

Forestry Development Project
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Final Report
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Submitted by

Louisiana State University Agricultural Center
Baton Rouge, Louisiana



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Abbreviations

AMADHO	Honduras Timber Dealers Association
ANETRAMA	Wood Processing Association
CADERH	Center for Human Development
COHDEFOR	The Honduras Forest Development Corporation
COLPROFORH	The School of Forest Professionals of Honduras
CONADES	National Council of Sustainable Development
CUPROFOR	National Forest Products Laboratory
SNACIFOR	National School of Forest Science
FAO	Food and Agriculture Organization of the United Nations
FIDE	Foundation for Investment and Development of Exports
GDP	Gross Domestic Product
GOH	Government of Honduras
GTZ	Deutsche Gesellschaft für Technische Zusammenarbeit
IMF	International Monetary Fund
LSU	Louisiana State University
LSU AgCenter	Louisiana State University Agricultural Center
NGO	Non-Governmental Organization
USAID	United States Agency for International Development
ZAMORANO	Escuela Panamericana Agricola

Executive Summary

- This project was primarily a technical knowledge transfer effort focusing on forest products utilization and processing, economic and rural development, marketing and business development, social dimensions, and value-added wood processing.
- Based on meetings with over 40 individuals representing all stakeholder groups, over 75 potential post-roundtable/workshop project ideas were generated. Approximately 20 projects were committed to, generally falling into the following broad areas:
 - * Value-added wood processing;
 - * Workforce preparation/training;
 - * Social and human capital development;
 - * Academic scientist and student exchange;
 - * Forest sector marketing and promotion [(including eBusiness)];
 - * Policy and planning;
 - * Information and research support;
 - * Forest sector economic analysis;
 - * Forest sector investment.
- Based on stakeholder input and decision processing over the course of the project the top two ranked priorities for industry development both had to do with marketing. The top ranked recommendation was to conduct market research that can help to identify market opportunities for Honduran wood products producers.
- Second ranked was the need to develop a comprehensive national marketing strategy and implementation plan.
- Next ranked was the need for government involvement in forming the foundation for industry development at the national level. This was followed by the recommendation to form a national forest-sector development council that would have representation from all key stakeholder groups including industry, government, academia, non-governmental organizations (NGOs), international consulting support.
- We developed and implemented an interactive planning component in the framework of the informational and educational roundtable/workshops that were conducted in the project. These sessions were divided into three parts. The first was a presentation by LSU AgCenter team members on the specific workshop topic. The second part focused on issue generation and discussion. Finally, the third part concentrated on developing action plans to address identified issues.
- The planning techniques we used on the project resulted in tangible deliverables across a broad spectrum of forest sector stakeholders in Honduras.
- Significant professional and personal relationships were developed between LSU AgCenter team members and Honduran counterparts.
- In the long-term, forest-sector development in Honduras can contribute to an increase in rural employment and a lessening of poverty. The success of development projects, such as the

ALIANZA, will be measured in the future by their ability to encourage environmentally sound forest management practices and sustainable growth of the forest-based industry sector.

- It is recommended that this first step in sectoral development be continued to a second phase that would entail large-scale implementation of recommendations developed in this project.

Summary

Background

In late October 1998, Honduras suffered the brunt of Hurricane Mitch, one of the largest category 5 hurricanes in recent memory. The Government of Honduras estimated that more than 8,000 people died due to the storm. Up to a third of the country's 6 million people were dislocated and over 1 million were at least temporarily uprooted from their homes or livelihood. Hurricane Mitch did not just cause numerous deaths and immense damage in the cities; it also caused deforestation on the Caribbean coast of Honduras and disruption of the forestry sector in general. One effort to address post-Hurricane Mitch forestry issues was the formation of a forestry and forest products sector project that was part of the Louisiana Alliance/Presidential Program for Investors in Honduras (ALIANZA). The project is being conducted by a team from the Louisiana State University (LSU) AgCenter, School of Renewable Natural Resources, and the School of Human Ecology. This project was primarily a technical knowledge transfer effort funded by the United States Agency for International Development (USAID) and it focused on forest products utilization and processing, economic and rural development, marketing and business development, social dimensions, and value-added wood processing.

Project Description and Alignment with USAID Strategic Objectives

Initially this project was to focus on areas including forest soils, forest management, forest products utilization, and value-added wood processing. As discussed in the Quarterly report for October-December 2000, based on country needs, the focus shifted away from forest management and more towards markets and marketing. This transition was explained to USAID officials in Honduras and approved. Accordingly, the LSU AgCenter specialists are concentrating their efforts in wood products utilization/processing, economic/rural development, and marketing/business development.

To accomplish this, the LSU AgCenter assembled a team of specialists to work with counterparts in Honduras in each of these areas. Technology and knowledge transfer has helped Hondurans to make critical decisions regarding forest sector development, enhance the country's economic development activities, and preserve the sustainability of their forest resources. The primary objective of the forestry/forest products project was to empower people from many stakeholder groups to better utilize forests and associated areas impacted by forests in Honduras. The emphasis was on both public and privately owned and managed pine and hardwood forests and forest products sectors.

In summary, in addition to simply transferring technology and knowledge, it is hoped that this project will have the long-term effect of increasing rural employment and contributing to ameliorating poverty. The success of this project can be measured in the short term by the extent to which we engaged in technology and knowledge transfer with Honduran counterparts. In the long-term, sustainable growth of the forest-based industry sector will determine the success of this project.

The Forestry/Forest Products Team

Dr. Richard Vlosky, Professor of Forest Products Marketing, School of Renewable Natural Resources (SRNR) led the LSU AgCenter forest sector team. Additional team members from the SRNR were Dr. Michael Dunn, Program Leader and Forest Economist, Extension Natural Resources Program, and Dr. Todd Shupe, Associate Professor, Forest Products. In addition, Dr. Pamela Monroe, Professor, Family, Child, and Consumer Sciences and Denese Ashbaugh Vlosky, LLD, Instructor, Extern, and Ph.D. Student, Family, Child, and Consumer Sciences represented the School of Human Ecology at LSU. Finally, Arturo Chavez, AgCenter Forest Sector Project Coordinator (Honduras) Tegucigalpa, Honduras was a team member based in Honduras.

The LSU AgCenter team of specialists worked with counterparts in Honduras in each of these areas. Stakeholder groups represented by Honduran counterparts were from non-governmental organizations, academia, government, industry, and local village/municipalities.

Objectives

The primary objective of the forestry/forest products project was to empower people from many stakeholder groups to better utilize forests and associated areas impacted by forests in Honduras in an efficient and sustainable manner. The emphasis was on pine and hardwood forests and forest products sectors that are both publicly and privately owned and managed. Technology and knowledge transfer can help Hondurans make critical decisions regarding sound forest management and wood utilization that will enhance the country's economic development and poverty alleviation activities while preserving the sustainability of their forest resources.

Specific objectives of the project were:

1. Formation of a national group of representatives from the public and private sectors to discuss and identify relevant topics in which the LSU AgCenter can collaborate in the goal of sustainable development of the forest sector in Honduras.
2. Development of a plan of action among the two groups (LSU and the National Group of Support Counterparts) to execute interactive discussions and workshops in the areas that are found to have greatest commonality between stakeholder groups and have a positive impact in Honduras.
3. Development and initiation of applied projects and activities that included the following areas: sustainable forest certification, value-added wood product processing and marketing, export promotion, rural development, establishing Internet-based wood products exchanges and networks for the public and private sectors, and technical training at host institutions.
4. Development of a long-term prioritization plan for the forest sector.

Conceptual Framework

There was an interactive strategic planning component included in the framework of the informational and educational roundtable/workshops that were conducted. These sessions were divided into three parts. The first was a presentation by LSU AgCenter team members on the specific workshop topic. The second part focused on issue generation and discussion. Finally, the third part concentrated on developing action plans to address identified issues.

In the issue identification sessions, a broad cross section of stakeholders, representing all aspects of forestry and forest products (such as landowners, industry, and government), came together to generate issues that needed to be addressed with respect to maximizing the potential of forest-based communities in Honduras. These discussions were a follow-up to individual meetings that took place at previous site visits. The issue identification refinement provided a starting point for developing action plans.

In the planning sessions, stakeholders with the necessary expertise and desire to address the top issues moved forward with project-oriented activities. This involved goal setting and developing methods for evaluating projects/process.

The team proceeded with specific actions to address some identified issues. Based on meetings with over 40 individuals representing all stakeholder groups, over 75 potential post-roundtable/workshop project ideas were generated. Approximately 20 projects were committed to, generally falling into the following broad areas:

- Value-added wood processing;
- Workforce preparation/training;
- Social and human capital development;
- Academic scientist and student exchange;
- Forest sector marketing and promotion [(including eBusiness)];
- Policy and planning;
- Information and research support;
- Forest sector economic analysis;
- Forest sector investment.

In the long-term, forest-sector development in Honduras can contribute to an increase in rural employment and a lessening of poverty. The success of development projects, such as the ALIANZA, will be measured in the future by their ability to encourage environmentally sound forest management practices and sustainable growth of the forest-based industry sector.

Activities and Accomplishments

Contact/Counterpart Identification

When the project was officially funded and underway in the fourth quarter of 2000, the initial tasks were to identify stakeholders and develop relationships with key representatives from these groups. In addition, counterparts were being identified. It was made clear from the outset that the relationships with potential counterparts were a partnership and not a handout. This approach was not well received by some folks but was embraced by others. Overall, the major areas of opportunity to interface with counterparts was with regard to better utilization of Honduras forest resources for value-added wood products, knowledge and technology transfer, and, hopefully, providing input and expertise that would be used by policymakers in an effort to improve economic conditions and ameliorate poverty in Honduras.

Key counterpart agencies/institutions identified for close contact and dialog were FIDE, CUPROFOR, CADERH and ESNACIFOR. In addition, contacts were made with COLPROFORH, AGENDA FORESTAL, AMADHO, ANETRAMA, COHDEFOR, CONADES, WORLDVISION, PRONADERS, and representatives from individual industrial wood product manufacturers.

Project Planning and Implementation

The first projects implemented were a series of workshops and roundtable discussions to introduce the team, its core competencies and to solicit input from stakeholders on what further areas of emphasis and projects would be of greatest utility in Honduras. Based on meetings with over 30 individuals representing all stakeholder groups, the following list of potential post-roundtable/workshop projects was generated.

Although many of the suggestions fell outside the scope of this project, they are all included as they may become priorities for USAID funding and linkages in the future.

Value-Added Wood Processing

The secondary, or value-added, forest products industry is global in scope. In order to be competitive, an understanding of market forces and structures in is essential. In this light, the stakeholders we interviewed believe that the Honduran secondary (value-added) solid wood products industry should be further developed. The information that resulted from post-workshop projects should aid companies that might not be able to internally generate market data, give industry researchers comparative information and support policy makers to better serve the value-added wood products industry. In addition, adding value to Honduran forest resources is a logical alternative to exporting value in the form of raw materials or primary products.

Specific Project Suggestions/Priorities

1. Study of wood properties and utilization potential of lesser-known species to evaluate favorable species for specific products.
2. Identify potential uses of these species as solid wood products for the value-added global market.
3. Evaluate these species as raw material for wood-based composites.
4. Develop technologies to increase quality and durability of wood and wood products; and uses e.g. in housing construction, for export products, etc.
5. Develop energy efficient technologies in primary and secondary industries.

6. Seminars on wood properties.
7. Seminars on technology of major forest products (e.g. lumber, plywood, etc. including new technologies and trends in wood use).
8. Seminars on quality of wood products (with forest technology, wood technology, etc.).
9. Opportunities for small diameter trees and thinnings.
10. Finger jointing, edge-gluing potential and technologies.
11. Biomass energy production. Vast quantities of waste exist.
12. Secondary industry technical efficiency.

Workforce Preparation/Training

Workforce preparation may well be one of the most important economic issues facing the world economy. In particular, education and training impact many facets of the social and economic structures. The economic health of Honduras, its communities and its families, are dependent on success in a global marketplace where high levels of workplace performance are needed to successfully compete. New and existing workers who are involved in forest-sector development must have the necessary knowledge, skills and abilities. Accordingly, one important post-workshop activity will be to conduct an assessment of workforce availability and training needs in Honduras.

Alleviating economic hardship of the Honduran people was another area of focus by USAID. The objective was to address basic and vocational education and training. Presently, very few opportunities and options are available for students, particularly in the rural sector, to continue their education after primary school.

Issues we suggested that could be addressed in the context of the forest-based sector included how to: induce greater investment in training and skills development by individuals, businesses, communities and governments; improve partnerships between government, educators and industry so that people learn skills that are or will be needed by employers in the forest-based sector; build better programs and services to assist in understanding the demands of the job market and helping employees and employers to prepare and; examine ways to develop effective customized and on-the-job training programs that could involve a myriad of training delivery systems and training levels as indicated in the figure below.

Specific Project Suggestions/Priorities

1. Examine possible rural-based technology capacity building grant proposals from major technology providers (e.g. Microsoft, IBM, etc.).
2. Secondary industry training center proposal: business management, processing, wood technology, machine centers. CUPROFOR and ESNACIFOR have infrastructure for this.
3. Work with Cluster Forestal in order to present options for alternate employment sources for local campesinos.
4. Another project can be a massive reforestation program funded by the government, so that can be managed by the local campesinos group and provide income to them.
5. Another project can be the hiring of campesino groups to provide seeds to ESNACIFOR
6. Organized a procedure to include the campesino's organizations in the rural area to participate in the decision making process, so that not only in Tegucigalpa occur this process.
7. Propose and research a way to include the domestic maquila process into account as an alternate source of income for the rural campesino.
8. Research a list of alternate sources of income for the rural persons, so they move from the agriculture production into a service or industry sector as an employee. This will elevate the life level in the communities. These enterprises should be based on these local

communities as a requisite for its existence. When this occurs, it will ease the pressure on the forest as a survival means for them.

Academic Scientist and Student Exchange

We anticipate that individuals will be interested in pursuing an advanced degree in wood products utilization at Louisiana State University following the workshops. The degree program will be specifically tailored to further empower the individual(s) to return to his or her country as a leader in wood products utilization and well trained in sustainable forest products utilization. Demonstrations and academic exchange would include advanced education/training and research participation in Honduras and the U.S.

Specific Project Suggestions/Priorities

1. CUPROFOR/Experiment Station agreement for cooperation
2. Opportunities for LSU to help CUPROFOR develop an income generating plan to provide technical assistance and services. RV is in the process of tracking down information on a UN report.
3. Work in the area of employee training working in conjunction with ESNACIFOR, which has a large-scale training program and facilities, and SECAFOR.
4. Help LSU aid in directing student thesis activities that mesh with our projects/activities and short-term research needs.

Forest Sector Marketing and Promotion/eBusiness

The goal of a promotional program for wood products industry development was to increase the awareness, utilization and applications for Honduran wood products, particularly value-added, or secondary products. Such efforts may include but are not limited to advertising, reports, brochures, trade missions, market studies, and other activities designed to make customers and potential customers of Honduran wood products more aware of the availability and quality of such products.

Specific Project Suggestions/Priorities

1. Short course in marketing and business principles.
2. Forest Sector National eBusiness conference co-sponsored by ESNACIFOR, COHDEFOR, LSU AgCenter, USAID, etc.
3. Honduras Primary Sector Intranet: Information, pricing, trade opportunities, trading exchange, market intelligence, and community.
4. Short course eBusiness.
5. Develop a "How to Invest in Honduras Forest Sector" manual/handbook for potential investors.
6. Trade mission from Honduras to New Orleans to discuss bilateral trade opportunities and strategic partnerships.
7. Maintain direct contact with other associations important to industry development marketing program activities.
8. AMAHDO Website.
9. Honduras Primary Sector Intranet: Information, pricing, trade opportunities, trading exchange, market intelligence, and community.
10. Develop metrics to measure secondary industry capacity and competitiveness.
11. Conduct secondary industry training assessment survey.
12. Primary/secondary matchmaker program to increase value retained in Honduras.
13. ANETRAMA Website.

14. Honduras Secondary Sector Intranet: Information, pricing, trade opportunities, trading exchange, market intelligence, and community.
15. eBusiness exchange for artisans in Vaya de Angeles (or other concentrated area of secondary producers)
16. Develop, publish and distribute promotional literature.
17. Promote value-added wood products through foreign trade shows.
18. Develop and publish an industry newsletter for Honduran and foreign distribution. (Translated as appropriate)
19. Develop a web-based import-export network for manufacturers.
20. Put together a pamphlet "Export Procedures for the Honduras Forest Products Sector"
21. Plan and conduct seminars for value-added industry decision-makers to provide an educational overview of value-added wood product benefits in furniture manufacturing.
22. Develop and produce a video on the forest sector and in particular the value-added industry in Honduras.
23. Collect and distribute information regarding value-added wood products. Including pertinent market data, trends, markets, statistics and research.
24. Conduct research to promote and better utilize value-added wood products in export markets.
25. Develop an Internet site of Honduran primary and secondary wood product manufacturers and products.
26. Develop a public relations & advertising campaign directed towards the use of value-added wood products such as furniture, flooring, paneling, moulding and millwork.
27. Organize & conduct trade missions.
28. Secondary industry marketing. Examine alternative channels, markets.

Policy and Planning

A number of contacts suggested that the LSU AgCenter team could aid in the areas of forest sector policy and planning. Specific suggestions are listed below.

1. Help in coordinative role in planning for government.
2. Review and comment on PLANFOR, the 20-year forestry plan (1996-2015).
3. Analysis and sanction of this new initiative for consolidating Ag, Forestry, environment, land tenure in order to create sustainable development.
4. Assist Cluster Forestal in wood processing and marketing through technological transfer. But the cluster must include the Social Forestry groups (campesinos) and Artisans.
5. Prepare options to include the campesinos in management forestry plans at a local level, so either the government or industry pays some local campesino group to manage that forest area. Also these same campesinos groups that manage the forest be given the rights for the woodcutting. But at the same time, they will be in charge of the reforestation effort.

Information and Research Support

Information maintenance and research support are required to support the forest products sector in Honduras. Many specific activities that contribute to the research effort were suggested.

1. Develop an industry competitive value chain information network.
2. Develop an industry interactive database that will include extensive company data, trade leads, buyer and seller matchmaking capabilities and joint venture opportunities.
3. Information Support System (ISS) for forestry/forest products sector; Business/marketing oriented.

4. Figure out a way to make the massive management plans databases more useable. They have data at the management, regional, and national levels but it is not accessible.
5. Surveys of firms, workers, customers, and others with information relevant to the secondary wood products industry.
6. A periodic census of primary and secondary wood products producers.
7. Publications and reports on the relative competitiveness of the Honduras secondary wood products industry.
8. Computerized databases of market, product, production and other relevant information.
9. Domestic and international market development research.
10. Research on regulatory issues facing the industry in the areas of environmental and safety compliance including the costs for environmental regulation and monitoring compared to neighboring states.
11. Research on industry-specific issues.

Forest Sector Investment

USAID programs emphasize stimulation of rapid economic growth to include support to entrepreneurs and stakeholders in the forest sector who need access to land, technology, markets and credit/financial support. One component of the foundation for economic growth in a country such as Honduras is the rich natural forest resources, which must be sustainably managed. A number of ideas regarding investment were generated by contacts.

1. Furniture maquilas in SPS. Prepare a list of project that can be done according with a domestic maquila model. That is to include artisans so they can produce components of furniture on their small shops, and then send them to a central processing place to assemble the finished product.
2. Market study for particleboard, composite panels.
3. Put together a pamphlet "Honduras Investment Guide for the Forest Sector"
4. Furniture coop in San Pedro Sula-Currently export oriented but may benefit from communication technology.
5. Look at the RTA furniture industry possibilities.
6. Eco-tourism-look at tourist-based forestry, recreational uses of the forest, opportunities for business ventures.
7. Feasibility study for small-scale composite panel facility (particleboard, hardboard, etc.) RV is in contact with plant developer in Europe that specializes in projects in developing countries.
8. Identify persons with entrepreneurial spirit to promote and develop value-added products and lesser-used species.

Other

In addition to core team areas of expertise, three additional ideas for projects surfaced in the areas of fire control, biodiversity and inventory management.

1. Forest fire logistics, coordination, management, organization, equipment needs
2. Help COHDEFOR write a grant to do aerial photographic inventory of the hardwood forests. Apparently none exist. Work with GIS folks at the Center for Forestry Information (CEIF).
3. Prepare projects to include biodiversity research to options in reforestation, especially in medicine plants that can be cultivated in forestry zones.

Results Achieved

Following is a list of what we consider to be the most significant accomplishments made in the course of the project. All of these projects are partnerships with counterpart entities and individuals in Honduras. Throughout the course of each project, the Honduran participants received the knowledge and skills to continue to develop and re-transfer technology/knowledge to other Hondurans.

1. Developing and executing a promotional strategy for CUPROFOR, the national wood products laboratory located in San Pedro Sula. CUPROFOR is in need of an international donor/sponsor to help support its research and technology transfer on lesser-used wood species in Honduras. A current obstacle in this regard is the lack of international recognition of CUPROFOR.
2. Assisting with development of a 5-year Extension Plan to be executed by the national forestry university (ESNACIFOR).
3. Conducting an in-depth survey of small/medium value-added wood products manufacturers. This survey is a first step in a larger project to integrate the technical and industrial capabilities of small and medium entities to support better production methods and access to markets.
4. Training faculty from ESNACIFOR (the University for Forestry and Natural Sciences) at the Louisiana State University AgCenter in Baton Rouge, Louisiana in the areas of wood technology, marketing and business development, extension, and human dimensions.
5. Devising a forest-sector development and investment prioritization strategy for Honduras (FIDE).
6. Building a solar kiln for training and teaching purposes (ESNACIFOR).
7. Co-authoring peer-reviewed articles on wood properties and market potential for lesser-used species.
8. Presenting information on social sector development models and extension materials in the context of forest industry development (CADERH).

Specific results accomplishments by quarter are as follows:

January-March 2001

During the period of January-March 2001, the Forest Sector Team continued to establish contact with as many professionals as possible across the five major stakeholder groups: academia, industry, government, NGOs, and local representation. In addition:

- The social dimension of the forest-sector project was successfully introduced to counterparts.
- Compiled a comprehensive database of contacts by discipline/institution. (See Attachment A).
- Developed and administered a survey to stakeholders to identify priorities, issues and potential for forest sector ALIANZA cooperation. The survey results were used as a planning tool in prioritizing future forest sector team activities.
- Dr. Vlosky developed and delivered three presentations at a workshop/roundtable. The presentations were on a forest-sector economic development methodology developed by Dr. Vlosky and LSU colleagues, marketing principles, and the use of the Internet in conducting business in the forest sector (eBusiness).

April-June, 2001

During the period of April-June 2001, the Forest Sector Team visited Honduras twice and continued to meet with as many professionals as possible across the five major stakeholder groups (academia, industry, government, NGOs, and local representation). The team also identified key individuals who worked with us as project/activity partners. In addition, all remaining area-specific workshop/roundtable discussion were completed. Overall, a strategy for the project implementation phase of the project with Honduran counterparts in the forest sector was finalized. With a number of post-workshop projects/activities initiated. In addition:

- Dr. Richard Vlosky, forest-sector team leader, continued to engage in continual communication with the Honduras office and team members over this time period.
- The team had two planning meetings over this time period in Baton Rouge to define roles, functions, identification of form and timing of reports, and develop a schedule of activities for the current and subsequent project activities.
- Based on communications with stakeholders and our Honduras coordinator, key counterpart entities and individuals were identified for further project/activity implementation.
- A number of specific projects/activities were committed to in the areas of marketing, human dimensions, extension, wood technology and other areas in the development of processed wood products industries.
- The workshop/roundtable phase of the project was completed. Five workshops were given. The purpose of the workshops was to develop awareness of issues and provide stakeholder input for program activity implementation.
- It was decided to include two additional individuals to support objectives in the area of wood technology and quality control. They are Dr. Qinglin Wu, LSU Agricultural Center, School of Forestry, Wildlife and Fisheries and Dr. Chung-yun Hse, a research wood scientist with USDA Forest Service, Southern Research Station at Pineville, Louisiana. Drs. Wu and Hse will assist Dr. Todd Shupe in conduct seminars and short courses.
- The team finalized the list of key contacts/counterparts in Honduras from each stakeholder group (academia, industry, government, NGOs, and local representation).
- During the team site visits, team members met with contacts/counterparts in their respective areas of expertise to discuss projects/activities.

- Drs. Shupe, Monroe, Dunn, and Ms. Ashbaugh Vlosky developed and delivered five presentations at workshops/roundtables. The presentations were on extension programming, social sector methodologies, wood technology, and Sarvodaya, a social-economic development model.

July-September 2001

During the period of July 1, 2001 to September 30, 2001, the Forest Sector Team visited Honduras twice and continued to meet with as many professionals as possible across the five major stakeholder groups (academia, industry, government, NGOs, and local representation). The team also continued the implementation phase of the project with Honduran counterparts in the forest sector with a number of post-workshop projects/activities initiated. Specifically:

- Dr. Richard Vlosky, forest-sector team leader, continued to engage in continual communication with the Honduras office and team members over this time period.
- The team continued to remain in close contact to discuss roles, functions, and to develop a schedule of activities for the current and subsequent project activities.
- Based on communications with key counterparts, projects/activities were prioritized and implementation was initiated. Fifteen projects are in progress in the areas of marketing, human dimensions, extension, wood technology and other areas in the development of processed wood products industries.
- Two additional individuals were added to the forest sector project to support objectives in the area of wood technology and quality control. They are Dr. Qinglin Wu, School of Forestry, Wildlife and Fisheries, LSU AgCenter, and Dr. Chung-yun Hse, a research wood scientist with USDA Forest Service, Southern Research Station at Pineville, Louisiana.
- The team finalized the list of key contacts/counterparts in Honduras in the social sector area and initiated projects with the stakeholder group.
- During the team site visits, team members met with contacts/counterparts in their respective areas of expertise to discuss projects/activities.
- Drs. Shupe and Hse presented a ½ day seminar on wood gluing at CUPROFOR in San Pedro Sula.
- Drs. Vlosky, Dunn, Shupe and Hse visited Lancitilla, an ESNACIFOR-managed national park to discuss forest management schemes and the use of lesser-used species with the park manager.
- Dr. Monroe and Ms. Ashbaugh-Vlosky developed a counterpart relationship in the social sector with CADERH and will be developing a human issues training module for the wood processing vocational-technical training centers.
- Presentations by Dr. Vlosky to IADB and CABEI bank officials, and to National Party candidate representatives.
- Presentation by Ms. Ashbaugh Vlosky on the Sarvodaya model of development to PRONADERS, a social sector governmental organization.
- Drs. Vlosky, Monroe and Ms. Ashbaugh Vlosky met with Ms. Mary Flores de Flores, the First Lady of Honduras to discuss social sector issues and projects.

October-December 2001

During the period of October 1, 2001 to December 30, 2001, the Forest Sector Team visited Honduras twice and continued to meet with as many professionals as possible across the five major stakeholder groups (academia, industry, government, NGOs, and local representation). The team also continued the implementation phase of the project with Honduran counterparts in the forest sector with a number of post-workshop projects/activities initiated.

Plans for the project extension period (January-March 2002) were established. Major planned activities are to continue working with counterparts on projects/activities. This will include implementation, report writing and project assessment. In addition, the team will begin planning the final project report outline and components. Specifically:

- Drs. Vlosky, Dunn and Shupe and Arturo Chavez met with representatives from FIDE to discuss national forest sector priorities.
- Dr. Monroe and Ms. Ashbaugh-Vlosky strengthened their counterpart relationship in the social sector with CADERH and began joint development of a human issues training module for the wood processing vocational-technical training centers.
- Presentation by Ms. Denese Ashbaugh Vlosky and Dr. Pamela Monroe on the Sarvodaya model of development to WorldVision, a global social sector non-governmental organization.
- Team members met with Dr. Manuel Hernandez, Director of ESNACIFOR, to plan November faculty training at the LSU AgCenter for two faculty members.

January-March 2002

- A final wrap-up conference titled “Structures for Successful Forest Sector Development” was held on January 19th with the intention of offering final perspectives on forest sector development processes. The presenters and topics are as follows:
 - Overview and Introductions-Arturo Chavez, LSU AgCenter Honduras Coordinator
 - The Value in Developing Stakeholder Partnerships-Richard Vlosky, Associate Professor and Forest Sector Team Leader, School of Renewable Natural Resources, LSU.
 - The Role of Extension-Paul Coreil, Vice Chancellor, LSU AgCenter and Director of the Louisiana Cooperative Extension Service
 - Elements of Successful Industry Associations-Buck Vandersteen, Executive Director, Louisiana Forestry Association
 - The Role of Universities-Bob Blackmon, Director, School of Renewable Natural Resources, LSU.
 - The Role of Research-Todd Shupe, Assistant Professor, School of Renewable Natural Resources, LSU.
 - Where Do We Go From Here in the LSU AgCenter/Honduras Partnership? Facilitated open discussion led by Arturo Chavez.
- Dr. Pamela Monroe presented a seminar on Research Methods to physicians and educators at the national hospital as part of the nutrition component of the social sector sub project.
- Dr. Shupe presented two seminars at CUPROFOR in San Pedro Sula for wood products manufacturers on Quality Control and Finishing.
- Ms. Denese Ashbaugh Vlosky, Dr. Pamela Monroe and Mr. Arturo Chavez led a facilitated meeting of instructors and students from the CADERH vocational-educational educational system to evaluate and revise the social sector Human Ecology module.

Outputs

January-March 2001

1. Comprehensive database of contacts by discipline/institution.
2. Survey to stakeholders.
3. Formal invitations to Forestry Workshop in Marketing of forestry products and e-business.
4. Report on post-workshop projects/activities sorted by discipline.
5. Translated handouts for presentations at the marketing/eBusiness workshop/roundtable.

April-June, 2001

1. List of committed post workshop projects/activities by discipline/institution/key counterpart.
2. Five workshop handouts, translated where appropriate.
3. List of attendees for the three workshops conducted by Drs. Shupe, Monroe, Dunn and Ms. Ashbaugh Vlosky put into a database.
4. CADERH (Center for Human resources development) meeting notes generated and translated by Arturo Chavez.
5. List of key contacts/counterparts from each stakeholder group (academia, industry, government, NGOs, and local representation) finalized.

July-September 2001

1. Refined project descriptions of post-workshop projects/activities that are in progress.
2. Translated seminar handouts distributed at the wood gluing seminar presented by Drs. Shupe and Hse at CUPROFOR.
3. List of attendees for the seminar conducted by Drs. Shupe and Hse.
4. Gluing seminar registration form.
5. Revised ALIANZA brochure in Spanish.

October-December 2001

1. Training at the Louisiana State University AgCenter for eight Honduran forest sector representatives.
2. Translated four key Louisiana Cooperative Extension Service forest sector bulletins into Spanish. These bulletins were distributed widely in Honduras through government, private sector and academic counterparts.
3. Completed joint project with ESNACIFOR examining production flows at 12 small/medium value-added furniture manufacturing facilities in Seguatepeque and San Pedro Sula.
4. Coordinated a conference held on December 3rd at the LSU Agricultural Center that highlighted the accomplishments made in Honduras on the ALIANZA project by both the forest sector and agricultural reconstruction teams.
5. Coordinated a project with the art department at the LSU University Laboratory School to illustrate a social sector vocational-educational student human ecology training module.
6. Published a feature article in the Forest Products Journal on the forest sector component of the ALIANZA project.
7. Wrote and disseminated the final report on national forest-sector priorities that resulted from the facilitated meeting that took place earlier in the project.

January-March 2002

1. Peer-reviewed article (in review) on marketing for small and medium value-added wood products manufactures submitted to Revista Forestal, CATIE, Turrialba, Costa Rica. (Appendix A).
2. Translated presentation booklet for Forest Products Industry Structures Conference (Appendix B).
3. Presentation booklets for Quality Control seminar (Appendix C).
4. Presentation booklets for Finishing seminar (Appendix D).
5. Handout materials for Research Methods seminar (Appendix E).
6. Report to sponsors on market applications and potential for Honduran bamboo (Appendix F).
7. Report on Developing a Cooperative Extension System for Forest Products and Forestry Systems in Honduras (Appendix G).
8. Peer-reviewed article (in review) on the Facilitated Forest Sector Development Prioritization Process (Appendix H).
9. Human Ecology Module for dissemination to CADERH vocational-educational students (Appendix I).
10. Construction of a solar kiln for instructional and training purposes (Appendix J).

Obstacles Overcome/Lessons Learned

The forest sector team encountered very few obstacles in the course of the project. This was primarily due to the methodology developed and executed. This methodology included taking three months on the front-end of the project to familiarize the team with the various landscapes in Honduras that we would be working in. These included political, social, forest sector, cultural, and investment landscapes.

The roles and responsibilities for counterparts and the LSU AgCenter team were articulated early in discussions with stakeholder groups. It was made clear that we did not come with a suitcase full of money. We came to work WITH counterparts, to impart knowledge, and to help to leave something lasting long after we were gone.

We also did not make promises that we could not keep within the context of partnership relationships with counterparts. This was the most important lesson that we learned.

Site Visits

October-December 2000

- The forest-sector team leader visited Honduras in December with the primary objectives of initiating discussions with potential project partners and being introduced to key project personnel in USAID and MetroVision in Honduras..

January-March 2001

- The forest-sector team visited Honduras in January and February with the primary objectives of continuing discussions with key project partners and implementing projects/activities.

April-June, 2001

- The forest-sector team (Drs. Vlosky, Monroe, Dunn, and Shupe) visited Honduras in April-May with the primary objectives of continuing discussions with key project partners, completing the workshop/roundtable phase of the project, and develop project/activity goals and objectives.
- The team (Drs. Vlosky, Monroe, Dunn, and Ms. Ashbaugh Vlosky) also intended to visit in June to continue discussions with key counterparts but had to cancel due to tropical storm Allison and weather related conditions.

July-September 2001

- The forest-sector team (Drs. Vlosky, Monroe, Dunn, Shupe, and Ms. Ashbaugh Vlosky) visited Honduras in July with the primary objectives of continuing discussions with key project partners and implementing projects/activities.
- The team (Drs. Vlosky, Dunn, and Shupe) along with Dr. Chung Hse visited Honduras in August/September to continue discussions with key counterparts and to present a seminar on wood gluing.
- The team visited CADERH wood processing vocational-technical training centers.

October-December 2001

- The forest-sector team visited Honduras in October and December with the primary objectives of continuing discussions with key project partners and implementing projects/activities.

January-March 2002

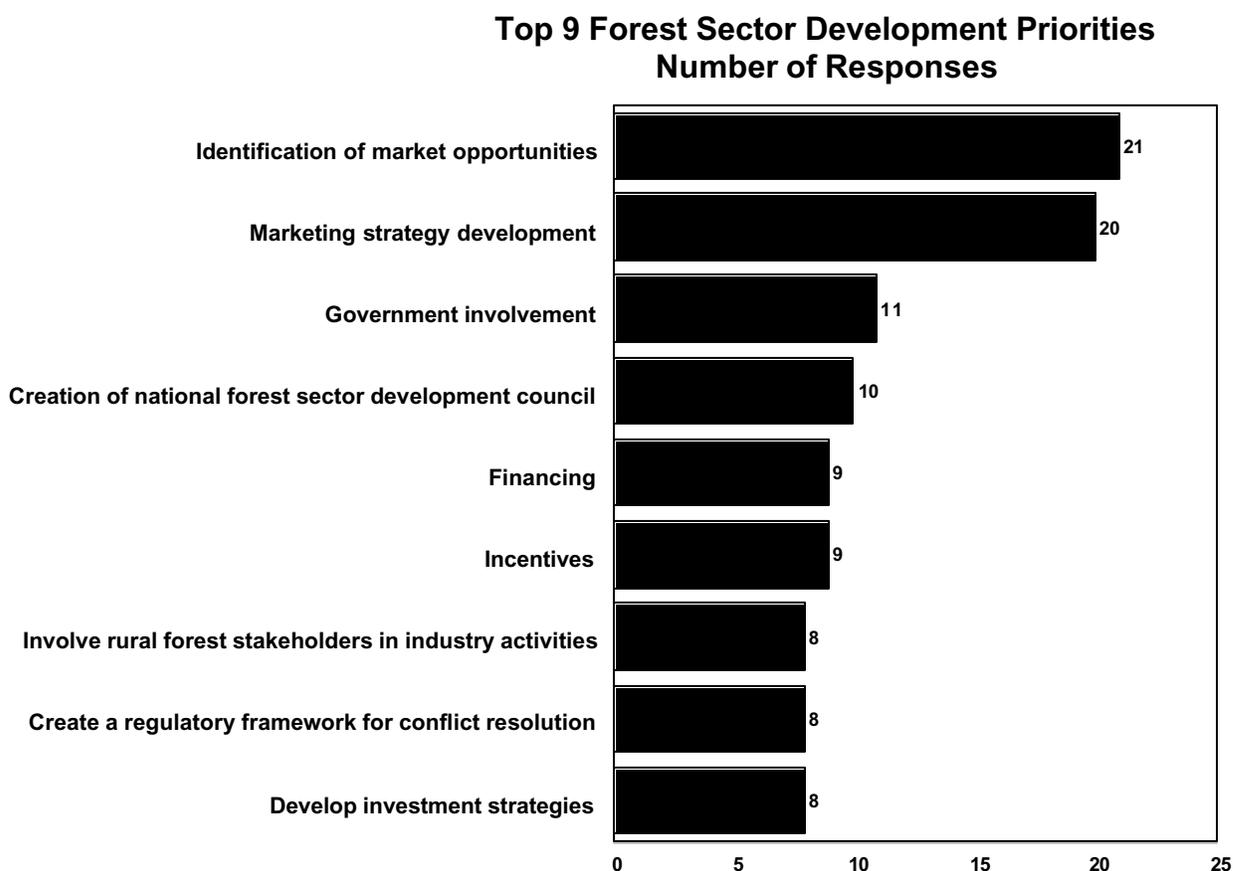
- The forest-sector team (Drs. Vlosky, Monroe, Dunn, Shupe, and Ms. Ashbaugh Vlosky) visited Honduras in February with the primary objective of finalizing all projects.
- Dr. Shupe visited in January to collect data on the marketability of Honduran bamboo as a building material.

Conclusions and Recommendations

In October 1998, the world changed for Honduras. Hurricane Mitch severely weakened the country's economic and social foundations. As was the case with other industrial sectors, forest-based industries were impacted. In response to this catastrophe, the LSU AgCenter, through MetroVision, was asked by the government of Honduras and USAID to provide expertise to help in rebuilding the forest sector. In the short-term, knowledge and technology transfer can help to make the industry more efficient and aid government agencies in crafting policies that encourage growth and investment.

Based on stakeholder input and decision processing over the course of the project, the top two ranked priorities for industry development both have to do with marketing (**Figure 1**). The top ranked recommendation is to conduct market research that can help to identify market opportunities for Honduran wood products producers. Second ranked is the need to develop a comprehensive national marketing strategy and implementation plan. Next ranked is the need for government involvement in forming the foundation for industry development at the national level. This is followed by the recommendation to form a national forest-sector development council that would have representation from all key stakeholder groups including industry, government, academia, non-governmental organizations (NGOs), international consulting support.

Figure 1.



The project resulted in tangible deliverables across a broad spectrum of forest sector stakeholders in Honduras.

Significant professional and personal relationships were developed between LSU AgCenter team members and Honduran counterparts.

In the long-term, forest-sector development in Honduras can contribute to an increase in rural employment and a lessening of poverty. The success of development projects such as the ALIANZA will be measured in the future by their ability to encourage environmentally sound forest management practices and sustainable growth of the forest-based industry sector.

Next Steps

Beyond the problem assessment that occurred in this project, the next step should be implementation. The first important step for implementation or action planning, then, is to convert the problems that were identified into goals that can be achieved. Therefore, the second step in this strategic planning support process for the Honduran forest sector will be to break the overall goal of poverty amelioration through forest sector development into smaller objectives (tied to recommendations) that are reasonably achievable and measurable.

Structured planning procedures should produce working plans for addressing issues by goals, objectives, action steps, resources, time-frames and contacts. These working plans should become the foundation of a forest-sector strategy for the next 3-5 years. They are also the foundation for cross-agency collaboration. In order for collaboration and cooperation to work between agencies and organizations in the forest sector, there needs to be a sincere desire to work together. Collaboration requires extra effort and energy, especially for the group that is trying to build a bridge to others. Many times, it takes more energy on the front end because stakeholders have to do most of the initial construction. In the long run, the forest-sector will have more support, better utilization of resources and better access to different resources (which includes funding and leadership).

Summary

Part of a broader economic planning process in Honduras, the methodology actualized in this project addresses many aspects of forest-sector development. In addition to strict sectoral development, forest-sector development can stimulate economic development in chronically depressed regions of the country.

We barely scratched the surface in sectoral development by developing some benchmark perspectives and by transferring knowledge desired by stakeholder groups. Any further processes or actions should include continued analysis and systematic follow-up that can accommodate changes in demand, supply, market conditions, economic conditions, social conditions, etc. This approach can assist local and national policy makers in formulating strategies for implementation of development efforts designed to capitalize on defensible market driven opportunities in forest products industry sectors within social and sustainability frameworks.

Regardless of the underlying motivation, and there are many in Honduras, (rural development, adding value, employment enhancement, etc.), the recommendations are but the first step in a planning framework that can help develop sustainable strategies for forest products industry development. Such development can add value to existing resources and create employment opportunities with transferable skills.

For success to be achieved, many stakeholders, including local development organizations, industry members, academic institutions and state and local economic development agencies must be involved to move from baseline analysis to program implementation.

It is anticipated that the information generated in this first step in forest-sector development planning will be used by legislators and other policy makers in Honduras such as public and governmental agencies to provide resources to develop programs that will further industry stability and sustainable growth.

Attachments