GOD'S EARTH
Our Choices

A Panel Presentation on "The Light of God's Creation"
FWCC Triennial, Ghost Ranch, New Mexico, United States
August 17, 1994

The Light of God's Creation

Stephen Collett

Could there be a better locale in which to consider the light of God's creation? Through the hours of the day and night this landscape expands and recedes before the viewer as though each formation drew a living breath from the light.

It is possible for humankind to forget, for short periods in our lives and histories, that we are *of* the earth and *in* it as part of God's creation. Archeology gives us evidence of the fate of those who ignore their impact on nature for too long—the Mayans, the Romans, the peoples of Mohenjo Daro and of Mali. Our sins against the creation have multiplied many times over in modern societies. We have left for our descendants an archeological nightmare of toxic wastes, a drastic reduction in the lifeforms which share the planet, and frightening rates of decline in the productivity of soils, the availability of fresh water and the stability of the global climate.

There are two chief forces which drive the dynamics of this decline: one is poverty and the other is affluence. In neither situation are people making ecologically sound decisions.

The world's environmental crises and the social and economic dynamics which drive them were the subjects of the Earth Summit—or the United Nations Conference on Environment and Development (UNCED)—held two years ago in Rio de Janeiro. It is the opinion of the Quaker United Nations Office that this conference—some eight years in the making—was probably the most significant single event in the United Nations' history. In short, it established guiding principles and programs for *sustainable development*, a new general theory for human social and economic activity which can—and must—wean us as a species from our self-absorption and selfishness in our use of the earth's resources.

As for the implementation of the Earth Summit agreements, some elements are already coming into law, as with the *conventions* or treaties on climate change and on the protection of biodiversity; and more recently in the convention to combat desertification. The Quaker UN

Office has been working closely the past two years with African states and the major donor countries to support the drafting of this new legal instrument of international action to protect drylands. Drylands encompass forty percent of the earth's habitable surface, and one sixth of its people; and the convention, which has been called the first *development* treaty, can have a major influence for the protection of soils and the provision of food security.

Not all the Earth Summit agreements are law, for in many areas we have only begun to define the coordinates of where a more responsible path might lie where we are far astray. But one factor which UNCED identified characterizing all aspects of the sustainable approach to stewardship of the earth is that *people* must be at the center. None of the proposed undertakings can proceed unless individuals and communities are empowered to assume responsibility for the sustainability of their local environments. Sustainable development depends on participatory decision-making and the rights to information, referendum, compensation and, through all these means, to a democratic process.

My colleagues here this evening are going to tell us about efforts they are involved in with their communities to effect this historic and critical change.

Quaker Participation in the Alleviation of Poverty in Tanzania

Silas M. Keza-Kubi

Friends, it gives me pleasure to share with you what we Quakers in Tanzania are doing in development. Tanzania is one of the three East African countries (others being Kenya and Uganda). Its main features which are known the world over are Mount Kilimanjaro (which stands 5,895 meters or 19,100 feet above sea level) and the Serengeti National Park. Tanzania has a population of about twenty-eight million people. About fourteen percent of the population live in cities, while the remaining eighty-six percent live in the rural areas. There are more than 130 tribes in the country. We thank God that in spite of all those tribal differences we have lived peacefully since independence. This is the most valuable feature we have in Tanzania.

Historically, Tanzania Yearly Meeting was started by immigrants from Kenya who came to settle in Tanzania. It started as a monthly meeting under the then East Africa Yearly Meeting. It was in 1986 that it became a Yearly Meeting of its own.

The Poverty Effects

Those who have been to our Yearly Meeting know that our office is situated in the rural area. It is agreed that in all poor countries the rural people are poorer than the average in that given country. The estimates are that at average rural Tanzanians, most of whom are subsistence farmers, earn less than $200 per year. Since about eighty-six percent of our population live in the rural areas, more than twenty million Tanzanians subsist below that amount. It is this status quo that has led us Quakers in Tanzania to take seriously the whole issue of development.

Poverty is indeed a vicious circle. A problem caused by another problem causes another and so on and on—and it is always difficult to discern on which part of the circle to make the first cut.

As Quakers we humbly admit that we do not have a single answer to the people's problems. So our philosophy in all of the development activities is "helping people to help themselves."

From experience, we have come to realize that, in our society, one group of people suffers more from the effect of poverty than the other. That state can be seen in the following anecdote.

Boke is a young mother at Mtakuja village. It is a Monday morning and she wakes up at six. Strapping her six-month child, Boke rushes to the spring to fetch water three kilometres away. From the spring she hurries to the field with her hoe where her husband has gone about an hour ago. She is likely to be shouted at by the husband because she is late in coming to the field. At noon she walks home to prepare the lunch, to come back to the field at about three p.m. to sow the seeds. This time Boke is alone. After sowing, Boke goes to collect firewood about five kilometers away from her home. From there it is time to fetch water again and, finally, she prepares dinner. This is the routine which will characterize Boke's daily life throughout her life.

Conservative estimates put it that a rural Tanzanian woman walks about 7,000 km per year in fetching water and in collection of firewood. She works about fifteen hours every day without any rest. So apart from reducing the intensity of the effects of poverty to the people, our projects try to influence a balanced carrying of these effects between men and women in the community.

Development Activities

So far, our development activities have been limited to one district out of the more than a hundred the country has. The district is Serengeti and it is the one in which our office is located. Also, it is the area in which most of the Quakers are found. However, I would like to point out that the projects we deal with include people from other churches and non-Christian communities as well. We hope to get into other districts when the resources allow us. Following are some of the projects we are involved in:

Water Projects. The purposes of these projects include reducing waterborne diseases by provision of clean water; reducing walking distances by bringing the water near to the home; and involving men in the whole issue of water, which traditionally belongs to women. Each well serves about 250 people. This number makes about fifty families.

All families using one well make a contribution to the maintenance fund, which is kept in a savings account in a bank. During the implementation of a water project, all able men from all homes which are to use a particular well participate by doing all the things which are within their ability. Funds from donors are used to meet costs which are entirely beyond the local people's ability. From beginning to end the wells belong to those who have worked on them and are to use them. The first seven wells, to serve about 1,750, were completed in 1992 and up to present are in good condition.

Heifer Projects. Apart from their economic purpose, these projects seek to involve men in animal husbandry, which in that society is also women's responsibility. Most men from these villages engage in poaching activities in the Serengeti National Park. So another aim of the projects is to keep men busy and, therefore, keep them away from the park. So far the church has received and distributed eighteen cows. The agreement with the beneficiaries is that every first female calf shall be given back to the church, which in turn shall give it to another family.

Planned Projects. Through encouragement by one donor organization we hope to begin research-oriented projects, particularly in the area of food production, with the aim of helping people to come out of the chronic food shortages. The projects will involve agriculturists and sociologists. We strongly believe that somehow the people can manage to feed themselves, but before that can happen a lot of concerted efforts must be put in to find the way.

So far two organizations have been the main donors of our projects. ICCO, which is a Dutch organization, has supported virtually all of the water projects. Heifer International, which is an American organization, is supporting the heifer projects.

On behalf of the beneficiaries of these donations and on our own behalf, allow me to extend our most heartfelt gratitude to all these organizations. And I request all Friends who in one way or another may come in contact with these donors to join us in thanking them. It has also been brought to our attention that some American yearly meetings and Quaker organizations are keen to support our efforts in development. I would like to thank you in advance and assure you all that whatever is

given for projects will go a long way in helping the most needy people in our society.

Conclusion

To conclude this sharing, I call upon you all, Friends, to continue thinking about the needy in our societies. Let us show our love to our neighbours. It is my strong belief that to do so is to confirm our Quaker tradition and make our testimony shine. The Lord bless you all.

Options to Conserve the Aymara Culture

Bernabé Yujra Ticona

My Friends, I want to let you know about the social work of the National Friends Church (INELA) in Bolivia. Our church began in 1926 in Bolivia with missionaries who had come from Guatemala. The evangelizing work began in rural areas around Lake Titicaca, because it was difficult to evangelize within the city of La Paz. From then to today, we have gained 190 churches, located in eleven districts. From 1926 to 1960 the Oregon Friends Mission was in charge of our meeting. Between 1964 and 1967 we organized the National Evangelical Friends Church of Bolivia (INELA), and our churches have continued the evangelizing work in the rural areas. The mission continued supporting us with equipment, tents and transportation.

But in our evangelizing work we discovered many problems and needs in the Altiplano of Bolivia. The Altiplano in Bolivia is inhabited generally by people of the Aymara culture, and part of the valleys by people of the Quechua culture. The primary need was for school education so that we could begin making the word of God known, and so that these children who attend Quaker schools could become educated according to Quaker principles. By the year 1974, we had developed 36 schools, one in the city and 35 in the country. I am the product of one of those schools in which I was educated. That is why I am able to be here with you. This foundation has motivated me to work much more in this area.

However, in moving forward God's work in both the educational and the spiritual areas, we encountered another problem, especially in the rural areas. That was the social area. People didn't have ways of sustaining themselves and their families with the crops and the livestock that they have. There are constant climatic changes, so that they had difficulties with their potato crops and other products. They also had health problems. So we said to ourselves, "What can we do for these people? How can we show our love for them?"

So we have formed a team of veterinary technicians with whom we have been able to work towards agricultural and livestock improve-

ment. This group is called the Friends Evangelical Agriculture and Livestock Technology Service (SETALA). The team works in the agricultural area. We have at this time two livestock specialists and two agronomists. But we discovered just resolving their agricultural problems didn't end the matter; we still had the problem of health. That bothered INELA. So we began a project. We now have a health center in La Paz. It provides a moderate amount of medical care; I can't say that it's full care. Now we have a new project to raise funds for an ambulance. International Quaker Aid has given us support for this. This year we were able to buy a vehicle which we can now equip as an ambulance. The office of the World Committee already knows about our work. This is how we respond to people's needs in the rural area. The children also have nutritional needs. So we need to develop equipment to have a team who can work with them. We have forty agricultural development promoters in the field as well. Thanks to World Concern, which helped us at two different periods, we were able to train these forty promoters.

But there are still more needs, especially in the poverty of the Bolivian Altiplano. It's because of this that we've begun looking at how we can develop agroecology. We've had to come to grips with the problem of chemical fertilizers, which are spoiling the earth, just as the vaccines are weakening the animals. So we've begun investigating how we can return to the use of natural folk medicines for the animals, and use natural fertilizers in growing crops. That way, the crops we get will have much more nutritive value for people and the soil won't lose its fertility. This is what I can tell you about the work INELA is doing in Bolivia.

Treading Lightly...with Renewable Energy

Gillian Smith

The evening before I wrote this talk, I heard an astronaut describing the view from the moon. Everything he could see from the spacecraft was either black or white—the moon's surface, the stars, the space between—except for the small multicoloured jewel hanging in the black sky, which was our planet Earth. It was so small that the astronaut could cover it up with his outstretched thumb, and he was overwhelmed that he could do this to the entire world that he knew.

The Earth, our home, is remarkably robust but at the same time it is fragile, and we humans are having an ever greater influence on the health of our planet. Between the years 1900 and 1990, the world's population grew 3.2 times (to 5.3 billion people), and over the same period of time, world energy consumption grew more than 14 times. In the next hundred years world population is expected to double. We need rapidly to rethink our attitudes towards energy, and fortunately this is starting to happen.

Our demand for energy is really a demand for the services energy can supply: heating (and cooling), lighting, cooking, and transport. Energy is also needed for industry: to produce raw materials such as steel and concrete, to manufacture everyday objects, and to provide services such as clean water.

In the past, energy was obtained from wood and charcoal, and then, as demand grew, mainly from coal, oil and gas. As we now know, the increasing consumption of these so-called fossil fuels (the coal, oil and gas) is bad for our planet, through the pollution caused by smoke and acid rain and through the release of carbon dioxide gas into the atmosphere which is causing the planet to warm up and our climate to change.

Another reason that we are foolish to rely on fossil fuels is that they are energy supplies which cannot be replaced: in a few hundred years we are using up reserves of concentrated energy which took hundreds of millions of years to create. Furthermore, because coal and oil reserves are found in just a few places, energy supply has got mixed

up with international politics and can be a source of conflict between nations.

Whichever way we look at it, we need to move away from using fossil fuels; we need to look to cleaner, more earth-friendly means of meeting our energy needs.

First we can reduce the amount of energy we use, by cutting out unnecessary use and by using energy more efficiently. For example, cooking stoves can be made so that more of the heat is used for cooking and less is lost up the chimney.

At the same time we should look at our energy sources. One way to avoid relying on fossil fuels, according to some, is to use nuclear power stations, but these are becoming more and more unpopular and I will say no more about them. However, I think we can allow ourselves one nuclear reactor—this is the sun, our primary source of energy!

Sunshine delivers energy as heat and light to the Earth at a rate equal to around 10,000 times our entire energy consumption. We can consider the sun's energy supply to be enormous, continuous and free. The energy supply methods that we call "renewable" collect the sun's energy almost on the same time scale that it arrives and thus we stay close to the natural energy balance of the earth.

I will now talk about some of the different kinds of renewable energy sources and give some examples of how they are being used.

We can collect the sun's energy through photovoltaic panels (sometimes called solar cells), which produce electricity directly from light. One use for these panels is for portable refrigerators for medical supplies in hot countries; and in India there is a national programme for installing PV-powered water pumps and telephones in rural villages.

We can also supply energy from other natural forces which are powered by the sun. The sun's heat drives the Earth's weather systems, producing winds which can drive windmills to do mechanical work such as sawing wood or grinding corn or pumping water. Alternatively, wind turbines can make electricity, which is what the new wind farms in California and Northern Europe and many other countries are doing.

Wind also produces waves on the sea which can be harnessed using devices which are either tethered in the open sea, or built into

cliffs and seawalls. The tides can also provide power, using the rise and fall of the water or watercurrents.

Wind and sun together evaporate water from the oceans. When this water falls as rain in the mountains, it can be used to drive waterwheels and hydroelectric units. In Nepal, power supplies for individual villages are being produced by diverting fast-running streams through small waterwheels. These contrast with the enormous hydroelectric dams in other parts of the world which are now the subject of much debate.

Another popular renewable energy source is biofuel (trees to you and me): Here the energy from the sun is used to cultivate fast-growing plants which are then used as fuels.

There is no single "right" type of renewable energy source. We should use the most appropriate for where we live. One thing we have to take into account is that on each individual patch of the Earth, renewable energy sources are not very concentrated and not very constant: wind comes and goes and changes direction; waterflow in rivers varies according to season; clouds sometimes block out the sun. We can try to concentrate the sources and smooth out the variations, for example:

—by damming a river to make a large artificial lake to feed a hydroelectric power station;

—by building a barrage across a river estuary to harness the tides; or

—by constructing a large array of mirrors to focus the sun's rays to heat a furnace.

But often we find that the more we try to control nature, and the bigger the schemes we develop, the more problems we cause because of the interlinking of nature's systems.

The better approach for getting the most from renewable energy sources is to use several types together. In general, for example, when the weather is wet and windy, it is less sunny, so a system could use sunpower and wind- or waterpower to complement one another with perhaps a battery to store surplus power as electricity. In this case I am thinking of a stand-alone system that might be suitable for an island or isolated community.

Modern technology is providing control systems to operate such multiple systems most efficiently. However, for all systems you have to balance the apparent advantages from efficient-but-complex technologies with those of a simple, easily-understood and easily-maintained system which may be better in the long run.

The need for energy supply systems to be appropriate to a local situation makes them obvious candidates for decision-making at the local level and for community involvement. This is equally true in rural and more industrial places. By their nature, the machines or systems for capturing the renewable energy are located where the energy source is, and it is also most sensible to locate them close to where the energy is going to be used.

This means that people will be living beside their energy source, whereas with power supplied from fossil fuels, the electricity may be generated at a power station many miles away and all the people see are the electricity lines bringing the power. For example, if we decide to use wind turbines, we must accept that they will be visible around the countryside. Acceptance of a new and different technology is often difficult, and personal involvement usually makes it easier. In Denmark, wind turbines are more popular if they are owned by local cooperatives who also derive direct benefit from the machines; wind turbines owned by investors living miles away are much less loved. In Holland some wind turbines are given names which make them more acceptable somehow: one group of turbines near Rotterdam is called "Donald and his nephews."

For me, the development of renewable energy sources rather than fossil-fuel sources is one example of how we have to choose wisely in the use of our engineering knowledge and skills. We cannot expect to solve all the world's energy problems at once but we must try to help with every little step that we take.

And for successfully increasing the use of renewable energy sources, the lessons seem to be (as with many things in life):

—to use the most appropriate method for where we are;

—to keep projects to a human scale, using local knowledge and decision-making.

This way there is a better chance of people living together happily and with least disturbance to our home, that fragile multicoloured jewel, the Earth.

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These Friends shared their thoughts as part of a panel presentation on "The Light of God's Creation" at the 18th Triennial of the Friends World Committee for Consultation, held August 15 through 24, 1994, in Ghost Ranch, Abiquiu, New Mexico, USA.

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