



# 2001

## Annual Report

INTERNATIONAL NETWORK FOR BAMBOO AND RATTAN

## Message from the Chair and Co-Chair

In 2001 INBAR has achieved real progress in all its fields of activity, supported by substantial contributions from the Chinese Government, Canada's International Development Research Center (IDRC), the Dutch Government (DGIS), the International Fund for Agricultural Development (IFAD), with additional contributions from those member countries in which INBAR is most active and from concerned people from around the world. The Common Fund for Commodities (CFC) and the International Tropical Timber Organization (ITTO) have also signalled they will provide significant funding assistance next year. It is through the funding provided mainly by these organizations that the normal functioning of INBAR's headquarters and the development of INBAR's programmes are financed.

In February 2001, the Fifth Board Meeting was held at the headquarters of IFAD in Rome. Ms Yoshiko Y. Nakano, President of the Organization for Industrial, Spiritual and Cultural Advancement - International (OISCA) (Japan) and Mr Romualdo L. Sta. Ana, President of the Philippine Bamboo Foundation, Inc. were invited to become members of INBAR's Board of Trustees. Ms Josefina Takahashi Sato, Council Chair of ITTO will join the Board in 2002. Mr David Hopper and Mrs Ana Cecilia Chaves left the Board at the end of their terms in November 2001. The Board expresses its sincere thanks for their vigorous efforts on behalf of INBAR during its formative years and welcomes the new members of the board.

In the year 2001, Mr Wang Zhibao, Chairperson of the INBAR Council and former Administrator of the China State Forestry Administration (SFA), resigned from his position after his appointment as Deputy Director General of the Office of the Leading Group for Western Region Development of the State Council in China. Mr Zhou Shengxian, newly appointed Administrator of SFA, became the new Chairperson of the INBAR Council. We would like to express our sincere gratitude to Mr Wang Zhibao for his significant contribution to INBAR's establishment and development during his term of office. At the same time, we would like to express our warm welcome to Mr Zhou Shengxian. We firmly believe that INBAR will continue to receive strong support from the Chinese Government.

In February 2001, Kenya joined INBAR. INBAR has developed from an international organization of nine founding member nations, and six observing nations to 22 member nations, of which 10 are in Asia, five in Africa and seven in the Americas. Venezuela, Ethiopia, Uganda and Cameroon are actively interested in joining INBAR. In 2001, INBAR established its South America Office in Ecuador, and is preparing to open a West Africa Office in Ghana. Beside these two offices, INBAR already has regional offices or contact points in India, Malaysia and in Europe. With the on-going implementation of its programme activities, INBAR's influence is being extended and its international status is gradually improving. We welcome the application of more nations to join our global network.

With the energetic efforts of the host government, the construction of INBAR's permanent headquarters has been progressing smoothly. The main structure of the building has now been finished. It is expected that the building will be completed and ready for occupancy in the second half of 2002. In October 2002, the INBAR Council Meeting and Board Meeting will be held in the new headquarters building. These two meetings will discuss critical issues concerning INBAR's development in the future. At the same time, we will hold a Ceremony to mark the completion of the permanent headquarters, and to celebrate the fifth anniversary of INBAR's establishment.

Last but not least, we would like to take this opportunity to thank all the staff at INBAR headquarters and at the various regional offices for their hard work and contribution to the development of INBAR. We hope they continue their efforts to achieve even greater progress in 2002!



Dr Gordon Smith  
Chair



Professor Jiang Zehui  
Co-Chair

# Director General's Overview



*Dr Ian R. Hunter  
Director General*

In my overview to the 2000 Annual Report I commented on the growing portfolio of activity with development projects. In 2001 we made very solid progress with work in four countries - Ecuador, China, Ghana and India - and much of this annual report is dedicated to describing the work in those places. During 2001 we have been planning activity in other countries and beginning work on projects in Tanzania, Bangladesh, Nepal and the Philippines. It might seem surprising that an organization with a relatively small budget could undertake such a large programme. However it is possible due to the very substantial co-financing we have been able to attract.

INBAR welcomes this opportunity to work close to the coal-face. It brings many benefits. Our research, study and investigation activity has a much sharper focus as a result of coming into contact with real need. We are building partnerships with NGO's who are able to tell us when our technology transfer packages are useful, usable and appropriate. We are able to see the beneficial impact of our activities on the lives of the poorest people in the World.

## Financial Issues

2001 was a year of further evolution in the financial development of INBAR. In 2001 co-funding of project activity increased further to \$524,000. Notable co-funding support came from several states in India and from the Indian Government; from several Chinese provincial governments; from the Chinese Ministry of Science and Technology; from UNIDO; from GTZ and from DFID. INBAR continued to enjoy financial support from its four main donors (PRC, IFAD, DGIS and IDRC) but increased its income from other sources by about 500% to \$400,177. INBAR was able to apply most of this extra funding to supporting and developing its main project work, thus avoiding the risk of dilution and loss of focus.

In 2002 INBAR will benefit from at least two new contract arrangements. INBAR has been successful in gaining Common Fund for Commodities' financing to apply to project activity in Bangladesh and Nepal. INBAR has also been granted the right by DGIS to host five junior professionals. While there is a significant training element in the junior professional's position they also bring a very useful addition to field capacity in development projects.

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# Programme I: Ecological Security

## Staff:



Dr Lou Yiping  
Programme Manager



Dr Fu Jinhe  
Programme Officer



Ms Nadia Bystriakova  
Researcher

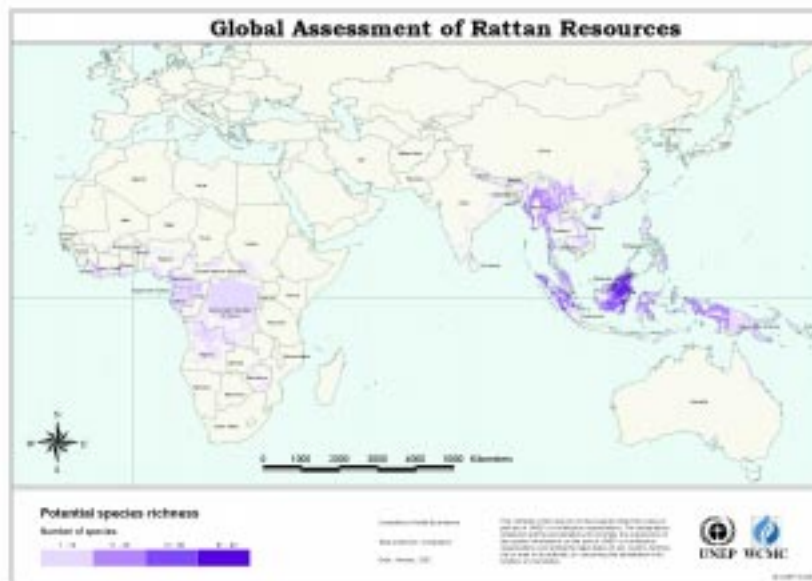
The programme aims to improve knowledge of bamboo and rattan resources and their contribution to rural development and environmental benefits.

## INBAR Project Collaborators:

Prof. David Midmore (Australia)  
Prof. Zhang Guangchu (China)  
Mr Wang Zhongqin (China)  
Dr Nimfa Torreta (Philippines)  
Dr Igor Lysenko (Russia)  
Dr Valerie Kapos (United Kingdom)

## Project Highlights:

Rattans are spiny climbing plants and not routinely included in resource inventories being classified as a "non-timber forest product". An estimate of global rattan resources has not yet been developed and the distribution of rattan species in the world is not adequately mapped. As a step towards improving the information available, INBAR and UNEP-WCMC have been jointly conducting a project to estimate the magnitude and distribution of 610 species and subspecies within natural stands. Since rattans grow in conjunction with other forest species, the project is attempting to determine distribution and to estimate areas of rattans by combining information on the distribution of rattan species with certain types of forest cover. From this database a series of maps were produced linking the recorded location with forest type. The map below shows rattan species richness in Asia, where the highest figures of potential richness (92 species per square km) were recorded in Sarawak, Malaysia. From these maps one can calculate the approximate area of land likely to contain rattan species. One can also identify areas with high concentrations of species. (However, it should be noted that such geographical variations can sometimes also be the result of differing levels of activity by taxonomists). One can also begin to infer species-to-site requirements from general knowledge about the site in which they are found naturally.



# Programme II: Livelihood Development

The activities of the Livelihood Development programme are designed to enable INBAR to impact positively and directly the livelihoods of the rural poor by developing sustainable bamboo and rattan income-generating activities. These are mostly achieved through rural development projects, in each case implemented through a range of local NGOs or expert organizations. Other activities in the programme aim to provide specific information to support these projects, and to seek ways of improving their effectiveness.

## INBAR Project Collaborators:

Dr Ratan Lal Banik (Bangladesh)

Dr Edwin Marguerinos (Bolivia)

Mr Chen Suijun (China)

Mr Zhang Guansong (China)

Fr. Roberto Costa S. G. (Ecuador)

Mr Byron Cassignia (Ecuador)

Mr Milton Cedeno (Ecuador)

Mr Luis Fernando Botero (Ecuador)

Mr David Coleman (Ghana)

Mr Vilas Gore (India)

Mr Sanjeev Vasudev (India)

Mrs Sangeeta Agrawal (India)

Mr Kamesh Salam (India)

Dr N. Manokaran (Malaysia)

Ms Carmelita Bersalona (Philippines)

Dr Said Iddi (Tanzania)

Mr Alex Chihongo (Tanzania)

Ms Catherine Mackenzie (UK)

## Project Highlights:

The focal points of the Livelihood Development programme are our four Pilot Development Projects, of which we have one each in Ecuador, Ghana, India and Hainan, China. These aim to trial bamboo- or rattan-based development activities to form replicable models that can be applied on a larger scale. These projects are, or shortly will be, run by INBAR staff based in our various regional offices in Ecuador, Ghana and India, who have considerable in-country experience. Each project is scheduled to last until the end of 2004, giving plenty of time for model development and evaluation.

The multitude of uses to which bamboo and rattan are put mean that adopting a market-led approach provides a very solid foundation for the sustainable development of livelihoods. To this end we have conducted a comprehensive study of the markets for bamboo and rattan in the Northeast of India and surrounding countries and regions, which has identified significant opportunities for bamboo and bamboo products in the region.

Other activities have included the study of the potential for micro-hydropower to fuel bamboo development in hilly areas and the development of a model for its implementation and management, and a study of community-business bamboo partnerships. Studies of the Production-to-Consumption systems of bamboo in Bolivia and the Philippines have commenced and the results they produce are expected to provide a basis for initiating rural development activities in these countries in the near future. The programme is also continuing to provide technical assistance to the UNDP/UNIDO-funded Cane and Bamboo Technology Centre in Northeast India.

## Staff:



Dr I.V. Ramanuja Rao  
Senior Programme Manager



Dr Herwig Cleuren  
Policy Researcher



Dr Arienne Henkemans  
Social and Community Development



Mr Andrew Benton  
Programme Development



Jin Wei  
Programme Assistant

# Programme III: Economic Development

## Staff:



Dr Maxim Lobovikov  
Programme Manager



Ms Wu Junqi  
Programme Assistant

The programme aims to enhance the role of bamboo and rattan as materials for industrial development and economic growth to promote sustainable development.

## INBAR Project Collaborators:

Dr Ahtaruzzaman (Bangladesh)	Prof. S.L. Chan (Hong Kong, China)
Dr Shashi Kant (Canada)	Mr V.N. Gore (India)
Prof. Wang Houli (China)	Dr K.J. Rawat (India)
Dr Zhang Minxin (China)	Mr K.S. Subba Rao (India)
Prof. Zhang Qisheng (China)	Dr Jules Janssen (The Netherlands)
Prof. Zheng Wang (China)	Dr Isabeilita Pabuayon (The Philippines)
Ms Ximena Londoño (Colombia)	Dr Lionel Jayanetti (UK)
Dr Jorge Gutiérrez (Costa Rica)	Mr Philip Wardle (UK)
Dr K.F. Chung (Hong Kong, China)	Dr Bruce Michie (USA)

## Project Highlights:

The INBAR project on the introduction of the International and National Bamboo Building Codes is one of the most important priorities of INBAR. The project is implemented by a group led by Dr Jules Janssen.

One billion people on the planet live in bamboo houses built without proper building standards. Professional architects cannot use valuable bamboo material for construction because of the absence of Bamboo Building Codes. Bamboo buildings have proved to be much safer during earthquakes and other disasters, but loans and insurance are not available for the bamboo constructions built without Building Codes. Introduction of the Bamboo Building Codes will literally save human lives and construction costs, open up wide construction markets for bamboo, promote bamboo industrial development, inspire new designs and technologies, and expand architectural horizons.

The year 2001 was a turning point in the implementation of the INBAR Building Code Project. The ISO Committee held in Cape Town in September 2001 voted unanimously for the draft documents to become DIS (Draft International Standards) and the manual to become DTR (Draft Technical Report). These documents are about four years ahead of the regular schedule. The result was achieved due to the intensive work of INBAR and ISO Committee experts. The bamboo sector may attain the International Building Standards by the end of 2003. After approval of the Standards, development of National Building Codes will be a much easier task.



## Programme IV: Outreach

The programme aims to promote information flow in the bamboo and rattan sectors as an efficient approach to improving income generation at both community and industrial levels.

### INBAR Project Collaborators:

Mr Fu Maoyi (China)	Mr Burkhard Vielhaber (Germany)
Prof. Pei Shengji (China)	Mr Arun Bansal (India)
Dr Wang Kanglin (China)	Dr K. K. S. Nair (India)
Prof. Zhang Qisheng (China)	Mr Shankara Pillai (India)
Ms Zhang Wenyan (China)	Mr Kamesh Salam (India)
Ms Zhang Xinping (China)	Dr Lee Ying Fah (Malaysia)
Mr Juan Carlos Jaramillo (Colombia)	Mr Tan Ching Feaw (Malaysia)
Mr Jorge Moran (Ecuador)	Ms Irene Gomez (Singapore)
Ms Jutta Niemann (Germany)	Mr Alan Palmer (Sri Lanka)
Prof. Dr Walter Liese (Germany)	Dr Peter Scott (United Kingdom)

### Project Highlights:

Two training workshops were organized in 2001. These workshops have been very effective in promoting capacity building and technology transfer. In October the workshop on bamboo handicrafts and handicraft processing tools attracted a total of 44 participants from 14 countries, including 13 participants from Ghana. In addition to financial support from INBAR and the Ministry of Science and Technology of the People's Republic of China, contributions came from other international organizations and/or government aid agencies such as FAO, UNIDO, ITTO, GTZ and USAID.

Also in October/November 2001, we held a training workshop on Affordable Bamboo Housing for Earthquake-prone Areas in Mizoram, NE India attended by 87 participants. The workshop was a joint undertaking by INBAR, the UNIDO Cane and Bamboo Training Centre in Guwahati, Assam, and the government of Mizoram. Theory sessions were followed by intensive design and practice sessions, enabling all participants to combine tradition and fantasy in new ways and to grasp the improved construction system. The construction of a full-size model house involved the participants and added an ambitious element to the workshop. The government is now considering the use of the technique for their official buildings.



*Model house construction, with the help of participants*



*Finished bamboo house*

### Staff:



Dr Huang Shineng  
Programme Manager



Dr Ralf Kwaschik  
Senior Information  
Specialist and Special  
Advisor on Network  
Development to the DG



Dr N. Manokaran  
Technology Transfer  
Specialist and Special  
Advisor on Rattan to  
the DG



Ms Liu Qian  
System Specialist and  
LAN Manager



Mr T. P. Subramony  
Resident Manager  
South Asia Office



Mr Stephen van der Mark  
Associate Professional  
Officer

## INBAR in Ghana

Ghana used to have abundant forest resources and even recently 6% of its GDP and 11% of its exports came from tropical timber. However, the forests have been over-cut for years and can now only sustain a cut of about 20% of their historical yield. This has obvious implications for national income and the income of the rural people.

Ghana has not actively utilised its bamboo despite having appreciable resources in the west and south. Ghanaians wondered whether increased utilization of bamboo might help sustain economic activity and raise rural incomes. Over the last couple of years INBAR has actively assisted in awareness raising and discussions in Ghana. Last year a large delegation of 13 Ghanaians attended our training workshop and field trips in China. The Ghanaian delegation decided to leave their own funds with INBAR for the purchase of a series of small bamboo processing machines and a container of bamboo product samples to ship to Ghana for exhibition, and requested INBAR to organize experts to carry out bamboo resources survey and training courses on bamboo cultivation and product processing in Ghana in March 2002. Collectively Ghana has decided that with a workforce experienced in wood working and existing market links for timber, a gradual inclusion of bamboo products in production and trade is both feasible and desirable. The initiative has now received support at the highest level, being the subject of a cabinet paper in early 2002.

In 2001 INBAR provided technical assistance to Ghanaian entrepreneurs in importing bamboo processing machinery which has been installed in factories in Assin Foso and Azim (in west and south Ghana). INBAR, with the Chinese Government, sent a mission to Ghana to assist with commissioning the factories and to begin training local people in simple fabrication.

Already Ghanaian entrepreneurs, using existing wood working machinery, have successfully made glue-laminated boards from strip bamboo. This action research has high-lighted some problems which can be solved by further work. It has revealed that the African bamboo (*Bambusa vulgaris*) deserves its name, being generally coarser, darker than Chinese Moso, with shorter internodes and having larger internodes with nodal swellings. These shortcomings do not prevent manufacture of a good product but further treatment may be necessary to achieve quality. However, there is considerable genetic variation and more gracile forms can be found, offering the prospect of improvement by selection.

Significantly, one of INBARs action research development projects is being located in Ghana, and preparatory activities were conducted during 2001. It is also hoped that INBAR will be able to open a Technology and Information Centre for West Africa in Ghana, and negotiations for it's establishment have been ongoing during 2001.



*Bamboo roofing in Ghana*



*Bamboo products made in Ghana*

# INBAR in Northeast India

Throughout 2001 INBAR has been providing expert assistance to the UNDP/UNIDO-funded Cane and Bamboo Technology Centre (CBTC), the aim of which is to provide support for developing and enlarging sustainable handicrafts industries in the Northeast. INBAR's Dr Ramanuja Rao prepared a strategy paper and an action plan for the centre in the spring. INBAR and our local partners have subsequently organised and run six State-level workshops and one regional workshop (the latter in 2002) on developing policies supportive to the bamboo and rattan sectors in the Northeast. Besides UNDP/UNIDO these were also supported by INBAR, the concerned States and the North East Council of the Government of India. Conclusion papers and a regional policy action plan are being prepared.

Preparatory activities prior to these workshops have resulted in the creation of a significant groundswell of interest and support amongst State governments, the national government, NGO's, business people, and many of the people of the Northeast. This collective enthusiasm has enabled us to expand our activities far beyond what was originally envisaged.

INBAR is now developing three pilot development projects in the Northeast, one each in the States of Manipur, Mizoram and Tripura. Each focuses on instigating the supportive framework within which the bamboo and rattan sectors can grow to enable sustainable, community-led business development. Small scale business development will be included in the projects to test the effectiveness of these "enabling framework" interventions and provide business models for replication by communities.

Presently a team is completing an evaluation of the bamboo sector in Tripura State to enable the production of an actionable working plan. A report for Mizoram State completed in early 2001 is providing the basis for identifying interventions in that State, whilst a similar mission in Manipur State is expected to commence shortly. Significant financial support has already been promised from the Governments of all three States, and the national Government of India has so far agreed to offer considerable additional funding to take two of the projects beyond the \$1 million mark.

## Supportive studies

INBAR has been conducting supportive studies during 2001 of two aspects of the bamboo and rattan sector that will provide additional foundations for its development. INBAR was contracted by UNDP to produce a study of the potential, and deliverable mechanisms, of bamboo-based housing in Tripura, Uttaranchal and Ratnagiri. This is particularly useful in our Tripura project, which has a significant low-cost housing component, and a model bamboo-housing village is being constructed there.

We have also conducted a study of the markets for bamboo and rattan raw materials and products in the Northeast and surrounding countries, and this includes implementable recommendations for sustainable market development. Such a study has never been done for bamboo or rattan in India before and has aroused considerable interest amongst governments and the business community alike. The study was co-funded by INBAR, UNIDO and IFAD.



*Bamboo area in Tripura*



*Bamboo transport by river near Teliamura, Tripura*



*Traditional bamboo housing in Tripura*

## INBAR in Hainan, China



*Rattan seedlings*



*Large scale rattan nursery in Baoting County*



*Visiting the project site*



*Villager receiving the  
Land-Use License*

In the 50 years to 1994 when a logging ban was implemented, deforestation in Hainan Province had reduced tropical rainforest coverage severely, and had impacted negatively upon the sustainable livelihood options for local people. Hainan is predominantly rural, with ninety percent of the population deriving its income from agriculture with many of these people from tribal minorities, such as the Li and the Miao, who have historically been among the poorest on the island. Today the forests are recovering due to the logging ban and the policy of mountain closure, but the people's livelihood options have suffered. A significant need for alternative sources of income has been identified in many of the buffer zones around the closed mountain areas.

The GTZ - Hainan Province Forestry Bureau - INBAR project was instigated to protect and develop local bamboo and rattan resources, promote tropical forest conservation and sustainably increase the incomes of farmers. As Hainan is tropical the project consists of a major rattan component. China is a net importer of rattan and Hainan is one of the few places in China in which it can be grown. The Project therefore identified the farming of rattan in the forest margins as an activity where a strong market already existed and where the products of the farmer's activity could readily be sold. A major part of the project therefore involves capacity building in rattan cultivation, processing and products that can be used to enable on-farm income generation. A number of rattan nurseries have been established and training in rattan cultivation and processing has commenced. Networking and information exchange is another area targeted for development and the Bamboo and Rattan Network of Hainan has been established. The Network produces a regular newsletter and is building capacity to support the sustainable development of the bamboo and rattan sectors in the Province via the ecological and economic construction of the sector, and by technical and market information exchange.

It was early recognised that an integrated approach had to be taken. Critical to success was a sense of ownership by the local farmers. The Provincial Government have therefore taken the step of establishing a land contracting system with local farmers. A contract document has been developed that specifies precisely the name of the licensee, location, area and time period for management. The right can be transferred or inherited during the contract period. In return the farmer must guarantee the preservation of the forest. The licenses are issued concensually, taking into account existing land use patterns and existing attitudes towards secondary forest use. The licenses have been taken up enthusiastically by many farmer families.

The license confers the right to manage and harvest existing rattan plants within the license area, thus providing a continuing income while newly planted rattan is maturing. Seed collection revenues and the harvest of existing rattan have already significantly increased local incomes. In one village 24 families have seen their annual income increase by \$2,500. Since annual cash incomes have been as low as \$500 per family this constitutes a very significant increase. Approximately half of that extra income comes from donor and government support for seed collection, which is not sustainable in the long term. However this source of income will be replaced in the medium term by revenue from maturing rattan canes.

## INBAR in Ecuador

On 6 August 2001 INBAR officially opened our Technology and Information Centre (TIC) for Latin America and the Caribbean in Guayaquil, Ecuador. The Centre is housed in offices in the Faculty of Architecture at the University Estatal de Guayaquil and is staffed by Dr Herwig Cleuren and Dr Arienne Henkemans and supported by administrative staff provided by the Faculty. The opening of the office gives a significant boost to INBAR's Latin America and Caribbean programme, providing a regional focal point to facilitate better networking in the region, and staff with much regional expertise to enable greater effectiveness of our activities.

The TIC's first activity was the holding of the International Workshop on the role of Bamboo in Disaster Avoidance in Guayaquil, in conjunction with the International Bamboo Fair and Workshop on Bamboo Resources 2001 which was organised by the local NGO, ECUABAMBU. The potential roles of bamboo in land rehabilitation and stabilisation, earthquake resistant housing and erosion control were discussed at the INBAR workshop, and the fair provided exhibitions of bamboo products and opportunities for trade discussions for more than 1000 visitors. The staff have also participated in the Fair for Construction Materials and Housing organised by the College of Architects of Guayas, and in the Workshop on the Use of Bamboo in Construction in Guayaquil.

One of the largest users of bamboo in Ecuador is the charity Viviendas del Hogar de Cristo, which provides low cost bamboo-based housing to the poor in many parts of Ecuador. Hogar de Cristo runs its own bamboo plantation to supply its needs and INBAR is working together with them to develop it into a model plantation. Training of other bamboo growers has already been held at the plantation, and experiments are being used to produce models for successful management. These will be utilised in the INBAR-FECD (Canadian-Ecuador Fund for Development) jointly funded project commencing in 2002 that will help sustainable development of a range of communities in and around the town of Santo Domingo.

The TIC staff have also paid a visit to Peru to discuss further bamboo development projects and have close contacts with bamboo practitioners in Colombia and Chile. In Bolivia, a production to consumption study of the bamboo sector is under way in collaboration with the Centro de Investigacion Agricola Tropical (CIAT) in Santa Cruz.



*Hogar de Cristo plantation as a training base*



*Transplanting Guadua seedlings*



*Bamboo nursery*

# TOTEMs

Transfer of Technology Models (TOTEMs) are the cornerstones of INBAR's Transfer of Technology programme. They are intended primarily as vehicles for south-south transfer of bamboo and rattan technologies, because much of the technical expertise relevant to bamboo and rattan cultivation, processing and use, rests within the nations to which they are indigenous.

The TOTEMs have been produced by partners in nine countries, and each consists of a report, a video and a PowerPoint presentation. The different parts of each TOTEM are targeted at slightly different audiences, via the local extension workers, who are the main target users. The report and film are intended to be the main means of extension to the individuals and communities who will implement the technology and who will benefit directly from it. The PowerPoint presentation is primarily intended as a tool for the extension worker to sell the technology and its role in development to those who provide the infrastructural, policy and financial support for its implementation, such as government departments, donors and NGOs.

These present TOTEMs are part of an ongoing INBAR TOTEM programme, and we are keen to discover how effective they are in order to help us improve existing TOTEMs and to assist the pinpointing of needs with our new TOTEMs. We welcome feedback on the TOTEMs.



Totem Interface



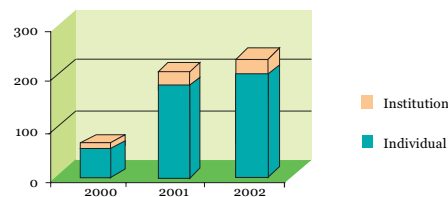
Elsie Yang  
External Relations

## INBAR's Expanding Global Affiliate Network

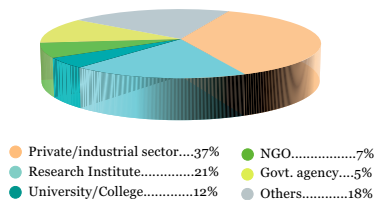
INBAR was operating as a network of collaborating organizations, institutes and individuals long before its formal establishment as an international organization in November 1997. To broaden and consolidate the strength of its existing network, the INBAR Affiliate Scheme, a second-tier membership structure based on individual people and institutions/companies was formally launched in September 2000.

2001 saw the rapid expansion of the INBAR global affiliate network. The number of affiliates has increased from 63 by the end of 2000, to 206 by the end of 2001 and 235 till March 2002.

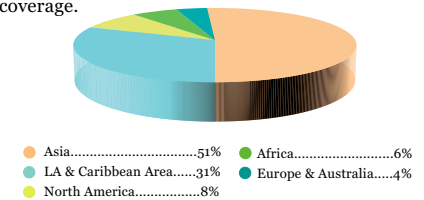
Graph 1 below shows the progress achieved since the launch of the Affiliate Scheme:



Graph 2 below shows percentages of the current affiliates classified by their main activities areas:



Graph 3 below shows the percentage of the current affiliates classified by their geographical coverage.



# Publications

This year INBAR has commenced cooperation with scientific publisher VSP, a subsidiary of Brill Academic Publishers, to produce our Technical Reports and Proceedings. Apart from the Newsmagazines and Annual Report, INBAR issues four main series:

## A. Technical Reports

INBAR's series of Technical Reports is intended to provide high quality, up-to-date information on technical aspects of the biology, cultivation or use of bamboos and rattans.

## B. Working Papers (on-line publications)

The working papers are the results of specific studies funded by INBAR. Eight Working Papers have been published in 2001 on the INBAR Website both as .txt files and as .pdf files, the latter of which contain the full contents of the publication and can only be downloaded by INBAR affiliates.

## C. Proceedings:

Reports/articles of the workshops, seminars and meetings held by INBAR are grouped in the proceedings series.

## D. INBAR Newsmagazine

The INBAR News Magazine is the only publication that regularly reports on INBAR activities and has aroused considerable interest from a range of organizations, institutes and individuals during the year. Each issue generally contains a lead article, an editorial written by the Director General and a range of topical articles describing INBAR's various recent activities. Two issues are produced each year, and are available in four languages (English, French, Spanish and Chinese).

## E. Journal of Bamboo and Rattan

The Journal of Bamboo and Rattan (ISSN 1569-1568) is a peer reviewed scientific journal and provides a forum for scientific articles and reviews on all aspects of bamboo and rattan biology, production, processing and use.

### Published in 2001:

#### Technical Reports:

TR 21: A Manual of Bamboo Hybridisation

#### Working Papers:

- WP 28: Bamboo Production-to-Consumption Systems in Tanzania
- WP 29: Rattan and Bamboo in Uganda: a Study of the Production-to-Consumption Systems
- WP 30: Bamboo in Abra (Philippines): an Investigation of the Production-to-Consumption Systems
- WP 31: Uncovering the Green Gold in Indonesia
- WP 32: Socio-Economic Study for the Bamboo Sector in Costa Rica
- WP 33: China's bamboo product trade: performance and prospects
- WP 34: Institutions and Bamboo Production to Consumption System: A Comparative Study of China and India
- WP 35: Evaluation of Bamboo Resources in Latin America

#### Proceedings:

PR 7: Bamboo for Sustainable Development

#### Newsmagazine:

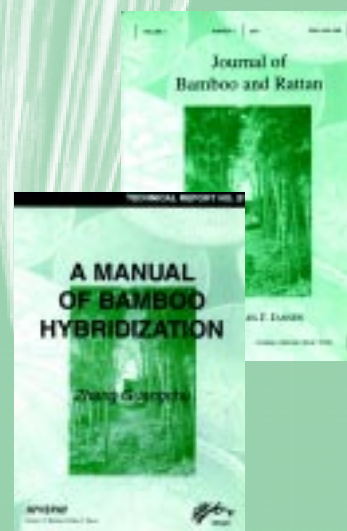
Volume 8 Issue 1 & 2

#### Journal of Bamboo and Rattan:

Volume 1 Number 1



Yang Feng'e  
Publications



# Appendix I: The Council

The Council is responsible for giving guidance to the Board of Trustees on general policy and strategy, and comprises all Member States who are party to the International Agreement Establishing the International Network for Bamboo and Rattan. All sovereign states that are members of the United Nations are eligible to accede to this Treaty, which remained open for signature until 6 November 1999. After 6 November 1999, the Agreement is open for accession by any state with the approval of the Council. No contribution is required, nor are any additional stipulations made other than those that are in agreement with the purposes and aims of INBAR. The Council membership as of December 2001 comprised:

Country	Official Name
Bangladesh	The People's Republic of Bangladesh
Benin	The Republic of Benin
Bolivia	The Republic of Bolivia
Canada	Canada
Chile	The Republic of Chile
China	The People's Republic of China
Colombia	The Republic of Colombia
Cuba	The Republic of Cuba
Ecuador	The Republic of Ecuador
Ghana	The Republic of Ghana
India	The Republic of India
Indonesia	The Republic of Indonesia
Kenya	The Republic of Kenya
Malaysia	Malaysia
Myanmar	The Union of Myanmar
Nepal	The Kingdom of Nepal
Peru	The Republic of Peru
The Philippines	The Republic of the Philippines
Sri Lanka	The Democratic Socialist Republic of Sri Lanka
Tanzania	The United Republic of Tanzania
Togo	The Republic of Togo
Vietnam	The Socialist Republic of Vietnam

## Council Representatives

Organizations and individuals who act as formal technical representatives for Member Countries are as listed below:

Country	Individual	Organization
Bangladesh	Mafuztul Islam	Ministry of Environment and Forests
Benin	Jean-Marie Ehuzu	Ministère des Affaires Etrangères et de la Coopération
Bolivia		
Canada		Embassy of Canada in China
Chile	Jorge Campos Roasio	INTEC-CHILE
China	Qu Guilin	State Forestry Administration
Colombia		
Cuba	Eng. Miguel Alvarez González	Forest Research Institute
Ecuador	Cecilia Calderón de Castro	Econo Asociación para el Desarrollo Sostenible del Bambú
Ghana	J. R. Cobbah	Forestry Research Institute of Ghana (FORIG)
India	D.C. Khanduri	Ministry of Environment and Forests
Indonesia	Sunaryo	Ministry of Forestry
Kenya	Paul K. A. Konuche	Forestry Research Institute (KEFRI)
Malaysia	Secretary General	Ministry of Primary Industry
Myanmar	U Shwe Kyaw	Ministry of Forestry
Nepal	R.B. Joshi	Ministry of Forestry and Soil Conservation
Peru	Gustavo Suarez de Freitas	Instituto Nacional de Recursos Naturales (INRENA)
Sri Lanka		
The Philippines	Celso P. Diaz	Ecosystem Research Development Bureau (ERDB)
Tanzania	Permanent Secretary	Ministry of Natural Resources & Tourism
Togo		Ministère Togolais de l'Environnement et de la Protection Forestière
Vietnam		Ministry of Agriculture and Rural Development

## Appendix II: Board of Trustees

The fifth Session of the Board meeting was held on 26 February 2001.

Name	Board Position
Gordon Smith, Canada	Chair
Jiang Zehui, P.R. China	Co-Chair
Keith Bezanson, Canada	Convener, Corporate Development Task Force
Seewant Bhoojedhur, Mauritius	Chair, Programme Committee
Ana Cecilia Chaves, Costa Rica (until November 2001)	
Rodney Cooke, United Kingdom	
David Hopper, United States (until November 2001)	
Ian R. Hunter, United Kingdom	Director General
Yoshiko Y. Nakano, Japan	
Romualdo L. Sta. Ana, the Philippines	

*Dra. Ana Celicia Chaves and Mr David Hopper finished their terms as INBAR Board members in November 2001. Dr Yoshiko Y. Nakano from Japan and Dr Romualdo L. Sta. Ana from the Philippines joined the Board in 2001.*

## Appendix III: Secretariat and Administration

INBAR secretariat staffing as at 31st December 2001 includes:

Ian R. Hunter	Director General
Chen Xuhe	Deputy Director General
Judy Zhu	Treasurer and Financial Officer



Chen Xuhe

Hao Ying	DDG's Assistant
He Lin	Accountant
Ren Hong	Office Manager
Tang Xiaoli	Events Organiser
Yang Feng'e	Publications
Yang Jianwei	Assistant Accountant
Elsie Yang	External Relations



Ren Hong

Judy Zhu

He Jun	Driver
Ren Ping	Driver
Sun Shaohui	Driver



Tang Xiaoli

Hao Ying

He Lin

Yang Jianwei

# Appendix IV: Auditors' Report and Financial Statements



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## AUDITORS' REPORT

To the Board of Trustees of the International Network for Bamboo and Rattan

We have audited the accompanying balance sheet of the International Network for Bamboo and Rattan ('INBAR') as of 31 December 2001, and the related statements of activities, net funds and cash flow for the year then ended. These financial statements are the responsibility of INBAR's management. Our responsibility is to express an opinion on these financial statements based on our audit.

We conducted our audit in accordance with International Standards on Auditing. Those Standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audit provides a reasonable basis for our opinion.

In our opinion, the financial statements present fairly, in all material respects, the financial position of INBAR as of 31 December 2001 and of the results of its operations and its cash flows for the year then ended in accordance with International Accounting Standards.

A handwritten signature in cursive script that reads "PricewaterhouseCoopers".

PricewaterhouseCoopers

9 March 2002

# International Network for Bamboo And Rattan

## Balance Sheet

As at 31 December 2001

(in US dollars)

	2001	2000
<b>ASSETS</b>		
Non-current assets		
Fixed assets (note 3):		
Motor vehicles	71,936	71,936
Computer equipment	104,993	101,888
Office furniture and equipment	144,074	140,897
	<u>321,003</u>	<u>314,721</u>
Less: Accumulated depreciation	188,343	143,368
	<u>132,660</u>	<u>171,353</u>
Recoverable deposits	8,630	8,026
Current assets		
Other receivable (note 4)	163,917	8,201
Cash and cash equivalents (note 5)	527,618	772,362
	<u>691,535</u>	<u>780,563</u>
	<u>832,825</u>	<u>959,942</u>
<b>NET FUNDS AND LIABILITIES</b>		
Net funds		
Restricted (note 6)	362,158	433,353
Unrestricted	226,098	270,371
	<u>588,256</u>	<u>703,724</u>
Current liabilities		
Accounts payable and accrued liabilities	244,569	256,218
	<u>244,569</u>	<u>256,218</u>
	<u>832,825</u>	<u>959,942</u>

The accompanying notes form an integral part of the financial statements.

Approved on behalf of the Board:

  
Director General

  
Treasurer



# International Network for Bamboo And Rattan

## Statement of Activities

For the year ended 31 December 2001

(in US dollars)

	PRC Government	IDRC	DGIS	IFAD	Others	2001	2000
<b>Revenue</b>							
Grants:							
Restricted (note 7)	-	-	335,897	335,000	400,177	1,071,074	900,885
Unrestricted	590,086	335,894	-	-	-	925,980	1,271,844
Interest income	-	-	-	-	21,370	21,370	13,672
Publication sales	-	-	-	-	17,897	17,897	7,892
INBAR Affiliate and yellow page	-	-	-	-	8,523	8,523	
Others	-	-	-	-	2,760	2,760	2,971
	590,086	335,894	335,897	335,000	450,727	2,047,604	2,197,264
<b>Program activities</b>							
Ecological Security	40,346	3,844	56,829	-	2,701	103,720	65,706
Economic Development	14,835	9,633	113,925	-	2,725	141,118	152,086
Livelihood Development	331	1,883	55,572	223,717	256,327	537,830	233,136
Outreach	21,932	7,714	408,488	-	38,352	476,486	745,548
	77,444	23,074	634,814	223,717	300,105	1,259,154	1,196,476
<b>Management and administration</b>							
Secretariat expenses (note 8)	36,346	311,692	-	-	-	348,038	666,309
Board of trustees expenses (note 9)	-	50,973	-	-	-	50,973	75,583
	36,346	362,665	-	-	-	399,011	741,892
Expenses covered by in-kind contribution (note 10)	504,907	-	-	-	-	504,907	379,276
Excess of (expenditures over revenue)/ revenue over expenditures	(28,611)	(49,845)	(298,917)	111,283	150,622	(115,468)	(120,380)

## Statement of Net Funds

For the year ended 31 December 2001

(in US dollars)

	2001	2000
Opening balance of net funds	\$ 703,724	824,104
Excess of expenditure over revenue	(115,468)	(120,380)
Closing balance of net funds	\$ 588,256	703,724

The accompanying notes form an integral part of the financial statements.

# International Network for Bamboo And Rattan

## Statement of Cash Flow

For the Year Ended 31 December 2001

(in US dollars)

	2001	2000
Cash flows from operating activities		
Excess of expenditure over revenue	\$ (115,468)	120,380
Adjustments to reconcile excess of expenditure over revenue to net cash provided by operating activities:		
Depreciation	46,680	58,433
Losses on disposals of fixed assets	392	1,659
Interest income	(21,370)	(13,672)
Increase/(decrease) in other receivable	(155,716)	261,845
Decrease in prepaid expenses	-	15,425
Increase/(decrease) in recoverable deposits	(604)	3,836
Decrease/(increase) in accounts payable and liabilities	(11,649)	25,882
	(142,267)	353,408
Net cash provided by operating activities	(257,735)	233,028
Cash flows from investing activities		
Purchases of fixed assets	(8,379)	(32,046)
Net cash used in investing activities	(8,379)	(32,046)
Cash flows from financing activities		
Interest received	21,370	13,672
Net cash provided by financing activities	21,370	13,672
Increase/(decrease) in cash and cash equivalents	(244,744)	214,654
Opening balance of cash and cash equivalents	772,362	557,708
Closing balance of cash and cash equivalents	\$ 527,618	772,362

The accompanying notes form an integral part of the financial statements.



# International Network for Bamboo And Rattan

## Notes to Financial Statements

For the year ended 31 December 2001

(in US dollars)

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### 1. PRINCIPAL ACTIVITIES

The International Network for Bamboo and Rattan (“INBAR”) was created in Beijing, the People’s Republic of China (“PRC”) on November 6, 1997, by international agreement signed by nine sovereign nations. Subsequently, the Head Office of INBAR was established in China under the terms of Headquarters Agreement between the Government of the People’s Republic of China and International Network for Bamboo and Rattan. Up to December 31, 2001, 22 nations have acceded to the treaty establishing INBAR.

The mission of INBAR is to improve the social, economic and environmental benefits of bamboo and rattan. It supports and coordinates core programs in scientific research, technology generation and sustainable development programs, providing bamboo and rattan solutions for people and the environment.

INBAR is currently funded through support received from the government of the People’s Republic of China (“PRC government”) and by grants and contract supports from International Development Research Centre (“IDRC”) of Canada, Directorate General of International Cooperation (“DGIS”) of Netherlands and the United Nations’ International Fund for Agricultural Development (“IFAD”) and other donors (note 7).

### 2. ACCOUNTING POLICIES

The principal accounting policies adopted in the preparation of these financial statements are set out below:

#### Basis of preparation

The financial statements are prepared in accordance with and comply with International Accounting Standards. The financial statements are prepared under the historical cost convention.

#### Reporting currency

The financial statements are prepared in US dollars as INBAR is an international organization and its clients and donors prefer the use of US dollars in the financial statements as US dollars is a global currency.

#### Foreign currencies

Foreign currency transactions are accounted for at the average exchange rates that closely approximate the exchange rates prevailing at the date of the transactions; monetary assets and liabilities expressed in foreign currencies are translated into US dollars at the exchange rate stipulated by People’s Bank of China at the balance sheet date. Exchange difference arising from these cases are recognized in the statement of activities.

#### Fixed assets

Fixed assets are stated at cost less accumulated depreciation.

Depreciation is calculated on the straight line method to write off the cost of each asset, taking into account zero residual values over their estimated useful lives as follows:

---

Motor vehicle	5 years
Computer equipment	3 years
Office furniture and equipment	10 years

---

The costs of fixed assets used for Outreach program (INBAR Central Hub) were directly charged to the expenditure of program activities in the year when they were purchased.

#### Other receivable

Other receivable are carried at anticipated realisable value.

### Cash and cash equivalents

Cash and cash equivalents comprise of cash and short-term deposits with original maturity of three months or less.

### Net funds and grants

Net funds comprise of unrestricted and restricted contributions from donors. Grants which can be used at the discretion of INBAR is classified as unrestricted net funds. Grants which are restricted by the donors for specific purposes or periods are classified as restricted net funds.

Grants are recorded using the accrual method. All grants are included in unrestricted net funds unless specifically restricted by the donor or the terms of the grants. If the restrictions are met in the same reporting period, the amount is recorded in unrestricted net funds.

### Taxation

INBAR enjoys the same exemptions and facilities as are accorded to diplomatic missions in PRC according to the Headquarters Agreement between the Government of the People's Republic of China and the International Network for Bamboo and Rattan. As such, INBAR is exempted from taxation in PRC.

### 3. FIXED ASSETS

		Motor vehicles	Computer equipment	Office furniture and equipment	2001	2000
Opening net book value	\$	35,164	\$ 31,998	\$ 104,191	\$ 171,353	199,399
Additions		-	4,599	3,780	8,379	32,046
Disposals		-	-	392	392	1,659
Depreciation charge		13,189	20,783	12,708	46,680	58,433
Closing net book value	\$	21,975	\$ 15,814	\$ 94,871	\$ 132,660	171,353
As at 31 December 2001						
Cost	\$	71,936	\$ 104,993	\$ 144,074	\$ 321,003	314,721
Accumulated depreciation		49,961	89,179	49,203	188,343	143,368
Net book value		21,975	\$ 15,814	\$ 94,871	\$ 132,660	171,353

### 4. OTHER RECEIVABLE

Other receivable include the following:

		2001	2000
Donors	\$	138,756	-
Advance to Suppliers		20,589	2,703
Advance to employees		4,572	5,498
	\$	163,917	8,201

### 5. CASH AND CASH EQUIVALENTS

Cash and cash equivalents include the following:

		2001	2000
Petty cash	\$	3,270	1,953
Cash in Bank		524,348	770,409
	\$	527,618	772,362

### 6. RESTRICTED NET FUNDS

Restricted net funds are only used for specific programs activities designated by the donors.



## 7. RESTRICTED GRANTS

Restricted grants provided by donors other than PRC government, IDRC, DGIS and IFAD are as follows:

		2001	2000
FAO-Food and Agriculture Organization of the United Nations	\$	18,365	5,764
UNIDO-United Nations Industrial Development Organization		110,500	-
UNDP-United Nations Development Programme		15,000	-
UNESCO-United Nations Educational, Scientific and Cultural Organization		-	6,000
ITC-International Trade Center		7,500	-
Management and Personnel Services Department of IFAD		15,118	-
DGIS/HPI-International Cooperation Personnel Branch of DGIS		99,511	-
CAF-Chinese Academy of Forestry		19,835	-
Government of Chishui, China		4,123	-
Government of Mizoram, India		13,000	13,000
Government of Tripura, India		15,213	-
Regional Community Forestry Training Center, Thailand		907	-
Bamboo and Rattan Network of Ghana		32,000	-
European Commission		14,433	-
GTZ-Deutsche Gesellschaft für Technische Zusammenarbeit, Germany		31,947	59,605
W. A. Jones Foundation		2,725	-
	\$	400,177	84,369

## 8. SECRETARIAT EXPENSES

Breakdown of secretariat expenses are as follows:

	PRC Government	IDRC	2001	2000
Motor vehicle expenses	\$ -	\$ 7,739	\$ 7,739	16,865
Training	-	111	111	7,902
Office	-	13,565	13,565	55,891
Depreciation	28,612	18,068	46,680	58,433
Printing and reproduction	-	6,520	6,520	19,253
Communication	-	3,296	3,296	22,637
Professional services	-	12,993	12,993	53,343
Financial expenses	-	2,041	2,041	280
Travel	-	22,491	22,491	69,865
Employee salaries and benefits	7,734	211,527	219,261	346,852
Rent and utilities	-	13,341	13,341	14,988
	\$ 36,346	\$ 311,692	\$ 348,038	666,309

## 9. BOARD OF TRUSTEES EXPENSES

Breakdown of Board of Trustees expenses are as follows:

	2001	2000
Conference and seminars	\$ 16,370	26,861
Allowances for Board of trustees	-	13,000
Professional services	4,150	10,047
Travel	30,453	25,675
	\$ 50,973	75,583

## 10. CONTRIBUTIONS IN-KIND

Contributions in-kind are from PRC Government and details are as follows:

	2001	2000
Expenses covered by contributions in-kind from PRC government:		
Local staff benefits	\$ 31,320	31,320
Rent and utilities	473,587	347,956
Total contributions in kind from PRC government	\$ 504,907	379,276

## 11. CONTRIBUTIONS FROM PROJECT PARTNERS FOR INBAR PROJECTS

Some of the program activities recorded in INBAR's statement of activities for the year ended December 31, 2001 are jointly carried out by INBAR and its project partners. Besides INBAR's funding, such program activities are also funded by project partners. Project partners' committed contribution to those program activities are set out below:

	2001	2000
GTZ-Deutsche Gesellschaft für Technische Zusammenarbeit, Germany	\$ 72,000	-
Indo-German Changar Eco-Development Project (GTZ-India)	5,340	-
GTZ (Hainan)	25,308	-
Government of Hainan, China	18,149	-
Government of Chishui, China	14,026	-
Ministry of Science and Technology (MOST), China	27,613	-
CRIWI-Research Institute of Wood Industry of Chinese Academy of Forestry	9,000	-
Nanjing Institute of Environmental Science, SEPT	2,500	-
Zhejiang Fustar group Ltd	5,075	-
Micro Hydro Power (Asia-Pacific)	3,200	-
EUT-Technical University of Eindhoven	70,200	-
Natural Resources Institute of U.K.	11,050	-
ITTO-Royal Forest Department, Thailand	9,900	-
USAID-USA agency for international development mission to Ghana	15,000	-
VHC-Corporacion Viviendas del Hogar de Cristo	14,180	-
CIAT-Centro de Investigacion Agricola Tropical	8,077	-
DFID	20,000	-
DFID through TRADA	78,168	-
Central Queensland University	65,664	-
Department of Primary Industry and Fisheries of the Northern Territory Parks and Wildlife Commission	41,050	-
In-Hand Abra Foundation, Philippines	-	1,494
Colombian Bamboo Society	-	17,457
Ecosystems Research and Development Bureau	-	4,400
Kerala Forest Research Institute	-	2,000
Research Institute of Sub-tropical Forestry, China	-	4,458
Ministry of Science and Technology of China	-	38,600
Indian Plywood Industries Research & Training Institute	-	5,000
Ogun State University, Nigeria	-	2,251
Instituto Nacional de Recursos Naturales, Peru	-	18,824
Kenya Forestry Research Institute	-	10,583
Addis Ababa University, Ethiopia	-	8,205
Forestry Research Institute of Ghana	-	5,656
Tanzanian Forestry Research Institute	-	2,686
Forestry Research Institute, Uganda	-	3,537
Fundacion de la Universidad de Costa Rica para la Investigacion	-	16,400
Forest Research Institute, India	-	4,000
Nanjing Forestry University, China	8,500	12,089
Hong Kong Polytechnic University	-	109,806
Peking University, China Center of Economic Research	-	4,441
Bamboo Society of India	-	1,410
Crafts Society of Manipur	-	1,020
Zhang Guangchu	-	6,000
Andrew Benton	-	6,750
Royal Botanic Gardens, KEW, UK	-	45,750
University of the Philippines at Los Banos	-	6,263
National Laboratory for Material and Structural Models, University of Costa Rica	-	20,130
China National Bamboo Research Center	-	1,205
Food and Agriculture Organization of the United Nations	-	40,000
Housing & Urban Development Corporation, India	-	18,000
	\$ 524,000	418,415



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