

BACP

BIODIVERSITY AND AGRICULTURAL
COMMODITIES PROGRAM



Market Transformation Strategy for Soy

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ACRONYMS

BACP	Biodiversity and Agricultural Commodities Program
GEF	Global Environment Facility
FAO	Food and Agriculture Organization of the United Nations
IFC	International Finance Corporation
MTS	Market Transformation Strategy
NGO	Non-governmental Organization
P&C	Principles and Criteria for the responsible production of soy; produced by the Roundtable on Responsible Soy
RTRS	Roundtable on Responsible Soy

1 INTRODUCTION

1.1 Background

This Market Transformation Strategy (MTS) for soy has emerged from discussions between the International Finance Corporation (IFC), the Biodiversity and Agriculture Commodities Program (BACP), and members of the Roundtable on Responsible Soy (RTRS). The purpose of the MTS is to guide BACP support to projects that will transform the soy market along the entire value chain – from production to commercialization - in ways that improve conditions for biodiversity. This means that a percentage of the market (the transformed market) would be applying standards agreed upon by RTRS that “contain” (imply) an optimal biodiversity conservation component, as measured by precise indicators. The present MTS concerns an initial period of one to 2 years and will be modified, as necessary, over the course of the BACP program, in response to shifts in the market and other influencing factors. The primary geographic focus of the MTS is on Brazil due to: a) its status as the world’s second largest producer of soy; b) the high level of biodiversity of global significance that is at risk due to the rapid expansion of soy production within Brazil; c) the good potential for reducing impacts on Brazil’s biodiversity; and d) the existing cooperation with country stakeholders, including strong public and private sector engagement in the RTRS and endorsement of the BACP from the GEF’s Brazil Focal Point.

1.2 Report Structure

The Soy MTS briefly describes the BACP goals and the preliminary allocations of BACP funds in soy for each of the four components in the BACP logical framework. The strategy goes on to discuss the synergies between the BACP and the RTRS and the strategic directions of our strategy by component. It ends with a discussion on the short term implications of the proposed BACP activities and briefly describes some emerging trends that will have to be monitored over the life of the BACP so that the strategy can be adjusted appropriately.

1.3 BACP Goals

BACP is a program funded by the Global Environment Facility (GEF), the International Finance Corporation (IFC), the Japanese Government and other donors, and executed by the IFC. The ultimate goal of the program is to contribute to the preservation of global genetic, species, and ecosystem diversity within agricultural production landscapes by using market forces to transform selected commodity markets. BACP currently works in soy and palm oil and targets the three major market actors in each commodity: producers (supply), traders and purchasers (demand), and financial

institutions, all of which are represented in the relevant commodity roundtable. In addition, where policy-related barriers have been identified, the program will work with regulatory institutions and policy-makers in target countries to support a better enabling environment.

The BACP Grants Facility is the primary tool used to achieve the program’s goal. BACP grant funds will be used through a competitive process to support projects that contribute to the BACP goals through activities that fall under one or more of the following components:

- **Component I: Support activities for an enabling environment**, including dialogue between industry groups and governments, research and case studies to define and document the economic benefits of biodiversity, and capacity building of public institutions.
- **Component II: Support better production, through industry-sponsored better management practices (BMPs) programs** that study the linkages between BMPs and biodiversity conservation, test BMPs through practical application in the field, and train farmers in the use and importance of biodiversity-friendly practices.
- **Component III: Support increased demand for products with positive biodiversity impacts** through analyzing the various soybean consumers, studying emerging patterns of preferential sourcing of biodiversity-friendly soybean products, and increasing awareness amongst buyers and consumers through outreach and marketing in support of certification or verification schemes.
- **Component IV: Encourage the adaptation of financial services to support biodiversity-friendly practices** by farmers and all actors along the supply chain. This would include projects to support financial institutions in adapting their policies and procedures to encourage biodiversity-friendly supply chains and discourage others.

This market transformation strategy defines the allocation priorities of BACP funds for soy projects during the first two years of implementation. The initial 4-year budget for soy is approximately US\$2,900,000, which is tentatively allocated to the four BACP components and cross-component activities as listed below.

Program component	Tentative allocation
Support activities for an enabling environment	\$800,000
Support for better production	\$800,000
Support for increased demand for products with positive biodiversity	\$800,000

impacts	
Encouraging financial services to support biodiversity-friendly practices	\$500,000
TOTAL	\$2,900,000

2 SYNERGIES BETWEEN RTRS AND BACP

The BACP model is designed to work in close collaboration with the Roundtable on Responsible Soy (RTRS), which defines standards that are acceptable to its members and promotes better management practices to reduce negative environmental and social impacts throughout the value chain. The RTRS is an international, multi-stakeholder, industry-led initiative that brings together representatives from all sectors involved in the soy value chain (producers, buyers, traders, financial institutions, and civil society) and seeks to define responsibly-grown and processed soy. The RTRS is strategically important to the BACP because its members together represent a group that have a strong traction within international commodities markets. By joining the RTRS, companies such as Bunge, Cargill, and Archer Daniels Midland Company (ADM) have shown their commitment to responsible soy. Although its headquarters are based in South America, the RTRS counts among its members large soy consuming companies throughout the world, including four new members from India. Membership also includes producers associations representing a significant proportion of the producers in Brazil and Argentina, important financing institutions, and civil society organizations that have a long history of working hand in hand with the private sector on a variety of social and environmental issues. A full list of the RTRS members can be found at www.responsiblesoy.org.

In 2007, the RTRS drafted Principles and Criteria (P&C) for sustainable soy. Since then, the P&C have been under discussion within the RTRS and have been open for broad public comment. The RTRS expects to present interim P&C for approval by the General Assembly of its members in May 2009. The expectation is that the interim P&C will be field tested for one year and the results of the field tests will be used to improve the final P&C.

The RTRS has drafted a two-pillar model for the implementation of its Principles and Criteria (P&C) for sustainable soy production:

- Pillar 1 consists of a voluntary certification system that uses the fully implemented and independently verified P&C as a basis for certification. This component is aimed at producers and processors supplying markets that already demand certification.
- Pillar 2 aims at helping a majority of producers meet the P&C over time. This pillar consists of a set of tools, including training, technical assistance, and financial support for farmers.

The current status of the RTRS provides the BACP with an opportunity to support their two-pillar model for P&C implementation. BACP and the RTRS Secretariat are exploring the possibility of BACP support for the RTRS's Outreach Program and other activities associated with Pillar 2. These discussions are in line with the RTRS's letter of intent, signed in 2006, in which it expressed its support to BACP, its willingness to collaborate with the program and its interest in submitting a project proposal.

Cooperation between BACP and the RTRS is further buoyed by the fact that IFC is an ordinary (voting) member of the RTRS and maintains continuous contact with the RTRS Executive Board, which is the main decision-making body of the RTRS, the Secretariat, and RTRS members. Given their shared agenda, the continued, open communications between the RTRS and BACP, and the strategic importance of the roundtable's membership, the RTRS is a natural partner for the BACP. The success of the MTS for soy depends on maintaining this partnership and cooperation.

3 KNOWLEDGE MANAGEMENT

It is notable that BACP's cooperation with the RTRS and their related work in soy is occurring by design to create replicable knowledge. As work progresses to set metrics and test best practice in each of the commodity areas, the BACP helps collect knowledge and lessons learned and disseminate them as appropriate and especially through the roundtables themselves, as it is the case now with the Biodiversity Technical Committee of the RSPO: its sole role is in knowledge management. This knowledge management function will also traverse commodities and roundtables so as to maximize the overall impact of the BACP program

4 STRATEGIC DIRECTIONS BY BACP COMPONENT

BACP proposes to finance projects that fall within the four components described below. As components 1, 2, and 3 offer greater potential for impact in the short run, BACP will give priority to projects that fall within these components. As conditions in the soy market change, this strategy will be modified to prioritize other components or to deal with any new issues affecting the market.

As mentioned in the opening of this document, BACP's strategy for soy is initially focused on Brazil. Brazil is one of the 17 mega diverse countries in the world and home the world's largest biological diversity. It also contains some of the world's most threatened biomes by human and agricultural expansion (the *Cerrado*, the Amazon and the Atlantic Forest). Given BACP's initially limited resources, the relative importance of Brazil's biodiversity, position in global soy production, and the threats posed to biodiversity by agricultural expansion within its borders, at this initial time BACP will essentially finance projects in Brazil. Submissions from other countries

will be considered, most probably after a first Request for Project Applications round, as additional resources become available and subject to the endorsement of BACP by the Global Environment Facility local focal points in those countries (as required by GEF). The expansion of the model to more countries, however, is desired and will be sought.

4.1 Component I: Support Activities for an Enabling Environment

4.1.1 Strengthen the Legal Framework and Enforcement Mechanisms

The existing legal framework and enforcement mechanisms in soy producing countries play an important role in the expansion of soy production into biodiversity-rich ecosystems. In Brazil and Paraguay, the laws aimed at protecting forests and high value habitats are both modern and ambitious and have the potential to protect important ecosystems. The Forest Code in Brazil, for example, mandates that every landowner maintain a native forest cover of at least 20% of their land. However, the minimum set-aside required depends on the type of habitat in which the land is located. Enforcement, however, is weak and incentives to comply with the law are few. Moreover, both Paraguay and Brazil lack sufficient staff, resources, and management capacity to manage federal and state protected areas and to ensure that these areas are not converted to agriculture or other commercial exploitation.

In Argentina, environmental regulations aimed at slowing the expansion of soy into areas with biodiversity of global significance are nascent and lack the commitment on the part of provincial governments and other government entities to enforce them.

Several key potential interventions have been identified to deal with these barriers:

- Create incentives for producers to comply with land set-aside laws, and eliminate the current disincentives for producers who want to make their land compliant with set-aside laws. In Brazil, for example, the Forest Code does not include grandfather clauses for producers who settled in land before the current Code went into effect, thereby requiring a higher percentage of land set-aside than previously mandated when the land was settled. The law, however, does create some flexibility for producers who were compliant with the previous codes. Producers who were compliant with the old Forest Code and wish to register their land in the national cadastre may do so without paying a fine as long as they sign a “Termo de Ajustamento de Conduta (TAC)”, which obligates them to adjust behavior over a period of time to comply with the new legislation. Producers who deforested their lands in excess of the previous code’s limits must pay a fine before being allowed to register.

- Design and demonstrate mechanisms that appraise the value of land set-asides for conservation. Under the current conditions, producers and finance institutions view land set-asides for conservation only as a revenue loss because they see it as non-productive land. Policy makers must support the development of mechanisms that recognize the value of ecological and social services of conservation lands, including values for water and carbon management. Several NGOs in the State of Mato Grosso, Brazil are working with the private sector and landowners to design viable mechanisms that provide payments for environmental services. BACP will strengthen such cooperative efforts and will support similar innovative projects that recognize the ecological value of land and natural resources.
- Build the capacity of federal, provincial, state and municipal government agencies to implement policies and strategies that support all segments of the value chain for biodiversity-friendly soy, including laws and regulations that protect biodiversity in soy production areas.

4.1.2 Limit the Expansion of Soy Production onto Natural Habitats of High Biodiversity Value

Conversion of natural habitats into productive landscapes is one of the major impacts of soy cultivation and limiting the expansion of soy production into key biodiversity areas is a priority for BACP. Several activities focused on land management and zoning are already in place in Brazil to regulate the use of land according to socio-environmental and sustainability principles that limit the expansion of soy cultivation into biodiversity-rich areas. In 2006 a group of Brazilian and international agro-industry associations and companies that buy and sell soy adopted the soy moratorium. This voluntary commitment prohibits signatories from buying or selling soy produced on land in the Amazon Biome that was been deforested after July 2006, regardless of whether the deforestation was done legally or illegally. The moratorium expired in 2008 but was renewed for another 2 years until 2010. The soy moratorium was to a large extent a response to pressure from consumer groups in Europe concerned with the environmental effects of soy production in environmentally rich areas. Although this pressure was mobilized by international NGOs, it was the close collaboration between these NGOs, Brazilian trade associations, and two important associations, ABIOVE (Brazilian Vegetable Oil Industry Association) and ANEC (Brazilian Grain Exporters Association) that added credibility to these advocacy efforts. Efforts were also bolstered by participation of industry heavyweights ADM, Amaggi, Bunge and Cargill, who participated actively in the definition of the moratorium's operation model, as well as a broad communication campaign that targeted every sector involved in the soy market. The

moratorium has thus been seen as a joint effort between soy buyers and NGOs in response to a threatened international market.

In 2003 the governor of the State of Amazonas in Brazil created a “*Zona Franca Verde*” (*green free zone*), which intended to balance forest preservation with the socio-economic needs of the surrounding communities. Similarly in the Brazilian State of Pará, collaboration between government agencies and NGOs has resulted in a system of macro-zoning that created new state protected areas. In Mato Grosso, Brazil the municipal government and NGOs collaborated to propose zoning practices that have the potential to make the municipality of Lucas do Rio Verde the first municipality fully compliant with the revised Forest Code. Although this effort has suffered a series of setbacks recently, the collaboration between local government, NGOs, and the private sector has produced innovative practices that could serve as models in other areas of the country.

BACP will support projects that propose innovative land zoning practices at the landscape level (municipal and state) or at the producer level (companies or plantations) and that identify and set aside priority areas for the preservation of biodiversity-rich habitat.

4.1.3 Assess and report how land-use decisions and management practices in soy production landscapes influence biodiversity.

Few studies measure and compare alternative land use patterns and management practices and their relative impacts on biodiversity in soy production landscapes. Although the negative impact of soy production on biodiversity and ecosystems seems obvious, a common complaint among soy producers is that no empirical data exists linking certain agricultural practices to specific impacts on biodiversity. As a result, producers have little understanding or buy-in on how better management practices can positively impact biodiversity in and around the production area.

Understanding the linkages between soy production and biodiversity loss is an important prerequisite for formulating better management practices. BACP seeks to identify practices that have the largest impact on biodiversity conservation and mainstream these biodiversity-friendly practices into production and on-farm processing. These practices may have a direct result on biodiversity, such as improved waterway biodiversity as a result of reduced chemical usage. They may also have an indirect result, such as reduced need for expansion due to improved production and post harvesting practices that maximize land productivity and reduce losses.

In addition to identifying and supporting the adoption of better management practices for soy production, BACP seeks identify how land-use patterns in soy

production landscapes influence biodiversity. Amidst the fragmented landscapes dominated by soy, other crops, and pasture is habitat that provides a safe haven for native species and important corridors for species migration. It is important to identify how particular landscapes and natural corridors contribute to the maintenance of biodiversity and prioritize areas for conservation. Just as important would be to identify lands that do not contribute significantly to biodiversity and highlight those lands for the inevitable expansion of soy. BACP seeks to measure the impacts of a variety of land use practices to derive acceptable proxies to be later used in planning by businesses and other players.

4.2 Component II: Support Better Production

4.2.1 Develop, test and scale up the adoption of better management practices that have direct and indirect positive impacts for biodiversity

Better management practices (BMP) are essential to improving conservation of biodiversity. BACP is particularly interested in projects that promise to maintain or increase yields while protecting biodiversity and ecosystem services. Demonstration projects at the scale of farms should include preparation of training materials needed for replication to other farms and strengthening of local institutions to carry this work forward. Projects might focus on BMPs related to, but not restricted to the following topics:

- Management of non-native species; invasive, non-native species (plants, animals, fungi and bacteria) are a growing and costly problem for natural resource managers in agricultural landscapes worldwide. Initial projects might identify and prioritize the species of concern, and test and document management strategies for the most problematic species for natural areas, particularly where these are problematic for growers and conservationist alike.
- Soy cultivation requires high investments in soil improvement and pest management which result in mass application of agrochemicals that are often harmful both to biodiversity and surrounding communities. Improved selection and application of agrochemicals (fertilizers, herbicides, fungicides and pesticides), however, can provide win-win scenarios for biodiversity conservation and farm productivity. As in all BACP projects, proposed activities must have clearly defined biodiversity objectives.
- Management planning and implementation and monitoring of native habitats can improve biodiversity values on farms. Demonstration projects and

replication tools could focus on large HCV set-aside sites, buffer strips along streams and small areas such as wood lots. Game management and provision of timber and non-timber forest and native grassland products may be included as complimentary to biodiversity management.

4.3 Component III: Support Increased Demand for Products with More Positive Biodiversity Impacts

4.3.1 Support Compliance with the RTRS Principles and Criteria and Code of Conduct

To become certified under the RTRS, members of the roundtable must comply with the Principles and Criteria (P&C) and the RTRS Code of Conduct. Once the P&C are accepted, as is expected in the 1st half of 2009, there will be an intensive period of testing and documenting implementation procedures. RTRS members need training and technical assistance to comply with the P&C and the Code of Conduct, particularly in those items related to biodiversity conservation.

BACP will work with the RTRS and other partners interested in building institutional capacities that will reduce the barriers RTRS members face to implement the biodiversity components of the P&C. Projects may include:

- Research, demonstrate and document data sources and standards for measuring biodiversity values in soy production landscapes, including how these are understood and implemented on individual farms
- Create training and support programs and manuals for implementing biodiversity components of the P&C at the farm and landscape scales

4.3.2 Conduct a value chain analysis of the biodiversity component of certified soy

To facilitate and encourage soy value chain participants to incorporate biodiversity criteria into their products, an understanding of the entire value chain is required and should be shared among the participants. Specifically, in order to support the costs of certification through the value chains, the roles, costs, and benefits for each participant must be defined, from the producer and processors to the intermediaries and most importantly, the consumer. BACP would support a project that analyzes one or more value chains for biodiversity-friendly soy and identifies opportunities to increase market-based support for the cost of certification. In line with the above, BACP will also support preliminary studies aimed at investigating the market impacts of certified soy and its effects on the value chain, both for domestic and international

end markets. Such studies should include a cost-benefit analysis for all actors in the value chain, in particular those down the value chain.

4.3.3 Develop and adopt feasible and quantifiable biodiversity indicators and tracking protocols

Soy producers implementing BMPs aimed at protecting biodiversity lack standard indicators and methods for tracking and reporting their impact on biodiversity. As part of the formulation of its P&C, the RTRS is establishing indicators that will allow members to determine their compliance with each of the P&C. BACP will support projects that help formulate, test, and document biodiversity indicators consistent with the P&C of RTRS. Projects should include protocols for evaluating progress toward certification and demonstrate the framework for independent audits and transparent reporting.

Similar to BACP's work with the Roundtable on Sustainable Palm Oil, the BACP deems it strategic to support the RTRS Secretariat in developing and documenting the biodiversity components of the P&C and sharing information among RTRS members. The RTRS Outreach Program currently has limited resources and staff, and BACP's funds could be used to strengthen the Program's technical capacities, particularly in those areas related to BMPs and biodiversity conservation.

4.3.4 Conduct an analysis of soy consumers and develop outreach strategy targeting end users

Despite best efforts to support verifiable biodiversity-friendly standards for soy, and although the soy market is essentially B to B (and the businesses that want sustainable soy are present at the RTRS), the BACP would be support an analysis of the soy market and its various consumers, segmented by product type if possible (soybean, soy meal, soybean oil, soy products and ingredients, etc). BACP seeks to understand the level of awareness and concern each segment user has regarding the link between soy production and biodiversity, the depth of existing preferences for biodiversity-friendly soy, and scope of potential future demand within each segment for biodiversity-friendly soy. We also seek to understand any emerging patterns of preferential sourcing of biodiversity-friendly soybeans and/or related products.

As a compliment to this analysis, BACP would also support work to target particular market segments with consumer awareness building activities and outreach to increase demand for biodiversity friendly soy.

4.4 Component IV: Encourage the Development of Financial Services to Support Biodiversity Friendly Practices

4.4.1 Develop competitive financial products specifically aimed at biodiversity-friendly, certified, soy production, processing and commercialization

Traders play a crucial role in the financing of soy production by providing credit lines for producers to acquire inputs such as seed and fertilizer. In places where financing instruments from banks are insufficient, traders provide the bulk of financing for production. A few traders in Brazil currently offer financing mechanisms specifically for producers that meet social and environmental criteria. Given the prominent role that traders play in financing soy production, BACP believes that financing projects that work with traders to design financial instruments supporting biodiversity criteria makes strategic sense. Several potential areas of action were identified:

- Conduct a cost benefit analysis of traders who utilize biodiversity criteria in their financing schemes; evaluate criteria that maximize environmental impacts and minimize compliance validation costs and with these results, design lending schemes that make economic sense to both producers and traders.
- Implement pilot project that test and demonstrate the competitiveness of financial products specifically aimed at biodiversity-friendly, certified soy production, processing and commercialization. Projects should include plans to use the lessons learned from the pilot activities to replicate these projects.

In addition to traders, some Brazilian banks also offer financial products that are aimed at stimulating environmentally friendly production of soy. A number of banks following the *Protocolo Verde*, offer reduced interest rates to producers that are compliant with Brazilian environmental legislation. Critical to the success of these loans is the methodology employed to ensure compliance, including regular field visits and a complete appraisal of the producer applicants. Another group of banks offer reduced interest rates for producers that are compliant with environmental regulations, but they do not have a rigorous compliance structure to ensure that banks' clients adhere to these regulation.

Relative to the overall financial market, however, social and environmentally responsible loans are small. BACP is interested in projects that propose to build upon the successes, experiences and methodologies of environmentally responsible lending. Projects might design and/or scale-up competitive financial products, such as lines of credit, loan guarantees, and equity investments, that are specifically aimed

at biodiversity-friendly, certified soy production, processing and commercialization. Projects should offer a methodology for ensuring that the client implements biodiversity-friendly practices in soy production or commercialization and that it continues to use these practices in its business model.

Although discounted finance rates are a powerful incentive for employing biodiversity friendly practices, these practices are often dismissed because they are associated with reduced profits. For example, maintenance of riparian habitat or the preservation of native vegetation (e.g. the “legal reserves” under the Brazilian environmental legislation) removes a portion of the land from production without compensation to the landowner. Payment for environmental services, such as those outlined in the United Nations Collaborative Programme on Reducing Emissions from Deforestation and Forest Degradation in Developing Countries (UN-REDD Programme) may prove successful in compensating farmers for maintaining healthy, biologically diverse forests and riparian zones that provide carbon sequestration, flood control, and a clean water supply. Compensation measures, such as biodiversity banking, may also provide growers with supplemental revenue that would sufficiently off-set production losses enough to make conservation a productive use of their “unproductive” land. BACP will support projects that demonstrate how these alternative financial mechanisms support land set-asides or otherwise protect natural habitats in soy production areas.

5 EXPECTED OUTCOME OF STRATEGY IN THE SHORT-TERM

Within the next 4 years (and possibly after several revisions of this strategy) it is expected that BACP’s Phase 1 support will foster policies and government programs that are more supportive of production and commercialization of biodiversity-friendly soy. Pilot projects will have demonstrated BMPs related to biodiversity conservation that better equip soy producers to achieve the certification standards established by the RTRS. BACP support will also demonstrate how all players in the value chain, including financial players, benefit from their collaboration in producing, processing, and marketing biodiversity-friendly soy. Critical to meeting the long-term objectives, the pilot projects will have laid the foundation for rapid replication of the most successful programs and BMP.

Consistent with BACP’s ten year goals and corresponding logical framework, the expected outcomes of this strategy are:

- Policy-related barriers to the adoption of biodiversity-friendly management practices in soy production and commercialization in Brazil are in an obvious process of being removed and replaced with incentives and programs favorable to biodiversity in soy-production landscapes.

- Alternative land use planning and natural resources management methods show positive impacts on biodiversity and significant potential for replication at both the farm and landscape levels.
- Adequate financial services supporting biodiversity practices are available to actors involved in the production and commercialization of soy in Brazil.

6 DISCUSSION OF THE LONG-TERM STRATEGY

As mentioned in the beginning of this document, the soy MTS is a living document that must adapt to emerging trends and changes in the market if we are to achieve our long term goals. Our strategy will be regularly reviewed by the BACP and adjusted as conditions warrant. The purpose of this section is to provide general anticipated information that may guide future versions of the BACP soy strategy, but it does not constitute a present priority.

6.1 Demand from China

China is the largest importer of soybeans, accounting for nearly 50% of the market. China also the world's largest importer of processed soybean goods, such as soy oil, with demand expected to grow as a result of continued economic development. Currently the Chinese market focuses on minimizing costs, but not on environmentally and socially responsible production. The RTRS is engaging Chinese purchasers in RTRS initiatives and the success of these efforts should be followed closely. Subsequent revisions of the BACP MTS for soy will include activities in China and this initial period will include activities to prepare for this.

6.2 United States Soybean Production

The United States is currently the world's largest soybean producer, but has limited engagement in RTRS initiatives. As is the case with China, the RTRS has begun to engage U.S. producers in the RTRS dialogue to increase the credibility to the RTRS efforts. The dialogue is also seen as an attempt to even the playing field for producers already engaged in the RTRS process who are concerned that the new certification requirements will put them in a competitive disadvantage vis a vis US producers.

6.3 Soybean for Biofuels

Biodiesel is created from mixing ethanol from sugarcane, and a lesser degree corn, with oil. Given its low production costs in comparison with other oils, soybean oil represents the main raw material in biodiesel production. Currently, however, the percentage of soybeans used for biodiesel is only a small proportion of the total

soybean production. While a rapid expansion of biodiesel production is expected in Brazil in the short term, Brazil's longer term production is projected to remain limited to supplying its domestic demand (FAO, 2008). As such, biodiesel production is not expected to substantially influence the demand for soybean oil in the near future unless changes in government biodiesel policies significantly promote greater biodiesel production. Trends in biodiesel policies and markets should be monitored.

7 SPECIAL REQUIREMENTS OF THE BRAZIL GEF LOCAL FOCAL POINT

Per the requirements of the Brazilian Government, all BACP projects implemented in Brazil must be cleared by the Brazilian GEF local focal point. To ensure that this process is conducted efficiently, BACP will submit to the Brazilian GEF local focal point all project proposals that pass the first BACP screening process.

8 BACKGROUND AND OPPORTUNITIES FOR THE SOYBEAN MARKET

8.1 Biodiversity Impacts of Soy Production

With more than 15% of earth's biological diversity and the largest number of endemic species in the world Brazil leads the planet's 17 mega-diverse countries. Within Brazil's diverse landscape, the *Cerrado* is a woodland-savanna that covers 21% of the country and harbors endangered mammals such as giant anteater, giant armadillo, jaguar and maned wolf. The Amazon Biome (the Amazon rainforest and its related ecosystems) covers nearly 45% of Brazil and is home to nearly 1/3 of the world's species. Despite the biological importance of these areas, global demand for food and energy has launched the rapid expansion of soybean production in Brazil, which is associated with deforestation in the biodiversity rich *Cerrado* and southern Amazon.

In addition to the direct negative impacts on biodiversity, deforestation may affect the region's climate and its ability to absorb carbon dioxide, further contributing to climate change (Morton et al, 2006). Soil erosion and sedimentation of streams is another well documented negative environmental impact of soybean production, particularly in the Brazilian central plateau (Harris et al, 2005).

Insecticide contamination in runoff to streams and water reservoirs has been documented in the main soybean growing region of Argentina (Jergentz et al, 2005), as well as in the Pantanal region of Brazil (Harris et al, 2005), among others. In addition, the spread of Asian Soybean Rust in Brazil has resulted in the spraying of millions of hectares with fungicides on many lands never previously exposed to them (Goldsmith and Hirsch, 2006).

Finally, the use of genetically modified (GMO) soy is widespread. The RTRS promotes responsible soy production regardless of seed type used in production (genetically modified, conventional, organic or other) and will tailor its certification criteria to accommodate various production models. BACP considers the use of GMO seed an important issue that requires further consideration in the BACP strategy.

8.2 Supply and Demand Considerations

Soy is a versatile crop with multiple uses. Whole soybeans are used for seed, snacks, and in the production of soy-based foods such as tofu. However, these whole-bean uses only account for a small proportion of soybean production. Soybean meal and vegetable oil derived from processed soybeans are the main products. Soybean meal accounts for 50%-75 % of the value of soy and a substantial proportion of soybean meal is used as livestock feed (e.g. up to 98 % of U.S. soybean meal consumption; Ash et al, 2005). The remainder of soybean meal is used in human foods such as bakery ingredients and meat substitutes.

Soybean oil corresponds to only 18%-19% of the bean weight, a yield much lower than that of other seeds such as canola and sunflower. Nevertheless, with soybean production surpassing that of other oilseeds, soybean oil is the second most widely used vegetable oil worldwide. Soybean oil is primarily used in salad and cooking oils, bakery shortening, frying fat, and margarine, as well as in a number of industrial applications (Ash et al, 2005). It also represents the main vegetable oil employed in the production of biodiesel.

8.2.1 Production

The United States is the world's lead producer of soybeans, followed by Brazil and Argentina (Table 1). However, Brazil's average annual rate of increase in soybean production surpasses that of the U.S. and Brazil is expected to become the world's largest soy grain producer within the next few years.

Table 1: Area planted (thousand hectares), and production of soybeans, soybean meal, and soybean oil (thousand metric tons), by country for 2007/2008.

Country	Area	Soybeans	Soybean meal	Soybean oil
U.S.	25,420	70,350	39,022	9,498
Brazil	21,300	61,000	24,970	6,180
Argentina	16,370	46,500	27,660	6,773
China	8,700	13,500	30,685	6,917
India	8,800	9,300	6,385	1,426
Paraguay	2,600	6,800	1,270	290

Others	6,860	10,760	29,763	6,776
Total	90,060	218,220	159,755	37,860

Source: USDA FAS (<http://www.fas.usda.gov/psdonline/psdQuery.aspx>)

8.2.2 Exports

Together, the United States, Brazil, and Argentina account for more than 90% of world exports of soybeans, soybean meal, and soybean oil, a scenario that is unlikely to change. (Table 2). However, increased demand in the U.S. for corn-based ethanol has decreased soybean production in that country, while currency devaluations, low production costs, technological advances, and investments to expand production capacity have contributed to an increase in Brazil's soybean production. Brazil is expected to soon become the world's leading soybean exporter, but domestic markets, which consume approximately half of the of soybean meal and oil produced, will likely keep Brazil the number two exporter of these processed goods. Conversely, a small domestic market, lower export taxes on processed soybeans, and the location of processing facilities near major ports contribute to Argentina's position as the world's largest soybean meal and soybean oil exporter.

Table 2: Exports of soybeans, soybean meal, and soybean oil (thousand metric tons), by country for 2007/2008.

Country	Soybeans	Soybean meal	Soybean oil
U.S.	31,434	8,573	1,361
Brazil	25,500	12,400	2,400
Argentina	13,500	26,900	5,867
Paraguay	5,080	1,112	262
China	450	670	80
India	5	4,850	10
Others	2,999	1,701	1,025
Total	78,968	56,206	11,005

Source: USDA FAS (<http://www.fas.usda.gov/psdonline/psdQuery.aspx>)

8.2.3 Imports and Opportunities to Influence the Market

Although China is the world's fourth-largest producer of soybeans, the growth of its economy has increased food consumption and turned the country into the world's leading soybean and soybean oil importer (Table 3). While the EU is the second largest importer of these commodities, it dominates global imports of soybean meal, importing ten times more than the next largest importer (Table 3). It is important to know who leads global demand for soybean meal because the increasing demand for soybean meal is the primary driver for soy production expansion. In turn, the expansion of soy production in Brazil has the greatest impact on biodiversity loss. If the BACP can capitalize upon European preferences for sustainably produced soy and

major producers, traders, and processors heed that demand with biodiversity friendly certified soy, we can arguably have a positive impact on biodiversity conservation.

Table 3: Imports of soybeans, soybean meal, and soybean oil (thousand metric tons), by country for 2007/2008.

Country	Soybeans	Soybean meal	Soybean oil
China	36,500	200	2,750
European Union	15,400	23,900	915
Japan	4,050	1,770	40
Mexico	3,750	1,550	180
Argentina	2,950	--	--
Taiwan	2,250	26	15
Thailand	1,600	1,950	--
Indonesia	1,400	2,400	16
Korea	1,250	1,835	310
Turkey	1,200	385	65
Egypt	1,100	350	375
India	--	--	700
Others	5,850	20,715	4,598
Total	77,300	55,081	9,964

Source: USDA FAS (<http://www.fas.usda.gov/psdonline/psdQuery.aspx>)

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