

INSTITUTE OF CURRENT WORLD AFFAIRS

DGD - 4
Forestry Congress Highlights

Kathmandu, Nepal
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Mr. Peter Martin
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Dear Peter,

Lacking acknowledgement of the substantial deposit cabled to the organizing committee of the Eighth World Forestry Congress in Jakarta, I scheduled an early arrival in Indonesia to investigate the situation. Bill Knowland having the same problem decided to join me on the flight from Hong Kong. The next day in Jakarta we got quite a tour of the city as we taxied from place to place in order to verify our position on the pre-Congress tour, register for the Congress, confirm our hotel reservations and collect Congress publications. By that evening we were very skeptical as to the organization's ability to manage the estimated 2000 Congress participants due to flood Jakarta in the coming week.

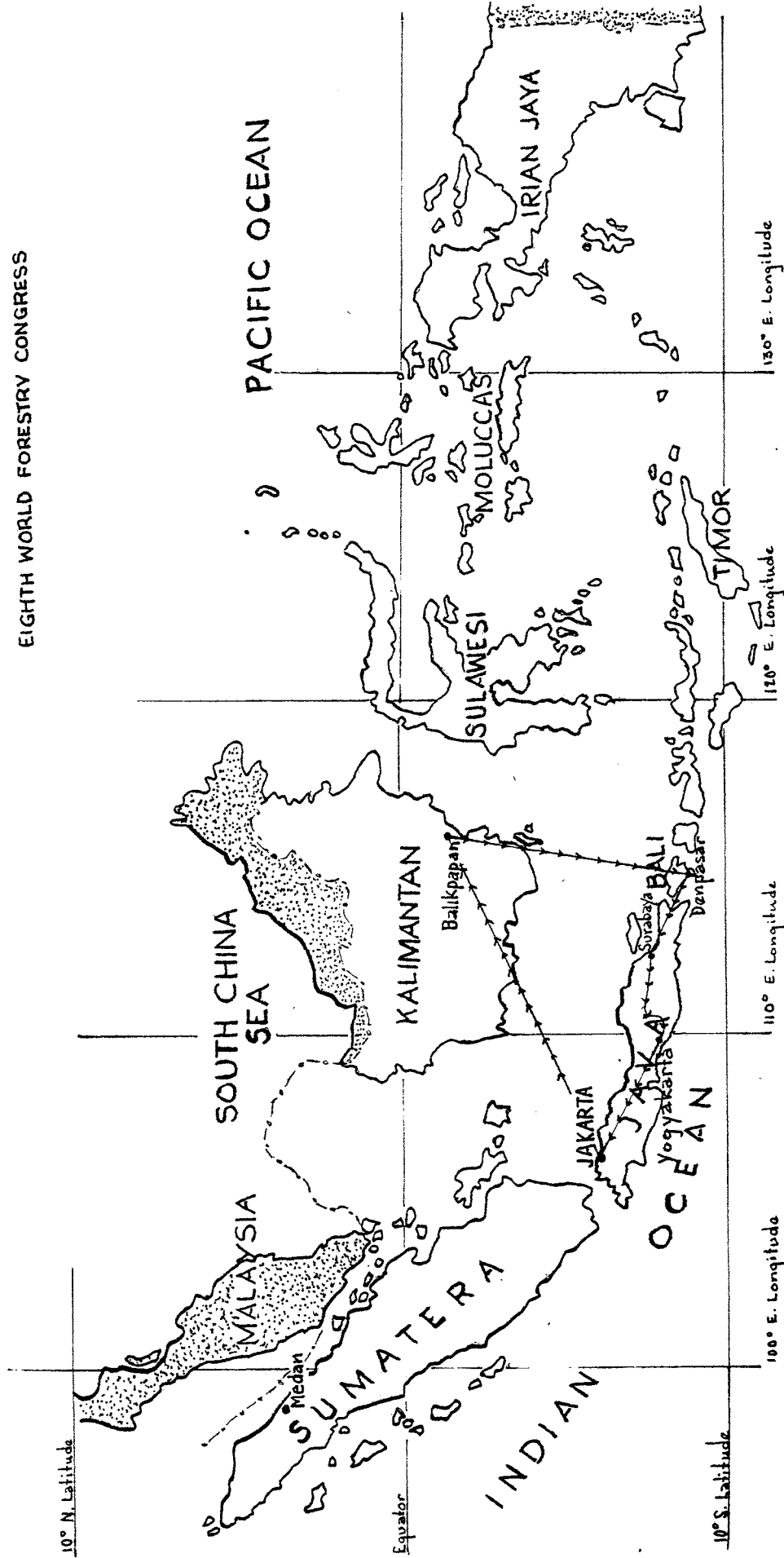
The advantage of our early start the following morning was cancelled partially by the normal airport confusion of missing persons, misplaced luggage, mechanical delays and uncomprehensible boarding announcements, but eventually we boarded the flight for Borneo. The members of our tour totaled approximately 120; almost one quarter were Japanese, isolated somewhat by a language barrier. The remainder of the group came from more than 20 different nations and a variety of backgrounds, including industry, government and education and research institutions; several were private forest land owners and one, a Peace Corp volunteer in Micronesia. There was some initial confusion as to my identity as I was the only female forestry professional and the only unattached woman in the group; I was called alternately Mr. Donovan, Mrs. Donovan, Mrs. Davidson (a fellow tour member with whom I sat at dinner one night) and finally Ms. Donovan.

As sketched on the accompanying map our tour of Kalimantan (Borneo), Bali and Java covered approximately 2000 miles by plane, boat, bus, van and truck. Our accommodations ranged from adequate to luxurious and our meals, from simple box lunches to an elegant torchlight buffet on the shores of Bali. We examined local forest service nurseries and the large industrial nursery, plantation and harvesting operations of the Weyerhaeuser joint venture, the International Timber Corporation of Indonesia (ITCI). We also toured a modern plywood factory and an integrated teak processing facility producing a variety of products including lumber, veneer, molding and parquet flooring. In one rather antiquated match factory employing 80 percent women and many children, we were not permitted to take photographs. The scale of employment justified the level of technology, we were told. Justification of the hazardous working conditions and low wages was not given. After questioning our guide we calculated a profit margin of roughly 200 percent.

Other stops on our tour included forests reserved for religious reasons and those protected for watershed purposes. At a govern-

TOUR MAP

EIGHTH WORLD FORESTRY CONGRESS



INDONESIA

SCALE 1 : 20,000,000

ment forest service training center my query as to where were the female members of the class received only a hearty laugh in response. An official spokesman for the Faculty of Forestry at the Gadjah Mada University in Yogyakarta told me that approximately ten percent of their enrollment are women. An actual tally secured for me by another source gave the number at about 20 in 600, a percentage closer to three than ten.

Some of the most interesting sites visited were the multiple-product forestry projects, known variously as agroforestry, agri-silviculture or silvopastoral systems. On the very densely populated island of Java, small land holdings have pushed farmers to expand their agricultural operations onto areas of unsuitable soil and topography, in particular through the deforestation of mountain slopes. Livestock grazing and firewood collection have destroyed further the forests resulting in landslides, soil erosion, siltation and flooding downstream, and increased upland aridness. In an attempt to reverse this trend of environmental degradation the Indonesian government has undertaken a forest rehabilitation program designed to improve the watershed and produce food, fodder and fuel as well as timber and other tree products. At one of these projects in Central Java which we visited, the hillside forests, which foraging cattle, fuelwood gatherers and windthrow had reduced to a few scattered trees, have been restocked with pine (Pinus merkusii) underplanted with red kaliandra (Calliandra calothyrsus) and elephant grass (Pennisetum purpureum). The pine can be thinned, beginning at age five depending on site quality, to provide fuelwood and poles, tapped for resin beginning at age ten and harvested for pulp or match wood at age thirty. The kaliandra, a legume, enriches and stabilizes the soil with its deep root system and at age two can be cut for fuel. Resprouting from the stump or a copious seed dispersal, it reportedly can produce 40 cubic meters of wood per hectare annually. Moreover, its leaves provide a nutritious fodder to supplement the elephant grass. Planted in contour ridges to aid soil conservation, the elephant grass can produce more than 30 tons of fodder per hectare annually. Field trials showed that three years after establishment fertilized grass could yield annually up to 60 tons per hectare in five cuttings, enabling a farmer to stall feed as many as three cattle per hectare, a sixfold increase over traditional production methods. In some cases farmers also plant cassava among the young tufts of grass. Comparable projects in other areas have Albizia falcataria or Leucaena leucocephala substituting for the red kaliandra as the fast-growing fuel and fodder species; in other instances maize and potatoes are grown as food crops.

As an adjunct to the forest improvement program, the government is trying to demonstrate the advantages of penning livestock. Traditionally domestic animals have been turned into the forest to forage on available vegetation. In addition to consuming the palatable sprouts, cattle trample seedlings and compact forest soil, all of which have a negative effect on forest growth. Government officials point out to the farmers that stall feeding yields a better quality and therefore more valuable animal and also results in improved forest productivity. The cattle penning campaign has met with varying success due to traditional beliefs in some areas that the grass gives the animals digestive disorders and also perhaps to the cost, in

terms of money, time or labor of collecting the fodder for the captive animals.

One of the first agroforestry projects, the watershed stabilization and upland development scheme for the Upper Solo River basin, was begun in 1973. In addition to directing the reforestation of steeper slopes, greater than 50 percent, with Pinus merkusii and Albizia falcataria underplanted with elephant grass, the United Nations' technical advisors engineered improvements in the water courses and the bench terraces. Unfortunately some of the reforested areas experienced seedling mortality rates of up to 50 percent. Apparently maintenance of the plantations declined as the farmers' interest waned with the increasing labor demands of food production. An absence of technical and institutional support, specifically the government's failure to extend credit for the purchase of cattle and to distribute fertilizer the second year, contributed significantly to the caretakers' loss of interest.

In order to protect its approximately 845,000 hectares of valuable teak (Tectonis grandis) from encroaching agriculturalists the State Forest Corporation, Perum Perhutani, also has introduced a system of multiple-crop forest management. In new plantations Calliandra calothyrsus and Leucaena leucocephala are interplanted with teak in order to provide fuelwood as well as to enrich and stabilize the soil. At the plantation we visited, dry rice was growing among the tree seedlings and we were informed that in other areas maize, soybeans and elephant grass are planted as food and fodder crops. Under the shady, older teak stands medicinal herbs may be cultivated. The slow-growing teak which is harvested at age sixty also yields intermediate thinnings for use as firewood, poletimber or sawtimber. Government loans are available for the purchase of fertilizer, pesticides and genetically improved seeds, the use of which are encouraged. According to official reports approximately 6000 hectares have been brought under this type of intensified agri-silvicultural system since 1974. In addition the state has attempted to improve the lot of the teak forest workers by moving their families from the traditional thatched teak bark huts scattered through the forests to government built villages providing schools, religious halls and sanitation and medical facilities as well as housing. Instruction and training in improved forestry and agricultural techniques, handicrafts production and animal husbandry, including the care of honeybees and silkworms, is offered. Labor intensive silvicultural and harvesting practices are maintained in order to maximize employment in this populous region. As we saw, hand tools and human and bovine energy dominate the timber harvesting scene rather than petroleum fueled chainsaws and dinosaur-like log-moving equipment. Several tour members pointed out, however, that the workers' productivity could be substantially improved and their tasks made less arduous by minor adjustments in the sawtooth angles and regular sharpening of the tools.

To supplement the agenda of forestry exhibits we were treated to tours of art and handicrafts workshops, a batik factory and numerous holy shrines and temples, one of the most breathtaking being Borobudur. At several stops we were entertained by musicians and dancers in elaborate costumes dramatizing themes from religious epics or ancient rituals. As we passed through innumerable small

villages and incredible intricately terraced fields, it was of some relief to see that despite the disruption our caravan caused, our visit provided amusement and in some cases a newly paved road, although never quite finished for our passage. If travelling en masse with a police escort of sirens and flashing lights impeded intimate encounters with local populations, it did facilitate our viewing a wide spectrum of Indonesian forestry projects. Although at times the hectic pace and the kaleidoscope of new images were a bit dizzying, one did find calm moments for discussion with a colleague on the merits of a particular forest project or practice. The more experienced tour members were extremely helpful in educating this neophyte in tropical forestry. I found that the tour offered both an ambiance and opportunity for informal but professional conversations which were rarely available during the rest of the Congress. Moreover, the friendships developed during the pre-Congress tour not only provided a few familiar faces among the crowds in Jakarta but also prompted additional introductions and references.

The Eighth World Forestry Congress was convened on October 16 at the Convention Hall in Jakarta; speeches by Indonesian President Soeharto and Vice President Adam Malik as well as various officials from Perum Perhutani, the Food and Agricultural Organization of the United Nations (FAO), and the International Union of Forestry Research Organizations (IUFRO) greeted the more than 2000 participants from almost 90 nations. Although held initially in 1926, this conference of forestry professionals has met regularly every six years since 1948. Organized by the FAO in varying host nations, the Congress is meant to "serve as a forum for the exchange of views and experience and for discussions of matters concerning all aspects of forestry which may lead to the formulation of broad recommendations applicable on a regional or worldwide basis." Although official government delegations tend to dominate the participation, the Congress welcomes representatives of international organizations; scientific, technical or educational forestry organizations; professional forestry organizations; forest industry and private or public bodies financing forestry activities or connected with forestry, forest conservation and the utilization of forest products. Despite the abundance of administrators, educators and researchers, I did meet a few private forest land owners from Japan and Scandinavia and students from Germany in attendance. By all reports the Eighth World Forestry Congress was the most popular in spite of it being the longest in history.

With the theme of the 1978 Congress being "Forests for People", the organizing committee designated five discussion areas,

- Forestry for Rural Communities,
- Forestry for Food,
- Forestry for Employment Promotion,
- Forestry for Industrial Development,
- Forestry for Quality of Life,

each of which was addressed by a guest speaker and a IUFRO spokesman. These individual discussion areas were subdivided into from four to nine topics, altogether thirty, which were examined in position papers presented by various different experts and in interventions from the audience. Invited special papers and voluntary papers were

discussed in satellite meetings or extra sessions. All totalled this amounted to more than 72 hours of actual conference during the week and easily 30 kilograms of printed matter per participant. In general, position papers briefly summarized the state of knowledge on a particular topic, reviewing recent research findings and noting promising developments and trends. Interventions, mostly by government delegates, very often extolled the virtues of some forestry program in the delegate's homeland. I must admit I was surprised at the enlightened forest practices described by some of the delegates.

A topic new to the Congress this year and one of special interest to me was Women in Forestry. A doctoral student in forest sociology at the University of Washington and a FAO essay competition winner, Paula Williams delivered the position paper and in so doing became the first woman ever to present a position paper at a World Forestry Congress. Although several of the 19 papers submitted on this topic referred to women's "natural abilities" which suit them to employment in forestry research institutions, laboratories and nurseries, Paula declared that this sort of stereotyping is due, in fact to socialization patterns. Moreover, she asserted that there are "no specific roles for women in forestry. Women, like all other workers, deserve an equal access to all job opportunities in forestry." Indeed, certain jobs "need to be redesigned so that they will be available to more people...so that (they) will be safe and less strenuous for everyone." As one of the Congress' more politically charged issues the final policy declaration on women in forestry was predictably non-committal, reflecting the conservatism of this traditionally all male bastion and reemphasizing Dr. King's contention that foresters' "education and training tend to exaggerate the 'stickle-back' mentalities, tend to emphasize the territorial imperative...."

Two of the most articulate and rousing speakers to step to the podium were Dr. K.F.S. (Ken) King, Director-General of the newly formed International Council for Research in Agroforestry (ICRAF), and Jack Westoby, former Director of Programme Coordination and Operation in the Forestry Department of FAO. Addressing the discussion area Forestry for Food, King accused foresters of being "mesmerized by the wood which they produce" and of neglecting the so-called "minor" forest products which in many cases yield financial returns greater than those from traditional wood products and normally in time periods shorter than those from timber plantations. In planning forest development he argued that the whole productivity of the forest ecosystem be considered. King also claimed that foresters' "attitudes to development are often isolationist", regarding people only as a threat to their forest domain. He urged the participants to reaffirm that the focus of forestry and the ultimate responsibility of the forester, as a scientist, is to humanity.

Westoby as guest speaker on the topic of Forestry for Industrial Development ventured further to assert that "as yet, forest industries have made little or no contribution to socio-economic development in the underdeveloped world...Indeed, the probability is that such forest industries...(have) served but to deflect attention from real needs, diverted resources from what should have been the true priorities, and served to promote socio-economic underdevelopment." For developing countries to insure that forest industries truly contribute

to socio-economic development, he argued that forestry sector priorities must be "subordinated to, and carefully geared to, their national development priorities....the most imperative...(being) to ensure that their people are adequately fed." Finally he called on foresters to decide "Whether they stand on the side of power, landed property, the status quo....where, historically, most foresters stood....Or whether they share the aspirations of the common people, and are prepared to work for the day when the rich and many-sided contribution of forestry is harnessed to the service of all, and not to that of a privileged few." Reactions to Westoby's words rumbled through the generally conservative audience, but were defused greatly by the time they surfaced as interventions. At subsequent coffee breaks I overheard a few contemptuous comments regarding the speaker's newly found radicalism after his having persisted in FAO for some two decades.

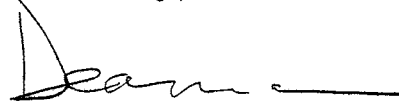
If the censorious tone of Messrs. King and Westoby was a bit jarring to some, the essence of their message was repeated throughout the Congress proceedings. Specifically, in the developing world despite warnings of dire environmental consequences the forests are falling in the face of the food, fodder and fuel needs of the rural inhabitants. Technological progress which has elevated wood to the role of an essential raw material in the mechanical and chemical sectors has overshadowed the primitive uses of wood. Nevertheless, as the industrialized nations demands for timber products increases, so do rural populations and their needs for forest products and forest land for food production. Legislating against the cutting of forests for fuel and fodder supplies or agricultural settlement has only redefined traditional practices as illegal; in some cases forest nationalization has increased destructive exploitation and forced farmers onto unsuitable marginal land with disastrous environmental results. If forests are to survive to serve the national and international communities, they must accomodate the demands of neighboring rural communities as well. It has been shown that with intensified management forests can produce food, fodder and fuel in addition to timber and other non-wood products. The cooperation of forester and farmer for the integration of silvicultural and agricultural systems can lead to a more efficient utilization of the productive capacity of the forest ecosystem. As the forests are called upon to play an increasingly important role in providing the raw materials of urban as well as rural life, it is imperative that the primitive laissez-faire attitude toward forest administration be abandoned and that forest management become an integral part of rural development programs.

The dilemma of the forest and man relationship exhibits the circularity of many development problems. To have forests for people one must secure the support of the rural inhabitants for the development of the forests. Prerequisite to this commitment to conservation is popular recognition that cooperation will be to the direct and imminent benefit of the local communities. The difficulty lies not in convincing rural inhabitants of the value of forest products but rather convincing them that they themselves have something to gain by forest management. Traditional forest management schemes have offered a promise of greater future rewards for present abstention, an ascetic investment program generally unpopular with indi-

viduals whose future is precarious. The introduction of agricultural intercropping, fast-growing fuel and fodder species and fruit and nut trees into forest rehabilitation projects will improve the health as well as productivity of the forest within a time horizon meaningful to the small farmer. Local individual and community commitment and participation is as necessary to project success as central government support or proper technical assistance.

In essence the ideas presented at the Eighth World Forestry Congress were nothing novel. Indeed, a system of agricultural intercropping with timber species was introduced into the teak plantations of Burma during the mid-nineteenth century. Although some foresters scoff at the new jargon, such as agrisilviculture, energy forests and urban forestry, these terms denote an expansion of the concept of multiple-use forest management, the theme of the 1960 World Forestry Congress. Multiple-product forestry, multi-story cropping and multi-purpose species reflect the realization of the need for intensified utilization of our scarce natural resources. The necessity of reorienting forest development policies was recognized in the formal and informal Congress gatherings. Hopefully the noble words and ideas will survive the transit from Jakarta. By far the toughest task will be to translate the rhetoric into action, into trees. Existing successful forestry experiments which gloriously illustrate FAO and World Bank publications must be extended to national scope. Moreover, these development schemes must be expanded to a scale which will have a significant effect on improving the lives of the rural poor and on securing the sustained productivity of the rural ecosystems. Unless we can reverse the trend of forest destruction and environmental degradation, we may well find the Ninth World Forestry Congress convened on the more desperate note, Forests for Mankind's Survival.

Sincerely,



Deanna G. Donovan
Forest and Man Fellow