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Watershed

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Burma, Cambodia, Lao PDR, Thailand, Vietnam

Watershed

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Editor
Witoon Permpongsacharoen

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Editor

Editorial Office
TERRA
409 Soi Rohitsuk
Pracharatbampen Rd
Huay Khwang
Bangkok 10310, Thailand
Tel: (66 2) 691 0718
Fax: (66 2) 691 0714
email: terraper@ksc.net.th

Cover photograph
*The confluence of 7 canals
in the Mekong Delta,
Phung Hiep, Vietnam.*
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Why Watershed?

WATERSHED - In its simplest, scientific meaning, it is the drainage basin of a river, the area through which all waters flow from their highest source before draining naturally to the sea. Within the watersheds of the great Himalayan rivers, the Salween or the Mekong for example, are the watersheds of thousands of smaller rivers, streams and lakes, each with their own particular character and history. In the broader ecological sense, the term watershed includes not only the land and water but the mountains and forest, flood plains and valleys, as well as the communities of plants, animals and people who live there.

These watersheds, large and small, have been ravaged by war in the past and still are today. But the battles that now pervade the region are more commonly conflicts over natural resources - who has rights to use, conserve, expropriate, destroy, buy and sell. Lowlanders blame highlanders for destroying the forests and water supplies for rice fields below, rural communities blame urban and industrial centres for draining and polluting their rivers, while many traditional systems of management and conservation are discarded

with the expansion of export-oriented cash crops and agribusiness schemes.

To compound this situation, the watersheds of mainland South-

east Asia now contain some of the last unlogged tropical forests and undammed rivers in the world. Consequently, companies from all over the world are competing to exploit these resources. Other agencies insist these areas be roped off from human activity in the name of global biodiversity conservation. Whether the demand is for development or conservation, many communities in the region who have always lived with the forests and rivers are threatened with eviction.

As a result of these pressures and conflict, some people are advocating a "watershed approach" to managing natural resources. This implies a way of looking at things as a whole, of seeing people and not just the trees but the forest, not just the river but all that creates and diminishes its flow. A watershed approach can be an alterna-

tive process of learning, of learning not by separating and isolating knowledge, but by awareness of the interaction and

♦ editorial ♦

interdependency of people and nature, the blending (and clashing) of cultural, ecological, political and economic forces which constitute life...and destruction. In this sense, the watershed is a unit of analysis or study known as political ecology.

Far from being just an academic musing, a watershed approach is a practical way to examine, and begin the search for solutions to, real life problems faced by member communities of a watershed. At the heart of this approach is empathy, a respect for life downstream and in the mountain forests where water springs. All communities in the region have known this empathy at one time or another in their culture and history. Traditional systems of living were indeed based on respect for nature and neighbours. But these have often been disrupted by the ambitions of warring armies, colonial powers, and, more recently, by the agents of 20th-century industry.

Today six nation states lie within the great watersheds of the Chao Phraya, Irrawaddy, Mekong, Red and Salween rivers, which collectively are home to a cultural and biological diversity unparalleled on earth. In ecological and cultural terms, the borders of these states were never more than arbitrary lines on a map drawn in distant capitals. But now, even in economic and political terms, the significance of these borders is fading as the region enters the era of economic globalization. With the exception of Burma, still shackled by military rule, Yunnan and the states of Cambodia, Lao PDR and Vietnam are opening to the global economy, undergoing radical transformations, guided by institutions such as the International Monetary Fund and the World Bank, and by a model of industrial development followed in Thailand for the past several decades. As such, the movement of money, people, natural resources and environmental degradation across borders is accelerating with the demands of the global market economy. Having exhausted much of its forests and water resources in the drive for economic development, Thailand's demands are now driving the policies and pace of resource extraction in neighbouring Burma, Lao PDR and Cambodia. Power plants and industrial operations, supplying markets in Japan, Europe, Thailand or Asia's economic tigers, are being shifted to Yunnan or the Mekong Delta where raw materials and labour are cheaper and plentiful. The ultimate goal, of course, is higher profits and a temporary competitive edge in the global marketplace.

Thailand's experience indicates that rural communities, especially those outside the cultural and economic mainstream, face a double threat from this kind of development. First, development demands extraction and expropriation of natural resources upon which communities depend. Forests are logged, labelled 'degraded', and then offered up to private companies for industrial tree farms. The destruction of fisheries becomes a "trade-off" or "acceptable environmental cost" of hydroelectric development. Not only does this process deprive people of the resources needed for survival but alienates these people from the knowledge and traditional practices that once helped sustain their communities and culture.

Meanwhile, development experts, armed with indicators of poverty and economic growth, interpret communities as ignorant and backward, destroyers of the environment, and in desperate need of development, basic tools, and training in how to succeed in the modern world.

In this region, where the pace of environmental destruction and investment in development is staggering, development as currently defined by government-industry alliances should be questioned. To do that, *Watershed* begins with a thought-provoking feature on development and its definitions. Not everyone will agree with this feature or have the same worldview as its author, but it is imperative that people engage in open and democratic discussion about critical ecological and development trends in this region.

Because *Watershed* is produced in English, we wish to apologize for its exclusivity. However, we hope to reach many people who are either working with communities or shaping policies and projects affecting communities and watersheds.

Finally, there is another meaning of watershed - a turning point in the course of events that signals a break with present trends and the beginning of something new. Such a watershed is needed both in thinking and in practice. In this spirit, *Watershed* is offered as a hopeful forum to encourage critical thinking and discovery of paths, new and old, which can lead to sustainable development in this region.



Letters Page

In future issues of *Watershed*, we will publish a letters page. The editors welcome letters and comments from readers. Please send letters to:
The Editor, *Watershed*, TERRA, 409 Soi Rohitsuk, Pracharatbampen Rd,
Huay Kwang, 10310 Bangkok, Thailand.

Mekong agreement and disagreement

On 5 April 1995, the Agreement on Cooperation for the Sustainable Development of the Mekong River Basin was signed by representatives of the governments of Cambodia, Laos, Thailand and Vietnam, culminating more than three years of closed-door negotiations between the respective governments. The United Nations Development Programme and the Asian Development Bank were key actors in supporting the negotiations and drafting the Agreement. Thai Prime Minister Chuan Leekpai said the Agreement "shows our determination to harness the river's vast natural resources for mutual progress and prosperity".

At a public forum meeting organized by NGOs the day before the signing, Phisit na Patthalung, Director of Wildlife Fund Thailand, put forward another view: "The ADB is just Japan's tool to use Thailand to forge the path for further exploitation of our regional neighbours. The ADB has saddled the Mekong region with the externally-driven plan."

Northern forest dwellers march to protest forest evictions

Over 10,000 forest-dwelling villagers including ethnic communities in Northern Thailand rallied in Chiang Mai in April to protest their forced resettlement from protected forest areas. Three recent Cabinet resolutions have classified the communities as "illegal encroachers" in forest areas, and therefore subject to eviction.

Since the end of 1994, more than 5,000 people have been evicted from forests in the North, and up to 1.5 million people could be affected in the future under plans which cover 13 forests in 7 provinces. The protesters' demands include the urgent implementation of development projects and aid for the 5,200

people already resettled; degazettment of community forest areas out of the protected area system; cancellation of land titles that are held by influential people who have bought land in village community forests or village common lands; enactment by the Cabinet of the "Local People's Community Forest Act"; and the establishment of a committee to ensure that the above demands are implemented. The Agriculture Minister responded to the villagers' demands by establishing a committee to look into the issue, to report in sixty days. Meanwhile, evictions have been temporarily stalled due to the political crisis in Thailand. Saipien Kiew-ie, a woman who is under threat of eviction, vowed, "We will fight for our basic right to live where we are".

The issue of protected area management was discussed in early April at a conference in Pattaya attended by NGOs, government agencies, academics and village leaders. While most recommended that the rights of communities within protected areas be acknowledged and supported, conservationists and the Royal Forestry Department remained reluctant to envisage any major reforms of policy or law to allow communities to exist as part of protected forest areas.

Laotian conference promotes role of NGOs in rural development

The National Conference on Sustainable Rural Development, held in Vientiane in February 1995, recommended that Laotian non-governmental organisations be created to support grassroots development. Hosted by the Committee for Planning and Cooperation, with UNDP support, the conference also recommended greater provincial autonomy in planning development, based on successful experiences in Savannakhet, Luang Nantha and Oudomsay provinces.

Laotian Deputy Premier Khampoui

Keoboulapha appealed for environmentally sound rural development, and said this could only be successful with the active participation of the rural population.

Cambodian government supports community forestry

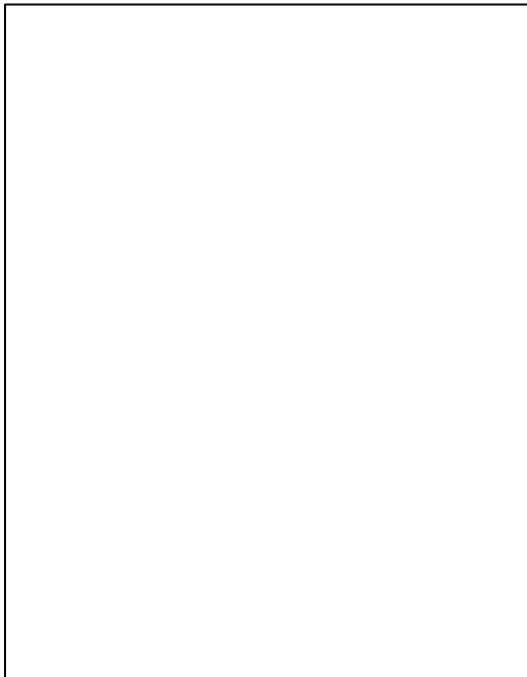
According to a submission to the March ICORC (International Conference on Reconstruction of Cambodia) donors meeting in Paris, the Cambodian government intends to give responsibility of management of forests and other natural resources to local communities. The document, entitled "Implementing the National Program to Rehabilitate and Develop Cambodia", announces the government's intention to "secure land tenure for agricultural, secondary forest, grazing, aquaculture and other productive uses, based on ownership or irrevocable, long-term stewardship under clear terms of use and protection" and also "to encourage community forestry for the rehabilitation of degraded forests used by villagers".

Mennonite Central Committee (MCC) Cambodia, an NGO promoting community forest issues, welcomed the declaration, adding, "The challenge for all government agencies and donors is, can more examples of community management be realised in various ecological situations, such as mangroves, wildlife reserves, wetlands and fisheries, especially in areas where there may be a conflict of interest between local people's livelihood needs and those of commercial companies".

In December 1994, the government signed the first community forest contract with communities in Takeo Province. The contract recognises the rights of 12 villages to use and manage 500 hectares of degraded forest land for 60 years.

Nam Theun II power deal signed

In March, the Electricity Generating Authority of Thailand (EGAT) signed a deal to purchase electricity for the next 25 years from the Nam Theun II dam. To be built on a BOT (build-operate-transfer) basis by an international consortium, the deal is expected to attract financiers for the US\$1.2 billion venture.



The Vu Quang Ox (*Saola*) - endangered by the Nam Theun II dam

If completed, Nam Theun II will be the second largest hydroelectric dam in the Mekong river basin. Fourteen villages (over 4000 people), including ethnic Makong and Thai Bo minority communities, will have to be resettled from their ancestral lands to make way for the reservoir. Downstream, at least 27 other villages will be affected by disrupted river flows and the destruction of fisheries.

Partners with the Lao PDR government include Electricite de France (30%), Australian construction giant, Transfield (10%), and the Thai consortium of Ital-Thai, Jasmine and Phatra Thanakit (35%). Electricite de France is hoping to raise its share of the investment by the end of this year. Thai investment

house Phatra Thanakit intends to raise money on the Thai debt market and has already secured US\$ 90 million from the newly-formed Export-Import Bank of Thailand for preliminary construction. Sources in Vientiane report that the Japanese government has rejected a request for financing from the Lao PDR government due to the project's huge scale and environmental risks.

The dam will devastate wildlife in the Nam Theun-Nakai Plateau area, the largest national biodiversity conservation area designated by the Lao PDR in 1993, according to a Forestry Department report. Wildlife biologists warn that the dam will destroy irreplaceable habitat for threatened wildlife species including tiger, elephant, white-winged duck and the newly-described large-antler muntjac and Vu Quang Ox (known as *Saola* in Lao PDR). The area is regarded as "globally significant" for conservation with some of Southeast Asia's largest remaining areas of lowland, forested river valleys, old-growth pine and cypress, wet evergreen and montane forests along the Lao PDR-Vietnam border.

There has been no adequate environmental impact assessment (EIA) of the project even though early stages of construction have already begun, the Forestry Department report notes. "A report done for the project [by Snowy Mountains Engineering Corporation of Australia] is sub-standard and unacceptable as an EIA."

The World Bank sponsored the feasibility study of Nam Theun II, conducted by SMEC in 1990. However, the Bank and its commercial arm, the International Finance Corporation, have yet not confirmed their position in response to the Lao PDR government's request for US\$300-400 million for the project.

"Considering the size of Laos, we see the Nam Theun II as a large project which

has a complicated financing package," explained World Bank official Callisto Madavo. "There are still many questions surrounding Nam Theun II, including technical, legal, economic, social and environmental aspects."

The project includes a 50-metre high dam on the Theun river, a 400-square kilometre reservoir on the Nakai Plateau, and an 18-metre high dam on Nam Kathang, a tributary of Xe Bang Fai, where water will be released from the powerhouse. With a 600-MW capacity, electricity from the dam will be sold to EGAT for a base price of 4.55 US cents per kilowatt/hour. Construction of the power plant site is underway and the dam is expected to start operating by the year 2000.

Contract signed for gas pipeline from Burma

On 1st February 1995, Burma's State Law and Order Restoration Council (SLORC) signed a deal with the Thai government to supply natural gas to Thailand, ensuring SLORC an annual revenue of US\$400 million for the next 30 years. Also, France's Total, Unocal of the U.S. and the Petroleum Authority of Thailand finalized details on construction of the US\$1.1 billion gas pipeline. Surveying for the pipeline route from Burma's Gulf of Martaban to Thailand will continue after the rainy season.

In Burma, the pipeline will cut through the ancestral lands of the Mon, Karen and Tavoyan people. Construction of related infrastructure projects is resulting in forced labour, forced eviction and other abuses of human rights, while ethnic armies resisting the SLORC military have targetted the pipeline for sabotage. Construction of the pipeline across the Tenasserim Peninsula will destroy pristine rainforest in the vicinity of the Thung Yai-Naresuan-Huay Kha Khaeng Wildlife Sanctuary — a UNESCO World Heritage Site.

Forum aims to stimulate discussion and raise questions about current trends and ideas emerging in this engaged in the debate. **Watershed** invites readers within the region to respond. As the momentum to build large dams in the Mekong region gathers pace from a consultant engineer, J. Hans van Duivendijk and

“We Are Going to Have to Get Out of the Dam Building Business”

In his presentation to the International Commission on Large Dams (ICOLD), Daniel P. Beard explained about the lessons learned by dam-builders in the United States. He argues that, for social, ecological and economic reasons, the era of building large dams must end.

The United States Bureau of Reclamation, the agency I direct, was founded in 1902 as a civil works construction agency. Our original mission was to develop the water resources of the Western United States so as to promote the settlement and economic development of the region. The substantial infrastructure developed by our program has made the USBR the largest supplier of water in the United States. We are the country's sixth largest electric power generator, and we manage 45% of the surface water in the Western United States.

Reasons for Change

Over the last few years we have come to the realization that we must make significant changes in our program, and it is these changes I would like to discuss with you today. I want to examine the changes that are taking place and why. I also want to examine what these changes will mean for the USBR and how they could have an impact on the activities of the International Commission on Large Dams.

The changes occurring in the USBR are part of a larger picture. Water resource policies in the western United States were originally conceived and implemented to meet the needs of agriculture and mining. That was an acceptable approach as long as there were ample water supplies, plentiful government funds and environmentalists and indigenous peoples who had limited influence in political or legal proceedings.

All of that has now changed.

The Western United States is now the most urbanized portion of our country and is experiencing the most rapid growth. The demands these urban residents make on our water resource system are different from those of agriculture or mining. Water supplies are no longer plentiful, particularly be-

cause of increased population and greater demand for new uses. Federal funds are no longer plentiful. Government budget reductions at all levels have meant fewer dollars for undertaking large construction projects. Indigenous peoples and environmentalists have now a critical voice in political and legal proceedings. There is greater competition for water, especially from non-consumptive uses, such as in-stream flows. And there is broad-based, public support for protecting these non-consumptive uses. Federal environmental regulations continue to grow and influence policy debates. Protecting endangered species, solving domestic water pollution problems, and enforcing wetland protection laws have altered our traditional approaches to solving water problems.

And finally, public support for subsidies to a small number of agricultural producers or landowners, which had been the foundation for most of our projects, has declined.

What has forced these changes in the United States? I believe there are five major forces driving these changes.

1. Economic Realities

A basic premise for our program was that the beneficiaries of projects would repay the costs. We now realize the significant construction and operating costs of large-scale water development cannot be repaid. Our experience has been that these projects repay only a small portion of their total costs. Irrigation, the largest beneficiary of these projects, could only repay a portion of its costs, repaid even at zero percent interest. Thus, the USBR program has provided extensive subsidies for project beneficiaries at the expense of taxpayers. In addition the actual contribution made to the national economy is small in comparison to alternative uses that could have been made with the public funds used to construct the projects.

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egion. **Forum** features two opinion pieces on key environment and development issues from people
o the opinions voiced in **Forum**; responses will be published in the **Letters** page.
n this issue **Forum** features the debate on dam construction, with opinion pieces
lirector of the US Bureau of Reclamation, Daniel P. Beard

“Dams will always be needed”

While admitting that dam-building has been flawed in the past, J. Hans van Duivendijk, at a conference entitled "Both Sides of the Dam", argued that future problems may be avoided through better technology. Where problems occur, he states, the fault lies not with the dam-builders, but with the governments of "non-western" countries.

Let me start by saying that nobody must expect that new dams will not be required in the future for the same reasons for which they were required in the past. Many dams were built in the past. The 1983 ICOLD World Register of Dams lists as much as 36,000 dams.

In the nineties, dams are being built at a rate of 350 dams each year, and in principle there is no reason why this figure would decrease. The reasons for this dam-building are two-fold: an ever-increasing population and a higher standard of living. Nobody can deny these two trends. Any statistics on the world's population show a steady increase; one could argue about the future rate of increase but an increase there will be. And the shifting in economic development from Western Europe and USA, first to newly industrializing countries and, subsequently, to Southeast Asia will most probably result in an overall higher standard of living in the world. Both trends tend to increase the demand for dams.

In the past, dams were built for various purposes. Based on the same 1983 figures, 43% are multi-purpose, 31% for irrigation, 13% for hydropower, 8% for water supply, and the remainder for navigation, flood control and recreation. Of 1,129 dams under construction on Jan 1, 1993, the major dam-building countries today are China, with 275 presently under construction, Turkey with 164, Japan with 149, and Korea with 109. Newly industrialized countries also are prominent - Spain with 43 dams under construction, India with 28, Greece with 14, Thailand with 27, and many others.

The question one really needs to ask is not whether these dams are needed, because the answer has a direct relationship with population and economic growth, but, 1) are they built at the right location; 2) is their design optimum from the point of view of cost, environmental and social effects, short- or long-term benefits?; 3) are they safe?; 4) do the reservoirs silt up?; and 5) what about maintenance?

My contribution to the discussion will be first of all technical and secondly pragmatic in the sense that I know from experience how and by whom dam building is decided upon in many of the countries where the majority of the dams are being built today. Dams are not ordered by, asked for, or demanded by engineers, geologists, hydrologists or even economists. No, dams are built because the local, regional or state governments have the opinion that these dams are needed. First the Administration - the politicians and planners - and secondly economists and engineers, are listened to. Let me give two examples of how this works in practice.

In a certain North African country, the ruler wants to be remembered by future generations as 'the dambuilder', and so many big dams are built, whether needed or not, and without looking at alternative solutions. Or, in another country, say in Asia, the higher authorities are not very interested in the negative consequences of dam construction for the local population. In that particular country, the cultural patterns and habits do not recognize the rights of the simple peasant and 'people's participation' is an unknown phenomenon. Accordingly, dams are built without regard to negative impact on the people.

From my experience I can say that, generally speaking, a feudal, dictatorial, non-democratic government does not provide the right environment for the kind of decision-making and conception of dams that many of us in the western world would like to see nowadays. Dam designers in these countries meet with many challenges: lack of basic hydrology and geological data; construction not to the standard envisioned in text books; interphases of construction with resettlement, land acquisition and reservoir impounding are badly planned; past and future deforestation of the catchment will lead to an early sedimentation of the live storage in the reservoir; maintenance, let alone monitoring, of the dam after completion should not be expected.

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There is also the question of the anticipated costs of these projects. Our experience has shown that actual total costs of a completed project exceed the original costs, including inflation, by at least 50%. Often, project benefits were never realized. The result has been that our credibility with the public and our political leadership suffered from our failure to accurately estimate the ultimate costs and project benefits.

2. Social Realities

For many years, the USBR largely served the needs of a few agricultural interests. We generally did not serve the needs of an expanding urban population. The result was that the base of support for our program declined.

In addition, those who opposed our efforts to construct facilities became our sharpest critics. This was a costly mistake. Eventually, the opposition took its toll, and public support for our efforts deteriorated. Today, U.S. public opinion places a far greater value on the natural and cultural attributes of our rivers than in the past. As a government agency, we must operate within the context of existing public values and opinions.

3. Operating Realities

The Western United States has many large facilities that store water on the main stem of major rivers, and deliver water primarily for agricultural irrigation. Over time, our operating experience has given us a more clear appreciation for the secondary costs of large-scale water development, which are significant. Soil salinization, decline or elimination of fisheries, elimination of wetland habitat, destruction of native cultures, agricultural pollution, reservoir sedimentation, and the risks of dam safety concerns have all been by-products of our development efforts. We have been slow to recognize those problems, and we are still learning how severe they are and how to correct them.

4. Environmental Costs

In the past, the evaluation of proposed projects was based primarily upon engineering and economic analyses, to the general exclusion of biological, ecological, or cultural factors. Today, our ability to recognize and characterize such values, and even incorporate them into economic evaluation, has greatly improved. This is the result of new laws requiring more complete consideration of such factors, such as the National Environmental Policy Act, and also technical advances in analytical techniques - computer technology, modeling capacity, and forecasting tools - as well as advances in the natural sciences themselves. We now have a clearer and sharper understanding of environmental costs than we did even 20 years ago, let alone 50 or 75 years ago when many USBR structures were built.

5. New Alternatives

Within the last two decades, we have come to realize there are many alternatives to solving water resource problems in the U. S. that do not involve dam construction. Non-structural alternatives are often less costly to implement and have fewer environmental costs. For example, we have seen the emergence of more sophisticated resource management approaches in both energy and water. We now recognize the benefits of demand management and conservation; the value of water pricing in management and conservation; the importance of using multi-objective water resource management that fully integrates environmental planning in helping us understand the true, long-term costs and benefits of each alternative; and the value of open, inclusive decision-making in stimulating new ideas and avoiding costly mistakes.

Approaching the new Realities

Today, U.S. public opinion places a far greater value on the natural and cultural attributes of our rivers than in the past.

What has been the result of these forces?

The result is that the dam building era in the United States is now over. There are few good investment opportunities for major civil works construction

for water resource development. We can no longer count on public or political support for large, traditional construction projects. Those projects that we have underway will be completed as quickly as possible. But the opportunity for large projects in the future is extremely remote, if not non-existent. Rather, we now anticipate facing the challenge of water management with the tools of the "Information Age" - improved data collection, hydrological modeling, geographic information systems, and demand-side management tools - with new construction in small increments, narrowly targeted to meet well-defined but limited objectives.

How have we in the USBR approached these turbulent times?

In the past year, we have carefully reviewed our past and our future, and we have come to a number of important decisions. We have recognized our traditional approach for solving problems - the construction of dams and associated facilities - is no longer publicly acceptable. We are going to have to get out of the dam-building business. Our future lies with improving water resource management and environmental restoration activities, not water project construction.

That does not mean we won't continue to be an engineering organization. We will have to continue managing and maintaining our current infrastructure. Dam safety, for example, has been and will continue to be a very high priority program for USBR. Additional construction of smaller facilities will

be necessary from time to time. But construction of large dams and associated works will no longer be our reason for existence. Improved water resource management will be.

In the Future...

We must undertake to correct and ameliorate the environmental impacts associated with operating our projects. We will emphasize water conservation, demand management and efficient use, including reuse, wherever possible. Every problem we must address has a common theme - there isn't enough water in a river.

Most western streams are overallocated and under stress. Excessive use has been condoned, even encouraged - and legitimate in-stream uses have been ignored or prohibited.

To solve these problems, we cannot build new reservoirs. Instead, we will have to encourage the movement of water from one use to another. We believe conservation, demand management, efficiency improvements, and reuse offer the best opportunities for doing this, if structured to provide real economic benefits for all participants.

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Each of these factors, if not considered during the design stage in its proper context, may lead to a dam disaster. In fact, each of these factors may, if properly evaluated, result in a recommendation to refrain from dam building altogether in a particular situation.

This is, however, exactly the situation from which

all of the present problems with dams originate: 1) The good designer anticipates one or more of the aforementioned problems and either produces a conservative, and therefore costly, design; or recommends that the dam not be constructed as desired; 2) The earlier mentioned administration does not accept such solutions and orders the designers to arrive at a design which can be carried out at a reasonable cost without being too pessimistic on later consequences or side-effects. I regret to admit that in most countries where nowadays the majority of dams are built the situation in (2) applies.

I also hasten to say that dam technology and engineering design are not the problems anymore. Dam building is so far advanced that a satisfactory solution can be found or proposed for most of the challenges listed earlier. No, the problems are caused by opportunism of politicians and the irresponsible attitude of many governments.

The question then boils down to: how can these governments be persuaded to build dams only at good locations, with safe design, and after having considered all short- and long-term effects. Some of you might say that the international funding agencies have a task here. Indeed they do, but their influence is limited. Others will look at organizations like ICOLD and ask



Since completion in the 1970s, the World Bank-funded Nam Ngum dam has been an important foreign exchange earner for Lao PDR. But electricity production has dropped in recent years due to water shortages. The government must now borrow from the Asian Development Bank to divert two tributaries to feed the depleted reservoir.

them to interfere. In fact these organizations cannot interfere. All they can do is formulate recommendations and guidelines. A time consuming process, especially as these recommendations must be backed by the designers, the owners and administrators from the very countries where the problems are created.

Lastly, some of you will look at

me and say, "What about the consultants from western countries?" Well, indeed, they also have a task here but, again, their input is limited as they are only asked in a few situations to give advice and, moreover, in these situations they do not always get the means and the time to arrive at the right answer.

Finally, I would like to draw a few conclusions. It is relatively easy to look at both sides of the dam in a rich, developed western country having a vast experience in dam-building and a more or less democratic decision-making process. It is relatively easy for pressure groups in these countries to have the criteria for dam-building changed.

However, in a non-western, not-so-democratic country the situation is very much different and it is there where at present dams are being built, where the great problems are or will be and where politicians and administrators still only see one side of the dam and that, as you can imagine, is the most attractive side which obstructs the view on the least attractive side. Summarizing: getting someone to look at both sides of the dam is not a technical problem but a matter of culture. And culture in those countries will only change very slowly and under great pressure.

♦ community voices ♦

Although the vast majority of people in this region live and work in a rural community, the people making decisions and mobilizing capital for development live in cities. **Community Voices** is a space for the written or spoken word from community residents who have views about the changes taking place, their values, struggles and hopes for the future, development and their connection to and knowledge of the resources they depend upon. **Community Voices** reflects the diversity of culture and knowledge of local communities in this region.

From Pak Mun

Last year, the Pak Mun hydroelectric dam on the largest Mekong tributary in northeast Thailand was completed despite strong local protests. For the Electricity Generating Authority of Thailand (EGAT), the Pak Mun may well be the last big dam it ever builds within Thai borders, as the best dam sites have already been exploited and escalating demands for compensation are squeezing profit margins.

For the first time in its thirty years of dam-building, EGAT admitted earlier this year that the Pak Mun dam had destroyed the Mun River fisheries and that local people, the vast majority being fishers, were entitled to compensation from the State. While this is bitter consolation for local people, EGAT's admission nevertheless sets an important precedent for other Mekong countries.

With business in decline at home, EGAT officials are now defecting to private companies to take advantage of the current dam-building boom in Yunnan and Lao PDR, where free-flowing rivers are slated to be dammed one after another. The collapse of the Mun fisheries - and the number of people affected by the loss of fisheries still increasing - will make it increasingly difficult for EGAT and would-be dam operators to escape responsibility for the threats posed by dams to Mekong fisheries.

Earlier this year, TERRA talked to two leaders of the local movement against Pak Mun dam, Mrs. Sompong Wiengchan, and Mr. Thongcharoen Seehatham, both of whom were born and raised in Khong Jiam District; where the Mun River flows into the Mekong.....

TERRA: The people of the Mun River in Ubon Ratchatani first heard of plans to build the Pak Mun dam about 6 years ago, and they have been protesting against construction of the dam for all of those years. Why did the Mun River people protest against the Pak Mun dam, and what are their demands after more than 5 years of protest?

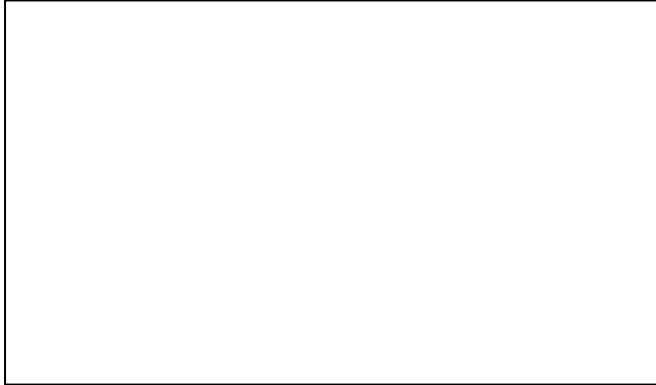
Thongcharoen: Before speaking of the Pak Mun dam issue, I would like to speak of the history of the Mun River, the most important river in Isan [Northeast Thailand]. Its length is from 700-800 km. The Mun River provides the people living on its banks throughout Isan serenity and a pure life.

In the year 1991, construction of the dam began. Villagers were confident about predicting the extent of the loss of nature, and that there must be many impacts for all of the people of Isan. Therefore, we started protests. We have been protesting for 5 to 6 years.

As construction progressed serious problems began. Now we are demanding compensation for the loss of our fishing-based livelihood. The dam blocked the route of passage for fish migrating from the Mekong River, which had nurtured and sustained the villagers living on the banks of the Mun River. When they initiated the dynamiting of the rapids [downstream of the dam, November 1991] the serious impacts began.

♦ community voices ♦

Before construction of the dam, we could still catch plenty of fish to eat and much to sell. But now, after the destruction of the rapids began, and with the dam construction, our communities started to break apart. Our environment was destroyed, our culture is lost.



Now, we are demanding compensation for the loss of the opportunity for us to make income from fishing for the past 3 years, 35,000 baht for each of those years and totaling 105,000 baht. We have been protesting [occupying the Pak Mun dam site] in demand of compensation for 4 months already, but there has been no assistance for us yet.

TERRA: Sompong, now that construction of the Pak Mun dam has been completed, how do you see the impacts that have occurred on the communities and families living along the Mun River?

Sompong: Before, we had peaceful and friendly communities, we had a means of livelihood on the Mun River, collecting vegetables from the forest, catching crabs and fish.

Now the reservoir floods the area, the water is deep, and we can not catch fish. The dam is an obstacle to the route of the fish, and fish cannot enter the Mun River. Communities are disintegrating. People are becoming separated from each other. Water surrounds the village. The monastery (*wat*) is on one piece of land, while the village is on another. We no longer have our unity.

TERRA: How can families recover their livelihoods? The Pak Mun dam is completed, land and forest have been flooded, there are no longer many fish in the Mun River. What are Mun River families doing now?

Sompong: Now, we must demand compensation, to recover our livelihoods, to create a new way of life for ourselves. It's not the same as before, when we could work together, because in the past everyone of us had income every day and our lives were closely related because of fishing and the river.

But now it's not like that. Now, some have much money, while others have little. If we are to recover, we will have to work at

it for 5-10 years. We have been demanding compensation for 5-6 years already. When the impacts from the dam began, we started protests demanding compensation, but for 3 years the government has not paid us for our losses.

TERRA: Thongcharoen, you have been involved with opposition to the Pak Mun dam from the earliest days, and were a fisher all your life before that. Ever since construction of Pak Mun dam began, some people say that Thailand needs dams for economic development, other people say dams are not needed. What is your opinion?

Thongcharoen: I do not agree with the government's programme to develop hydroelectricity projects, because the construction of dams destroys many natural resources. Good communities and their culture are destroyed.

Dam construction destroys the resource that is the most important for people, which is water. Water is a substance that is most important for living beings, be they humans or animals. Dams produce polluted water, and the river's ecosystem changes

very much. If the government is going to do all of this again, I do not agree. If they do projects that will really have benefit for the people, and which do not destroy our resources, the government should support construction of water projects that are small-scale.

The Mun River and the Mekong River are not dry, they do not require water development. If the government is going to do development,

let them support the development of the hearts of the people. These two things must go together.

If the government plans to build another dam like Pak Mun, I do not agree. If dams are built in other places, people there will endure much suffering, perhaps they will find it unbearable, perhaps they will not be as strong as we have been.

Pak Mun dam destroyed our river, the Mun River. The dam destroyed our fishing communities and our culture. To destroy a river, to destroy communities and culture, is a terrible thing.

