark has been underway for several years, development of the PRA approach is new. The approach grows from three origins.

NES and Clark have conducted several collaborative research projects to improve approaches to natural resources management. One element of interest has been investigation of institutions and practices at the village level, in an effort to identify approaches that community organizations can sustain. PRA has emerged as one product of the NES/Clark collaboration.¹

The second is a growing literature on Rapid Rural Appraisal for agro-ecological systems analysis, zoning, project planning, monitoring, and data collection. Rapid appraisal approaches are best known through the work of Robert Chambers and Gordon Conway and as implemented by the International Institute for Environment and Development.² While PRA is part of the rapid appraisal

family, it differs in that it devises a plan for communities to implement, identifies agencies within the community to carry it out, suggests external agencies that may be called upon for help, and provides a strategy for implementation.

The third is the abundant literature on participation and rural institutions that suggests that sustainable development must build on principles and priorities that rural people identify.³

The unique integration of effective natural resources management, rapid appraisal, and rural participation through PRA seemed worthy of field testing. A joint NES-Clark team reviewed the Rapid Rural Appraisal methodology, made a number of changes to prepare and implement village action plans, and designed a pilot test study to determine the effectiveness of the approach.

The opportunity for field testing PRA arose in early 1988. During the summer of 1987, NES and Clark had carried out a research exercise in Katheka Sublocation⁴ to determine how and why the community had functioned effectively in constructing bench terraces, cut-off drains, check dams, and gabions to control soil loss and to develop water supplies. For the Katheka study, all data were gathered with conventional questionnaires, developed in conjunction with standard survey and sampling techniques.

¹ For example, since 1978, NES and Clark have published 12 District Environmental Profiles, case studies on local resources management, training materials and selected works on soil erosion monitoring and natural resources management.

² See RRA Notes, Number 8 (January, 1990), "Manuals on RRA and Related Approaches," pp.30-35.

³ For example, Korten, David C. and Rudi Klauss, People Centered Development: Contributions Toward Theory and Planning Frameworks (Kumarian Press: Hartford), 1984; or Thomas-Slayter, Barbara P., Politics, Participation, and Poverty: Development Through Self-Help in Kenya, (Westview Press: Boulder), 1985.

The team found that the methodology was time consuming and yielded only one-way flows of information between the community resident and the researcher. While the Katheka data were of interest, the team felt the approach was less than satisfactory in providing data to help community itself. An exploration for alternatives began.

In the meantime, as part of the Katheka work, NES held several training sessions and demonstration days in the village to inform other communities about Katheka's effective practices. On one demonstration day in early 1988, a nearby sublocation, Mbusyani, sent its Chief, chair of the Farmer's Cooperative Union, and leaders of ten women's mwethya (self-help) groups. The Mbusyani leaders liked what they saw and asked NES to help implement similar programs in resources management in Mbusyani. NES agreed. What was to become PRA began to take shape.

Purpose and Scope of the Mbusyani Study

The purpose of the Mbusyani study then was to learn whether a team consisting of NES staff, a Clark representative, technical officers, and community leaders could gather data, define problems, rank solutions, and devise an integrated village plan for natural resources management in a relatively short time period, with substantial community participation. The basic questions included:

Data

To what extent did Mbusyani residents possess sufficient data upon which to build a practical resource management plan?

Participation

Would participation as a means for gathering data and setting priorities be a manageable way to devise an agreed upon plan?

Village Leaders and Institutions

To what extent would a PRA approach capture the attention of village leaders who are in a position to manage the plan?

Technical Officers

Would PRA engage technical extension officers whose expertise and administrative backing would be vital in the design and implementation of any significant resource management plans?

Donor and NGO Assistance

Would preparation of an agreed-upon village resource management plan attract non-governmental organizations (NGOs) or donor assistance?

Sustainability

Would village groups, once mobilized and familiar with the PRA process, sustain resource management activity and design new plans?

Mbusyani leaders agreed to provide every possible help to the PRA team. NES had a small budget to pay for petrol for the project Landrover and overnight accommodation (US\$20 per night) for the 5 NES team members. Staff salaries were already covered through regular NES budgets. An assessment was planned for 10 days in July-August, 1988. The total "additional" cost for the pilot PRA was less than US\$1,000.

*Program for International Development, Clark University and National Environment Secretariat, Ministry of Environment and Natural Resources, Government of Kenya, Resources Management, Population, and Local Institutions in Katheka: A Case Study of Effective Natural Resources Management in Machakos, Kenya, 1988.

COUNTRY AND PROGRAM SETTING

PRA has undergone most of its field trials in Kenya's arid and semi-arid zones. These dry areas constitute 80 percent of the country but, given their aridity, support only about 20 percent of the nation's population. However, in many cases, these dry zones are increasing in population at rates far faster than the high potential zones. This increase results, in part, from natural growth but, more specifically, because the high potential lands are becoming "full" and younger generations are migrating into the drier zones in increasing percentages. Whereas the high potential districts tend to grow at rates below the national average of 3.9 percent annual increase, many of the drier zones are increasing (natural increase plus in-migration) at rates of 4.5 percent and even higher.⁵

While pressures on Kenya's drylands create difficult problems, there have recently been a series of encouraging policy changes. For example, one positive development has been the introduction of the Kenya Government's District Focus. Officially launched in 1983, the District Focus strengthens regional development through greater mobilization of local resources and increased involvement of the beneficiaries. In principle, the District Focus enables the sublocation -- the smallest unit within Kenya's administrative structure -- to initiate development planning and projects.

A second important factor in Kenya's rural development has been greater attention on the part of the Kenya Government and the donor community

to resource allocation and policy change. The marginal areas have now been recognized as important to Kenya's economic growth. For example, the recent creation of the Ministry of Reclamation and Development of Arid and Semi-Arid Areas and Wastelands represents this new thinking. The new Ministry's mandate is to develop those marginal areas that have been "left out of the mainstream." One segment of the Ministry's approach is to involve communities in setting priorities in order to inject long term sustainability. Through this process, local resources will be mobilized and demand for improved services created. In fact, one of the Ministry's project proposals is on "Community Participation and Social Mobilization."

The PRA site, Mbusyani, is a sublocation consisting of eight villages in Kenya's semi-arid zone. It lies 90 km east of Nairobi in Kakuyuni Location, Kangundo Division, Machakos District. The terrain is hilly, the climate dry (avg. rainfall is 400 to 600 mm per year), elevation is about 1500 meters. Population in 1990 is estimated at 8000.

The residents of Mbusyani are Akamba, a group of agro-pastoralists who have lived in Machakos since the seventeenth century. Some Mbusyani households have family ties in the sublocation that date back three or four generations. Due to increasing land pressures in neighboring regions, many have moved into Mbusyani in recent years, occupying land that previously was used for rotational grazing. Today people derive their

⁵For example, the districts of Trans Nzoia, Laikipia, Garissa, West Pokot, Marsabit, Tana River, Kajiado, and Narok are all dry areas with rates of population growth higher than 5 percent per year. "Analysis of Natural Resources Management Activity in Kenya," Richard Ford, William McConnell, and Ute Arens, a paper presented at a national seminar on "Institutional Innovations in Land-Use Management in Kenya," Nyeri, September, 1989.

livelihoods mostly from subsistence agriculture and cash remittances though about 20 prosperous farmers sell coffee as their primary source of income.

The extension of farming and the subsequent constriction of grazing lands are two forces that have led to accelerated resource degradation including loss of ground cover, soil erosion, and reduced water availability in the region in general and Mbusyani in particular. These forces, coupled with erosive soils, steep hillslopes, and torrential

seasonal rainfall, have created a situation in which the community's natural resources are vulnerable. There are many dimensions to this predicament including health problems such as bilharzia, food storage needs, access to reliable water, high rates of soil loss, and declining water supplies.

With these needs and with the potential utility of PRA in mind, the NES team began its PRA experiment.

RATIONALE AND DESCRIPTION OF THE METHODOLOGY

Declining productivity, degradation of natural resources, and environmental mismanagement are problems throughout much of Africa. Rural food production, per capita, has declined by as much as 15 percent in recent years in African nations.⁶ Declines in water supply and increases in soil loss are evident in many areas. Excessive deforestation, especially in semi-arid zones, along with significant population increases, are widespread.⁷

Over the last three decades, national governments and donor agencies have tried a number of approaches to stimulate rural production, increase the well-being of rural households, and assure the capacity of the human and natural resource base to sustain these developments for generations to come. While some projects have achieved their objectives, many have not.

For example, a recent World Bank report describes the details of Africa's crisis, much of which focuses on natural resource issues. The document cites declining per capita agricultural output, rising debt, eroding human services, weakening institutions, and increased pressures on the environment.⁸

The rural poor who live in marginal environments tend to benefit least from present development initiatives.⁹ These project failures have contributed to the "African Crisis" and led to disillusionment on the part of many donor agencies about prospects for meaningful rural development in much of Africa.

While causes of resource degradation, declining productivity, and failed projects are many, one of the core difficulties is the gap between those who design and manage project interventions and the intended beneficiaries. Increasingly, the task of project design has become a specialized skill, carried out by trained professionals. Accordingly, project planning and investment decisions have become centralized as has the authority to manage resources.¹⁰

These project failures and environmental declines have led to soul searching within the development community to find more appropriate means to channel investments for rural development. They have initiated a quest for new approaches to data gathering, problem identification, and project design to reverse the decline in Africa's production.

⁶ World Resources 1988-89: An Assessment of The Resource Base that Supports the Global Economy, World Resources Institute, International Institute for Environment and Development, and United Nations Environment Programme, 1988.

⁷ Lloyd Timberlake, Africa in Crisis: The Causes and Cures of Environmental Bankruptcy, Philadelphia, Earthscan, 1986.

⁸ The World Bank, Sub-Saharan Africa: From Crisis to Sustainable Growth, a Long-Term Perspective Study, 1989.

⁹ Alan B. Durning, "Poverty and the Environment: Reversing the Downward Spiral," Worldwatch Paper 92; Worldwatch Institute, Washington, 1989, p. 54.

¹⁰ Goran Hyden, No Shortcuts to Progress: African Development Management in Perspective, London, Heinemann, 1983.

The PRA approach assumes that popular participation is a fundamental ingredient in project planning and that locally maintained institutions and technologies as well as sustainable economic, political, and ecological inputs are fundamental to reverse Africa's decline. This approach builds on the premise that individual rural communities reside in discreet ecosystems or micro-zones -- rainfall, soils, elevation, vegetation, etc -- and require particular and unique combinations of farm, health, soil, water, and woodland/grassland management. PRA further assumes that community residents have a good working knowledge of their ecological and development needs but do not necessarily have the means to systematize this information or mobilize the community to take action.

PRA uses multi-sector teams to join with village leaders to assess village needs and priorities and then create village resource management plans. The plan becomes the basis for action in the rural community and enables local institutions, government units, and NGOs to cooperate. PRA draws upon knowledge and skills already known in the village; it creates a setting in which local residents exchange information with one another and the local technical officers; it provides a structure for local aspirations and goals to be expressed and implemented; it provides a ranked list of village project activities that funding agencies can support; and, it sets in place a plan that village leaders and institutions can implement and sustain.¹¹

¹¹Barbara P. Thomas-Slayter, "Implementing Effective Local Management of Natural Resources: How Much Can NGOs Accomplish?" Paper presented at the African Studies Association meeting, November, 1989.

THE PRA PROCESS

The NES team that carried out the pilot PRA consisted of a social scientist with extensive agricultural experience (team leader), a biologist, a social scientist, an environmental information specialist, and a health nutritionist. The team worked closely with extension officers for technical assistance, particularly in water, and drew heavily on the energy and assistance of local leaders including formal officers such as the Assistant Chief and informal leaders such as heads of women's groups.

PRA normally has eight steps though the procedures can vary, depending on local need and preferences of the team. These steps include:

- ▶ site selection and administrative clearance;
- ▶ preliminary visit;
- ▶ data collection: (a) spatial; (b) time-related; (c) social; and (d) technical, especially problems of the community;
- ▶ data synthesis and analysis;
- ▶ prioritizing problems and exploring opportunities to resolve them;
- ▶ ranking opportunities and preparing a Village Resource Management Plan (VRMP);
- ▶ adoption of the VRMP;
- ▶ implementation.

The eight steps, as carried out in Mbusyani, were:¹²

Step 1: Site Selection

Administrative officers and ten leaders from Mbusyani women's groups came to Katheka to see how village groups had organized programs and projects to ease natural resource pressures. The Mbusyani group was so impressed with Katheka's achievements that they invited NES to visit their sublocation to determine if similar work could begin in Mbusyani. Thus, NES went to Mbusyani because the local leaders requested it.

Step 2: Preliminary Visits

NES made a preliminary visit on 31 May, 1988 and spent a half day meeting with leaders. After extended discussions among NES and Mbusyani leaders, all agreed to go ahead with a PRA. The village leadership understood what would be expected of them, especially in organizing groups of leaders and residents for discussions with the PRA team. NES pledged to assist with gathering data, organizing it into forms that village groups could rank, and helping to prepare a village resources management plan. NES stressed that implementation of the plan would fall on community leaders, with assistance from technical extension officers, NES, and donor or NGO groups to be identified.

Step 3: Data Collection

The team gathered: (1) spatial data; (2) time related information; (3) data on institutions and social structure; and (4) technical information. All were important in carrying out the PRA.

¹² Kabutha, Charity, Barbara P. Thomas-Slayter and Richard Ford. Participatory Rural Appraisal Handbook, published by the World Resources Institute, in collaboration with Kenya's National Environment Secretariat, Egerton University, and Clark University, 1990.

Data Gathering

Example 1 : Village Sketch Map (Spatial)

Definition

The sketch map is a spatial representation of the community.

Purpose

It provides reference points within which data collection, analysis and planning take place.

Process

Whereas the Assistant Chief already had a 1:50,000 topographical map, he did not have a detailed map of the sublocation. The team traced a base map, using the 1:50,000 topo map as a guide. Then the PRA team, two village elders, and the Assistant Chief, drove all roads and lanes in the entire sublocation -- a trip of about 2 hours -- recording information and talking with people, as appropriate.

Result

The map exercise identified micro-zones,

defined largely by elevation, soils, and rainfall. The Upper Zone has somewhat higher rainfall, generally fertile soils, and potentials for growing coffee. The Lower Zone is generally drier, has few water sources, and generally lower agricultural potential.

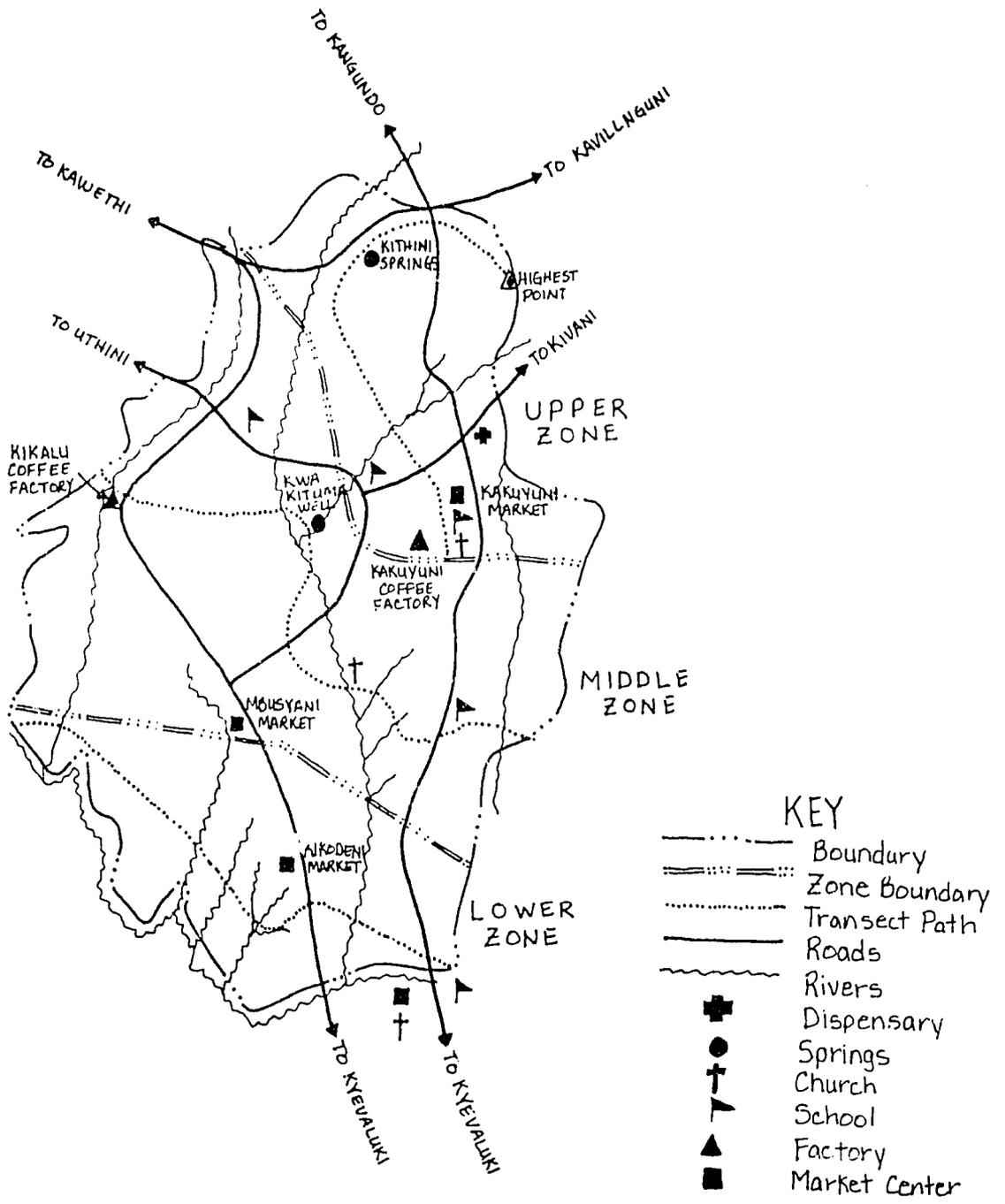
Usefulness

Knowing about micro zones, disparities in wealth, differences in land use, and variations in resource access provided opportunity for the Assistant Chief, women's group leaders, and the PRA team to locate areas where local leaders thought there were particular problems. Having this initial visual reference provided common ground for the team and local leaders to exchange information. The sketch map also suggested how the team should go about preparing the village transect.

Time

The mapping exercise took one half day.

**Figure 1
Village Sketch Map**



Source: Mbusyani PRA, L.L. Wichhart

Data Gathering

Example 2: Village Transect (Spatial)

Definition

A village transect is a spatial cross-section of the community, showing ecological, cultural, economic, and land use conditions.

Purpose

The transect identifies types of land use, local perceptions of problems, and village views of opportunities to solve them. It helps the team to verify the validity of the sub-zones defined by the sketch map. There are several goals in using the transect. First, the transect confirms sub-zones set out in the sketch map. Normally, the PRA team pencils in a rough track on the sketch map that will cut through the differing micro-zones in the community. These zones may be distinctive in many ways including ecology, cropping patterns, economic activity, wealth, ethnicity of residents, or type of land tenure system. Using a transect enables the team to double check the approximate zonal estimates in the sketch map.

Second, the transect enables the team to begin looking for problems and opportunities on a zone-by-zone basis. The core of PRA is developing collaboration among community institutions to define and act upon their needs, as residents perceive them. The transect is the first formal data collection step in this process.

Third, the transect exercise is one of the first opportunities team members will have to interact with humble (unofficial) leaders of the community in totally non-threatening ways. As team members walk the transect line, they will encounter farmers,

school children, water carriers, animal cart drivers, market goers, cattle herders, and more. Creating the transect allows team members to ask villagers what kind of yields they had last year, how prices are changing for maize or fertilizer, whether the water table is rising or falling, and how they describe their most severe problems.

Experience in doing several PRAs suggests that these casual conversations yield huge dividends. For example, a casual conversation on the road, in an anonymous setting, may get an honest response about prices or problems whereas a formal sit-down interview may encourage cautious answers. A chance meeting on a village path may bring together two or three totally disassociated residents candidly discussing, for example, the current fuelwood or forestry situation, without fear of reprisals from higher authorities. Finally, informal transect conversations call forth comments from people who might not normally speak up in a community meeting or formal interview -- women, impoverished residents, ethnic minorities, or youth.

Process

While some PRA teams walk a straight line from one side of a community to the other, intersecting all micro zones, the Mbusyani team chose a different tactic. As the distances were great, the team broke into three smaller units to explore the routes (as noted on the sketch map). The sub-groups joined with elders and asked questions as they walked. In each case, the sub-groups started at the highest point in the micro zone and worked out.

Results

The transect provided a detailed look at land use practices, present problems, and potential solutions. It also enabled the team to confirm that considerable variety in ecology and land use practices was present in the sublocation.

Usefulness

Preparing the transect enabled the PRA team to become acquainted with details of the micro zones. As the sub-groups walked through the community,

they observed, recorded data, and stopped and talked with whomever they met. A list of problems and opportunities for the sublocation began to emerge.

Time

Given that the team split into three sub-groups, it took only one half day to gather the data. Then one member from each sub-group sat together in the evening and prepared the composite transect that appears below.

Figure 2
Village Transect

SOIL	LOOSE, DEEP, RED SOIL	CLAYEY SOILS AND SMALL PATCHES OF RED SOILS	SMALLER, SANDY SOILS ROCKY IN MOST PARTS
WATER	ABOUT 3% OF HOUSEHOLDS HAVE SHALLOW WELLS AND A FEW HAVE 2 LITER AND 5 LITER BUCKETS	A ROOPE INFESTED WITH BLOWFLIES, 2 PEOPLE MAINTAINED DAMS	WATER IS NEUTRAL BUT VERY DIRTY, RIVER CONTAINS BLOWFLIES AND CATERPILLAR
VEGETATION	A. NATURAL VEGETATION CLEARING TO GIVE WAY TO SETTLEMENT	WITH FEWER TREES OF NATURAL VEGETATION, MANY EXOTIC CROPS & HERBAGES	NATURAL VEGETATION CONSISTING OF ALGAE, SHRUBS, AND GRASS
SOCIAL-ECONOMIC INDICATORS	1% OF HOUSEHOLD HEADS IN WORK EMPLOYABLE, MAJORITY ANIMATED, FEW OF EDUCATION WORKERS	1% OF HOUSEHOLD HEADS, 1% THATCHED ROOF WORKERS	MAJORITY GERM, THATCHED HOUSES
FOOD CROPS	MAIZE, BEANS, BANANAS, PINEAPPLES	MAIZE, BEANS, PINEAPPLES, FRUITS, BANANAS	MAIZE, BEANS, BANANAS, FRUITS, PINEAPPLES
CASH CROPS	COFFEE	COFFEE	COFFEE
ACHIEVEMENTS (LAST 5 YEARS)	SOIL CONSERVATION, TREE PLANTING, WATER DEVELOPMENT - WELLS, ROOF CATCHMENT	SOIL CONSERVATION, WATER DEVELOPMENT - DAMS	SOME SOIL AND WATER CONSERVATION
FORESTRY/AGRO-FORESTRY	WIDE SPREAD AGRO-FORESTRY, WEI WILDER, PULP NATURAL, MARRASCS PAPAYAS	MINIMAL TREE PLANTING - MANGOES, PAPAYAS	VERY LITTLE TREE PLANTING
RESOURCES MANAGEMENT	TERRACING, EMBANKMENT SO INFILLED WITH MULTI-SURFOD GRASSES	ALOT OF BENCH TERRACING	LIMITED SOIL CONSERVATION
PROBLEMS	INADEQUATE WATER, EDUCATION, HEALTH FACILITIES, FAMILIES, LACK OF DEP FACILITIES	WATER, FAMILIES, INADEQUATE EDUCATION AND HEALTH FACILITIES	WATER, TERAFODIT AND FEED
OPPORTUNITIES	REHABILITATION: 3 DAMS, SPECIAL EXTENSION ASSISTANCE - TOOLS MARKET	WATER DEVELOPMENT - DAM, WELL, ROOF CATCHMENT, GOVERNMENT ASSISTANCE	WATER DEVELOPMENT - DAM, DAM, ROOF CATCHMENT, EXTENSION ASSISTANCE

Source: Mbusyani PRA, L.L. Wichhart

Data Gathering

Example 3: Farm Sketch (Spatial)

Definition

Farm sketches are hand drawings of individual farm layouts and use including cropping patterns, buildings, tree locations, and water sources.

Purpose

They illustrate relationships between resource management practices and a variety of variables including income, education, and ecology for a representative sample of households in the community.

Process

The team divided into smaller units and chose two to three farms within each micro zone, paying close attention to examples of the diversities of ecology, income, land use, and family size present in the community. Team members prepared sketches by walking around the farm with household heads.

Results

The farm sketches show individual farm management practices and enable the team to compare facilities and strategies among the three zones.

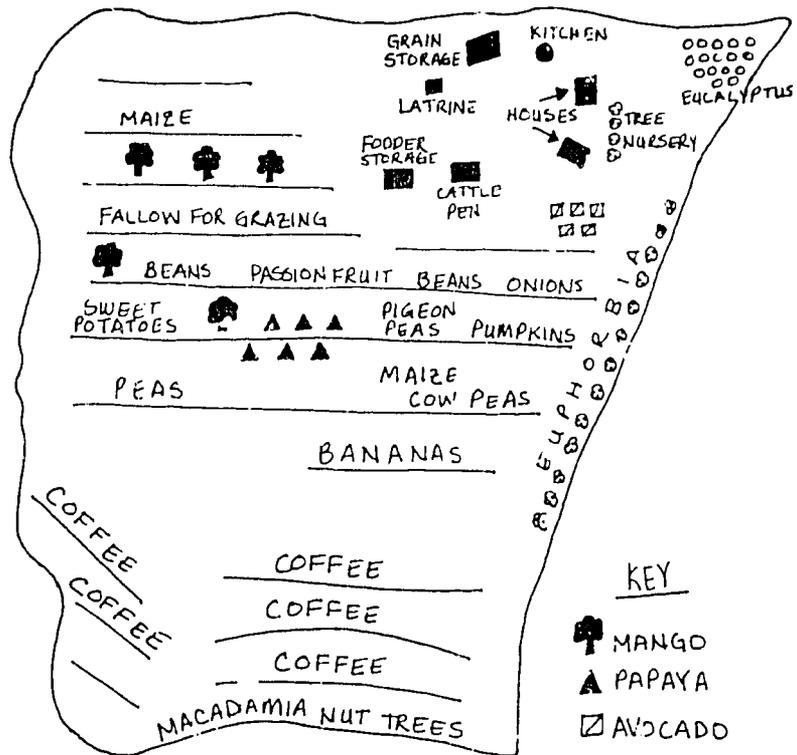
Usefulness

It became clear that the Upper Zone was, on a relative basis, more affluent than the Lower Zone, had better managed farms, produced more, and provided higher incomes than in the other two zones. The farm sketches (coupled with the farm interviews noted below) confirmed these differences.

Time

Farm sketches took an entire day, even with the team breaking into three sub-groups. In subsequent PRAs, the teams have combined the exercises of farm sketches, farm interviews, and the transect, just to save time.

Figure 3
Farm Sketch



SIMON MULE
ZONE II
6-7 ACRES
3 ADULTS
CHILDREN GROWN

CAREFULLY DESIGNED AND
MAINTAINED TERRACES; NAPIER
GRASS PLANTED ON TERRACE
EDGES.

Source: Mbusyani PRA, L.L. Wichhart

Data Gathering

Example 4: Time Line (Temporal)

Definition

The time line is an aggregate of past events, as influenced by present conditions.

Purpose

The goal is to understand and learn from the community what residents consider to be important in its history. This provides insight into the community's historical perspective on current issues.

Process

The PRA team meets with residents to discuss what they consider to be the most important events in the community's past. It is important to note that groups assembled for data gathering should reflect the age, ethnic, gender, class, and educational diversity of the community. Data are gathered in group meetings with explicit attention to include community residents from different backgrounds and perspectives.

Depending on the size of the community, three or four groups are organized, reflecting the different sub-zones. In Mbusyani, with a population of about 8,000, the PRA team split into four groups. They asked the Assistant Chief to arrange for four community groups to go to four local market centers to meet the visitors.

The time line tries to determine what the community considers to be important in its history. The PRA team learns from discussions among small groups about problems and achievements as far back as the most senior local residents can remember. In Mbusyani, the elders presented a vast store

of information that normally might not be offered to a visiting researcher or project design team.

The role of elders, both male and female, is important in Africa where age is so highly respected. Further, the elders carry some of the community's history with them and personify some (but not all) of the values, priorities, and aspirations of the community. They lend the sense of continuity to community action that has been sorely lacking in many development interventions.

Results

The community emphasized earlier problems that they had experienced or had remembered being described by previous generations. Drought is an important element of Mbusyani's past as is famine. The exercise pointed out to the PRA team that problems of aridity and periodic drought were not new to the community and that they had some experience in dealing with them.

Usefulness

The time line exercise was effective in Mbusyani. Residents became deeply involved in describing their experiences, especially their hardships. The exercise drew heavily on the elderly who are not always consulted by planners and project designers. The exercise also helped to confirm some of the emerging hypotheses about the nature of Mbusyani's problems and aspirations.

Time

The time involved in Mbusyani was a full day though normally one half day is enough.

Figure 4
Time Line

1836	YANGEVO FAMINE
1850	YA KIASA FAMINE
1861	MUTULUNGO FAMINE
1870	NGELETE FAMINE
1880	NDATA FAMINE
1885	KYUMBE (DANCE)
1897	RINDERPEST OUTBREAK
1898	YUA YA MUNYILI, MBALIA and KILUMI DANCE
1898 - 1900	MISSION at MUISUINI -- KANGUNDO
1899	RAILWAY LINE at KONZA
1906 - 1910	IMMIGRATION from MBEONI, CHIEF NTHEKETHA
1910	NDATA ILA YAUMIE
1910 - 1911	YUA YA NDATA (MAHARAGWE) FAMINE
1912 - 1914	MONEY INTRODUCED
1914 - 1918	DESTOCKING by WHITE MAN - MALUA
1914 - 1918	MEN CARRIED to WAR
1915 - 1918	COMPULSORY SCHOOL
1918	DIARRHEA
1918 - 1919	EPIDEMIC LUNG DISEASE OF DOMESTIC ANIMALS - MUNYILI
1928 - 1929	NZALUKANGYE FAMINE
1930 - 1931	LOCUSTS
1931	KUTHUUA NIKUYU, FENCING WITH SISAL
1939 - 1940	MUINDI MBINGU CAMPAIGNED AGAINST FORCED DESTOCKING
1939 - 1945	WORLD WAR II
1942	MUNYOLOKO FAMINE, ENFORCED CONSERVATION MEASURES
1943 - 1945	MWCLYC
1944 - 1951	DAMS STARTED
1950	MBUA YA KANZI, MABOLELO FLOODS
1950 - 1951	DROUGHT after FLOODS, FORCED DESTOCKING
1951 - 1952	MBUA YA KAVISI
1952 - 1954	EMERGENCY
1960 - 1961	FOOD for WORK
1962	YUA YA NDEKE, BUMBER HARVEST, PROJECTS ON SERVICE DAMS STARTED
1965	YUA YA ATTA
1973	DROUGHT, ECLIPSE of the SUN
1978	EARTHQUAKE
1980	NIKWA NGWETE
1984	DROUGHT, ARMY WORMS
1984 - 1985	CHOLERA OUTBREAK, EPIDEMIC ON LEMON TREES
1987	NOUKENGWATIE

Source: Mbusyani PRA, L.L. Wichhart

Data Gathering

Example 5: Trends (Temporal)

Definition

Trend lines plot village perceptions of change over time in key sectors.

Purpose

PRA assumes that local communities have a good grasp of changes over time within their own villages and that these data are fundamental in helping communities plan management strategies for their resources. Trend line discussions bring together all ages and groups in the community, including men and women, to elicit their perspectives on "the way things are going." The trend lines show village perspectives, over twenty years, on changes in resource issues such as rainfall, crop production, soil loss, deforestation, health, population, and other topics of concern to the community. They complement the time lines. The team organizes groups of residents for this exercise.

Process

In recruiting trend line groups, less emphasis is placed on elders than for the time line group. More attention goes to those currently using the land. The reason is that time lines go back as much as a century whereas trend lines look only at the recent past and how it is changing.

Normally villagers talk about trends in some basic sectors such as soil loss, rainfall, income, education, population, and food production. But the open-ended style of PRA enables villagers to add new categories for trend analysis.

For example, in Mbusyani, local leaders charted their problems and discussed whether they had had more problems in recent years or earlier. This discussion unlocked a range of perspectives that might never have surfaced in a more formal interview or questionnaire setting. Further, the discussion among villagers concerning whether the trend line is going up or down revealed an inner core of villager feelings about basic issues in youth unemployment, need for vocational training, constraints of land, and the grinding poverty that many villagers faced. A team leader from NES led the discussion, using chalk and a blackboard (the meeting was held in a school classroom). The groups developed trend lines for population, rainfall/water availability, land productivity, formal education, tree planting, soil conservation, and erosion control.

Result

Trend analysis helped the team to: (a) learn from the community how they perceive change over time in various sectors; (b) integrate key changes into a village profile; and (c) organize the range of opportunities for the community to consider.

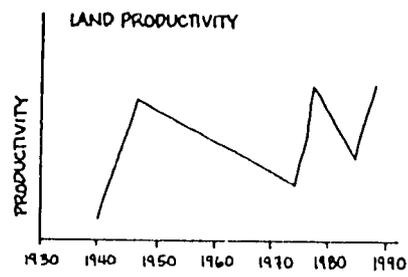
Usefulness

Several of the earlier data collection exercises had focussed on opportunities to solve problems. This exercise expanded the list.

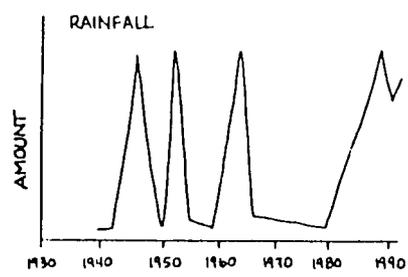
Time

The trend analysis took one half day.

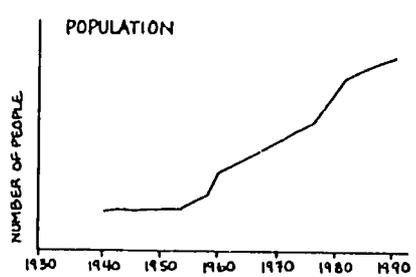
**Figure 5
Trend Lines**



- 1945- A BUMPER HARVEST DUE TO GOOD RAINS
- 1977- INCREASE IN YIELDS DUE TO TRAINING CARRIED OUT AT MACHAKO'S FARMERS TRAINING CENTRE. FREE SEEDS WERE PROVIDED (BEANS AND MAIZE) AND FREE FERTILIZER AS WELL.
- 1988- INCREASE IN PRODUCTIVITY DUE TO APPLICATION OF CHEMICALS. MANURE, FERTILIZERS APPLIED TO SHAMBAS IN 1987 WERE NOT USED BY CROPS DUE TO SHORTAGE OF RAINS PLUS DESTRUCTION OF CROPS BY CUTWORMS, CRICKETS, AND STALK BORER.



- 1940-1942- MBULUNGA FAMINE
- 1943-1945- MWOLYO FAMINE
- 1960- MAA YA NDEGE (FAMINE DUE TO FLOODS, FOOD BROUGHT BY AIRPLANE)
- 1978- NIKWA NGWETE FAMINE



- 1939-1954- NEARLY CONSTANT POPULATION DUE TO LATE MARRIAGES (WOMEN ABOUT 25 YEARS), CHILD SPACING OF AT LEAST 5 YEARS UNTIL PREVIOUSLY BORN CHILD WAS BIG ENOUGH TO CARRY A NEWBORN BABY.
- 1954- THINGS START RELAXING
- 1957-1960 AND 1975-1980 - SUBSTANTIAL IN-MIGRATION

Source: Mbusyani PRA, Clark University Cartography Service

Data Gathering

Example 6: Seasonal Calendar (Temporal)

Definition

A seasonal calendar is a snapshot of problems, opportunities, and possible interventions, represented over the course of a year.

Purpose

It enables the team, using group discussions, to learn about land use, hunger seasons, farming activity, times when disease is more prevalent, food surplus, and cash availability. The seasonal calendar also adds to information about village views of problems and opportunities.

Process

The Assistant Chief assembled a group representing different age, gender, and leadership perspectives. The PRA team leader asked questions about what activities were most important during the year and when did they happen. Responses helped the team to prepare a profile of activity in the village, on a monthly basis.

One of the valuable contributions of the seasonal calendar is the chance to link problems and opportunities to an annual cycle. For example, in some communities, dilemmas such as human and animal diseases or seasonal hunger occur virtually

every year. In times of drought or blight, these problems may start earlier and last longer. But they recur year after year. Other problems, such as access to fuelwood or need for building materials for water storage, may persist at an even level throughout the year.

Results

The seasonal calendar presented large quantities of diverse information in a time frame. It compared village activities, month by month, across sectoral boundaries. These annual cycles helped to determine, for example, labor availability, timing for project activity, potential absorptive capacity for new activities, times of disease and food shortage, and variations in cash flow.

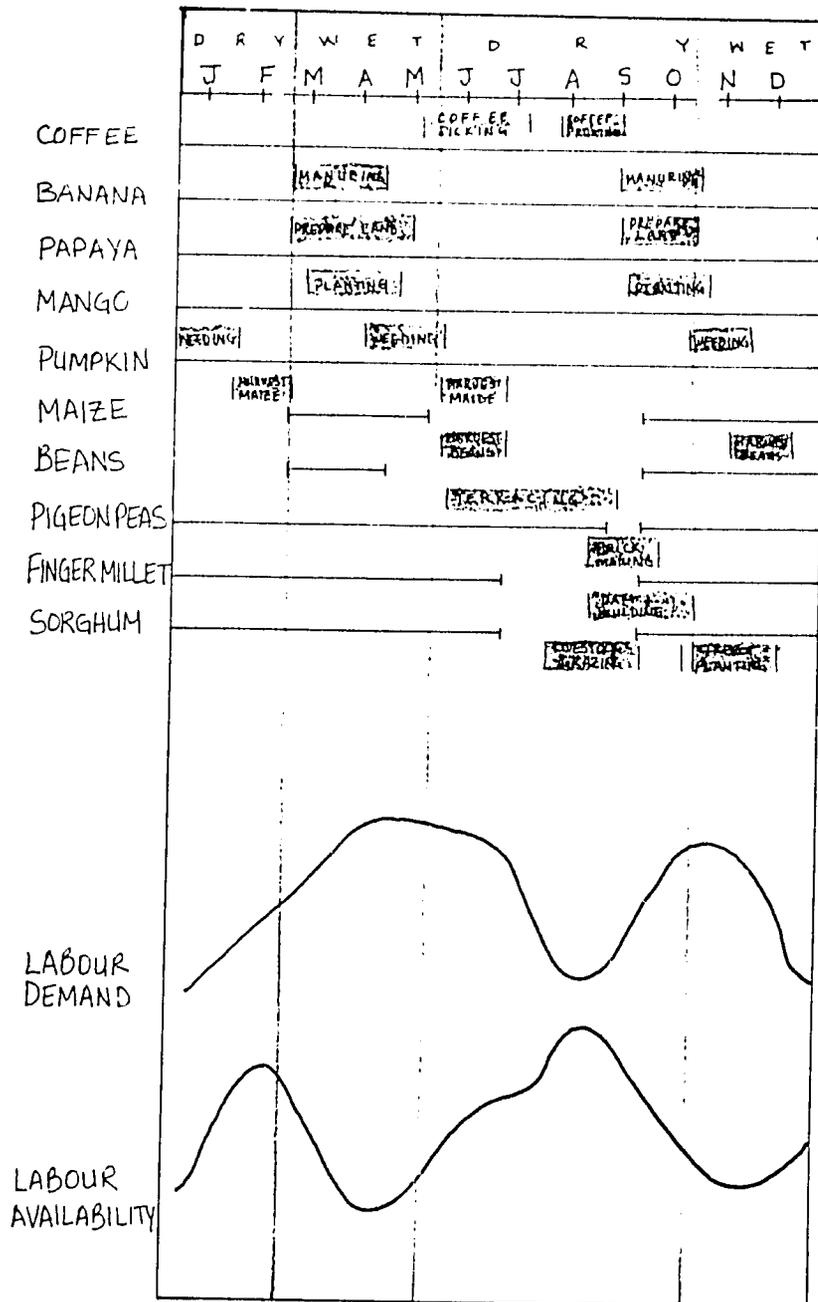
Usefulness

The calendar was one of the chief determinants to show that water scarcity seemed to be at the core of many of the community's problems. Regardless of season, water appeared to be a persistent problem.

Time

Group discussions on the calendar took one half day.

Figure 6
Seasonal Calendar



Source: Mbusyani PRA, L.L. Wichhart

Data Gathering

Example 7: Farm Interviews (Institutional)

Definition

Farm interviews collect detailed information for a small number of households. They supplement the farm sketches.

Purpose

The interviews yield socio-economic information. Topics include the nature of resource management practices, the characteristics of the particular farm household, and the respondents' observations on household and community problems. These interviews offer the team an opportunity to hold discussions with residents who might not normally be included among the leaders or other group meetings.

Process

Household heads were the same as those selected for farm sketches. They represented a cross-section of the community by gender, class, and ecological micro-zone.

Results

While the farm interviews yielded good data on family size, income, education levels, numbers of livestock, etc., the prime use was to confirm the growing list of problems and opportunities. The interviews, representing the diversity of the community, reinforced the hypotheses that water was a problem for the entire sublocation but was especially severe for households in the lower and poor zone.

Usefulness

The most helpful dimension was to assure that problem definition and eventual program activity would be sensitive to issues of equity in the sublocation.

Time

Farm interviews take one day if they are integrated with the farm sketches.

Figure 7
Farm Interviews
(extract)

This Household Data Form is to be completed for each interview and submitted to the PRA team leader at the end of the day. It records basic household data. The remaining information is to be collected as Field Notes, using the categories described in the Questionnaire Guidelines.

Name _____ Position in Household _____ Zone _____

Male _____ Female _____ Age _____ Marital Status _____

Highest level of education attained for husband and wife:

husband _____ wife _____

Place of origins of parents and grandparents?

How many children have been born to you?

How many children are living?

How many children are living with you on the farm?

How many people are living on the farm?

Does anyone in this family have a job outside Kyevaluki?

Do they help sometimes with such things as school fees or money for fertilizer?

Source: PRA Handbook, WRI, NES, Egerton, Clark

Data Gathering

Example 8: Village Institutions (Institutional)

Definition

Groups of residents rank community institutions in order of importance and construct diagrams that indicate the relationships between and among village units.

Purpose

An understanding of institutional roles and relationships is fundamental to sustainable development. The analyses helped the PRA team to: (a) learn about the activities of groups and organizations within the community; (b) understand how the community views these institutions and how they rank them according to their contribution to community development; and (c) assess the relationships among these institutions by creating a diagram of institutional interactions.

Process

The team first compiled a list of all institutions (church groups, women's organizations, cooperatives, etc.) in the sublocation. Meeting with clusters of men and women in four different sites of the sub-location, the team asked residents to rank the importance and cooperation of village institutions. The PRA team leader brought 30 to 40 circles, cut from paper, roughly a third being small circles, a third medium sized, and a third large. The team leader asked group members to place names of the community's institutions on the labels, using large circles for the influential groups and smaller circles for the less important. This exercise alone frequently consumes one or two hours as there is often intense discussion among villagers about which groups are the most important.

Next, the group leader asks villagers to arrange the circles to show how different institutions in the community cooperate to get things done. If two groups work closely together, the circles would be placed to overlap one another; if the groups have no record of collaboration, circles would be placed separate from each other.

Results

The Mbusyani discussions created four diagrams, one each from the four discussion groups, showing institutional relationships. While details varied, they all identified the important role of women's groups as well as government institutions in Mbusyani.

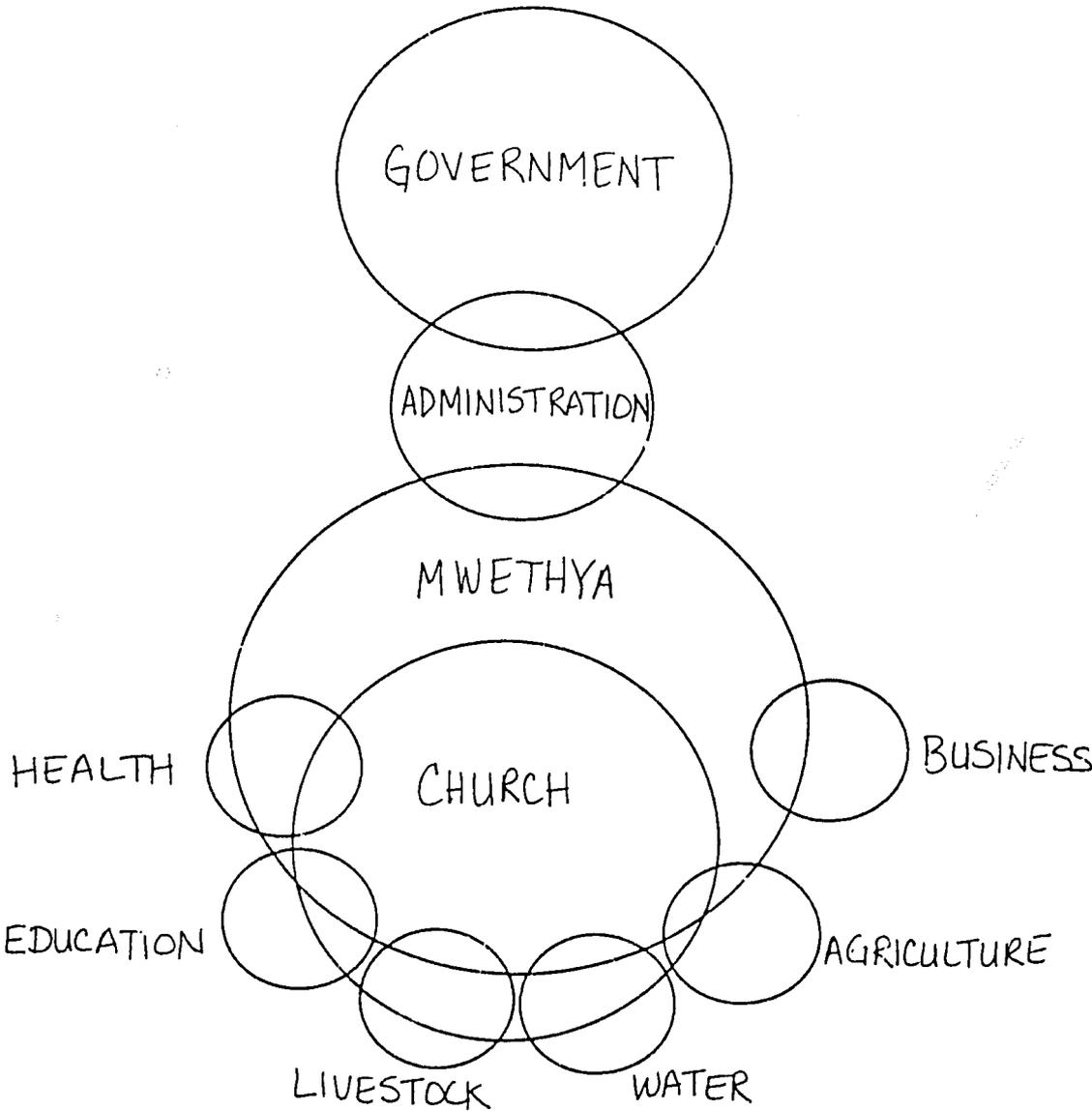
Usefulness

Responses on the social and institutional analysis are revealing. They provide direct information (institutional structure) and indirect data (which groups work together). For Mbusyani, they confirmed that the women's groups were the best to supervise follow-up work, raise and manage funds, and cooperate with the Assistant Chief to plan new activities. (In a different community, the institutional analysis revealed that no village group trusted the Assistant Chief and thus would not work with him.) The point of the village social analysis is the depth of understanding and action imperatives that can be derived from a half-day discussion of the village's social and political profile, as perceived by representatives from the community.

Time

The exercise took one half day.

Figure 8
Village Institutions



Source: PRA Handbook, WRI, NES, Igerton, Clark

Data Gathering

Example 9: Technical Survey (Technical)

In addition to the time, spatial, and social data, technical officers on the PRA team assemble information on economic and technical feasibility, i.e. water, soils, forestry, agriculture, etc. needed to help villagers rank project activity.

Technical data are fundamental to the successful design and implementation of an action plan. Most PRA teams include two or three technical officers who conduct surveys of potentials in water, forestry, crop adaptations, marketing, etc. In cases where a particular skill is lacking, the PRA team has been able to identify a local expert, in most cases for no additional money other than providing transport and sometimes cost of food and lodging.

Technical assessments consider the economic, ecological, and technical implications of alternative

interventions. After doing several PRAs, it has become clear that: (a) the technical data are among the most important to integrate into the villages' socio-economic and institutional capabilities; (b) villagers are the key agents, in cooperation with technical extension and NGO officers, to do the implementation; and (c) the technical interventions that work best are those that community leaders can understand and manage with very little external help.

The technical survey may take two or three days and may not require active involvement of village groups. However, previous PRA experience has shown that it is helpful for a village leader or elder to work closely with technical groups in developing the information.

Figure 9 Technical Survey (extract)

WATER SOURCES - LOWER ZONE

1. MBUSYANI DAM: a man-made water catchment area that serves a great percentage of the people in the lower zone. It is located in the middle of the drier region. The water from the dam is murky and has disease-causing parasites, though not the bilharzia parasite. It often dries up during September and part of October, as it is not large enough to provide for the needs of all users. There is a great deal of evaporation and siltation as well as some leakage. The dam was originally dug in 1952. In 1984, the community hired a tractor to dredge and expand the dam. It currently requires dredging again, rehabilitation, and improved management such as fencing to keep cattle out and tree planting to reduce siltation.

Source: PRA Handbook, WRI, NES, Clark

Step 4: Data Synthesis and Analysis

Once it had collected the data, the PRA team spent a day meeting by itself to organize the information. Large charts and tables of trend lines, institutional arrangements, the transect, etc. were made and lists of all the problems mentioned in any of the data collection exercises were compiled. The team then split into pairs. Each took a particular problem and (a) summarized it, in some cases subdividing by ecological zone; (b) matched opportunities or potential solutions to each; and (c) listed opportunities for each on large pieces of paper.

Step 5: Ranking Problems

The next day, villagers came together to rank their problems. The meeting was held in a primary school classroom near the sublocation's market. The charts and graphs made by the PRA team were displayed on the walls, with the charts containing the lists of problems and opportunities being placed at the front of the room. The NES team leader chaired the meeting. Participants included: the six team members from NES; nine technical officers representing soil, water, forestry, agriculture, health, community development, and livestock; a number of village elders and community leaders; the Assistant Chief for the sublocation; and leaders from eight women's groups.

There are many ways to rank problems. The literature on PRA and its companion Rapid Rural Appraisal offers many suggestions. In most cases, community groups have simply voted to derive a list of problems, ranking from most to least severe. This was the system used by Mbusyani. Some groups place clusters of problems in categories of

severity; while others use a numerical ranking of severity. In Pwani (Kenya), the community agreed on one set of rankings the first day and then, after intense discussions, established a totally different ranking the following day.

Given that all problems of a community cannot be solved in one effort, there is need to organize these problems into sets of issues that can be dealt with, step by step, over an extended period of time. The ranking process in PRA has become an important exercise in Mbusyani's efforts to help itself. The outcome in Mbusyani was a list of problems that villagers and technical officers agreed were the most severe and in greatest need of attention. The task was completed by lunch time. Several high priority problems were mentioned, but by far the most frequently cited issue was water.

Step 6: Ranking Opportunities

In the afternoon, the group reassembled to discuss possible solutions to the water problem. The PRA team made a list of recommended solutions, ranging from boreholes to rehabilitating rock springs. The NES/PRA team leader chaired the meeting.¹³ To bring order and system to the ranking an "Options Assessment Chart" developed by Gordon Conway and Robert Chambers was used.¹⁴ The criteria of stability, equity, productivity, sustainability, and feasibility were used to help the group place weighted values on each possible solution and eventually arrive at a unanimously agreed upon set of actions. They would develop a new well, rehabilitate two small reservoirs and water catchments, terrace a badly eroded hillside, and continue with efforts of reforestation. Techni-

¹³A detailed description of the ranking procedure can be found in Chairity Kabutha and Richard Ford, "Using Rapid Rural Appraisal to Formulate a Village Resources management plan: Notes on PRA and a Meeting (4 August 1988) of NES, Mbusyani Women's Groups, and Division Technical Officers," in *PRA Notes*, October, 1988, Number 2.

¹⁴For an example of the Conway/Chambers Options Assessment Chart, see the article cited in ¹³ and how it was used in Mbusyani.

cal officers played an important role in this discussion to ensure solutions would be feasible in technical, economic, ecological, and social terms. There was some difficulty using the Options Assessment Chart, as the terms (eg, sustainability) did not translate well into Kikamba (the local language), but the team worked closely with the village leaders and eventually a ranking emerged.

Step 7: Adopting a Village Resource Management Plan (VRMP)

The group was to reassemble the following morning to create a village resource management plan. However, several leaders and especially the water engineer felt there was insufficient technical information to develop a comprehensive plan. The water engineer returned the following week and, joined by the PRA team and the Mbusyani Resource Management Committee, visited all potential water points in the sublocation and expanded considerably upon the technical feasibility document.

Two weeks later, the entire sublocation committee reassembled and, using data from the water engineer's survey, organized a comprehensive water and natural resources management plan for Mbusyani.¹⁵ The plan indicates tasks to be carried out, materials needed to do the work, who will do it, and what, if any, external assistance is needed.

Step 8: Implementation

Mbusyani has moved forward, not always on schedule, but with considerable commitment from all parties involved. The Assistant Chief has been the prime mover with cooperation and support from the community. The first task, a well at Kithini Springs, went quickly. Labor and local materials came from the community and cement rings and

skilled labor from the Ministry of Water Development. No external funds were required.

The second project, rehabilitation of Mbusyani Dam, was more ambitious. Women's groups dug dozens of fence post holes for a fence to protect the watershed area. The groups also dug several meters of bench terraces and planted trees to curb erosion and siltation in the reservoir. A local NGO heard of the project and agreed to provide fence posts, wire fencing, and tree seedlings. The NGO also wrote a successful proposal to a UN agency, using data developed during the PRA exercise, noting how the work on the dam was part of a larger village plan to bring sustained production to its natural resources.

A third element of implementation was developing soil control on a badly eroded hillside. The Ministry of Agriculture donated tools to carry out this work and additional tools have been obtained through a private donor. Women's groups have provided hours of volunteer labor for the effort and planted hundreds of trees along the new terraces.

Eighteen months after adopting the plan, Mbusyani has made considerable progress though the work is not yet finished. It is unclear whether the enthusiasm and work energy that has been maintained over this period will continue. It is equally unclear whether the small external inputs such as hand tools from Agriculture, fencing and posts from an NGO, cement rings from the Ministry of Water Development, and funds from the UN have been critical to the success or whether the community would have been able to organize alternative means to acquire these inputs on their own.

¹⁵For those interested, the full Mbusyani Village Resource Management Plan appears on Pages 72 to 80 in Kabutha, Thomas-Slayter, and Ford, *PRA Handbook*.

FINDINGS AND CONCLUSIONS

The introduction set out six clusters of questions to be tested by the field methodology. Findings from Mbusyani have been reinforced by subsequent PRA field exercises. They include:

Data

Mbusyani residents know a great deal about their community. The time line and trend analyses revealed an intimate awareness of what past circumstances had been; the seasonal calendar indicated an integrated understanding of past problems and present needs. Yet in spite of these good data, there were gaps in their information base on topics normally assumed to be important in development planning. Villagers were generally unaware of quantified information on, for example, statistics of rates of soil loss or percentage change in infant mortality. They were also weak in anticipating the economic and technical feasibility of proposed solutions. Finally, they were mostly uninformed of ways to find technical and financial support to implement their hopes and aspirations.

Even so, these data gaps seemed to pose no serious problem in formulating the Village Resource Management Plan. Given long-term involvements with the community, villagers had sufficient data to rank problems and consider solutions. Extension officers provided technical and economic information. As a result, the community was able to rank solutions in ways that reflected their own knowledge base enhanced by technical and economic considerations.

In the judgment of the PRA team, villagers in association with extension officers, had access to sufficient data to formulate sound resource management plans.

Participation

PRA provides an organizational structure that focuses and systematizes participation. At every level, Mbusyani residents responded actively. For example, there was no shortage of elders to describe past events and present trends; people were interested in the seasonal calendar exercise; discussion was prolonged when considering the relative importance and relationships among institutions in the sublocation. During the formal meeting to finalize Mbusyani's VRMP, discussion was vigorous and often intense. While women were sometimes reluctant to speak in the presence of male extension officers and local officials, with conscious encouragement and specific support methodologies, they did speak up and, by the end of the sessions, had made their feelings well known.

Two elements seem to have structured the participation. First, data gathering from village groups sent a message that the PRA team had interest in knowing what the community knew. As the participatory data gathering continued, a momentum began to build. At no point were there ever more than 300 or 400 people involved in the process, out of a total population of 8,000. So it would be inaccurate to say that the entire community participated. Yet significant numbers did participate on a sustained basis, suggesting that the process was important in attracting the attention of the community.

Second, the task-oriented and visual nature of the PRA was important. Village residents could see what the researchers were collecting and felt they could comment, for example, on whether the trend line was being accurately drawn. The interactive and tangible nature of the data gathering demystified

the research and made the community feel ownership of the PRA from an early stage.

While there are certainly other elements in explaining why Mbusyani has implemented its resource management activities, the PRA team agreed that the structured and systematized participation has been one of the most important.

Village Leaders and Institutions

Locally initiated plans require committed and skilled local leaders to follow-up on the recommended initiatives. In the case of Mbusyani, the Assistant Chief demonstrated these qualities admirably. He called meetings, organized work groups, attended local committee discussions, and kept good records. He also served as liaison for dealing with external groups such as NES or the NGO. His leadership, while not necessarily flashy or charismatic, was steady, reliable, and thorough. This consistency in the Assistant Chief's leadership in follow-up has been a fundamental element in why the research has produced results.

It must be stressed, however, that the Assistant Chief was not the only leader. To date, he has managed none of the money which has been raised. All funds have been administered by one of the external agencies (for example, the indigenous NGO) or by the Mbusyani Women's Group. Thus a second crucial quality of local leadership is the skill and commitment that leaders of a half dozen women's groups have brought to Mbusyani. They have carried out bench terracing, fence-post installation, sand and gravel collection, and tree planting. They are now collecting money for a maize grinding mill and are gathering funds for a cost-sharing acquisition of tools. As with the chief, the women's leaders are not necessarily charismatic. Instead, their success comes through with assigned tasks and delivering services on time.

The Assistant Chief, the women's group leaders, and the community institutions are essential elements in Mbusyani's effective management. Given the recent shift in Kenya toward decentralization of development planning, through the District Focus, there is clear evidence that PRA provides a methodology that enables rural institutions to function more effectively. The PRA team agreed that cultivating such leaders and institutions in new communities will be a fundamental element in expanding the work of local sustainability.

Technical Officers

Bringing stimulation to extension services is another component in sustaining rural resources management. During the Mbusyani PRA, extension officers lent support, provided data, participated actively in group meetings, and played vital roles in follow-up. The greatest help has come from Water, Agriculture, and Community Development with smaller but important support from Forestry. However, not all extension officers assigned to the area have participated equally. Health, livestock, and animal production did not figure prominently in the VRMP and, accordingly, have not had significant roles in the implementation efforts.

There seem to be at least three reasons why PRA has attracted some of the extension officers. First, much of the technical officer's work relies on active support and labor contributions from the community. Frequently, technical officers lack the time or the means to elicit community support. PRA does it for them.

Second, officers frequently function with extremely limited budgets. Given financial pressure on government budgets, there is little likelihood that the water engineer or agriculture officer will soon have a significant increase in funds to implement extension services. However, PRA helps. In

several cases, including Mbusyani, the structured plan which PRA fostered has been a convincing factor in persuading donors to allocate small funds for materials. In the case of Mbusyani, funds were raised for tools and fencing. In other communities, PRA has facilitated the flow of cement, pipe, building stone, and timber. If extension officers (or NGOs) see that PRA can increase their access to project supplies and therefore to successful projects, they will cooperate. It has worked well in Mbusyani. Linkages between PRA and technical officers promise to work in other settings as well.

Third, technical officers do not always have occasion to cooperate across sectoral lines. The virtue of PRA is that it starts with a problem and seeks solutions, independent of sectoral responsibility. The reason why water, agriculture, and forestry have cooperated vigorously in Mbusyani is that one of the major activities has been rehabilitation of a reservoir in which technical help from all three ministries has been required. Thus, at least in the case of Mbusyani, PRA has promoted intersectoral cooperation in resolving problems of sustainable production.

Donor and NGO Assistance

A problem that prevails in much of rural Africa is dependency on outside help. Rural communities wait, beg from donors, or implore help from politicians to get water systems, agricultural supplies, or tree nurseries. This "client" relationship is demeaning and perpetuates a second class status for rural communities. PRA suggests there is a great deal that rural communities can do themselves.

The process of ranking needs and designing solutions in Mbusyani placed initiative in the hands of the rural groups in ways that identified: (a) what steps community groups themselves could take; (b) what services and materials they can organize from local extension staff; (c) the role of NGOs; and (d)

how requested donor assistance can complement items 'a' through 'c.'

Mbusyani's experience suggests that external funds the community raises actually reach the intended beneficiaries. At present, donors are not set up to respond to rural requests. While structures for such support are potentially available, the present donor process of project identification and design relies on centralized and external agencies. PRA shows that a "bottom-up" approach in village assessment produces tangible results. There is now equal need for donors and governments to direct a portion of their efforts to respond to such locally identified project design.

Sustainability

The crux of the issue in rural development is how long Mbusyani will carry on without continued encouragement or help from NES, an NGO, or other external sources. It is too early for a final judgment. However, a number of interesting and perhaps significant results have been observed.

First, much of the PRA follow-up has been carried out by the community. Bench terracing, fence post installation, watershed rehabilitation, and well-digging have been completed independent of outside help.

Second, a local Kenyan NGO discovered Mbusyani's VRMP and turned it into a fundable proposal. While delays within the UN bureaucracy dampened the initial enthusiasm, the funds have finally come and both the NGO and Mbusyani are benefitting. There will probably be additional "joint" ventures.

Third, both the Ministry of Agriculture and the Ministry of Water Development have been moved to provide assistance they would not necessarily

have provided. In both cases, they did so because the community was organized and the ministries knew that any supplies made available would be put to good use.

The point that persists throughout the PRA is its capacity to: (a) focus attention on problems that people already knew about but have been unable to act upon; (b) organize solutions that were not previously contemplated; (c) integrate services of

local labor, skilled technical officers assigned to the region, and external inputs; and (d) give the entire community a target as well as a systematic way to achieve it. The experiment in Mbusyani was quick (less than 10 days), inexpensive (less than \$1,000), participatory, and provided the community abundant and systematized data that has led to the VRMP. Thus, the PRA methodology has been effective, at least in one community, in turning data into action.

GUIDELINES AND SUGGESTIONS FOR POTENTIAL USERS

Raised Expectations

One concern of PRA is the expectations which it arouses. If communities spend several days discussing and ranking needs, they want to follow up with action. While the PRA team is concerned primarily with creating a plan, it cannot detach itself from providing solutions. Experience shows that results are best when the PRA team helps the community to identify sources for solutions.

In part, these solutions lie within the community itself and should be called upon. In part, solutions are within the jurisdiction of technical officers (water, agriculture, etc.) on the PRA team. In part, however, solutions lie in bringing resources from beyond the community, mostly in the form of materials not available locally. For example, one PRA team found hand tools for women's groups; another brought marketing guidance from a national horticultural agency; another helped the local water engineer bring hand pumps and roof-top catchment building materials which the villagers installed themselves. If those carrying out PRA have no means to provide small external assistance, they may create conflicts and frustrations that will defeat the purpose of the PRA action plan.

Two points are crucial on the role of external help. First, the outside resources are a small part of the overall project effort. Yet without them, the PRA "solutions" may never get off the ground. Thus, PRAs succeed for many reasons, including mobilized community institutions, strengthened local leadership, activated technical officers, and enlivened NGOs. But one additional element is finding modest external help that can coalesce all of these elements into productive activities.

Second, the eventual goal of PRA is to enable communities to find their own external assistance. For natural resources management and production to be sustainable, communities need to know about sources of assistance available and how to access it. For example, in one case, the momentum of a Kenyan PRA led to creation of a village committee, the chair of which was a retired school teacher. She wrote a short proposal, based on the PRA team's data, to the United States Embassy's Self-Help Fund, for a maize grinding mill. The fund manager noted that the proposal was one of the best researched and supported documents they had ever received. It was immediately awarded the money. In a second case, a women's group activated through PRA has now begun raising funds from within the community for self-improvement projects. Those embarking on village PRAs should keep in mind that strengthening community institutions is a long term effort and that modest but persistent nurture may be necessary to make communities sustainable.

Majority Will/Minority Sensitivities

PRA draws upon consensus building among leaders and institutions in rural communities. While some villages have long-standing traditions of openness and equitable involvement in local decision-making, others do not. In one PRA community, men had traditionally dominated in managing the affairs of the village; suggestions from women's groups were, at first, not welcome. In another, a cluster of friends of the Assistant Chief tried to dominate selection of opportunities. In still another case, where the poor of the village tended to live in the drier micro-zone, there was a clear attempt by "wealthy" farmers to steer water rehabilitation towards their already moist area.

Such expressions of self-interest are normal and the daily fare of village politics and mobilizing communities. PRA is not immune. Yet, because PRA seeks to implement sustainable resources management activities, it is mandatory that those managing PRA bear in mind the joint goals of production AND equity; development AND conservation; growth AND sustainability. These are not contradictory concepts. Yet without careful planning, village social stratification could evolve into interest groups manipulating the methodology of PRA into self-serving local projects. While such problems have not arisen at any of the PRA test sites to date, it is a constant possibility and needs to be anticipated.

PRA as a Flexible Approach Rather than a Rigid Structure

PRA is not a static methodology. Rather, it is a philosophy or orientation in which various data gathering and problem/solution ranking can be carried out amongst community, technical, administrative, and NGO institutions. The degree to which some aspects of the "PRA Approach" require amendment and expansion will depend on the local need and the imagination of the PRA team and village leaders doing the work. In the five case examples coming from Kenya, local teams have amended the ranking methodology, sub-divided the transect, simplified institutional diagrams, added

greater stress on gender issues, and more. The point here is that the basic steps noted in this article are suggestive rather than prescriptive and should be treated accordingly.

PRA as AN Approach Rather than THE Approach

PRA is a new way to look at village data, rural priorities and aspirations, and potential interventions. It offers possibilities of restructuring the way rural planning and resources management take place. Yet nothing in this article should be interpreted to mean that the PRA process can replace national and district planning, data collection and analysis by various government agencies, technical and economic feasibility studies, environmental impact statements, or extension services provided by technical officers. Rather, PRA should be considered as a supplementary methodology that gathers site-specific data, integrates sectors, involves beneficiaries in the planning, links extension services directly with rural communities, and sets in place a plan of action that local institutions take seriously. As the development community searches for means to introduce sustainable development, PRA appears to bring a mix of elements not present in most donor and government initiated methodologies. To this extent, PRA warrants further testing and refinement in various ecological, cultural, economic, and political settings.

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