



World Neighbors **IN ACTION**

Understanding the Link Between Population and Environment Through Participatory Action Research

*Using examples from Burkina Faso, this issue of **World Neighbors In Action** focuses on the process used to help local partners analyze their reproductive health problems in relation to their environment and to plan activities to address these problems.*

Burkina Faso is a landlocked country in the Sahel region of West Africa. Ninety percent of Burkina's population depends on agriculture and livestock for its livelihood.

In this semi-arid area, the majority of families survive primarily on subsistence farming dependent on a short four-month rainy season. As population pressure on land has increased, traditional farming practices that included long fallow periods and crop rotation as a means to maintain soil fertility have decreased. More marginal land has been cultivated and less pastureland remains for the animals of semi-nomadic pastoralists migrating south from the sahel, causing overgrazing. These practices have resulted in the loss of soil fertility and erosion, reducing the productivity of the arable land and diminishing food security.

Coping mechanisms for the long dry period include seasonal male migration to the coastal areas as short-term labor and the exploitation of the natural resource base. Because of this migration, women are often left to meet the family's needs. In an effort to generate income, trees are frequently harvested to sell as firewood and charcoal. Faced with few other options for earning income, this environmental exploitation provides families one means of securing food during the lean season.

It is in this context that World Neighbors has been implementing a development program in rural Burkina Faso since the 1980's. World Neighbors



Many factors play a role in women's reproductive health.

works in two provinces in marginalized areas characterized by difficult access, weak social, health and education infrastructures, little outside intervention and a low level of local organization.

World Neighbors' integrated program addresses sustainable agriculture and food security, natural resource management, community and reproductive health, and capacity building to strengthen the ability of community organizations to implement self-development initiatives.

World Neighbors emphasizes strengthening the capacity of communities to identify and analyze their needs, identify solutions, implement and evaluate results. A participatory approach is used to permit the local population to carry out a holistic and integrated analysis of their own development issues.

A series of impact evaluations of these integrated programs revealed that the local reproductive health needs were not adequately being addressed. Those involved in the program decided to conduct an action learning process to better understand reproductive health problems, as well as the community's perceptions of these issues, in order to develop strategies to better address them.

Three exercises are presented here, along with the overall action learning process. The first explores the many factors, from culture to environment, affecting women's reproductive health. The second exercise explores linkages between population and environment. The final exercise assists in the identification of actions to be taken.

The Action-Learning Process

Objective:

Help communities to analyze their reproductive health needs, identify the social and cultural constraints and other influential factors, and develop action plans that will allow them to meet their identified needs.

Methodology:

Action-Learning Facilitation Team

Those people who were actively involved in implementing this program played a role in facilitating this session:

- leaders of local organizations (association leaders, women leaders, and community health workers): facilitators of group discussions;
- World Neighbors' program staff: facilitators (training the team, note-taking, facilitation of analysis session, etc.);
- Local public health agents and other qualified resource people: facilitators and exterior resource people to help increase the quality of the work and methods. The resource people also carried out a household survey related to population and environment.

This team convened a training session for itself to review and adapt the action research tools and methodology as well as to be trained in participatory methods.

Tools Used:

Several tools related to the themes to be explored were designed not only to collect results, but also to analyze the information and identify actions to take. To the extent possible, these tools were presented visually using colors and locally appropriate symbols to illustrate the steps or the types of information being solicited, in order to make it easier for non-literate participants to understand. These visual tools were followed by semi-structured interview questions which helped to deepen and analyze the information generated.

Key tools:

- Reproductive Health Problems
- Reproductive Health Practices and Decision Making Mechanisms
- Sources of Information about Reproductive Health
- Effects and Making Decisions about Reproductive Health
- Women's Priorities that Affect Their Reproductive Health
- Questionnaire on Population and Environment
- Community Action Plan



Tool used to identify
'Women's Priorities
Affecting their Reproductive Health'

Gathering Information

A participatory approach was used to conduct these sessions. This entailed primarily qualitative research based on discussions with groups as homogenous and representative as possible (men and women, younger and older people, representatives from different ethnicities and parts of the villages), as well as with village health promoters (traditional birth attendants, traditional healers, etc).

A mini-survey was also carried out with randomly selected households in the vil-

lages where the program operates, as well as in comparison villages. For this survey, individuals within the household between 15 and 45 years old were interviewed.

The purpose of the survey was to collect information about the interviewees' opinions about the relationships between the population issues and the environmental issues that were present in the local context and in the areas where the program operates.

Feedback:

During data collection in each sample village, a synthesis of the information gathered was done every day. These syntheses were shared with all the participating groups and other community members, to allow them to make changes and corrections and to do analysis together.

Once the collection of information was complete, the facilitators and representatives from the grassroots organizations gathered for an analysis session.

Facilitators then organized a session with all of the program villages to more widely diffuse the findings and to draw out specific concerns.

One session was organized with program partners, particularly health services, to inform them of the key results, to complete the analysis, and to assess the technical feasibility of the actions proposed by the local participants.

Description of Some Tools Used

In light of the number of tools used, we can only present here those tools relating to the theme of population and the environment.

Each tool includes a small introduction about the relevance and importance of the tool, the objectives, the materials needed, the steps, an illustration or framework, the key results and commentary.

Tool #1: Women's Priorities That Affect Their Reproductive Health

This tool is designed to help women's groups analyze the factors that affect their reproductive health.

Access to health care is a real problem faced by most women that have poor income. As one of the women interviewed said, 'A woman that is involved in a goat rearing scheme has easy access to health care, thanks to the income generated from the sale of the goat.'

Objective:

Identify and analyze women's priorities that significantly influence their reproductive health

Participants:

Women of reproductive age and women of menopausal age, in separate groups

Materials:

Cards (multiple colors), flip chart paper or newsprint, markers, tape

Steps:

1. Problem Identification

Ask the participants to list the major problems that women in the community face. Write each problem on a card.

2. Categorization of the Problems According to their Influence on Reproductive Health

Group the problem cards into two categories:

- Problems that have a large effect on women's reproductive health
- Problems that have less of an effect on women's reproductive health

3. Semi-Structured Interview about the Reasons for the Categorization

Ask the participants to describe the criteria or reasons they used to place each problem in its category, taking problems from each group as examples.



Focus group discussion with reproductive age women

Examples of Women's Problems/Priorities	Problems with a Large Effect on Reproductive Health	Problems with Less of an Effect on Reproductive Health
Health Centers not easily accessible (distance, conditions of the road/path, lack of transportation)	X	
Women's workload (fetching water, gathering wood, etc.)		X
Poverty	X	
Hunger	X	
Illiteracy		X

4. Follow-up

If the participants worked in separate groups, bring them back together to review the results and synthesize the information.

If there are drastic differences in the results of the various groups, facilitate a large-group discussion to prioritize or classify the problems for consideration at the action-planning stage.

When prioritizing, consider the seriousness of the problems, their frequency or scope/extent, their overall importance and the possibility of taking action to address them.

Tool #2: Community Survey Regarding Questions of Population and Environment

Facilitators used a community survey to collect precise information that provides an in-depth understanding of the subjects/themes presented. This information helps with planning, and serves as a baseline for future program evaluations.

Only the section of the community survey that addressed reproductive health and environment is presented. Facilitators conducted individual interviews using a questionnaire designed to evaluate the local populations' knowledge, attitudes and practices relating to reproductive health.

Objective:

To assess the local level of knowledge regarding population and environment

Participants:

Individuals of reproductive age from a sample of households chosen randomly in both program villages and in comparison villages.

Note:

- Local resource people, as well as external resource people who have a strong knowledge of the local language, can be trained to administer the questionnaire.
- This article will not address all of the steps involved in developing the survey, collecting and analyzing the responses or the contents of the different parts of the questionnaire. We focus here only on the parts of the survey relevant to the theme of population and environment.

Knowledge of the Connection Between Population and Environment

- How would you describe the change in each of the following environmental components in your community over the past 10 years? Would you say that it has significantly improved, improved, has not changed, deteriorated, or has significantly deteriorated? **(Check the box corresponding to the response for each component.)**

Component	<i>Significantly Improved</i>	<i>Improved</i>	<i>Not Improved / Same</i>	<i>Deteriorated</i>	<i>Significantly Deteriorated</i>
Conditions of the Forest					
Cover Vegetation					
Conditions of the Soils/Cultivated Areas					
Wild Animal Resources					
Availability of Water					

- (Referring to question 1, ask about components that have significantly improved or improved.)** What do you think are the reasons why the environmental component in your community has improved in the last 10 years?

Reasons for Improvement in component (from 1)	Check Here
a. Increase in knowledge/awareness of environmental conservation	
b. Good programs for rehabilitation/management of resources	
c. Reduction in the rate of abusive tree cutting	
d. Reduction in the rate of brush burning	
e. Protection of cover vegetation/efforts to protect the forests	
f. Use of appropriate agricultural practices	
g. Reforestation	
h. Decrease in pollution/waste	
i. Other (Specify)	

Tool #2: Continued

3. **(Referring to question 1, ask about components that have significantly deteriorated or deteriorated.)**
 What do you think are the reasons why the environment component in your community has deteriorated in the last 10 years?

Reasons for Deterioration of Component	Check Here
a. Lack/insufficient knowledge/awareness on environmental conservation	
b. Lack/insufficient programs for rehabilitation/management of resources	
c. Illegal activities (i.e. tree cutting)	
d. Increase in population	
e. Increase in the utilization of resources	
f. Detrimental use of technical advancement	
g. Weak enforcement of laws and ordinances	
h. Modification in farming methods	
i. Increase in pollution/waste	
j. Other (Specify)	

4. In the past 10 years, has the number of people in your community...

(Read response categories to the respondent and circle only one response)

- a. Increased
 - b. Decreased
 - c. Stayed the same
 - d. Don't know
5. Over the past 10 years, what are the environmental changes that have been influenced by population growth in your community?
 (Circle all that apply.)
- a. Loss of soil fertility
 - b. Deforestation
 - c. Insufficient water supply
 - d. Increase of pollution/waste
 - e. Limited space/land in the community (cultivated)
 - f. Other (specify)
 - g. Don't know
6. What is the ideal number of children for couples to live in harmony with the environment?



**Water availability is among one of the highest priorities for women.
 Here women form a long queue to fetch water from a remote borehole.**

Results

Given the volume of information generated by the survey, we present here only the portion of the results illustrative of the connection between population and environment.

According to the survey respondents, considering the difficult socio-economic

context, the constant degradation of the environment and the decline in living standards, the ideal number of children that will permit a couple to live in harmony with their available resources is five (5). For those surveyed who had an education level of primary and higher and those who were single, the number was four (4) children.

When one considers that in Burkina Faso the average number of children per woman is 7.3 (according to the Ministry of Health), one can truly appreciate the relationship highlighted by the survey between the family size and the use of environmental resources.

Characteristics of the Population	Opinion of the Population (%)	Environmental Changes Influenced by Increased Population							Number of Respondents
		Diminished Availability of Potable Water	Destruction of the Brush	Increased Waste Material	Limitations of Cultivable Lands	Increased Burning of the Bush	Abusive Cutting of Trees	Animal Grazing	
Survey Area									
Program Area	78	64	56	23	64	31	49	24	728
Comparison Area	78	76	40	15	68	28	45	30	256
Gender									
Male	84	69	57	23	68	35	53	30	478
Female	73	65	47	19	62	26	44	21	506

Characteristics of the Population	Ideal Number of Children for Couples to Live in Harmony with Resources of their Environment	Ideal Number of Children for Couples to Live in harmony with Resources of their Environment (%)				
		Less than 4 Children	4 Children	5 Children	6 or more Children	Total
Survey Area						
Program Area	5	13	29	25	23	938
Comparison Area	5	10	17	17	37	327
Gender						
Male	5	14	27	21	29	568
Female	5	11	25	24	25	697

Follow-up

Following analysis, present the results in a manner comprehensible to the local population (percentages, graphs,

timelines) and determine with them the trends in the local knowledge, practices or attitudes relating to the themes/points considered.

The important problems that emerge from the results should be considered during the planning stage (see Tool #3).

Tool #3: Community Action Plan

At this stage, participants have identified the priority problems in the different domains (reproductive health, population, the environment), and other problems important to women. This tool helps to analyze the significant causes of these problems and to identify possible solutions to resolve them.

Objective:

To analyze the problems in order to identify the main actions to take to address these problems.

Participants:

The same as in Tool #1 (Women's Priorities)

Note:

To illustrate this exercise, we use the results from the first exercise as an example.

Materials:

Cards (at least three colors), flip chart paper or newsprint, markers, tape

Steps:

1. Analyze the causes of the identified problems
 - Use the problems that have been identified during the exercise in Tool #1
 - Ask the participants to identify the main causes of each problem; write each cause on a card (use a different color card for the causes, i.e. yellow, and the problems, i.e. blue)
2. Identification of Actions
 - Ask the participants to identify the actions to take to address each problem and its causes; write these actions on cards of another color, i.e. green.

Note:

- A simple chart that includes problems, causes, solutions, who will take action, when, and where, can be used in steps 1 and 2 with all groups involved.

- As a third step, convene a limited and specialized number of persons to formulate detailed action plans based on those identified in step 2.
- Participants can amend identified actions to reflect the analyses: prioritization, classification, analysis of constraints and opportunities, technical feasibility, possibility to have positive results in the short-term and medium-term, etc. This allows problems to be retained for consideration at the planning stage, which can be done by creating an intervention chart and a chart of activities to carry out the plan.
- The participants may also decide to consider only the problems that had a large effect on reproductive health.

Women's Problems and Priorities	Main Causes	Actions to Take
Difficulty accessing medical services/care	<ul style="list-style-type: none"> - Distance from the health centers - Poor condition of paths, particularly during rainy season - Lack of transportation - Increased costs of services and medicines 	<ul style="list-style-type: none"> - Implement community-based health services strategy - Put in place a transportation system to the health centers, particularly in emergencies
Women's Workload (collecting drinking water and wood, fieldwork, pounding grains)	<ul style="list-style-type: none"> - Low number and distance of sources for potable water, seasonal drying-up of water sources - Deforestation - No access to grain mills (low income, distance) - No access to agricultural equipment; women are therefore important source of work in fields 	<ul style="list-style-type: none"> - Increase the number of sources for water and wood - Provide appropriate technologies to women's groups - Strengthen women's skills in reforestation and construction of improved homes and stoves - Raise men's awareness of the need to relieve women of their heavy workload, particularly pregnant women
Poverty	<ul style="list-style-type: none"> - Insufficient revenue sources for women - No access to credit - Weak organizational and technical capacities of women 	<ul style="list-style-type: none"> - Strengthen women's skills for income-generating activities - Strengthen women's organizational capacities - Provide women access to credit
Hunger	<ul style="list-style-type: none"> - Low agricultural production - Insufficient agricultural equipment - Low or no stock of cereals/grains 	<ul style="list-style-type: none"> - Provide women technical training (soil and water conservation) - Build up grain stocks available for circulation in the cereal banks - Involve women in the management of the cereal banks
Illiteracy	<ul style="list-style-type: none"> - Distance of literacy centers - Literacy classes offered during inappropriate hours for women 	<ul style="list-style-type: none"> - Decentralize literacy centers in villages and neighborhoods - Create women's literacy centers
Little knowledge of the impact population has on the environment	<ul style="list-style-type: none"> - Lack of awareness-raising activities the relationship between P&E 	<ul style="list-style-type: none"> - Conduct Information, Education and Communication (IEC) activities on population and environment issues - Train resource people on population and environment
Harmful environmental practices	<ul style="list-style-type: none"> - Community leaders give low priority to environmental issues - Leaders lack skills and knowledge on environmental issues 	<ul style="list-style-type: none"> - Integrate an environmental component in development programs - Train resource people on environmental issues - Lobby administrative, political and traditional authorities

More Resources On Integrated Programs

World Neighbors In Action: Understanding Reproductive Health/Natural Resource Management Integration in the Philippines



This issue of *World Neighbors In Action* presents key aspects of design organization and findings of a workshop held in the Philippines for NGOs to share experiences in integrating reproductive health and natural resources management.

Workshop participants explored common issues for integrated RH/NRM, common assumptions and next steps for working

together on priority issues identified.

8 pp; English/French/Spanish; \$2.00 plush shipping; 2003

Gender and Decision Making: Kenya Case Study



This report presents the methods and results of a series of workshops focused on gender and decision making at the household level. Conducted by World Neighbors staff with participants from Makueni District, Kenya, the workshops helped community members discuss and analyze how decisions about family resources and childbearing were being made, and what impact these patterns had on men's

and women's well-being. The publication outlines three participatory exercises as well as the results and key lessons learned from the process.

24 pp; English; \$5.00 plus shipping; 2000

Evaluating an Integrated Reproductive Health Program: India Case Study



This report details the methods and findings of a participatory evaluation of integrated reproductive health programs in two villages in India, with comparisons to a third village that had no reproductive health programming. The results suggest that the integrated approach used by World Neighbors - India and its partners is effective in achieving high rates of reproductive health knowledge and positive practice, improvements in women's status, and significant benefits from participation in savings and credit programs.

60 pp, available in English. \$10.00 plus shipping; 2002

World Neighbors is a people-to-people, non-profit organization working at the forefront of worldwide efforts to eliminate hunger, disease, and poverty in Asia, Africa, and Latin America.

World Neighbors' purpose is to strengthen the capacity of marginalized communities to meet their basic needs. We affirm the determination, ingenuity, and inherent dignity of all people. Working in partnership with people at the community level since 1951, World Neighbors is recognized as a leader in participatory community development.

Program priorities are sustainable agriculture, community-based health, gender and reproductive health, and capacity building.

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