



## Partnering for Mutual Success: DaimlerChrysler – POEMAtec Alliance

### Background – DaimlerChrysler

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DaimlerChrysler's origins date as far back as 1883, when its predecessor "Benz & Co. Rheinische Gasmotoren-Fabrik, Mannheim" was founded by Karl Benz in Germany. The Chrysler Corporation was founded in the United States in 1925 by Walter P. Chrysler. In November 1998 Chrysler and Daimler Benz completed a \$36 billion merger, forming DaimlerChrysler, the fifth largest automaker in the world with estimated sales of \$160 billion.<sup>1</sup>

DaimlerChrysler's passenger car brands include Mercedes-Benz, Chrysler, Jeep®, and Dodge. It has manufacturing facilities in 37 countries, a staff of 365,600 employees and revenues of \$156.8 billion (as of 2002). The firm is listed on several exchanges across the world, including the New York, Frankfurt and Tokyo.<sup>2</sup> DaimlerChrysler has had been operating in Brazil since 1953, then as Mercedes-Benz of Brazil. The headquarters of DaimlerChrysler do Brasil and its primary manufacturing site is located in Sao Paulo, Brazil.

### Background – POEMA

The Poverty and Environment in Amazonia Research and Development (POEMA) project was started as a special program of the Federal University of Para in 1991 by Dr. Thomas Mitschein and the Federal University of Para as a means of curbing deforestation in the Amazon rainforest. Its goal was to create sustainable economic alternatives and improve living conditions in the Amazon region of Brazil.<sup>3</sup> POEMA was launched at the Federal University of Para in Belem. The initial pilot project was undertaken on the island of Marajo (off the northeast of Brazil). See Exhibit 1 for a map of Brazil. This venture was supported by DaimlerChrysler, the local government and initially by UNICEF as well.

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<sup>1</sup> Business & Company Resource Center, History/Chronology: DaimlerChrysler AG  
<http://galenet.galegroup.com/servlet/BCRC?c=1&rsic=PK&ste=74&docNum=I2501150530&ccmp=DaimlerChrysler+AG&bConts=4927&mode=c&tab=4&vrsn=2.0&cc=1&tbst=tsCM&tcp=daimlerchrysler&srchtp=cmp&rqp=CO&n=25&locID=uncbrcr>

<sup>2</sup> DaimlerChrysler website, <http://www.daimlerchrysler.com/dccom/0,,0-5-7155-1-12898-1-0-0-0-0-8-7155-0-0-0-0-0-0,00.html>

<sup>3</sup> Sarah Deem, "The quest for "greener" cars takes Daimler Chrysler to the rain forest", Popular Mechanics, August 17, 2001

Through the POEMA initiative, land that had previously been cleared was reforested to produce continuous yield year-round. Further benefiting the community, the harvests were to be processed within the region.<sup>4</sup>

### Origins of DaimlerChrysler – POEMA Alliance

In 1991, POEMA approached DaimlerChrysler (at the time Daimler-Benz AG) and its Brazilian subsidiary, Mercedes-Benz do Brasil in São Paulo with a proposal to conduct research on substituting synthetic inputs with natural fibers for interior car parts. Finding this in alignment with its corporate responsibility goals, as well as its desire to increase the number of recyclable and/or biodegradable parts in its automobiles, Daimler-Chrysler joined the POEMA project with an initial research and development investment of US\$1.4 million to research viable natural fiber products and the role local communities could play as suppliers for these products.<sup>5</sup>

The joint goal of DaimlerChrysler and POEMA was to make sustainable use of the region's existing resources, including its land, plant and human resources. They focused on the usability of natural fibers in the automotive industry.

In addition to providing financial support for the project, DaimlerChrysler also provided some initial research and development and technology. The Production Technology Department of DaimlerChrysler do Brasil worked closely with DaimlerChrysler teams from Germany to make valuable technical know-how (pilot level technology that was adapted and transferred for making high-quality manufactured goods from coconut fiber and latex) available to POEMA. With this assistance, POEMA researched a number ecologically friendly production options for various car parts. Through this initiative, the use of coconut fibers in automobile headrests was identified as a viable product. Once DaimlerChrysler and POEMA agreed that there was mutual benefit from this idea, they moved into the development phase.

POEMA developed a low-technology method of converting coconut fibers into car seat headrests that could be implemented by local people. The car seat headrests used both locally produced coconut fibers and latex, another product indigenous to the Brazil's rainforest.<sup>6</sup> In order to test the feasibility of this new product, a pilot project was initiated on the island of Marajo.

### Pilot Project

After about 18 months of research, POEMA with support from DaimlerChrysler launched a pilot project to produce headrests in the community of Praja Grande on the island of Marajo. The pilot project began in 1993 with a small, basic production facility, eight salaried employees, a workforce of 20 families and monthly production capacity of 6500 head rests made from coconut

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<sup>4</sup>"The Coconut and Latex Lifeline", Environmental Report 2001, Daimler Chrysler

<sup>5</sup> Juliana Menucci, "Innovative Supply Chain Management in the Amazon Basin."

<sup>6</sup> "The Coconut and Latex Lifeline", Environmental Report 2001, Daimler Chrysler

fibers and latex. While production began with rudimentary techniques and production levels around 400 per month, by 2003 production was up to 4000 units per month with more mechanized local processing.

DaimlerChrysler donated equipment for the processing of fibers, supplied people, tools and guaranteed the sales of the product. Additional investments in the project were then financed by Amazonian Bank BASA. Meanwhile, POEMA developed and improved new systems of cultivation in various Amazon communities and trained community members in technology, administration and marketing. Additionally, POEMA trained these local agro-industrialists in innovative agro-forestry practices that resulted in increased coconut production from 9 to 40 coconuts per tree.<sup>7</sup> The project was a success. DaimlerChrysler has very strict quality standards for its suppliers and the head rest cushions of the pilot project was able to meet all of these standards. The head rest cushions were shipped to the DaimlerChrysler plant in Sao Paulo for assembly into the automobile.

### DaimlerChrysler – POEMAtec Business Model

#### Overview

The success of this pilot project led to the expansion of the program. DaimlerChrysler not only increased its sourcing of headrests, it also ordered seat cushions for its Class A Mercedes-Benz model for sale in the Brazilian market. As demand increased, the for-profit entity, POEMAtec Fibras Naturalis da Amazonia (Amazon Natural Fibers) was contracted to produce the needed volume of headrests and seat cushions. POEMAtec, based in Ananindeua near the city of Belem in Northern Brazil (the Amazon region), is an independent company that works in partnership with POEMA - especially for actions related to the cultivation, harvesting and local processing of coconut fibers in rural Amazon communities.

DaimlerChrysler continued to support the program by signing a 10 year contract with POEMAtec.<sup>8</sup> In addition, DaimlerChrysler made it possible for POEMAtec to obtain the latest production systems for processing fibers by helping POEMAtec arrange favorable lease agreements.<sup>9</sup>

#### Human Resources

Initially, DaimlerChrysler contributed human resources to POEMA to help with the research and development effort. DaimlerChrysler's research and development team shared its knowledge and technology with the local POEMA research and development team, thus accelerating the rate of progress. DaimlerChrysler also provided training on the use of the new production equipment. However, once POEMA got on its feet, DaimlerChrysler backed away and allowed POEMA to run the operation independently. POEMAtec is controlled and managed by local Brazilians.

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<sup>7</sup> Juliana Menucci, "Innovative Supply Chain Management in the Amazon Basin."

<sup>8</sup> Sarah Deem, "The quest for "greener" cars takes Daimler Chrysler to the rain forest", Popular Mechanic, August 17, 2001

<sup>9</sup> Interview with Vicky Schreiber, of POEMA, July 24, 2004

### Ownership and Governance Structure

The formal relationship between DaimlerChrysler and POEMAtec is that of a buyer and supplier. However, while DaimlerChrysler does not have an ownership stake in POEMAtec, it does have a strong vested interest in seeing POEMAtec succeed. As such, DaimlerChrysler has acted more like a partner and facilitator than as a mere buyer. For example, DaimlerChrysler has helped POEMAtec obtain more favorable lease terms. In addition, DaimlerChrysler has shared its own research and development with POEMAtec, so that POEMAtec could then build on it. Finally, DaimlerChrysler has guaranteed a market for POEMAtec's products by signing a 10 year contract for the purchase of seat cushions and headrests, thereby reducing POEMAtec's exposure to risk.

### Supply Chain

Before POEMA, coconut fiber was considered waste. Now, it is a source of income. The sourcing communities are set up with a processing center to extract the fibers. These processing centers are equipped with tubs for soaking the coconuts and a machine that separates the fiber from the shell. Once separated, the fibers are twisted into rope and then sent to POEMAtec. (The coconut fruit is sold in the market or to a fruit-processing factory.) At POEMAtec, the fibers are combined with natural latex rubber and molded into headrests, sun visors and seat parts for trucks sold in Brazil, and Mercedes-Benz sedans, such as the A-Class. Some communities, including Praja Grande, have set up small factories run by cooperatives made up of small landholders. They sell the coconut fiber products to POEMAtec, which in turn supplies the finished assembly to DaimlerChrysler. An important aspect of the project is that the local communities can run, modify and maintain the processing equipment themselves, without outside help.<sup>10</sup>

### Marketing

DaimlerChrysler had two major considerations in terms of marketing its use of coconut fiber filled seat cushions. First, DaimlerChrysler needed to maintain its image as a top quality luxury car manufacturer. The coconut fiber parts could not be a compromise between responsibility and quality. They had to meet both standards at the same time. In order to ensure the quality of its overall product, its vehicles, DaimlerChrysler held the coconut fiber seat cushions and headrests to the same standards as it does for its other components. The coconut fiber products met or exceeded these standards.

Second, DaimlerChrysler wanted to communicate to its stakeholders that it was acting responsibly and was dedicated to reducing the negative impact of its vehicles while assisting local Brazilians reforest their land and create economic opportunities for the Amazon regions. DaimlerChrysler has promoted its leadership in the POEMA project through press releases and its corporate responsibility reports. In addition, DaimlerChrysler has received recognition by the media through various awards for its work with POEMA. Most recently, in 2003, DaimlerChrysler

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<sup>10</sup> Sarah Deem, "The quest for "greener" cars takes Daimler Chrysler to the rain forest", *Popular Mechanic*, August 17, 2001

received the OAS Award for Corporate Citizenship in the Americas in recognition of its POEMA Brazilian rainforest manufacturing project.<sup>11</sup>

## Program Results – Triple Bottom Line

### Financial Results

In addition to the benefits to the environment and society, DaimlerChrysler has received measurable benefits from its support of the POEMA project. First, according Ben Van Scheik, chief executive officer of DaimlerChrysler Latin America, and president of DaimlerChrysler of Brazil, DaimlerChrysler saves 5 percent in overall production costs by using natural products over plastics. In addition, the rising cost of petroleum derivatives, and improved fiber-processing equipment make coconuts a viable raw material alternative to plastics.<sup>12</sup> Sourcing these parts is as economically viable, if not more so, than their synthetic counterparts.<sup>13</sup>

Further, DaimlerChrysler is able to meet its local content requirements by sourcing its interior car parts from the coconut fiber plant. Also, the company is able to ensure that its vehicle production meets the high environment and recycling standards set at home in Germany. The automobile industry - especially in the European Union - is being required by legislation to increase the recyclability and biodegradability of its vehicles or high disposal costs will be incurred. As a global corporation, DaimlerChrysler maintains these standards in their operation in other countries where these requirements do not yet exist<sup>14</sup>. In addition, since coconut fiber is 100 percent biodegradable, there are no significant energy costs associated with processing waste and recycling because the waste fibers are either fed back into the processing cycle or used in products such as hairbrushes or shoe insoles. Finally, using natural fiber products provides value in projecting a positive public image.

In addition to these benefits, DaimlerChrysler has noted that its investment in natural fiber research and development are economically justifiable in the medium and long-term for the following reasons.

1. The results of the research developed in Brazil have been leveraged in a similar project in South Africa and may be used in a future project in the Philippines. In addition, DaimlerChrysler has also expanded its use of natural fibers to include components produced in Germany.<sup>15</sup> As such, the investment is spread over a broader area.

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<sup>11</sup> DaimlerChrysler website

<sup>12</sup> Sarah Deem, "The quest for "greener" cars takes Daimler Chrysler to the rain forest", Popular Mechanic, August 17, 2001

<sup>13</sup> Juliana Menucci, "Innovative Supply Chain Management in the Amazon Basin."

<sup>14</sup> Email from Vicky Schreiber, February 11, 2004.

<sup>15</sup> Sarah Deem, "The quest for "greener" cars takes Daimler Chrysler to the rain forest", Popular Mechanic, August 17, 2001

2. With the new regulations regarding the disposal of used vehicles, developing expertise in the use of natural fibers could become a cost benefit and potential advantage in the future.<sup>16</sup>

## Social Results

Before POEMA, coconut fibers, were considered waste and either burned or discarded. Now, they are a source of income. In the community of Praja Grande, for example, the average family's income has increased from about \$36 per month to about \$300 a month since participation in the program began.<sup>17</sup>

As of 2001, eight districts in Pará supplied coconut fiber to POEMAtec. Approximately 4,000 new jobs had been created in the coconut fiber production including agricultural producers, processing plant workers (there are four local processing plant in operation), and POEMATEC plant workers.<sup>18</sup>

According to DaimlerChrysler's estimates in 2001, the POEMAtec project had improved the quality of life of almost 5200 families.<sup>19</sup> The extraction and processing of the coconut fiber, involves the participation of more than 5000 families organized in producers associations and 7 agro-industries that commercialize their products to POEMAtec Industry. In addition, POEMAtec has expanded its production to include gardening and furniture products, thus creating even greater potential for income generation within the community. By working with local communities to improve cultivation systems and provide a market for their products, traditional families have been given new economic opportunities.

## Environmental Results

POEMA worked with small landholders in Praja Grande to help them switch from monoculture, or farming just one crop, to planting mixed-crop fields. If they had not changed their planting techniques, the soil would have been depleted of nutrients after about five to seven years. When this happened, farmers typically would slash and burn more of the rain forest to use for farming.<sup>20</sup> In addition, coconut husks previously were burned or discarded. Now they add value to the economy, society and the environment, exemplifying how the sustainable use of forests

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<sup>16</sup> Dr. Joachim Zahn, "Social and Environmental Responsibility of Large Enterprises in the North/South Relation. Globalization as opportunity – The Example of DaimlerChrysler in Latin America", POEMA Papers, October 2001

<sup>17</sup> Sarah Deem, "The quest for "greener" cars takes Daimler Chrysler to the rain forest", Popular Mechanic, August 17, 2001

<sup>18</sup> Juliana Menucci, "Innovative Supply Chain Management in the Amazon Basin."

<sup>19</sup> Dr. Joachim Zahn, "Social and Environmental Responsibility of Large Enterprises in the North/South Relation. Globalization as opportunity – The Example of DaimlerChrysler in Latin America", POEMA Papers, p. 15, October 2001

<sup>20</sup> Sarah Deem, "The quest for "greener" cars takes Daimler Chrysler to the rain forest", Popular Mechanic, August 17, 2001

resources can preserve natural resources while providing a source of income. Further, coconut fiber products are biodegradable and recyclable. Finally since latex is a renewable resource, its properly managed extraction is a sustainable activity. In short, DaimlerChrysler's partnership with POEMatec, has facilitated the development of an extensive production chain that supports biodiversity and utilizes by-products that would otherwise be waste. See Exhibit 2 for the POEMatec production chain.

POEMA has created sustainable economic alternatives to slash and burn farming. Through economically viable reforestation, it has helped transform monoculture plantations with a mixed tropical forest that includes coconut palms, rubber, cacao, banana, Brazilian chestnut trees and other plants<sup>21</sup>, enabling communities to improve their standard of living in an environmentally benign way.

### Challenges

Both DaimlerChrysler and POEMA have faced significant challenges in implementing their vision of reducing environmental degradation while simultaneously improving local economic conditions in the Amazon region. First, the region itself posed supply difficulties due to its location, lack of infrastructure, transport costs to the clients, etc. Traditionally, infrastructure is the job of the governments. However, instead of simply waiting for the government to act on its own, DaimlerChrysler and POEMA partnered with local governments to develop the necessary infrastructure and achieve mutually beneficial results.

As an example of this cooperation, POEMA received support from government technical programs and in some cases local governments have made in-kind contributions - such as the property for local processing facilities to set-up the coconut fiber production pole and local processing facilities. Also, government programs supported the construction of local processing facilities, and rural extension support has been provided by the State Secretary of Agriculture. Although no formal contracts exist between the government and POEMATEC/DaimlerChrysler, there is a very positive dialogue between DaimlerChrysler - POEMATEC and Government Programs that converge with the ideas of establishing sustainable chains of production based on natural resource use.<sup>22</sup>

Second, Mercedes-Benz is a brand that is known for its high quality. This goes for the entire vehicle including the accessories. It was critical that the POEMA products were up to DaimlerChrysler's quality standards and were delivered on time. DaimlerChrysler worked with POEMA to ensure that these quality standards were met. Once the Marajo venture was up and running successfully, it was clear that the scale of production would have to be increased. Again, DaimlerChrysler partnered with POEMA to create a second, larger plant just outside of Belem.

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<sup>21</sup>"The Coconut and Latex Lifeline", Environmental Report 2001, Daimler Chrysler

<sup>22</sup> Email from Vicky Schreiber, February 11, 2004.

## Key Lessons & Opportunities

Out of the 10,700 employees of DaimlerChrysler of Brazil working in the commercial vehicles sector, less than ten are expatriates from the headquarters. In addition, the board is split 50-50 between European and Brazilian. DaimlerChrysler goes well beyond providing foreign direct investment in Brazil; it considers its Brazilian operations “a national company with foreign capital.”<sup>23</sup> In addition, DaimlerChrysler recognizes the importance of having partners in the region in which it does business. This high level of local leadership and partnerships helps DaimlerChrysler deeply understand the Brazilian market and therefore provide locally appropriate and successful solutions. The success of DaimlerChrysler’s venture into natural fiber products is due to its willingness and ability to effectively partner with a wide range of stakeholders, including for-profit, non-profit and government organizations. No one organization or company could have done this working alone.

In addition to these factors, DaimlerChrysler has stated that the disposition and steps that were critical to its success include:

1. Open minded-research and the disposition to contribute to other peoples research.
2. Longer-term thinking than the optimizing of profits for today and tomorrow.
3. Recognition of side problems (such as infrastructure) as a challenge and application of innovative ideas.
4. Search and acceptance of both national and international partners.
5. Supply of “know-how”
6. Help to look for and provide Markets, Financing and Personnel<sup>24</sup>

## Venture Scalability/Transferability

DaimlerChrysler has already proven the scalability and transferability of its natural fiber project. The results of the research developed in Brazil have been successfully leveraged in a similar project in South Africa. Now DaimlerChrysler is also considering a similar project in the Philippines.

## Risks

Because the POEMA project relies on local government support, the project is subject to political risk, the risk that new leadership may discontinue support of the project. However, DaimlerChrysler and POEMA have mitigated this risk by working with various levels of the government, not only one or two individuals. So even, if some of the supporters are voted out of office others will likely remain. But even more importantly, the risk of the government ceasing to support the project is mitigated by the fact that this initiative creates jobs and income for local

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<sup>23</sup> Dr. Joachim Zahn, “Social and Environmental Responsibility of Large Enterprises in the North/South Relation. Globalization as opportunity – The Example of DaimlerChrysler in Latin America”, POEMA Papers, October 2001

<sup>24</sup> Dr. Joachim Zahn, “Social and Environmental Responsibility of Large Enterprises in the North/South Relation. Globalization as opportunity – The Example of DaimlerChrysler in Latin America”, POEMA Papers, October 2001

residents, therefore providing tax revenue to the federal, state and local governments.<sup>25</sup> Therefore, regardless of the specific agenda of a political figure, it is likely that this program will continue to be supported because it generates needed revenue for Brazil.

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<sup>25</sup> Interview with Vicky Schreiber, July 24, 2004.

**Exhibit 1**

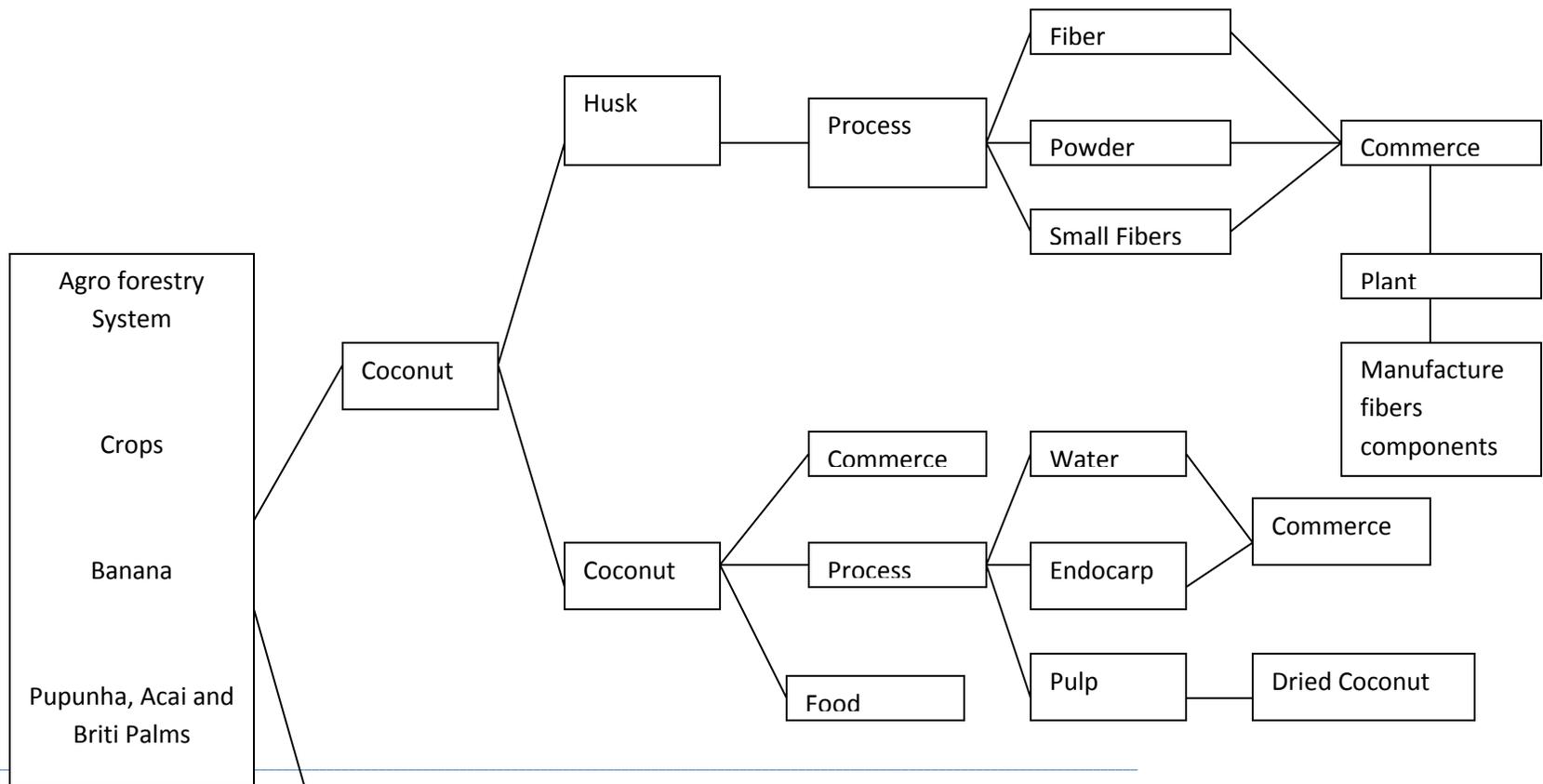
**Map of Brazil**





Exhibit 2

Productive Chain



Case #. This case was prepared by Yerina Mugica under the direction of Professor Ted London, UNC's Kenan-Flagler Business School, as a basis for class discussion. It illustrates the effective or ineffective handling of an administrative situation.

