

BRIDGES ACROSS THE SOUTH

FOOTAGE

IMAGE

SOUND

NARRATOR

000

EUROPE CROWD

SHOTS

Today most of the rich people in the world

live in the North, in cities, consuming a

disproportionate amount of the world's finite

resources. Most of the poor, and there are

many more of them, live in the South mostly

BANGLADESH CROWD

SHOTS

in rural areas. In recent history, the road

to riches has seemed to point North -

Northern ways - Northern technology. But it

POLLUTION SHOTS

was a road imposed by force in many cases,

and it hasn't always taken people, rich or

poor, where they wanted to go.

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PERSEPOLIS ABU

SIMBEL

In ancient history the road meandered between
the great civilizations of the southern world.

All twentieth century technology has its

roots in these ancestral cultures of today's

third world, cross fertilized through

centuries of trading, exploration and wars.

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But when Europe launched its search for new empires the ancient trade routes were severed, and replaced by exclusive North South links between the colonial powers and the colonies. In many parts of the world, local economies and cultures were distorted to meet European needs for labour and raw materials. Local skills were scorned and eventually forgotten. Everywhere the assumption took hold that Northerners knew best. What worked in the North would surely work in the South.

063 BOROBUDUR

Today these attitudes still linger but they're being challenged - Southerners are looking for Southern solutions, and they're re-opening their lines of communication.

071 MAPS

073 SUPER TITLE :
BRIDGES ACROSS THE SOUTH

080 ZOOM IN TO
COLOMBIA

Colombia, South America, is in fact a few degrees north of the equator, but by our definition it's a Southern country. Las Gaviotas, in the llanos, the remote eastern plains of Colombia.

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088 MAN ON WINDMILL

Two men, one from Colombia, one from Panama, part of a movement among Southern nations towards collective self-reliance. That sounds like a contradiction but it's not, because to reduce their dependence on the North, southern countries will have to help each other, and that is what TCDC, or technical cooperation among developing countries is all about.

107 BRAINSTORMING SESSION

Las Gaviotas is a research centre for appropriate technology. Jorge Zapp, a Colombian engineer, has travelled all over the world promoting the centre's inventions and looking for new ideas to develop. Tonight these scientists, engineers and students, all of them from developing countries, discuss problems they have run into with the design of a solar water distiller.

Luciá Gomez is a student from Ecuador, here for 3 months to gain practical experience.

134 STUDENTS AND ZAPP
WORKING ON SOLAR
DISTILLER

Northern technology is not free, it's developed for profit and sold to the Third World for billions of dollars a year. There are built-in restrictions on its use that can cause dependancy and crush local initiative. In many cases there are cheaper technologies just as good and often more appropriate, available in other developing countries. But how to get over the attitude that this is all second best.

153

Appropriate technology isn't necessarily small scale or "intermediate". Some nuclear technology for example, can be considered appropriate. And much of the less sophisticated appropriate technology is the result of very sophisticated research.

162 WINDMILL
STRESS TEST

At Las Gaviotas it took seven years and access to advanced computers to adapt the windmill to the winds of the llanos. Model number 56 can withstand the sudden squalls of the rainy season and still operate efficiently on the light breezes they get in the dry season.

181 CATTLE ON LLANOS

The soil of the llanos is very poor, and the vegetation fragile. Each head of cattle needs 10 hectares of grazing land. There is some forest which follows the streams and river beds, but if new settlers come and cut down the trees, there will be soil erosion.

Latin America was settled by people from temperate climates who did not know how to farm in the tropics.

199 HORSEMEN RIDING
DOWN STREET

At Las Gaviotas they are trying to make people "think tropically" and find ways for them to live on these plains without destroying them.

There are many developing countries with ecologically fragile areas like the llanos that could learn from the Las Gaviotas experience.

LAS GAVIOTAS
PLAZA WITH BICYCLES

Although horses are still used for herding cattle, bicycles have more or less replaced them on the llanos. The bicycle is one of the most efficient uses of human energy ever invented and in Las Gaviotas the principle is used in a variety of gadgets.

220 **FACTORY WINDMILL
 BLADE PRESS** A press for windmill blades in the factory that
 is mass-producing several Las Gaviotas
 inventions.

YUCCA SHREDDER A yucca or cassava shredder that can do in one
 day work that used to take a farmer two months.

230 **ZAPP WALKING TO
 LUNCH** About 300 people live at the Centre. There's
 a school, a small hospital, experimental farms
 and workshops. It's supported by the
 Colombian Government, and also receives funds
 from the United Nations system and the
 Netherlands, but it will soon be self-
 supporting thanks to the inventions of its
 scientists and engineers.

**LUNCH TABLE
 ZAPP AND LUGARI
 TALKING** Paulo Lugari, the Centre's Director, has spent
 10 years bringing his vision of a fruitful,
 settled llanos closer to reality. And now he
 has a further vision: to share the experience
 of Las Gaviotas with other developing countries,
 to make it a centre for technical cooperation.

257 ZAPP AND BERN BY
WINDMILL

Zapp and Lugari feel that Las Gaviotas should export knowhow, not gadgets. They think factories like their own could be set up in other countries with similar needs, so they want to invite technicians from abroad to spend time at Las Gaviotas. Samuel Bern is an agricultural engineer from Panama.

280 GROUP AROUND
HAND PUMP

At Las Gaviotas there are no secrets, no carefully guarded patents but a genuine desire to help other developing countries benefit from their experience.

In Panama they have developed a similar pump, but it's more expensive and not as efficient. This one costs only about 35 dollars and pumps more water with less elbow grease.

310 WATER RAM

A hydraulic water ram that can pump water using only the stream's energy. It's one of many gadgets developed at Las Gaviotas to take energy from the wind, water and sunshine of the llanos.

As a result of articles about Las Gaviotas in the international press, letters asking for information have been coming in from all over the world.

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(VOICE OVER)

324 LETTER FROM INDIA

"Dear Sir,

We understand your organization is quite active in the development of appropriate technology specially suited for rural areas.

TURBINE

There are several organizations....."

LETTER FROM PERU

335 LETTER FROM BANGLADESH

(VOICE OVER)

"Dear Sir, We have tremendous potentiality in manufacturing but unfortunately we lack in technology. We would be obliged....."

HYDROSTATIC PUMP

339 LETTER FROM ZAMBIA

(VOICE OVER)

"Dear Señor Lugari: We would like to obtain working drawings of the cassava shredder, the induction pump, the water ram and the solar heater..."

341 HOUSES WITH WINDMILL AND SOLAR HEATER

NARRATOR

In a house designed like the local Indian huts with a high roof for natural air-conditioning, its water pumped by windmill and heated by solar energy, Jorge Zapp relaxes with Samuel Bern. This kind of contact is all too rare in a world where it's mostly Northern scientists who can afford to travel.

353 ZAPP

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Technical cooperation between developing countries encompasses many things but perhaps first and foremost it's about forging links between the Zapps and the Berns of the world.

375 MAP

Cameroon in West Africa. A country that experienced German, French and British administrations.

380 LIBRARY

The University Centre for Health Sciences in Yaounde, the capital of Cameroon is one of the few schools in Africa to offer courses in advanced, post graduate nursing.

387 STUDENTS IN LIBRARY

Bataul Abderrahmane is from Tchad. She's in the final months of the two-year course.

Her two friends are also from abroad. Therese Saré from Benin and Felicima Ruhumbu from Burundi.

398 STREET SCENE YAOUNDE

Witch doctory, that's how most professionals dismiss the traditional medicine of the South. One legacy of colonialism in many countries was health care systems modeled on Northern medicine.

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405 DOCTORS WALKING ON
HOSPITAL GROUNDS

Big city hospitals often syphoned off most of the health budget and trained personnel. Rural people and the urban poor were neglected.

The news coming out of China about barefoot doctors, acupuncture and herbal remedies being used alongside modern medicine with great success has paved the way for a change in attitudes towards primary health care in other countries, a sort of philosophical technical cooperation.

424 PATIENT TAKING
STRESS TEST

A stress test on a patient with high blood pressure conducted by Gabriel Bone, a fifth-year medical student. No one is suggesting that poor countries should do away with properly trained doctors and specialists. But doctors are only one part of an overall health system and their training should emphasize this.

437 STUDENTS IN
LABORATORY

You need nurses, technicians, laboratory workers, sanitary inspectors and pharmacists. Mercy Bokondo is in her final year of laboratory studies.

450 STUDENTS ON CAMPUS

Mercy, Gabriel and the 3 foreign nursing students are all studying together under one roof. The Centre is unusual because it trains all members of the health teams needed for rural areas. To qualify for the advanced nursing course, students must have had 5 years' work experience. When they return home, these women will be teaching or inspecting rural health centres. The subject of today's lecture: "Health in the Work Place."

469 LECTURE HALL

Felicima, Therese and Bataul are not the only foreigners, nearly a third of the post-graduate nursing students are from other African countries, many on UNICEF scholarships. There is great scope for technical cooperation in the sharing of health expertise and training facilities but there are still problems to be worked out. The diploma given at the end of this course is not recognized in the home countries of some students.

496 LS VILLAGE

Bali, a small town about 300 kilometres away.

499 STUDENTS WALKING
THROUGH VILLAGE

Bataul, Felicima, Therese, Gabriel and Mercy

have left their classrooms and made their way here for a six-week stint in a rural health centre.

This area in the English speaking Northwest province of Cameroon is part of a public health demonstration zone; an effort to bring health care to as many people as possible by a rational use of the available resources.

523 EXT RURAL HEALTH
CENTRE

The Bali Centre serves about 30,000 people.

It has a staff of about 8 including midwives, nurses, sanitary inspectors and a pharmacist, but no doctor. The chief of the Centre is a registered nurse. He's trained to recognize the health problems that can't be treated at the clinic and refer patients to the nearest hospital, 45 minutes away by road. But in fact, most cases can be dealt with here.

540 INTERIOR CENTRE
STUDENTS TALKING
WITH NURSE

Primary health care puts great emphasis on community participation.

553 NURSE TALKING TO
MOTHERS ABOUT
MALARIA

Education of mothers is especially important.

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563 WEIGHING AND
MEASURING BABIES

Therese Saré has left her own four children,
the youngest only two years old, back in Benin.

She hasn't seen them for a year. That's how
much this opportunity for advanced training
means to her. While it would be nice if she
hadn't had to come so far, it will be a long
time before every African country can afford
specialized training in every branch of
knowledge. Until that time there must be
some coordination between countries. Regional
planning in higher education can avoid
duplication of effort and ensure that as many
students as possible are able to study, if not
in their own countries, then at least in an
environment similar to the one they're going
to work in.

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Batual went to nursing school in France for
a while, but she got homesick, luckily for
Tchad. Too often Southerners who study in the
North stay there, as a look at the staff of
many Northern hospitals will show.

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603 STUDENTS INSPECTING
LOCAL WATERWORKS

Clean safe water is absolutely essential for good health. The students are taken on a tour of the local waterworks by the sanitary inspector.

Clean water is something that health professionals in the North take for granted, but these students must be able to recognize sources of pollution, offer advice, and prod local authorities.

620 STUDENTS AROUND
WATER PIPES

The reorganization of health care systems so that they reach even the poorest people, will require revolutionary changes. Primary health care will be more acceptable and easier to implement for all countries if they realize that others are successfully using this approach. That's why the presence here of Bataul, Therese and Felicima has an importance beyond their personal gain.

642 4 STUDENTS EATING
BY LAMPLIGHT

643 WHAT DO YOU THINK
ABOUT THIS COURSE?

I'VE LEARNED MANY THINGS...

ABOUT THE COMMUNITY...

THE WAY PEOPLE LIVE AND THINK.

IT'S THE FIRST TIME I'VE STAYED IN A VILLAGE...

I'VE NEVER LEFT THE CITY BEFORE.

ME TOO. I'M NOT USED TO VILLAGE LIFE EITHER...

AND I THINK IT'S A USEFUL EXPERIENCE.

YES, VERY USEFUL.

665 MAP

The Philippines, an island nation in South East Asia.

671 ALIPIO'S BACKYARD HIS SON HARVESTING COCONUT TREE

Alipio Leander is a coconut farmer. His trees, which he inherited from his father, are about 60 years old, so they are very tall and difficult to harvest, and don't bear as many nuts as they used to.

The Government is offering incentives to farmers like Alipio to replace their aging trees with high yielding hybrids. Alipio's decision on the matter will be important because he's president of the local chapter of Cocofed, a Philippine growers' organisation.

694 COCONUT TREE AT
SUNRISE

The coconut is sometimes called the lazy man's tree. It doesn't need much looking after, and it seems to thrive all over the tropics. From earliest history it has been providing people with food and shelter. Various cultures have found a use for every part of the tree from the roots, ground up for medicine, to the leaves woven into baskets, hats and roofing.

712 OLD LADY WITH
COCONUTS ON HEAD

Most of the more than 20 million families who depend on the coconut tree for their livelihood, live in Asia and the Pacific.

720 HUSKING COCONUTS
BY ROADSIDE

To develop the enormous potential of the coconut industry in this part of the world, nine countries got together to form the Asian and Pacific Coconut Community. It's a commodity association like OPEC for petroleum, and though it doesn't have as much clout as OPEC it has its part to play in changing the relationship of North to South and in helping to establish a more equitable economic order in the world.

The main product of the coconut tree is copra, the dried nut meat from which oil is obtained. Copra, coco oil and coir, a fibre made from coconut husk are important export commodities.

749 MANILA HARBOUR
WITH COCONUT TREE
IN FOREGROUND

The Coconut Community tries to find new markets and seeks ways to stabilize fluctuating prices and to secure better shipping facilities and lower freight rates.

755 JAKARTA

The headquarters of the Coconut Community are in Jakarta, Indonesia. Its a long way from Aurora Province in the Philippines but Alipio Leander is here with 32 other delegates from the Philippine coconut industry, most of them farmers, and some small holders like himself. They have visited Malaysia, Thailand and now they're in Indonesia where their first stop is an oil mill.

775 OIL MILL UNLOADING
COPRA

The coco oil obtained from copra can be further refined and used in a variety of ways in margarine, baking products, toiletries, synthetic rubber and hydraulic fluid, to name only a few.

782 INTERIOR OIL MILL

However, this secondary processing takes place almost exclusively in the developed world.

Farmers like Alipio are the suppliers of raw materials to the manufacturing industries of the North. Manufactured goods are then sent back to the South to be sold at prices few farmers can afford.

794

This pattern, established during the colonial era, is continued today by the imposition of tariffs and other import restrictions.

Solidarity among producer countries can help to change these patterns.

Coconut industries could be established on a regional basis. These could supply many chemicals and other products now imported into the area, and bring better returns to the small farmer.

811 EXT OIL MILL

Economic cooperation between developing countries must be supported and strengthened by technical cooperation.

817 BUS ARRIVING AT RESEARCH INSTITUTE

The Philippine delegation's next visit is to the Research Institute for Industrial Crops just outside Jakarta. Here Asian scientists from several countries are working together on pest control and plant genetics.

830 PHILIPPINE DELEGATES IN BRIEFING

The delegates are briefed on the Institute's research in coconut hybrids. Indonesia is taking quite a different approach from the Philippines in this area. Coconut Community officials believe there is merit in both methods and that each has applications in both countries.

844 EXPERIMENTAL COCONUT GARDEN

In the Institute's experimental garden, hybrid coconut trees are being tested for quality and quantity of copra and coir yields, also for their resistance to disease, pest and storm damage.

These hybrids will never grow as tall as Alipio's trees and so will always be much easier to harvest.

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869 SEED GARDEN

At the same time as conducting genetic trials the Institute is planning to have seed nuts available to local farmers in the near future.

In the seed garden every fifth row of trees are tall, the rest are dwarfs, this will produce hybrid seed nuts by natural pollination using local species of coconut.

One of the beauties of cooperation between developing countries is that they are not cast in rigid roles of recipient and donor. Very often each side has as much to gain as the other. Alipio will go home with a lot to think about, but his delegation will have left its mark in Indonesia.

897 AERIAL SHOT
COCONUT PLANTATIONS
PHILIPPINES

Back home in San Luis in the Philippines Alipio Leander calls a small meeting of some members of his local chapter of Cocofed.

905 MEETING IN
ALIPIO'S BACKYARD

Alipio explains the natural pollination methods he has seen in Malaysia and Indonesia, and it's made more immediate because he didn't just read about it, he went there and saw for himself.

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931 DELEGATES ON BUS

However, technical cooperation among developing countries is not just about people travelling around in the South, though sometimes ideas are transmitted better in person. Nor is it a rejection of Northern aid and technology. It's an attitude in which every development issue is approached with an open mind, an awareness that North is not always best, an attitude which encourages the growth of facilities to help Southern solutions emerge.

956 CREDITS

970 PICTURE OUT