PLATFORM SUSTAINABLE BIOMASS

German and multilateral financial institutions in the bioenergy sector

A RESEARCH PAPER PREPARED FOR THE GERMAN NGO PLATFORM ON SUSTAINABLE BIOMASS

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PLATFORM SUSTAINABLE BIOMASS:

The Platform Sustainable Biomass of German environmental, nature conservation and development organisations takes up the issue of production, trading in and utilisation of bioenergy at the interface between environmental, agricultural, development and energy policy. It aims to network knowledge and develop positions and demands on specific key issues, in order to reinforce the ecological and socioeconomic dimension of the issue.

The platform is coordinated by WWF Germany and the German NGO Forum Environment and Development.

The expansion of bioenergy production in Germany requires widespread acceptance in society, but this can only be ensured if the ecological and social impacts are equally taken into consideration. Further information is available at www.plattform-nachhaltige-bioenergie.de (in German)

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Contents

Summary

The objective of this report is to identify which large German banks and multilateral financial institutions with German involvement are important investors in the production of bioenergy and which credit policies they have developed to screen clients from this sector.

FINANCING BY MULTILATERAL BANKS

An analysis is made of the involvement in the financing of the bioenergy sector of the following four multilateral development banks, of which Germany is a member:

African Development Bank (German voting share 4.065%): has not been involved in financing bioenergy projects to any significant extent yet, but is planning to invest in the coming years in biofuel projects Liberia, Madagascar, Mozambique Nigeria, South Africa and Zambia;

Asian Development Bank (German voting share 3.752%): has been involved in bioenergy financing in a modest way since mid-2007 by assisting China and the countries in the Greater Mekong subregion to develop biofuel policies. In April 2008, the ADB provided financing to five private equity funds focussing on renewable energy, which has several small-scale biofuel projects in the portfolio;

European Investment Bank (German share 16.17%): has started financing bioenergy projects in an active way since 2007, in line with EU policies. Has provided loans to investment funds focussing on small-scale bioenergy projects, but also to the research efforts of a large bioenergy company in Spain, to a municipal biomass incineration plant in the Netherlands and to ethanol plants in the United Kingdom. The financing of a biodiesel plant in Poland is considered;

Inter-American Development Bank (German voting share 1.896%): is strongly involved in financing the biofuel sector, by assisting Argentina, Costa Rica, Colombia, Dominican Republic, El Salvador, Guatemala, Guyana, Haiti, Honduras and Peru with developing national biofuel development policies. In July 2008, the IADB arranged a US$ 648 million investment in three new ethanol plants in south-central Brazil, by far the largest investment by any multilateral bank;

World Bank (German voting share in IBRD 4.49% and in IFC 5.36%): the IBRD seems to refrain from investment in the bioenergy sector, but over the past four years the IFC has been investing steadily in biofuel and other bioenergy projects in Brazil, Guatemala, India, Nicaragua, and Peru. Total investment arranged by the IFC for these projects is US$ 465 million, of which a large part is directly related to bioenergy production.

SUSTAINABILITY STANDARDS

The multilateral banks have developed social and environmental safeguard policies, which aim to minimize damage to the environment and to social interests by their investments. Some private banks follow the standards set by the multilateral banks and some have committed to other ecologic and social sustainable standards and policies (such as the Equator Principles). These policies are known as *screening policies*, as they are used to *screen* (compare) existing and new clients against certain criteria to determine if they are eligible to receive financing from the bank.

To assess which screening policies are relevant to deal with the environmental and social consequences of bioenergy production, the content of all policies is evaluated on the following topics:

- To what extent the financial institutions have established monitoring and verification processes which can assess the implementation of sustainability criteria for bioenergy projects?
- Do the financial institutions have established mechanisms for non-compliance and if so: how are they implemented?
- To which extent do these banks demand their clients to involve stakeholders in new project developments, e.g. Free Prior Informed Consent, level of participation, etc.?
- In how far "Good Governance" is addressed within the credit policies of the financial institutions?

Table 1 provides a comparison of the relevance of the standards developed by multilateral banks and other international sustainability standards for financial institutions intending to screen clients in the bioenergy sector. The assessment takes three elements into account:

- Is the standard designed for the financial sector and tailored to the specific needs and characteristics of the sector?
- Does the standard deal in detail with the social and environmental issues related to the bioenergy sector?
- Is the standard confined to specific financial services, such as project finance or export credits, or does it apply to all financial services?

The comparison shows that the World Bank standards are most useful for financial institutions to screen clients in the bioenergy sector, as these standards are designed for financial institutions, are sufficiently specific on the environmental and social issues related to the bioenergy sector and are applicable to all financial services. The Equator Principles and the OECD Recommendation on

TABLE 1: RELEVANCE OF SUSTAINABILITY STANDARDS FOR SCREENING BIOENERGY CLIENTS

Standard	Designed for finance	Details	Scope
ADB policies	Yes	No	Broad
AfDB policies	Yes	No	Broad
EIB policies	Yes	No	Broad
Equator Principles	Yes	Yes	Project finance
IADB policies	Yes	No	Broad
OECD Guidelines for Multinational Enterprises	No	Yes	Unclear
OECD Recommendation on Common Approaches	Yes	Yes	Export credits
Principles on Sustainable Biofuel Production	No	Yes	Broad
UN Global Compact	No	No	Broad
UNEP Finance Initiative Statement	Yes	No	Broad
WBCSD Financial Sector project	Yes	No	Broad
World Bank policies	Yes	Yes	Broad

Common Approaches have the same content, but are limited to a specific form of financial services: project finance respectively export credits.

The Principles on Sustainable Biofuel Production, which are still under development, will also be sufficiently detailed and specific. Although they are not designed for financial institutions yet, the recently announced collaboration between the Roundtable on Sustainable Biofuels and the Inter-American Development Bank will probably make these principles applicable by financial institutions as well.

The other sustainability standards are not very useful for financial institutions to screen clients in the bioenergy sector, as these standards lack the necessary details (UN Global Compact, UNEP FI Statement and WBCSD Financial Sector project) or are not easily applicable in the financial sector (OECD Guidelines for Multinational Enterprises).

FINANCING BY PRIVATE BANKS

Our research into the financing of the global bioenergy sector identified 15 German financial institutions which were found to be involved in the financing of a total of 43 producers of bioenergy, active in Asia, Latin America, North America and Europe. Without doubt German banks will be involved in many more bioenergy producers, but the findings can be considered as an significant sample. German banks were found to be involved in 41 bioenergy producers and 2 large soy traders (whose soybeans will be used for biodiesel production in Europe). Most bioenergy producers are producing ethanol or biodiesel, but electricity, biogas and biojet fuel are also produced.

In Table 2 an overview of these 15 German financial institutions is presented, listing the number of bioenergy producers they are related to. For each bank, the primary feedstocks are mentioned which are used by the bioenergy producers they are financing. Also, the location of the bioenergy plants of the bank's clients is mentioned. It should be noted, however, that some bioenergy producers use imported feedstocks (from outside the region they are located in).

As is shown in Table 2, WestLB is most involved in financing bioenergy producers. Among the 43 bioenergy producers found, 28 are financed by WestLB. The clients of WestLB use all kinds of feedstocks and are located in Germany, Europe, Asia, South and North America.

Significantly behind WestLB, Deutsche Bank is the second most important financier of bioenergy producers among German banks. The bank is found to finance 12 companies, which also use a range of feedstocks. These companies are located in Germany, Europe, Asia, South and North America.

Relatively important are also Dresdner Bank and HSH Nordbank, both financing 5 bioenergy producers. The clients of HSH Nordbank are fairly concentrated, mostly in South America and Asia, and use palm oil, soy, sugar or corn. The clients of Dresdner are more dispersed and use a broader range of feedstocks.

SUSTAINABILITY STANDARDS ADOPTED BY PRIVATE BANKS

The credit policies of the German financial institutions listed in Table 2, which all are involved in the financing of bioenergy companies, were researched. Table 3 provides a summary of the findings on these credit policies, with regard to various topics and issues.

As Table 3 shows, 8 out of the 15 German financial institutions found to be involved in financing bioenergy companies, indicate that the financing of the renewable energy sector (including the bioenergy sector) is an important business segment to them. But at the same time, 5 out of 15 financial institutions do not even acknowledge publicly that they have a shared responsibility for the environmental and social impacts of the activities they finance. Of these 5 financial institutions, 4 do not see renewable energy as an important sector and were found to be involved in one or two bioenergy companies. But HSH Nordbank sees the renewable energy sector as very important and was found to be involved in the financing of 5 bioenergy companies. This makes the absence of its responsibility acknowledgement worrying.

But clearly the acknowledgement by a financial institution that it shares a responsibility for the environmental and social impacts of the activities it finances is only the first step. This acknowledgement needs to be translated in concrete actions: development of standards, screening of clients on social and environmental impacts and mechanism to ensure that clients will (continue to) meet the standards.

A first step in this process can be the commitment to existing international standards. 10 out of 15 banks have committed to one or more standards. Of these, the broad non-specific standards as the UNEP FI Statement, the UN Global Compact and the report of the World Business Council for Sustainable Development are mostly useful as reaffirmation that the financial institution takes sustainability issues seriously.

More detailed, and therefore more useful for screening bank clients on social and environmental issues, are the World Bank Standards and the standards derived from these (OECD Common Approach and the Equator Principles). 6 financial institutions out of 15 have committed to one or more of these.

TABLE 2: GERMAN BANKS AND BIOENERGY PRODUCERS, PER BANK

Bank	**Bioenergy producers**	**Feedstocks used**	**Location of bioenergy plants**
Bayerische Landesbank	3	wood residues, rape, soy, rye	Germany, Europe
Berenberg Bank	1	municipal waste	Germany
Commerzbank	3	soy, sugar, corn	South America
Deutsche Bank	12	wood, municipal waste, palm oil, sunflower, soy, sugar, wheat, rape, corn, castor, jatropha	Germany, Europe, Asia, South and North America
Dresdner Bank	5	municipal waste, rape, soy, rye, sugar, palm oil	Germany, Europe, Asia, South America
Euler Hermes	1	rape, soy, rye	Germany
HSH Nordbank	5	palm oil, soy, sugar, corn	South America, Asia
HypoVereinsbank	3	rape, soy, rye, wheat, sugar, wine alcohol	Germany, Europe, South and North America
KfW	3	municipal waste, soy, sugar, corn	South America
Landesbank Baden-Würtemberg	2	rape, soy, rye, sugar, corn	Germany, South America
Landessparkasse zu Oldenburg	1	municipal waste	Germany
Mercedes-Benz Bank	1	rape, soy, rye	Germany
Norddeutsche Landesbank	3	rape, soy, rye, municipal waste, corn	Germany, North America
Sal.Openheim & Cie.	2	sugar	South America
WestLB	28	wine alcohol, municipal waste, palm oil, soy, corn, wheat, sugar, rendered animal fats, greases	Germany, Europe, Asia, South and North America
Total	**43**		

TABLE 3: EVALUATION OF BIOENERGY POLICIES OF GERMAN BANKS

Bank	Bioenergy clients Total	Importance for the bank	Acknowledging responsibility	Standards *	Credit policies	Bioenergy policy	Stakeholder involvement	Evaluation and monitoring	Non-compliance
Bayerische Landesbank	3	Low	Yes	UNEP WB	Yes	-	-	-	-
Berenberg Bank	1	Low	No	No	-	-	-	-	-
Commerzbank	3	High	Yes	UNEP GC CA	-	-	-	-	-
Deutsche Bank	11	High	Yes	UNEP WB GM GC	Yes	-	-	Yes	-
Dresdner Bank	5	High	Yes	UNEP WBC EP	Under dev.	-	-	-	-
Euler Hermes	1	High	Yes	CA	Follow WB	-	Yes	Yes	-
HSH Nordbank	5	High	No	UNEP	-	-	-	-	-
HypoVereinsbank	3	High	Yes	UNEP GC EP WB	Under dev.	-	Yes	Yes	Withdrawal
KfW	3	Low	Yes	UNEP EP WB	Follow WB	Under dev.	Yes	Yes	-
Landesbank Baden-Würtemberg	2	High	Yes	UNEP	Under dev.	-	-	-	-
Landessparkasse zu Oldenburg	1	Low	No	No	-	-	-	-	-
Mercedes-Benz Bank	1	Low	No	No	-	-	-	-	-
Norddeutsche Landesbank	3	High	Yes	No	-	-	-	-	-
Sal.Openheim & Cie.	2	No	No	No	-	-	-	-	-
WestLB	28	High	Yes	UNEP GC EP	Under dev.	Under dev.	Under dev.	-	-

** Standards:*

- *UNEP= UNEP FI Statement*
- *GC = UN Global Compact*
- *EP = Equator Principles*
- *WBC = World Business Council for Sustainable Development*
- *WB = World Bank Standards*
- *GM = OECD Guidelines for Multinational Enterprises*
- *CA = OECD Recommendation on Common Approaches*

Just committing to one of these standards does not imply that they are applied on all financial services, however. The World Bank standard are developed by a multilateral bank, which has a different position than commercial banks. Moreover, the Equator Principles only apply to project finance and the OECD Common Approach only to export credits. It is therefore desirable that financial institutions develop their own credit policies, tailored to their circumstances, financial services and organisation. 2 financial institutions claim to have done that, while 4 indicate to be in the process. Two others apply the World Bank standards on all transactions.

As the bioenergy sector has specific social and environmental characteristics, it would also be recommendable if financial institutions develop a specific screening policy for this sector. None of the 15 financial institutions has done so yet, although WestLB indicates to be developing a bioenergy policy. KfW Bankengruppe has recently published a position paper on agrofuels, which can be seen as an important step in the development of a credit policy on the topic.

RECOMMENDATIONS TO THE GERMAN GOVERNMENT

The German government has various options to try to prevent and minimise the undue social and environmental consequences of the financing of bioenergy projects by German and multilateral banks:

- The German government can use its influence as an influential member of the five multilateral development banks (AfDB, ADB, EIB, IADB and World Bank) to press all four development banks to further develop their social and environmental criteria for financing bioenergy projects, and rethink their role as development banks in this sector. In this process, the recent investments by the four multilaterals in bioenergy projects could be assessed against the draft *Global principles and criteria for sustainable biofuels production*.

- The German government can bring German private banks involved in the bioenergy sector together, to develop a joint project in which German banks aim to amend the draft *Global principles and criteria for sustainable biofuels production of the Roundtable on Sustainable Biofuels* into a concrete credit policy applicable to all their financing activities in this sector. In parallel, this project could develop mechanisms for (joint) verification, to ascertain if the bioenergy companies which are being financed do meet (and continue to meet) the social and environmental criteria set by the banks. This verification should be complemented by an independent compliant mechanism for affected people, like the ones established by the multilateral banks. A precondition for such a verification and complaint mechanism is increased transparency by the German banks with regard to the bioenergy companies they have been financing.

- The German government could also explore possibilities to sharpen and clarify existing German financial sector regulations. By providing additional guidance how existing regulations need to be interpreted to avoid undue sustainability risks, the financial sector could be shown how to take its responsibility towards society. The following regulations are most relevant:

Risk management: the Solvency Ordinance *(Solvabilitätsverordnung)* and the regulation on the Minimum Requirements for Risk Management *(Mindestanforderungen an das Risikomanagement)* could be amended by the *Bundesanstalt für Finanzdienstleistungsaufsicht (BaFin)* to give more explicit attention to sustainability risks;

Millionenkredite: The reporting rules of the *Großkredit- und Millionenkreditverordnung* could be complemented by a bank statement on how the sustainability risks related to these large loans are assessed.

Financial analysis: The Financial Analysis Ordinance (*Finanzanalyseverordnung*) could explicitly demand knowledge of the relationship between sustainability issues and the financial performance and risks of specific securities.

Securities prospectus: The Securities Prospectus Act *(Wertpapierprospektgesetz)* and the Act implementing the Prospectus Directive *(Prospektrichtlinie-Umsetzungsgesetz)* could explicitly demand information on sustainability issues which could have an influence on the risks related to an investment in the company. This could include information on the exact sourcing of their feedstocks and agreements with suppliers on social and environmental issues.

Know Your Customer: The Money-Laundering Law (Geldwäschegesetz) could include sustainability issues among the issues to be monitored by the bank as part of the ongoing business relationship with clients.

Introduction

The objective of this study is to analyse and evaluate (against sustainability criteria) the credit policies for the energetic use of biomass developed by large German and multilateral financial institutions, to develop proposals for government actions to improve these credit policies.

The objective of the study results in the following concrete research questions:

- Which large German banks (commercial and public, such as different Ländesbanker, KfW and Euler Hermes) and multilateral financial institutions with German involvement (such as European Investment Bank, World Bank Group and Regional Development Banks) are important investors in the production of bioenergy? What are the key data on these investments: volume of investments, regions, technologies, feed stocks, transport infrastructure, scale of projects, etc.?

- Which of these large German and multilateral financial institutions have established, or are on their way to establish, credit policies for the bioenergy sector (including production, processing and transport infrastructure)? How far are they in operationalising these policies?

- To which general ecologic and social sustainable standards/policies (such as the Equator Principles) these large German and multilateral financial institutions have committed, which are relevant for the bioenergy sector, banks have committed to? To what extent and in which way these standards and policies are relevant?

- To what extent the financial institutions have established monitoring and verification processes which can assess the implementation of sustainability criteria for bioenergy projects?

- Do the financial institutions have established mechanisms for non-compliance and if so: how are they implemented?

- To which extent do these banks demand their clients to involve stakeholders in new project developments, e.g. Free Prior Informed Consent, level of participation, etc.?

- In how far "Good Governance" is addressed within the credit policies of the financial institutions?

- What actions could be taken by the German government to improve the sustainability performance of large German and multilateral financial institutions with regard to the financing of bioenergy projects, for instance by improving transparency, stimulating the development and implementation of credit policies for the bioenergy sector, etc.

This report provides an overview of the findings on these research questions. Chapter 1 discusses the activities of five multilateral banks (ADB, AfDB, EIB, IADB and World Bank) in the bioenergy sector, as well as the policies they have developed. In Chapter 2 other sustainability standards are discussed which could be relevant for financial institutions to screen clients in the bioenergy sector on social and environmental issues. Each sustainability standard is discussed briefly, especially with regard to its relevance for bioenergy.

Chapter 3 provides an overview of how German financial institutions are involved in the financing of bioenergy companies. Chapter 4 evaluates the credit policies of German financial institutions in the field of bioenergy.

A summary of the findings of this report can be found on the first pages of this report.

Chapter 1 - Multileteral banks and bioenergy

1.1 AFRICAN DEVELOPMENT BANK

1.1.1 Introduction

The African Development Bank Group was established in 1964. It is focussing on the African continent and has the following subsidiaries:[1]

- African Development Bank (AfDB)
- African Development Fund (AfDF)

Germany has a voting share of 4.065% in the Board of Directors of the African Development Bank.[2]

1.1.2 Financing bioenergy projects

To date, the African Development Bank has not financed significant bioenergy projects, but the bank is the process of increasing its financing in this sector considerably. The following information was found on new initiatives and bioenergy projects in the pipeline:

- The Financing Energy Services for Small-Scale Energy Users (FINESSE) Africa program of the AfDB was started in 2003, financed by the Dutch government. The programme aims to assist countries in Africa to formulate appropriate policy and regulatory frameworks and to develop capacity to generate a pipeline of investment projects in renewable energy (including bioenergy) and energy efficiency. No bioenergy projects have been financed under this programme yet, but there is one project in the pipeline: support to sugar cane for production of bio-ethanol in Mozambique.[3]

- The AfDB's Private Sector Department (OPSM), with support from the Danish government, has compiled a project pipeline of renewable energy projects for 2007-2008. This pipeline includes biodiesel projects in Liberia, Madagascar, Nigeria, South Africa and Zambia with a total productive capacity of at least 150 million litres per year.[4]

- The African Development Bank is working on a *Clean Energy Investment Framework for Africa*. The AfDB provide technical and financing support for the aspirations of member countries to ensure access-for-all to reliable energy supplies. countries would need especially to raise the priority of finding effective solutions to meeting the basic energy needs of the poorer communities, most often in remote rural areas. Efforts to adequately promote rural electrification, decentralized approaches, and reverse deforestation will be key in this process.

  Support for various forms of biofuels is also proposed: "Liquid biofuels that can substitute, in part or wholly, for refined petroleum fuels can significantly reduce African countries' dependence on imported oil, improving their trade balance. These fuels (e.g. ethanol and biodiesel) are produced through relatively unsophisticated industrial processes from agricultural crops, both edible and non-edible, that can be grown in most countries with surplus arable land and water resources. To-date, however, few African countries have formulated a serious strategy to promote the production and utilization of liquid biofuels.[5]

1.1.3 Standards and policies

The AfDB applies a number of operational policies to its loans. Some of the key safeguard policies include:

Poverty reduction: This policy states that poverty reduction is AfDB's overall goal and identifies key sectors for AfDB operations.

Cooperation with civil society organizations (CSOs): This policy affirms the importance of collaboration with civil society organizations, and of a participatory approach in general, to achieving AfDB's poverty reduction goals. It outlines requirements for consulting CSOs at various stages of AfDB operations and describes other types of collaboration.

Environment: The Environment Policy describes Africa's environmental challenges and confirms AfDB's commitment to promoting sustainable development. It outlines AfDB's internal mechanisms for ensuring policy compliance and mainstreaming environmental considerations in AfDB operations. The policy also references AfDB's Environmental and Social Assessment Procedures and public consultation requirements. There are separate Environmental and Social Review Procedures for the AfDB's public and private sector lending. The AfDB is currently revising its Environment and Social Assessment Procedures and developing new Environmental and Social Guidelines on Bank Operations through Financial Intermediaries.

Involuntary resettlement: The Involuntary Resettlement Policy outlines the responsibilities of the AfDB and the borrower regarding the forced relocation of people for AfDB projects. The policy's goal is to ensure that resettled people receive assistance and share in the benefits of the project so that their livelihoods are improved. Requirements for the preparation of a resettlement plan are included in the policy.

Population: This policy deals with population growth and its implications for Africa's economic development. It requires, amongst other things, that the AfDB promote improved access to reproductive health and

family planning services and address the needs of refugees through its operations.

Gender: The Gender Policy aims to promote gender equity and gender mainstreaming throughout AfDB operations. It requires the AfDB to apply gender analysis to all of its activities.

Integrated water resources management: This policy affirms that water is a universal human right and an economic, social and environmental good. It commits the AfDB to promoting integrated policies and options for water resources that support water supply and sanitation, biodiversity protection, conservation, and minimize involuntary resettlement.

Agriculture and rural development: This policy aims to improve the effectiveness of AfDB operations in the agriculture and rural development sector. It requires that AfDB interventions ensure the participation of beneficiaries and minimize negative impacts on the environment and the livelihoods of local communities. It also states that AfDB lending will be guided by the International Labor Organization Declaration on Labor Standards.

Energy: The AfDB is currently developing an Energy Policy to look at issues including climate change and renewable energy.[6]

The AfDB has no specific policy on bioenergy, but in the framework of the *Clean Energy Investment Framework for Africa*, the AfDB states: "Caution should be exercised in the development of biofuels. They will be dealt with on a case-by-case basis. Where appropriate legislative and sustainability frameworks exist, countries should be encouraged to produce biofuels provided it does not adversely affect food security and the environment (destruction of virgin forests and biodiversity, pollution of water supplies and ecosystems, land degradation etc.)." [7]

Similar doubts were repeated by AfDB's president Donald Kaberuka in a television interview in August 2008: "Promoters of bio-fuels need to come up with second and third generation energy crops that will not compete with food crops." Kaberuka said he was skeptical about the huge investments going into energy crops production for extraction of bio-fuels, because the move was diminishing food production to levels that, if not checked, the world would come to regret.

The AfDB president said there was too much stress on how useful the bio-fuels would be to the world that was grappling with high fuel prices, but no emphasis was placed on how the ever-increasing population would be fed if the energy crops production surged exponentially to food production.[8]

1.1.4 Monitoring, verification and compliance

At the AfDB the *Operations Evaluation Department (OPEV)* is responsible for evaluations. Evaluation Guidelines are designed to assist OPEV staff with the evaluation of operations.[9]

In June 2004 the AfDB established an *Independent Review Mechanism (IRM)*, to provide people adversely affected by a project financed by the Bank Group with an independent mechanism through which they can request the AfDB to comply with its own policies and procedures. The IRM comprises *Compliance Review* and *Mediation* (problem solving) for public and private sector projects. for public sector projects, the mechanism can review compliance with all AfDB operational policies and procedures. for the private sector projects, compliance reviews shall only be undertaken for social and environment policies.

For authorized *Compliance Reviews* two experts will be selected to participate in *Compliance Review Panels* together with the director of the C*ompliance Review and Mediation Unit (CRMU)*. The operation of the IRM are guided by the *IRM Operating rules and procedures*.[10]

1.2 ASIAN DEVELOPMENT BANK

1.2.1 Introduction

The Asian Development Bank Group was established in 1966. It is focussing on the Asian continent and has the following subsidiaries:[11]

- Asian Development Bank (ADB)
- Asian Development Fund (ADF)
- Technical Assistance Special Fund (TASF)

Germany has a voting share of 3.752% in the Board of Directors of the Asian Development Bank.[12]

1.2.2 Financing of bioenergy projects

The Asian Development Bank (ADB) has financed a small number of projects related to the development of bioenergy production during the past two years:

In June 2007 the ADB, together with IFAD and FAO, launched the *Greater Mekong Subregion Biofuel Initiative*. According to the launching partners, the countries in the Greater Mekong subregion (Cambodia, China, Laos, Myanmar, Thailand and Viet Nam) have the potential to become major biofuel producers. But there are important hurdles that must be crossed to ensure the success of such an initiative.

The overall goal of the initiative is to develop appropriate strategies and options for the biofuel and rural renewable energy sector towards reducing poverty among rural households. The planning and assessment phase of the project, with an investment of US$ 1.0 million, ran until September 2008. The implementation phase, with an investment of US$ 3.5 - 4.0 million, will run for three years until the end of 2010. In this phase a public-private partnership on policy and investment cooperation will be established.[13]

In November 2007 the ADB approved a technical assistance grant of US$ 0.9 million to China for the develop-

ment of "National Strategies for Environmental Management and Energy Conservation". Specifically, the grant aims to support PRC's development of the macro environmental strategy for sustainable energy crops development, through surveys, analysis, assessments, and recommendations covering institutional, financial, and technical aspects.[14]

In April 2008 the Asian Development Bank announced it will invest up to US$ 20 million each in five private equity funds focussing on the renewable energy sector in Asia. The ADB thereby hopes to help the five funds to attract further funds in the private market. The funds have a combined target investment of up to US$ 1.2 billion. Four of the five funds have announced plans to invest in bio-energy: [15]

- The MAP Clean Energy Fund (MAP) has the largest target size of the five funds, aiming to invest a total of US$ 400 million in 10 to 15 projects across Asia, with a focus on Indonesia and Southeast Asia. Among the projects considered are "bio-ethanol projects with no competition for food crops in the region";

- The China Environment Fund III will make 15 to 20 investments of US$ 5 million to US$ 30 million. In the pipeline are a.o. biogas projects in China;

- The Asia Clean Energy Fund (ACE) will make about 15 investments of US$ 10 million to US$ 15 million each throughout Asia. Projects in the pipeline include palm oil projects in Southeast Asia and in biodiesel companies in the Republic of Korea;

- The China Clean Energy Capital (CCEC) fund will make 8 to 12 investments of US$ 5 million to US$ 30 million each. Projects in the pipeline include investments in biomass, bio-diesel and straw-to-ethanol in China.

1.2.3 Standards and policies

All ADB projects have to comply with the operational policies of the ADB, which are known as *Bank Policies (BPs)*. All Bank Policies are collected in the Operations Manual (OM) of the ADB. The OM also includes *Operational Procedures (OPs)* that spell out procedural requirements and guidance on the implementation of policies.[16]

Among the Bank Policies of the ADB there are three so-called *Safeguard Policies*, which deal with social and environmental standards and criteria. These three Safeguard Policies, all last revised in September 2006, are:

- *BP20: Environmental Considerations*
- *BP50: Involuntary Resettlement*
- *BP53: Indigenous Peoples*

These Safeguard Policies set general standards and criteria on social and environmental issues, which are elaborated furthers in the accompanying Operational Procedures. With regard to the environment, for instance Environmental Assessment Reports are demanded.

The ADB has no specific policies on bioenergy, although the ADB seems aware of the critical issues related to biofuel expansion. At the launch of the *Greater Mekong Subregion Biofuel Initiative* (see paragraph 1.2.2), the ADB noted that "establishing biofuel industries in the GMS could generate income and employment and help meet the energy needs of the region". But the ADB also mentioned the risks for food security, the risk of biofuels favouring large-scale agribusiness production and the use of mono-cropping leading to loss of biodiversity, soil erosion and nutrition leaching. As a response, the ADB is calling for the development of new and more efficient technologies, both in biofuel development and food production.[17]

1.2.4 Monitoring, verification and compliance

ADB evaluates operations to find out what results are being achieved, what improvements should be considered, and what is being learned. This is achieved through a systematic and impartial assessment of policies, strategies, programs, and projects, including their design, implementation, and results. There are two levels of evaluation:[18]

- self-evaluation, conducted by those responsible for designing and implementing a country strategy, program, project, or technical assistance activity.

- independent evaluation, undertaken by the *Operations Evaluation Department*, an independent department reporting to the *ADB Board of Directors* through the *Development Effectiveness Committee (DEC)*.

Since May 2003 the ADB has an *Accountability Mechanism* to address the concerns of people affected by ADB-assisted projects about violations of ADB's operational policies and procedures. The principles in establishing the ADB Accountability Mechanism include enhancing ADB's development effectiveness and project quality, being responsive to the concerns of project-affected people and fair to all stakeholders, and being independent and transparent.

The *Accountability Mechanism* consists of two separate inter-related functions which are called:[19]

- The *Consultation Phase*, which assists project-affected people with specific problems caused by ADB-assisted projects through consensus-based methods with the consent and participation of all parties concerned. The Special Project Facilitator (SPF) is responsible for this phase. The SPF is independent of operations departments which formulate, process and implement projects, and reports directly to the President.

- The *Compliance Review Phase*, which establishes ADB's accountability in its operations. It provides a forum in which project-affected people (and in special circumstances, any Board member) can file re-

quests for compliance review. The Compliance Review Panel (CRP) is responsible for this phase. It investigates alleged violations by the ADB of its operational policies and procedures in any its assisted project that directly, materially, and adversely affects people in project formulation, processing, or implementation. The CRP is independent of the ADB Management, and reports directly to the Board on all activities, except on specific activities where it reports to the Board Compliance Review Committee.

1.3 EUROPEAN INVESTMENT BANK

1.3.1 Introduction

The European Investment Bank (EIB) was created by the Treaty of Rome in 1958 as the long-term lending bank of the European Union. The task of the EIB is to contribute towards the integration, balanced development and economic and social cohesion of the EU Member States. The EIB raises substantial volumes of funds on the capital markets which it lends on favourable terms to projects furthering EU policy objectives.

In 2007, the European Investment Bank lent € 47.8 billion in support of the objectives of the European Union: 41.4 billion in the Member States of the Union and EFTA, and € 6.4 billion in the partner countries. The EIB is owned by the EU Member States. Germany owns 16.17% of the shares of the European Investment Bank.[20]

Apart from the EIB, the European Investment Fund (EIF) also belongs to the EIB Group. The EIF is the European Union's specialised financial institution for small and medium-sized enterprises (SMEs).The EIF is owned by the EIB (66%), the European Commission (25%) and other European financing institutions (9%).[21]

1.3.2 Financing of bioenergy projects

The European Investment Bank (EIB) started lending to the renewable energy sector in 2002, raising its annual investments to € 456 million in 2006. In line with the *Action Plan for EU energy policy 2007-2009* adopted in March 2007 by the European Council, the EIB decided to integrate energy as a specific objective in its *Corporate Operational Plan 2007-2009*. The EIB has also adopted new targets in the areas of renewable energy, energy efficiency and greenhouse gas emissions reduction. The most relevant targets are:[22]

- New annual target of € 800 million lending to renewable energy projects
- Raise EIB financing share of total costs for renewable energy projects from 50 to 75%, in particular for "emerging renewable energy technologies", including biomass and bio-fuels.

Concrete bioenergy projects financed by the EIB in the past five years are:

- In 2007 the EIB provided a loan of € 200 million to the Landwirtschaftliche Rentenbank (Germany) for the financing of renewable energy schemes - mainly biofuel and photovoltaic projects. In June 2008 this programme was refinanced by a loan of € 200 million.[23]
- In 2007 the EIB provided a loan of € 109 million to Abengoa (Spain) for research and development in four main business areas: bioenergy, environmental services, information technology and industrial engineering.[24]
- In March 2007 the EIB provided a loan of € 40 million to Huisvuilcentrale Noord-Holland, a Dutch local waste incineration company, for the construction of a solid biomass combustion unit in Alkmaar (Netherlands). The feedstock used is municipal biomass waste.[25]
- In September 2007 the EIB invested € 25 million each in two investment funds targeting renewable energy projects. The Enercap Power Fund will support renewable energy infrastructure projects in Central and South-Eastern Europe, while the DIF Renewable Energy Fund focuses on the provision of equity financing for renewable energy projects located in North-West Europe. Both funds are looking for biomass and biofuels projects as well.[26]
- In December 2007 the EIB provided a loan of € 167.9 million to ABF (United Kingdom), the parent company of British Sugar. British Sugar is building two ethanol plants with partners in Wissington and Saltend in Hull. The first plant was opened in September 2007 and is producing 70 million litres of bioethanol from sugar beet. The second plant is developed by Vivergo Fuels, a joint-venture of British Sugar with BP and DuPont. The planned capacity is 420 million litres of bioethanol per year, produced from wheat. The plant is planned to come on stream in mid 2010.[27]
- Under consideration by the EIB is a loan of € 41.5 million to Tempora Bioenergia (Hungary). The company will build two oil mills in Polgár and Gönyü in Hungary with a total annual pressing capacity of 400,000 tonnes of rapeseed delivering 160,000 tonnes of vegetable oil and approximately 240,000 tonnes of rapeseed pellets. In addition, a biodiesel refinery will be attached to the oil mill in Gönyü with a total capacity of 100,000 tonnes per year of biodiesel.[28]

1.3.3 Standards and policies

The EIB's environmental and social safeguard policies are based on the EU approach to environmental sustainability. The principles, practices and standards derived from these policies are highlighted in the *Declaration on the European Principles for the Environment (EPE)*, agreed to by the EIB and four other European multilateral financing institutions in May 2006.

The EIB aims to maximise the environmental benefits and to minimise the environmental costs of the projects that it finances through appropriate screening, mitigation and compensation measures.[29]

The main responsibility for scrutinising the environmental aspects of projects lies with the Projects Directorate, which has about 80 engineers and economists, all with adequate environmental skills, who undertake the environmental assessment of projects at the EIB. The *Environmental and Social Practices Handbook* of the EIB describes the internal processes and practices of the EIB, particularly the work carried out by its Projects Directorate, to ensure that all financing activities are consistent with its environmental policy. The Handbook is targeted at the Projects Directorate, but it is also aimed at other internal services, to help with their own work and for the better understanding of the requirements of the EIB. The Handbook refers to the variety of financing instruments deployed by the Bank and its role at various stages in the project cycle, though the focus is on the appraisal of investment loans.[30]

The EIB's environmental safeguard measures aim to ascertain that all projects financed by the EIB are in accordance with all EU directives on social and environmental issues. Projects are therefore also screened, among others, according to their potential impacts on sites of nature conservation. Where the impacts are expected to be significant, a special biodiversity assessment is carried out, according to the principles and practices of the EU Habitats Directive.

The EIB has no specific policy on the social and environmental impacts of bioenergy, however. [31]

1.3.4 Monitoring, verification and compliance

The Operations Evaluation department of the EIB Group carries out ex-post evaluations of the EIB Group's operations. The objective is to assess operations with a view to identifying aspects that could improve operational performance, accountability and transparency. The Operations Evaluation department focuses on how the institution (EIB or EIF) conducts its operations, given the framework of relevant EU policies (the Treaty, Directives, Council Decision, mandates etc..) and the decisions of the EIB Governors.

Operations are assessed using internationally accepted evaluation criteria and examining EIB value-added and management of the project cycle. Among the criteria against which projects are evaluated, the following are particularly relevant: [32]

Sustainability: Sustainability is the likelihood of continued long-term benefits and the resilience to risk over the intended life of the project. The assessment of project sustainability varies substantially from case to case depending on circumstances, and takes into account the issues identified in the ex-ante due-diligence carried out by the EIB.

Environmental Impact: The environmental impact and the social impact (when relevant) of the projects are evaluated, specifically considering two categories: (a) compliance with guidelines, including EU and/or national as well as EIB guidelines, and (b) environmental performance, including the relationship between ex ante expectations and ex post findings, and the extent to which residual impacts are broadly similar, worse or even better than anticipated. [33]

Citizens and NGOs can complain on activities of the EIB with the European Ombudsman, who conducts investigations into alleged instances of maladministration by the Community institutions and bodies. The EC Treaty vests the Ombudsman with full independence in the performance of his duties. The Ombudsman publishes the results of his enquiries.[34]

1.4 INTER-AMERICAN DEVELOPMENT BANK

1.4.1 Introduction

The Inter-American Development Bank Group was established in 1959. It is focussing on Latin America and has the following subsidiaries:[35]

- Inter-American Development Bank (IADB)
- Inter-American Investment Corporation (IIC)
- Multilateral Investment Fund (MIF)
- Fund for Special Operations (FSO)

Germany has a voting share of 1.896% in the Board of Directors of the Inter-American Development Bank.[36]

1.4.2 Financing of bioenergy

In November 2006 the Inter-American Development Bank launched its *Sustainable Energy and Climate Change Initiative (SECCI)*, with an initial IADB contribution of US$ 20 million. In addition, SECCI has received a US$ 2.8 million contribution from the United Kingdom and a US$ 10 million contribution from Spain.[37]

SECCI's goal is to support the Latin American and Caribbean region in its urgent challenge to find economically and environmentally sound energy options. Institutions eligible for SECCI funding include government ministries, national climate change authorities, planning agencies, government-owned and private corporations, regional and municipal governments, private project developers, nongovernmental organizations, and academic and research institutions.

The SECCI initiative has four pillars, one of which is "Biofuel Development". This pillar comprises the following *Priority Lines of Action*:[38]

- Assess the economic viability of fostering biofuels. Analyze the feedstock availability and costs of production; assess the potential for developing domestic

or regional biofuel markets, taking full consideration of environmental and social benefits and risks.

- Provide country-level policy assistance in support of biofuel development. Help to remove barriers and introduce policies and financial instruments that facilitate the development of domestic markets, promote access to international markets, and mitigate adverse social and environmental impacts.

- Finance biofuel programs. Provide lending for feedstock development, biofuel production facilities, and related infrastructure.

- Finance the adaptation of new and emerging biofuel technologies. Develop financial instruments to test and demonstrate the efficacy of new technologies, including loans to pilot programs, and the commercialization of new technologies and innovations. Provide support to networks or centers of knowledge.

IADB activities in this area cover support for public programs (e.g. diagnostics, policy, regulatory) as well as financing of private projects (e.g. ethanol, bio-diesel), both of which are amenable to receiving SECCI support for project-related feasibility studies and country-level diagnostics studies. To obtain SECCI funding, projects will have to meet the *Guiding Principles and Eligibility Requirements for the SECCI Funds*. One of the criteria is "institutional and environmental sustainability", but this is not detailed any further.[39]

In the framework of SECCI, the IADB is supporting countries in the region, through the General Secretariat of the Central America Integration System (SG/SICA) in the analysis of common technical, social and environmental standards as part of a solid framework to regulate the production and use of biofuels. [40]

In April 2007 the IADB announced planned investments in ethanol and biodiesel production, technical assistance for Central American countries, and a US$ 300 million Green Energy Program. The IADB aims to catalyze investments with a total value of US$ 3 billion in biofuel projects. "Biofuels could bring investment, development and jobs to rural areas with high levels of poverty, while reducing dependence on imported fossil fuels. In this respect, we think biofuels can further our core mission, which is to bring economic opportunity and a better quality of life to the region's low-income majority."[41]

The following information is found on concrete bioenergy related projects supported by the IADB, mostly in the framework of SECCI:

Argentina: In June 2008 SECCI approved a technical cooperation grant of US$ 464,520 to evaluate the feasibility of integrating a soybean oil plant and biodiesel plant in Puerto Rosario.[42]

Costa Rica and **Dominican Republic**: SECCI is helping prepare technical assistance projects for the development of Biofuels Action Plans, with comprehensive analysis and evaluations on the regulatory, economical, technical, social and environmental issues associated with biofuel development; [43]

Colombia: In January and February 2008 the IADB provided a total of US$ 2.45 million in Technical Assistance Operations in order to determine the infrastructural, research & development, technical, financial, and logistic bottlenecks for biofuels development in the country. US$ 500,000 came from the Knowledge Partnership Korea Fund for Technology and Innovation; US$ 330,000 from SECCI; US$ 922,000 from the IADB's Japan Special Fund and US$ 594,000 from the Japanese Trust Fund for Consultancy Services.[44]

El Salvador: SECCI is providing funding for the execution of comprehensive analysis and evaluations on the regulatory, economical, technical, social and environmental issues associated with Biofuel development, in relations to the ongoing Salvadorian National Program for Biofuels. The Bank is providing cumulatively US$ 1 million in Technical Cooperations to the Centro Nacional de Tecnologia Agropecuaria y Forestal (CENTA) and the Ministry of Economy (MINEC) in the area of biofuel development. [45]

Guatemala: In January 2008 the IADB approved a US$ 400,000 grant to Guatemala's Ministry of Energy and Mines from the SECCI fund to develop studies necessary as an input to the decision-making process regarding the adoption of national program establishing the general guidelines for biofuels production and use as an alternative to diversify Guatemala's energy matrix. [46]

Guyana: In April 2008 SECCI and the Japanese Special Fund provide technical cooperation grants totalling US$ 925,500 to the government of Guyana with a framework to promote Bioenergy (biofuels and cogeneration) alternatives and investment in the country.[47]

Honduras: In December 2007 the IADB approved a US$ 350,000 grant from the SECCI fund to the Government of Honduras in the execution of a series of studies, including subjects such as improving productivity and fiscal implications of the National Biofuels Action Plan.[48]

Peru: The IADB is supporting the Government of Peru with Technical Assistance Operations for the development of biofuels and renewable energy issues in the country. SECCI is providing financing of US$ 1 million. Additionally, the IADB is preparing the new Energy Matrix for Peru, which includes Renewable Energy and Biofuels, as part of the PBL in energy.[49]

Regional: In January 2008 the IADB provide a grant of US$ 750,000 from the SECCI fund to the Brazilian

Fundacion Getulio Vargas to develop "blueprints" of biofuels for the countries in Central America and the Caribbean, within the context of the *US-Brazil Initiative for Biofuels in Central America and the Caribbean*. Studies have already started in El Salvador, Dominican Republic and Haiti; the IADB provided funding to Haiti's studies.[50]

Brazil: In July 2008 the IADB announced a US$ 648 million financing package for three new ethanol plants in south-central Brazil, in the largest biofuel investment ever made by a development bank. The three plants are being developed by Companhia Nacional de Açúcar e Álcool (CNAA), a joint venture formed by Brazilian sugar producer Santelisa Vale, some American private equity firms and Global Foods (Netherlands Antilles). The IDB will provide an A-loan from its own capital for US$ 269 million, and will help raise US$ 379 million from commercial banks in a syndicated B-loan led by BNP Paribas (France).

Each of the plants (which are located in Ituiutaba and Campina Verde, state of Minas Gerais, and Itumbiara, state of Goiás) will have a sugar cane crushing capacity of 2.7 million tons per year and a 56 megawatt co-generation plant that will supply electricity to the sugar and ethanol mill and sell excess energy to the Brazilian electricity grid. The plants will produce up to 420 million liters of ethanol each year. Two of the three plants were planning for start-up in September 2008.[51]

1.4.3 Standards and policies

In January 2006 the IADB approved a new *Environment and Safeguards Compliance Policy*, which consolidates environmental safeguards consistent with best practices being carried out among public and private international financial institutions. The new policy makes current, coherent and systematic a set of environmental practices that the Bank has developed over the past 20 years, such as environmental assessments, consultations with local populations and other stakeholders, safeguards, incorporation of sustainability principles into country strategies and application of best practices and standards of the international community.

Main characteristics of the *Environment and Safeguards Compliance Policy* are:[52]

- Emphasizes early identification of challenges and opportunities with borrowing countries in the course of establishing country strategies and priorities for Bank support.
- Shifts emphasis from identifying environmental impacts to managing risks in a sustainable way, identifying project risks and opportunities and proactively managing them in partnership with borrowing nations.
- Establishes a robust procedure for effective management of environmental, social and cultural risks.
- Requires early and ongoing engagement with communities affected by a project and seeks community support before financing large projects.
- Quantifies and monitors a project's greenhouse gas emissions.
- Analyzes policy-based loans for sustainability risks and opportunities.
- Supports biodiversity by focusing on transboundary areas, conservation and protection from all significant threats to biodiversity.
- Fosters sustainability initiatives as part of the new emphasis on going beyond impact mitigation to seek opportunities to achieve the maximum value of investments.

In April 2008 the IADB announced that its SECCI initiative has established a partnership with the *Roundtable on Sustainable Biofuels* to integrate the Roundtable's sustainability principles into its lending policies. The IADB will also support Latin America stakeholder involvement in the Roundtable's global standards-setting process. Over the next two years, SECCI plans to test the principles in five projects to which the IADB is providing support, and co-host four regional stakeholder meetings to ensure that Latin American stakeholders are helping to write these global rules for biofuel sustainability.[53]

In July 2008 the IADB announced it is developing a *Biofuels Sustainability Scorecard* that will facilitate assessment by all interested parties of dimensions, such as land, climate, water use and biodiversity, in a potential biofuels project. The following criteria would be used to determine if a biofuel project meets IADB standards: [54]

- The project must show a positive impact on greenhouse gas reductions as compared to fossil fuels.
- The project needs to ensure it does not contaminate or deplete water resources, or degrade or damage soils, or contribute to air pollution.
- The IADB will only finance projects that do not compromise food security.
- The IADB will not finance projects in areas of high conservation value or that significantly compromise biodiversity.
- The IADB will require all project developers to assess the efficiency and environmental performance of technology choices and provide technical support for the development of models that allow for the integration of process efficiencies over time as new innovations become available.

1.4.4 Monitoring, verification and compliance

The IADB uses evaluation as a tool for institutional learning and an instrument for systematically assessing the effectiveness of its development policies, the results of the activities it finances, and related processes. Evaluation is a shared responsibility between management and the *Office of Evaluation and Oversight (OVE)* of the IADB. Management focuses on project evaluations and monitoring portfolio performance, while OVE focuses on oversight of evaluation systems and processes, Country Program Evaluations (CPEs), evaluation capacity building, strategy evaluation and policy and instrument evaluation.

The Office of Evaluation and Oversight carries out specific evaluation activities and oversees all evaluation processes within the Bank. It answers to the Board of Executive Directors and is independent from management. It examines strategies, policies, programs, activities, and delivery support functions and systems in order to verify that they comply with the IADB's objectives and mandates. It also disseminates findings of the evaluations so that recommendations for improvement can be used in the design, appraisal and execution of new operations. [55]

Additionally, the IADB has established an *Independent Investigation Mechanism (IIM)*, which investigates formal complaints related to the Bank's operations. The IIM was established by the Board of Executive Directors to investigate complaints that the Bank has failed to follow its established operational policies in the design, analysis or implementation of Bank-financed operations.[56]

1.5 WORLD BANK

1.5.1 Introduction

The World Bank Group was established in 1944. It has a global focus and has the following subsidiaries:[57]

- International Bank for Reconstruction and Development (IBRD)
- International Development Association (IDA)
- International Finance Corporation (IFC)
- Multilateral Investment Guarantee Agency (MIGA)
- International Centre for Settlement of Investment Disputes (ICSID)

Germany has a voting share of 4.49% in the Board of Directors of the IBRD and a voting share of 5.36% in the Board of Directors of the IFC.[58]

1.5.2 Financing of bioenergy

Within the World Bank Group, only the International Finance Corporation (IFC) seems to be involved in financing bioenergy projects. The following information was found on the financing provided by the IFC over the past five years for bioenergy projects:

Brazil: In April 2005 the IFC approved a US$ 30 million loan for IFC's own account and a US$ 20 million syndicated loan to Cosan, the largest sugar producer in Brazil (see paragraph 3.19). The financing is intended to increase Cosan's installed milling and ethanol production capacity in the São Paulo region, improve sugar cane agricultural yields and further reduce costs. [59]

Nicaragua: In October 2006, the IFC approved a loan of US$ 25 million for its own account plus a US$ 30 million syndicated loan to Nicaragua Sugar Estates. The financing is intended to improve the efficiency of the sugar mill and maximize its capacity, acquire up to 1,500 ha new land and construct a 75,000 l/day ethanol plant at Ingenio San Antonio.[60]

India: In February 2007 the IFC provided a US$ 45 million debt and equity package for its own account and a US$ 90 million syndicated loan from participating banks to Bajaj Hindusthan Sugar and Industries Limited. The company is expanding a brown-field sugar plant (in Uttar Pradesh) from 3,200 to 6,000 tons crushed per day (TCD), constructing three green-field sugar plants (all in Uttar Pradesh) with combined capacity of 34,000 TCD and building an ethanol distillery of 160 kiloliters per day (the project). [61]

Brazil: In March 2007 the IFC announced a US$ 35 million loan for the construction of the Vale do Parana mill, a greenfield sugar and ethanol plant located in Suzanapolis (São Paulo). The company is a joint venture of Unialco S.A. of Brazil, Inversiones Manuelita S.A. of Colombia, and Pantaleon Sugar Holdings of Guatemala. Vale do Parana will mill 2 million tonnes of sugar cane and produce 90 million liters of ethanol and 141,000 tonnes of raw sugar per year.[62]

India: In April 2007 the IFC provided a US$ 40 million corporate loan to Balrampur Chini Mills to build two 20 MW bagasse cogeneration plants to be located at a new greenfield sugar mill in Gulharia and an existing sugar mill in Kumbhi (both in Uttar Pradesh). The carbon credits from the two plants are sold via a forward contract to the IFC-managed Netherlands Carbon Fund. [63]

Guatemala and Nicaragua: In June and October 2007 the IFC provided two loans with a total value of US$ 70 million loan to Pantaleon Sugar Holdings, the largest sugar producer in Central America with mills located in Guatemala and Nicaragua. The financing is used to expand the company's sugar production in Nicaragua by 20%, expand and improve the company's plantations in Nicaragua, expand the company's existing electricity co-generation facilities in Nicaragua and construct a 150,000 liters per day ethanol plant in Monte Rosa (department of Chinandega, Nicaragua).[64]

Peru: In July 2007 the IFC approved a financing facility for the Irish company Maple Energy, consisting of an equity investment of up to US$ 10 million and debt investments of up to US$ 30 million for IFC's own account. The financing package is intended to finance the expansion of Maple Energy's activities, where the company is producing and processing oil and gas, as well as developing an ethanol production project. The project comprises the development of 10,672 hectares of land for sugar cane planting in the Piura region, construction of a distillery with a capacity to produce 114 million liters of ethanol per year, and construction of related loading facilities.[65]

Brazil: In March 2008 the IFC provided a US$ 40 million loan to the Brazilian company USJ Acucar e Alcool. The financing is intended to help the company to build and expand two sugar and ethanol mills in Goias. The investment program will increase USJ's sugar cane crushing capacity from 5.5 to 10 million tons per year, with most of the expansion in sugar cane supply coming from small and medium farmers in the state of Goias that currently farm lower return crops. The two mills are located around the municipalities of Quirinopolis, and Cachoeira Dourada, in the south of the state of Goias. [66]

1.5.3 Standards and policies

All policies, directives, procedures and good practices applied by the World Bank in its operations are grouped in the *Operational Manual*, which is split in two volumes. Volume I deals with the World Bank's core development objectives and the instruments for pursuing them. Volume II covers the requirements applicable to World Bank-financed lending operations, including its environmental and social *Safeguard Policies*.[67]

The objective of the *Safeguard Policies* is to prevent and mitigate undue harm to people and their environment in the development process. These policies provide guidelines for bank and borrower staffs in the identification, preparation, and implementation of programs and projects.

The effectiveness and development impact of projects and programs supported by the World Bank has substantially increased as a result of attention to these policies. *Safeguard Policies* have often provided a platform for the participation of stakeholders in project design, and have been an important instrument for building ownership among local populations.

The *Safeguard Policies* cover the following subjects:[68]

- Use of Country Systems
- Environmental Assessment
- Natural Habitats
- Forests
- Pest Management
- Physical Cultural Resources
- Involuntary Resettlement
- Indigenous Peoples
- Safety of Dams
- International Waterways
- Disputed Areas

Various Safeguard Policies deal with social and environmental issues which are relevant for the bioenergy sector, such as the Natural Habitats, Forests, Involuntary Resettlement and Indigenous Peoples policies.

The International Finance Corporation (IFC), the private sector arm of the World Bank Group, applies the *Performance Standards on Social and Environmental Sustainability* to manage social and environmental risks and impacts and to enhance development opportunities. Together, the eight *Performance Standards* - last revised in April 2006 - establish standards that the client is to meet throughout the life of an investment by IFC or other relevant financial institution. The *Performance Standards* cover the following eight subjects:[69]

- Social & Environmental Assessment & Management System
- Labour and Working Conditions
- Pollution Prevention and Abatement
- Community Health, Safety and Security
- Land Acquisition and Involuntary Resettlement
- Biodiversity Conservation and Sustainable Natural Resource Management
- Indigenous Peoples
- Cultural Heritage

While the performance standard do not deal specifically with the bioenergy sector, they include a lot of provisions which are relevant to the social and environmental problems occurring in this sector, such as *Performance Standard 5* on *Land Acquisition* and *Performance Standard 6* on Biodiversity Conservation.

Moreover, Performance Standard 1 on the *Social & Environmental Assessment & Management System* deals with issues such community engagement, consultation of stakeholders, monitoring and grievance mechanisms. A short summary of the provisions on these issues: [70]

- If affected communities may be subject to risks or adverse impacts from a project, the client will undertake a process of consultation in a manner that provides the affected communities with opportunities to express their views on project risks, impacts, and mitigation measures, and allows the client to consider and respond to them. Effective consultation: (i) should be based on the prior disclosure of relevant and adequate information, including draft documents and plans; (ii) should begin early in the Social and Environmental Assessment process; (iii) will focus on the social and environmental risks and adverse impacts, and the proposed measures and actions to address these; and (iv) will be carried out on an ongoing basis as risks and impacts arise. The consultation process will be undertaken in a man-

ner that is inclusive and culturally appropriate. The client will tailor its consultation process to the language preferences of the affected communities, their decision-making process, and the needs of disadvantaged or vulnerable groups.

- For projects with significant adverse impacts on affected communities, the consultation process will ensure their free, prior and informed consultation and facilitate their informed participation. Informed participation involves organized and iterative consultation, leading to the client's incorporating into their decision-making process the views of the affected communities on matters that affect them directly, such as proposed mitigation measures, the sharing of development benefits and opportunities, and implementation issues. The client will document the process, in particular the measures taken to avoid or minimize risks to and adverse impacts on the affected communities.

- The client will respond to communities' concerns related to the project. If the client anticipates ongoing risks to or adverse impacts on affected communities, the client will establish a grievance mechanism to receive and facilitate resolution of the affected communities' concerns and grievances about the client's environmental and social performance. The grievance mechanism should be scaled to the risks and adverse impacts of the project. It should address concerns promptly, using an understandable and transparent process that is culturally appropriate and readily accessible to all segments of the affected communities , and at no cost and without retribution. The mechanism should not impede access to judicial or administrative remedies. The client will inform the affected communities about the mechanism in the course of its community engagement process.

- The client will establish procedures to monitor and measure the effectiveness of the management program. In addition to recording information to track performance and establishing relevant operational controls, the client should use dynamic mechanisms, such as inspections and audits, where relevant, to verify compliance and progress

The IFC has developed a set of *Guidance Notes* to accompany each *Performance Standard*. In the Guidance Notes the issues mentioned above are specified further.[71]

IFC's *Performance Standard 3* on *Pollution Prevention and Abatement* demands clients to apply *Good International Industry Practice (GIIP)* in the field of environment, health and safety. To further specify what is meant by GIIP, the *World Bank Group Environmental, Health, and Safety Guidelines (EHS Guidelines)* were published in April 2007. They replace documents previously published in Part III of the *Pollution Prevention and Abatement Handbook* and on the IFC website.

The *EHS Guidelines* are technical reference documents with general and industry-specific examples of *Good International Industry Practice*. The *EHS Guidelines* contain the performance levels and measures that are normally acceptable to IFC and are generally considered to be achievable in new facilities at reasonable costs by existing technology. When host country regulations differ from the levels and measures presented in the EHS Guidelines, projects are expected to achieve whichever is more stringent.

The *EHS Guidelines* are intended to be living documents, and will be updated on a regular basis.[72]

There are general *EHS Guidelines* which contain information on cross-cutting issues potentially applicable to all industry sectors. They are designed and should be used together with the relevant industry sector guidelines. There are 27 general EHS Guidelines, grouped in four categories:[73]

- Environmental
- Occupational Health and Safety
- Community Health and Safety
- Construction and Decommissioning

The general EHS Guidelines are complemented by sector-specific guidelines. Currently the IFC has published 63 sector-specific EHS Guidelines. None of them deals explicitly with the bioenergy sector as such, but several EHS guidelines deal with sub-sectors:

Plantation Crop Production: this guideline deals with perannual plantation crops, including oil palm. The guideline describes best practices with regard to:[74]
- Stress on water resources
- Soil erosion and loss of productive capacity
- Pesticide use
- Eutrophication of aquatic environments
- Biodiversity impacts
- Crop residues and other solid waste
- Atmospheric emissions

Annual crop production: this guideline deals with annual crops, including crops which are used for bioenergy such as soybeans, corn and sugar. The guideline describes best practices with regard to:[75]
- Stress on water resources
- Soil erosion and loss of productive capacity
- Pesticide use
- Eutrophication of aquatic environments
- Loss of biodiversity
- Crop residues and other solid waste
- Atmospheric emissions

Oleochemicals Manufacturing: this guideline deals with the production of biodiesel in a fairly elaborate way, describing best practices with regard to air and water emissions, solid waste and energy use. [76]

The World Bank has long held a view of conditional and cautious support for biofuels. This is consistent since their assessment three years ago, on the commercial vi-

ability of biofuels for transport in developing countries. The World Bank has concerns regarding the manifold environmental and economic impacts accompanying large scale development of biofuels. These sustainability concerns include:[77]

- Biofuel production impact on the cost of staple food grains - in July 2008 a World Bank publication concluded that the rise in global food prices in the period 2002-2008 was caused for 70-75% by the rising production of biofuels and the related consequences of low grain stocks, large land use shifts, speculative activity and export bans;[78]
- High lifecycle GHG emissions associated with intensive cultivation of some biofuel feedstocks and fuels processing;
- Ecological impact of land-use changes;
- Competition for scarce water resources: biofuel production in some cases channels water away from other productive activities;
- Trade, standards and certification issues, particularly as they affect developing countries.

The World Bank acknowledges that in some cases, biofuels do promise benefits such as: [79]

- Lower greenhouse gas and local air pollution emissions;
- Energy diversification;
- Economically least cost compared to conventional fuels.

But the benefits and costs of biofuel development are largely site and circumstance specific. The World Bank therefore sees a crucial need for more research to inform the development of biofuels and determine the range of technologies/feedstock best suited to varying economic, environmental and social endowments. The World Bank therefore supports expanded R&D into sustainable biofuels, especially: [80]

- Second generation fuel production systems, to include cellulosic materials and agricultural wastes that do not compete with food
- Realizing the potential of second generation feedstock to utilize marginal lands for production without bringing about large land-use and water use changes
- Enabling developing countries and small-scale farmers to profit from the resulting technologies

To deal with the risks of biofuels, the World Bank calls for the development of public policies and certification schemes. "The challenge for governments in developing countries is to avoid supporting biofuels through distortionary incentives that might displace alternative activities with higher returns -and to implement regulations and to devise certification systems that will reduce environmental and food security risks from biofuel production.

Reducing potential environmental risks from large-scale biofuels production could be possible through certification schemes to measure and communicate the environmental performance of biofuels (for example, a green index of GHG reductions). But the effectiveness of certification schemes requires participation from all major producers and buyers as well as strong monitoring systems."[81]

1.5.4 Monitoring, verification and compliance

Today, the World Bank Group has two independent mechanisms to which citizens whose lives have been or could potentially be harmed in any way by the projects or policies funded by the World Bank Group can seek recourse: the *Inspection Panel (IP)* and the *Compliance Advisor Ombudsman (CAO)*.

The *Inspection Panel* was put in place by the World Bank's Board of Directors as a response to the criticism the institution faced over its funding for road projects in tropical rainforests and dams in highly populated areas. The Inspection Panel is a three-member body with a permanent secretariat, housed at the Bank's headquarters in Washington The Panel receives and investigates eligible complaints from (any two or more) people who feel they have been or could be harmed by any activity financed by the World Bank (IDA or IBRD), because of a violation of the Bank's own policies or procedures. [82]

Similarly, the *Compliance Advisor Ombudsman (CAO)* provides an independent recourse mechanism for the private sector arms of the World Bank Group (IFC and MIGA). Stakeholders can file a complaint to the CAO if they believe they are, or may be, negatively affected by an IFC or MIGA project. The CAO then deals with the complaint, following a procedure laid out in its Operational Guidelines. [83]

In 2007 the Operational Guidelines were revised with input from external stakeholders. The revised Guidelines:[84]

- Provide greater clarity about CAO processes and distinction between its three roles;
- Ensure CAO's Ombudsman function remains neutral and unbiased as it explores possibilities for resolution among the parties;
- Enhance CAO's potential to achieve procedural fairness for all involved parties; and
- Open a window in time following a CAO audit for a Sponsor and/or IFC/MIGA to move into compliance.

Chapter 2 - Other international sustainability standards

2.1 EQUATOR PRINCIPLES

The *Equator Principles* were launched in June 2003 by ten banks from seven countries playing a prominent role in the global project finance market. The *Equator Principles* are a set of guidelines developed by the banks for managing social and environmental issues related to the financing of development projects. The banks will apply the principles globally and to project financings in all industry sectors, including mining, oil and gas, and forestry. The principles are based upon the environmental and social policies and procedures used by the International Finance Corporation, which is a subsidiary of the World Bank.[85]

At present the Equator Principles have been adopted by 61 financial institutions: commercial banks, export credit agencies and development banks. [86] The Equator Principles were revised in July 2006, to include advisory services, project upgrades and expansion and to improve the standards applied.[87]

The Equator Principles seek to ensure that the projects to which the Equator Principles Financial Institutions (EPFI) are providing financing or advisory services "are developed in a manner that is socially responsible and reflect sound environmental management practices". To ensure this, the following criteria have to be met:[88]

- All projects with a total capital cost of US$ 10 million or more need to be categorised based on the magnitude of its potential impacts and risks in accordance with the environmental and social screening criteria of the International Finance Corporation (IFC);
- For each project assessed as being either Category A or Category B, the borrower needs to conduct a *Social and Environmental Assessment (SEA)* process to address the relevant social and environmental impacts;
- For projects located in non-OECD countries, and those located in OECD countries not designated as High-Income, the project has to comply with the applicable *IFC Performance Standards* and the applicable *Industry Specific Environmental, Health and Safety Guidelines* of the IFC and World Bank. In High-Income OECD Countries compliance is demanded with relevant host country laws, regulations and permits that pertain to social and environmental matters.
- An Action Plan is drawn up with the actions needed to implement mitigation measures, corrective actions and monitoring measures necessary to manage the impacts and risks identified in the SEA.
- The government, borrower or third party expert has consulted with project affected communities in a structured and culturally appropriate manner. For projects with significant adverse impacts on affected communities, the process will ensure their free, prior and informed consultation and facilitate their informed participation.
- The borrower has established a grievance mechanism, to receive and facilitate resolution of concerns and grievances about the project's social and environmental performance raised by individuals or groups from among project-affected communities.
- An independent social or environmental expert not directly associated with the borrower has reviewed the SEA, Action Plan and consultation process.
- Covenants are included in the financing contracts to assure compliance with all relevant host country social and environmental laws, regulations and permits, compliance with the Action Plan, provision of periodic reports and the decommissioning of the facilities at the end of the project life.
- EPFIs will, for all Category A projects, and as appropriate, for Category B projects, require appointment of an independent environmental and/or social expert;
- Each EPFI adopting the Equator Principles commits to report publicly at least annually about its Equator Principles implementation processes and experience.

The Equator Principles do formulate a procedure to be followed when financing a project. This procedure includes important social prerequisites, such as the free, prior and informed consultation and informed participation of project-affected communities. This procedure also requires the establishment of a grievance mechanism and an independent review of the social and environmental impacts of the project.

With regard to minimizing negative social and environmental impacts, the Equator Principles do not formulate standards themselves. In stead, the EP follow the *IFC Performance Standards* and the *Industry Specific Environmental, Health and Safety Guidelines* of the IFC and World Bank. Information on these standards are provided in paragraph 1.5.3.

2.2 OECD GUIDELINES FOR MULTINATIONAL ENTERPRISES

The *OECD Guidelines for Multinational Enterprises* (1976, last reviewed in 2000) provide principles and standards for responsible business conduct in a variety of areas including:

- employment and industrial relations,
- human rights,
- environment,
- information disclosure,
- combating bribery,
- consumer interests,
- science and technology,
- competition, and
- taxation. [89]

Adhering governments (all OECD member countries, and 8 non-member countries) are committed to promoting the *Guidelines* and to making them influential among companies operating in or from their territories. For business, observance of the *Guidelines* is voluntary. According to the OECD itself "there is growing evidence that the *Guidelines* are becoming an important international benchmark for corporate responsibility." The governments and international organisations like the G8 increasingly refer to the *Guidelines*.[90]

To strengthen the implementation of the *Guidelines* by MNEs, the OECD member governments in 2000 established *National Contact Points (NCPs)*, charged with encouraging and facilitating observance of the *Guidelines*. The *NCP* amongst others handles enquiries and assists in solving problems that may arise in this connection.[91]

The most relevant paragraphs of the *Guidelines* with regard to the bioenergy sector are the following paragraphs which encourage multinational enterprises to, among others:[92]

- Assess, and address in decision-making, the foreseeable environmental, health, and safety-related impacts associated with the processes, goods and services of the enterprise over their full life cycle;

- Continually seek to improve corporate environmental performance, by encouraging, where appropriate, such activities as (…) development and provision of products or services that have no undue environmental impacts;

These recommendations have some relevance for companies in the bioenergy sector, but are not very specific with regard to the specific issues dealt with in this sector. As the *Guidelines* are written for multinational corporations and not for financial institutions, they only indirectly provide guidance on what criteria financial institutions should demand their clients to adhere to. The practical usefulness of the Guidelines as bank policy for the biofuel sector is therefore very limited.

2.3 OECD RECOMMENDATION ON COMMON APPROACHES

The OECD has a *Working Party on Export Credits and Credit Guarantees*, which deals with export credit (guarantees) provided by governments. This *Working Party* has formulated the *Recommendation on Common Approaches on the Environment and Officially Supported Export Credits*, which was last revised in June 2007. In reviewing the 2003 *Recommendation*, OECD Members consulted regularly with representatives of business, labour unions and non-governmental organisations. Representatives from the World Bank Group, the European Bank of Reconstruction and Development (EBRD) and the United Nations Environment Programme advised on developments in international environmental standards.

The latest *Recommendation* requires OECD Member governments to review projects for their potential environmental impacts and to benchmark them against international standards, such as those of the World Bank Group. It also calls for more public disclosure of information, which will increase transparency for the most sensitive projects. In addition, ECAs will exchange information more regularly in order to improve common practices and promote a level playing field between export credit providers.[93]

The main points of the new *OECD Recommendation on Common Approaches* are: [94]

- clarification that exports to both new projects and existing operations should be reviewed before ECAs commit to providing official export credit support.

- the international standards against which projects should be benchmarked have been extended to include all ten World Bank Safeguard Policies or, where appropriate, all eight International Finance Corporation Performance Standards.

- stronger disclosure provisions for the projects with the highest potential environmental impacts, to provide for (i) Members to publicly disclose project information and (ii) environmental impact information be made publicly available, as early as possible in the review process and at least 30 days before a final commitment.

- to increase awareness in non-OECD countries (e.g. China, Brazil and India) who provide official export credit support of the benefits of reviewing the environmental impacts of projects they intend to support.

Just as the Equator Principles, the content of the OECD Recommendation on Common Approaches is tied closely to the World Bank Safeguard Policies and the IFC

Performance Standards (see paragraph 1.5.3). As the content of these policies is fairly detailed and elaborate, they are relevant for dealing with the sustainability issues related to the bioenergy sector.

While the Equator Principles are limited to the field of project finance, the OECD Recommendation on Common Approaches is limited to the field of export credits. There continues to be a need to define similar policies for other types of financial services.

2.4 PRINCIPLES FOR SUSTAINABLE BIOFUELS PRODUCTION

The *Roundtable on Sustainable Biofuels (RSB)* is an international initiative bringing together farmers, companies, non-governmental organizations, experts, governments, and inter-governmental agencies concerned with ensuring the sustainability of biofuels production and processing. The *Roundtable* is hosting a series of meetings, teleconferences, and online discussions with the aim of achieving global, multistakeholder consensus around the principles and criteria of sustainable biofuels production.[95]

In June 2007, the *Roundtable on Sustainable Biofuels* published draft principles for sustainable biofuels production for global stakeholder comment. After comments from various stakeholders were received in August 2008 a new version of the *Global principles and criteria for sustainable biofuels production* was published, which also includes criteria further defining the principles. The *Principles* themselves are: [96]

1. Biofuel production shall follow all applicable laws of the country in which they occur, and shall endeavour to follow all international treaties relevant to biofuels' production to which the relevant country is a party.

2. Biofuels projects shall be designed and operated under appropriate, comprehensive, transparent, consultative, and participatory processes that involve all relevant stakeholders.

3. Biofuels shall contribute to climate change mitigation by significantly reducing GHG emissions as compared to fossil fuels.

4. Biofuel production shall not violate human rights or labor rights, and shall ensure decent work and the well-being of workers.

5. Biofuel production shall contribute to the social and economic development of local, rural and indigenous peoples and communities.

6. Biofuel production shall not impair food security.

7. Biofuel production shall avoid negative impacts on biodiversity, ecosystems, and areas of High Conservation Value.

8. Biofuel production shall promote practices that seek to improve soil health and minimize degradation.

9. Biofuel production shall optimize surface and groundwater resource use, including minimizing contamination or depletion of these resources, and shall not violate existing formal and customary water rights.

10. Air pollution from biofuel production and processing shall be minimized along the supply chain.

11. Biofuels shall be produced in the most cost-effective way. The use of technology must improve production efficiency and social and environmental performance in all stages of the biofuel value chain.

12. Biofuel production shall not violate land rights.

In the accompanying criteria, which are open for comment during the end of 2009, refer to relevant international conventions and standards such as the ILO Labour Standards, FSC principles, CBD, UNFCCC, Universal Declaration of Human Rights and the principle of Free Prior and Informed Consent (FPIC). A new version of the principles and criteria will be published in February 2009.

2.5 UN GLOBAL COMPACT

The *UN Global Compact* was launched by United Nations Secretary-General Kofi Annan in July 2000. The *UN Global Compact* calls on companies to embrace ten universal principles in the areas of human rights, labour standards, environment and anti-corruption to be integrated into companies' core business strategy and in every day business practices. The initiative has grown to more than 5,200 participants, including over 4,000 businesses in 120 countries around the world.[97]

The ten principles of the *UN Global Compact* are: [98]

Principle 1: Businesses should support and respect the protection of internationally proclaimed human rights within their sphere of influence; and
Principle 2: make sure that they are not complicit in human rights abuses.
Principle 3: Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining;
Principle 4: the elimination of all forms of forced and compulsory labour;
Principle 5: the effective abolition of child labour; and
Principle 6: eliminate discrimination in respect of employment and occupation.

Principle 7: Businesses should support a precautionary approach to environmental challenges;
Principle 8: undertake initiatives to promote greater environmental responsibility; and
Principle 9: encourage the development and diffusion of environmentally friendly technologies
Principle 10: Businesses should work against corruption in all its forms, including extortion and bribery.

The ten principles of the *UN Global Compact* are formulated broadly: businesses should "support", "respect" and "uphold" certain general rights and principles. They do not go into detail regarding specific sectors or issues. Their relevance for addressing the social and environmental issues related to the financing of bioenergy companies is therefore limited. The signatories express the intention to minimize the negative social and environmental impacts of their activities (probably including the indirect impacts of financing activities), but which measures should be taken and which standards should be applied remains unresolved.

2.6 UNEP FINANCE INITIATIVE STATEMENT

In 1991 the *United Nations Environment Programme (UNEP)* launched the *UNEP Finance Initiative*. At present this initiative has around 160 signatory institutions from around the globe. Each of them has signed one of the following two statements, depending on its core business:

- *UNEP Statement by Financial Institutions on the Environment and Sustainable Development*
- *UNEP Statement of Environmental Commitment for the Insurance Industry*

Signatories to the *Statements* commit to the integration of environmental considerations into all aspects of their operations. The UNEP FI Statements are aspirational, voluntary declarations of intent.[99]

The *UNEP Statement by Financial Institutions on the Environment & Sustainable Development (UNEP FI Statement)*, as revised in May 1997, states: "We members of the financial services industry recognize that sustainable development depends upon a positive interaction between economic and social development, and environmental protection, to balance the interests of this and future generations." This recognition is followed by a brief list of fairly general beliefs, endorsements, commitments and intentions, of which the most relevant probably are:[100]

- With regard to our customers, we regard compliance with applicable environmental regulations and the use of sound environmental practices as important factors in demonstrating effective corporate management.
- We are committed to complying with local, national, and international environmental regulations applicable to our operations and business services. We will work towards integrating environmental considerations into our operations, asset management, and other business decisions, in all markets.

The *UNEP FI Statement* is very general in nature and does not make explicit references to specific issues or sectors. Its relevance for addressing the social and environmental issues related to the bioenergy sector is therefore very limited: a signatory of the *UNEP FI Statement* acknowledges its responsibility for minimize negative social and environmental impacts of its financing activities and promises to take appropriate measures. But which measures should be taken and which standards should be applied remains unresolved.

2.7 WBCSD FINANCIAL SECTOR PROJECT

The *World Business Council for Sustainable Development (WBCSD)* was formed in 1991 and now is a coalition of 170 international companies united by a shared commitment to sustainable development via the three pillars of economic growth, ecological balance and social progress.[101]

In 2002 the *WBCSD Financial Sector project* released a position paper at the *World Summit on Sustainable Development* in Johannesburg. This was accompanied by a statement issued by the chairmen of 11 major financial institutions (Swiss Re, Allianz, Deutsche Bank, Banca Monte dei Paschi, Gerling Konzern, Sompo Japan, Storebrand, UBS, Rabobank, ABN AMRO Bank and ING Group), making four commitments: [102]

- To integrate sustainable development into their business
- To promote proactive sustainable development thinking in their own companies, with other companies in the financial sector and with clients and other stakeholders.
- To recognize their role as drivers for change, although the limits of responsibility and influence of the financial services industry need to be further explored.
- To improve transparency as a matter of urgency.

The most relevant element of the *WBCSD Financial Sector project* is the acknowledgement that "the financial sector is a driver for sustainable development" because "we influence the way our clients conduct their business (through our policies and processes)". This acknowledgement is followed by the commitment "to promote sustainability both when selecting our clients and in managing ongoing client relations". As a general commitment this is valuable, but it does not give any con-

TABLE 1: RELEVANCE OF SUSTAINABILITY STANDARDS FOR SCREENING BIOENERGY CLIENTS

Standard	Designed for finance	Details	Scope
ADB policies	Yes	No	Broad
AfDB policies	Yes	No	Broad
EIB policies	Yes	No	Broad
Equator Principles	Yes	Yes	Project finance
IADB policies	Yes	No	Broad
OECD Guidelines for Multinational Enterprises	No	Yes	Unclear
OECD Recommendation on Common Approaches	Yes	Yes	Export credits
Principles on Sustainable Biofuel Production	No	Yes	Broad
UN Global Compact	No	No	Broad
UNEP Finance Initiative Statement	Yes	No	Broad
WBCSD Financial Sector project	Yes	No	Broad
World Bank policies	Yes	Yes	Broad

crete guidance on how to deal with the sustainability issues in the bioenergy sector.

2.8 SUMMARY

Table 1 provides a comparison of the relevance of the standards developed by multilateral banks (Chapter 1) and other international sustainability standards for the bioenergy sector. These standards are known as *screening policies*, as they are used to *screen* (compare) existing and new clients against certain criteria to determine if they are eligible to receive financing from the bank. The assessment takes three elements into account:

- Is the standard designed for the financial sector and tailored to the specific needs and characteristics of the sector?
- Does the standard deal in detail with the social and environmental issues related to the bioenergy sector?
- Is the standard confined to specific financial services, such as project finance or export credits, or does it apply to all financial services?

The comparison shows that the World Bank standards are most useful for financial institutions to screen clients in the bioenergy sector, as these standards are designed for financial institutions, are sufficiently specific on the environmental and social issues related to the bioenergy sector and are applicable to all financial services. The Equator Principles and the OECD Recommendation on Common Approaches have the same content, but are limited to a specific form of financial services: project finance respectively export credits.

The Principles on Sustainable Biofuel Production, which are still under development, will also be sufficiently detailed and specific. Although they are not designed for financial institutions yet, the recently announced collaboration between the Roundtable on Sustainable Biofuels and the Inter-American Development Bank will probably make these principles applicable by financial institutions as well.

The other sustainability standards are not very useful for financial institutions to screen clients in the bioenergy sector, as these standards lack the necessary details (UN Global Compact, UNEP FI Statement and WBCSD Financial Sector project) or are not easily applicable in the financial sector (OECD Guidelines for Multinational Enterprises).

Chapter 3 - German financing of bioenergy companies

3.1 INTRODUCTION

This chapter provides an overview of the involvement in the past five years of German financial institutions in the financing producers of bioenergy worldwide. German financial institutions are defined as all German-based private banks, cooperative banks, public banks and public financial institutions such as KfW and Euler Hermes. Financing is defined as the provision of loans and other forms of credit, assistance with the issuance of shares and bonds and investment in shares and bonds.

The bioenergy companies to which German financial institutions provide financing are discussed in alphabetical order. The findings are summarized in paragraph 3.45.

3.2 ABENGOA - SPAIN

Abengoa is a technological company that applies innovative solutions for sustainable development in the infrastructures, environment and energy sectors. It is present in over 70 countries where it operates through its five business units: solar, bioenergy, environmental services, information technology, and industrial engineering and construction.

Abengoa's subsidiary Abengoa Bioenergy is the largest ethanol producer in Europe. The company operates three plants in Spain and one in France with a total annual production capacity of 787 million litres. At present the company is developing three new ethanol plants in the Netherlands, the United Kingdom and Germany, with an annual production capacity of 481 million litres each.

In the United States Abengoa Bioenergy operates six plants in Kansas, New Mexico, Nebraska and Indiana, with an annual capacity of 1,461 million litres.

Ethanol is now produced in the United States and Europe from grains, but over the next four years Abengoa Bioenergy has committed US$ 480 million to new ethanol technologies, as lignocellulosic biomass. The company already has several demonstration plants operational for this technology.
Abengoa Bioenergy is also constructing a biodiesel facility with a production capacity of 200,000 tons at the CEPSA-refinery in Cádiz (Spain). The plant is expected to be in operation in 2008.[103]

In September 2007 Abengoa Bioenergy acquired Dedini Agro, which is one of the largest bioethanol and sugar companies in Brazil, for € 211 million. Dedini Agro is processing more than 6 million tons of sugarcane per year, mostly into sugar. But Dedini Agro also has two ethanol production facilities in the state of São Paulo with an annual production capacity of 130,176 m^3.[104]

German banks contributed to the expansion of this company in the following ways:

In June 2006 Abengoa secured a € 600 million syndicate bank facility, distributed in a loan of € 300 million with a six-year maturity and a revolving credit facility of € 300 million with a six-year maturity. 11 banks arranged the facility, including **WestLB**. 34 banks participated in the syndicate.[105]

To finance its ethanol plant in France, Abengoa Bioenergy secured a € 158.2 million financing package from a banking syndicate of 9 banks arranged by **HypoVereinsbank** and Rabobank (Netherlands) in September 2007. The project consists of a 200,000 m^3 corn-fed and 50,000 m^3 wine-alcohol fed plant located in Lacq.[106]

In August 2007 Abengoa secured a US$ 300 million financing package from an international banking syndicate to finance two ethanol plants in Kansas and Indiana (United States), with a total annual production capacity of 666 million litres. The package consisted of a nine-year US$ 215 million term loan and a US$ 85 million working capital facility. The syndicate was arranged by **WestLB** and Banco Santander (Spain).[107]

3.3 ADVANCED BIOENERGY - UNITED STATES

Advanced BioEnergy is an American company founded in January 2005 with the goal of becoming the most efficient, scaled pure play ethanol producer in the United States. Advanced BioEnergy presently operates three corn-based ethanol plants with a total annual capacity of 742 million litres in South Dakota in Nebraska. The company is planning new ethanol plants in Indiana and Minnesota.[108]

German banks financed Advanced BioEnergy in the following ways:

In October 2007 Advanced BioEnergy secured a US$ 118 million financing package for the expansion of its South Dakota ethanol production facilities. The financing consisted of a US$ 98.7 million senior secured facility and a

US$ 19 million tax exempt, subordinate secured financing. The financing package was arranged by **WestLB**. Five other banks participated in the syndicate.[109]

3.4 AGRENCO - BRAZIL

Agrenco Group is headquartered in Brazil and operates in Latin America, Europe, Africa, Middle-East and Asia. Agrenco is counting upon a working network of associated companies and partners, involving all production phases, from the origination of South American raw materials to global distribution. Agrenco Group also represents Latin American companies in Europe, working as agents in the development of competitive markets regarding soft commodities. Some 95% of the 1.6 million tons of soy marketed by the Group in 2005 originated in Brazil. Agrenco also develops soy origination activities in Argentina and Paraguay.

In 2006, the Agrenco Group announced investments of US$ 150 million (€ 100 million) in three biodiesel plants in Brazil. The multi-seed plants will altogether produce 380,000 tons (450 million liters) of biodiesel.[110] One of the three biodiesel production complexes, two of which include soybean crushing plants that will also generate electric power, will be opened in March 2008.[111]

The following forms of financing from German banks could possibly be used for Agrenco's biofuel activities:

In June 2006, Inlogs International (a subsidiary of Agrenco Group) secured a line of credit with a value of US$ 17.5 million (€ 11.7 million) with **WestLB**.[112]

In October 2006, Frome Holdings (a subsidiary of Agrenco Group) secured a line of credit with a total amount of US$ 100 million (€ 66.7 million) with **Deutsche Bank**.[113]

In January 2007, Agrenco Argentina (a subsidiary of Agrenco Group) secured a line of credit with a value of US$ 15.0 million (€ 10.0 million) with **WestLB**.[114]

In February 2007, Inlogs International (a subsidiary of Agrenco Group) secured a line of credit with a total value of US$ 20 million (€13.3 million) with **HSH Nordbank**.[115]

At the end of June 2007 Agrenco Group had a loan of € 11.7 million outstanding to **HypoVereinsBank**.[116]

In July 2007, Inlogs International (a subsidiary of Agrenco Group) secured a pre export finance facility agreement from **HSH Nordbank** with a total value of US$ 50 million (€ 33.3 million).[117]

In August 2007, Agrenco Brasil (a subsidiary of Agrenco Group) secured two lines of credit agreement from **WestLB** with a total value of US$ 42 million. The credit lines will mature in 2010.[118]

3.5 ANDRÉ MAGGI - BRAZIL

The Brazilian André Maggi group was established by André Maggi, an Italian immigrant's son who started growing soybeans in the state of Parana in southern Brazil in 1950. In 1978 he sold his farm and moved to Mato Grosso in the centre of Brazil, buying a 12,000 hectare farm in Itiquira. From this starting point the André Maggi group swiftly increased its agricultural estates in the Sapezal area in the Northwest of Mato Grosso, to become the largest soy producer in the world. [119]

In the mid-1990s André Maggi transferred the management of the family group to his son Blairo, who set up a faster and cheaper soybean export route which gave an extra impetus to the growth of the soybean sector in Mato Grosso. The André Maggi group is now active in agriculture (soybeans, cotton, corn and cattle), agricultural trading and processing, transport and shipping, as well as electricity production.[120]

The André Maggi group has planted 165,000 hectares with soybean and produced 417,113 tons of soybeans in 2006. The André Maggi group trades about 2.8 million tonnes of soybeans, of which about 15% are grown by André Maggi itself while the other 85% are acquired from external farmers. Soybean processing capacity amounts to 3,600 tonnes per day.[121] In 2006 André Maggi group realised total sales of R$ 1,727 million (£ 414 million). [122]

The following information is found on bank loans provided to the André Maggi group:

In January 2004 Amaggi Exportação e Importação obtained a US$ 230 million working capital facility from an international banking syndicate arranged by Rabobank (Netherlands). US$ 150 million was used as working capital to finance soybean stocks and had to be repaid between August 2004 and January 2005. The other US$ 80 million was used to finance inputs for soybean farmers supplying soybeans to Amaggi Exportação e Importação and matured in April 2005. The banking syndicate consisted of 11 banks, including **WestLB** and **HSH Nordbank**.[123]

In June 2006 Amaggi Exportação e Importação again obtained a US$ 230 million (£ 127 million) working capital facility from an international banking syndicate arranged by Rabobank (Netherlands). The banking syndicate consisted of 11 banks, including **WestLB**.[124]

3.6 ARCADIS - THE NETHERLANDS

Arcadis is a Dutch engineering company. In January 2008 its Brazilian affiliate Biogas opened its second degassing installation at the 80 hectares Sao Joao landfill near Sao Paulo (Brazil). The methane gas is extracted from the landfill and is used as fuel to feed a 24 mega-

watt power plant. Together, the Sao Joao and Bandeirantes landfill methane gas output is used to generate 340 million Kwh of electricity annually. As a result, the equivalent of 12 million tons of CO_2 will be saved in the coming years, which according to the Kyoto Treaty, gets Biogas 12 million carbon credits. These credits are shared with the Municipality of Sao Paulo. Of the remaining 6 million carbon credits that are for Biogas, a contract for the sale of 5 million of these credits was already signed with **KfW** until 2012.

In addition, Arcadis announced the development of a third land fill gas installation (Gramacho) near Rio de Janeiro. Once Gramacho is accredited under the Kyoto protocol, it will generate carbon credits for which Biogas can again seek long term contract buyers.[125]

3.7 ARCHER DANIELS MIDLAND - UNITED STATES

The publicly-owned American company Archer Daniels Midland (ADM) is one of the world's largest agricultural processors of soybeans, corn, wheat and cocoa. The company turns these crops into soy meal and oil, corn sweeteners, flour, cocoa and chocolate, ethanol and biodiesel, as well as a wide portfolio of other value-added food ingredients, animal nutrition and industrial products.

Headquartered in Decatur (Illinois), ADM has over 27,000 employees and more than 240 processing plants worldwide. Net sales for the fiscal year 2006/2007 amounted to US$ 44.0 billion, resulting in a net profit of US$ 2,162 million.[126]

ADM is one of the largest soybean exporters from Argentina, Brazil, Paraguay, Uruguay and Bolivia.[127] ADM's global soybean crushing capacity amounts to 65,500 tons/day.[128] In Latin America, ADM operates crushing plants with a total capacity of 12,650 tons/day in Brazil and 1,000 tons/day in Bolivia.[129] On the European soy market ADM also has a large market share with crushing plants and refineries in the Netherlands, the United Kingdom and Germany.[130]

ADM has a global biodiesel production capacity of 1.6 million tons (1,818 million litres) per year, of which 205 million litres are produced in Brazil.[131]

In the United States ADM owns a number of ethanol plants in Illinois and Iowa with a total annual capacity of 4,600 million litres per year. In July 2007, ADM announced plans to build two ethanol plants in Iowa and Nebraska with a total annual capacity of 2,082 million litres. This will ADM's total ethanol production capacity in the United States to 6,681 million litres per year.[132]

ADM has secured a number of credit facilities from international banking syndicates. At the end of June 2007, ADM had secured lines of credit totalling US$ 3.9 billion, of which US$ 500 million was actually outstanding.[133] The lines of credit are intended as a flexible facility which the company can use to pay farmers for their harvests. Amounts outstanding are therefore varying over the year. They are also used to pay for unexpected expenses, react swiftly to investment or acquisition opportunities and serve as back-up to assure the company's bondholders that ADM will have sufficient money to repay its bonds at their maturity date. Details on the involvement of European banks in ADM's lines of credit are as follows:

In March 2004 Archer Daniels Midland secured a US$ 2,166 million revolving credit facility, split into a US$ 1.836 million one-year tranche and a US$ 330 million four-year tranche. The facility was arranged by the American banks JP Morgan Chase and Citigroup. Involved in the syndicate was, among others, **Deutsche Bank**.[134]

In March 2005 Archer Daniels Midland secured a US$ 2,250 million five-year revolving credit facility. The facility was arranged by the American banks JP Morgan Chase and Citigroup. Involved in the syndicate was, among others, **Deutsche Bank**.[135]

In September 2005 ADM issued US$ 600 million of 30-year bonds with a 5.375% interest. Among the thirteen banks participating in the underwriting syndicate was **Deutsche Bank**, underwriting US$ 15 million.[136]

In March 2006 Archer Daniels Midland renewed its US$ 2,250 million revolving credit facility for another period of five year. The facility was arranged by the American banks JP Morgan Chase and Citigroup. Involved in the syndicate was, among others, **Deutsche Bank**.[137]

In February 2007 ADM issued US$ 1,150 million seven-year convertible bonds with a 0.875% interest. The bonds were purchased by a group of nine banks, which sold the bonds to institutional investors. Among these nine banks was **Deutsche Bank**, which purchased bonds with a value of US$ 47.9 million.[138]

In December 2007 ADM issued US$ 500 million of 30-year bonds with a 6.45% interest. Among the eleven banks participating in the underwriting syndicate was **Deutsche Bank**, which underwrote US$ 120 million.[139]

3.8 BAKRIE SUMATERA PLANTATIONS - INDONESIA

PT Bakrie Sumatera Plantations is the plantation holding company of the Bakrie Group, headed by Indonesia's Coordinating Minister for Social Welfare of Indonesia, Aburizal Bakrie. Bakrie Sumatera Plantations own estates with a total concession area over 50,000 hectares. This includes rubber and oil palm plantations. The total acreage planted with oil palm as at February 2007 amounted to 32,712 hectares, spread over North Sumatra, West Sumatra and Jambi.[140]

In April 2006, a US$ 25 million joint venture agreement was signed between Bakrie Sumatera Plantations and the Indonesian state-owned engineering company Rekaya Industri to build a biodiesel plant with an annual capacity of 60,000 to 100,000 tons on Batam island. Bakrie Sumatera Plantations shall supply the CPO from its palm oil refineries in West Java and Jambi and will own a 70% share of the joint-venture company PT Bakrie Rekin Bio-Energy. Production will start in mid-2008.[141]

German banks are financing the expansion of Bakrie Sumatera Plantations in the following way:

In February 2006 Bakrie Sumatera Plantations secured a three-year US$ 69 million international syndicated loan. The syndicate was arranged by Barclays Bank (United Kingdom), ICICI Bank (India) and RZB (Austria). Among the six banks participating in the syndicate was **WestLB**, participating with US$ 10 million.[142]

3.9 BAYERNFONDS BESTENERGY 1 - GERMANY

Bayernfonds BestEnergy 1 is a German based investment fund that is wholly owned by Real I.S., which in its turn is a wholly owned subsidiary of the **Bayerische Landesbank**. In May 2007 it has awarded the Finnish company Wärtsilä a contract for six turnkey biomass-fuelled power plants to be built across Germany, with a combined value of approximately € 100 million. All six plants have an identical configuration and set up and will have an electrical power output of 5.6 MWe each. The plants will burn wood residues from the local forests. The electricity to be generated by the plants will be fed to the main grid. All six power plants are due to achieve commercial operation by December 2008. [143]

3.10 BIOENERGY INTERNATIONAL - UNITED STATES

BioEnergy International is a joint-venture of various investors, planning to build an ethanol plant in Pennsylvania (United States). The plant will have an annual capacity of 379 million litres. Its total output is sold to Getty Petroleum, an American subsidiary of the Russian oil company Lukoil.[144]

German banks contributed to the expansion of this company in the following way:

In February 2008 BioEnergy International secured a US$ 205 million debt financing package arranged by TD Banknorth (Canada) and **WestLB**. The loan package consists of a US$ 106 million first lien loan, US$ 65 million in tax exempt bond debt, a US$ 30 million second lien loan and a US$ 4 million letter of credit and working capital facility.[145]

3.11 BIOPETROL INDUSTRIES - SWITZERLAND

The Swiss company Biopetrol Industries is one of the largest biodiesel producers in Germany, operating two plants with a total annual capacity of 350,000 tonnes. Biopetrol Industries is building a new plant in Rotterdam (The Netherlands) with an initial annual capacity of 400,000 tonnes, later to be expanded to 650,000 tonnes. The plant will start production at the end of 2008.

The company uses mainly European-grown rapeseed as feedstock, but its production facilities can convert at any time from rapeseed oil to alternative vegetable raw materials such as soya oil and palm oil.[146]

German banks contributed to the expansion of this company in the following way:

In February 2007 Biopetrol Industries issued 4% five-year convertible bonds with a total value of € 75 million. The issuance was managed by Dresdner Kleinwort, a subsidiary of **Dresdner Bank**. The proceeds were used to finance the new plant in Rotterdam.[147]

3.12 BRASBIOFUEL - BRAZIL

The Brazilian company Brasbiofuel in March 2007 announced that it will invest R$ 480 million in the construction of four biodiesel factories in the next four years in Brazil. The company is owned by Daniele Panicci from Italy and Oséias Alves da Cruz from Brazil. Brasbiofuel will begin with a production of 360 million liters per annum and aims to reach 1.5 billion liters per annum when the project is completed. Initially, the company will produce sunflower biodiesel, but the company has also studied the use of other raw materials, such as cotton, canola, jatropha and soybean. The aim is to export 50% of the production and to direct the rest towards the domestic market.[148]

German banks contributed to the expansion of this company in the following way:

In March 2007 Brasbiofuel announced it would finance its four biodiesel factories with 60% equity and 40% loans from international banks such as Credit Suisse (Switzerland) and **Deutsche Bank**.[149] No information is found on concrete financing deals.

3.13 BRASIL ECODIESEL - BRAZIL

Brasil Ecodiesel is Brazil's largest producer of biodiesel. Annual production amounted to 496 million litres in 2007, which equals 56% of the country's total output of biodiesel. Brasil Ecodiesel operates six biodiesel plants with a combined annual biodiesel production capacity of 640 million litres. The company operates farms with a total acreage of 46,552 hectares in the states Minas

Gerais, Ceará, Piauí and Bahia. Various feedcrops are used, including soybeans, castor seed and jatropha.[150]

German banks contributed to the expansion of this company in the following way:

Since August 2006, one of the three controlling shareholders of Brasil Ecodiesel was Eco Green Solutions LLC. This is an American investment fund of which the only shareholder is BT Global Investments Fund, located in Switzerland. This fund is managed by **Deutsche Bank**.[151]

Eco Green Solutions owned 33.68% of the shares of Brasil Ecodiesel at the end of March 2008.[152] In May 2008, it sold 20.48% of the shares to the two other controlling shareholders (Evon Zartman Vogt III and Nelson José Côrtes da Silveira). These two shareholders now own 50.0% of the shares of the company.[153] Probably the other 13.20% of the shares of Brasil Ecodiesel which were owned by Eco Green Solutions have been sold as well, as the fund is not mentioned anymore as a significant shareholder of Brasil Ecodiesel.[154]

But apart from its shareholding, Brasil Ecodiesel in August 2008 reported it had restructured its loan of R$ 14.1 million (US$ 6.6 million) with Eco Green Solutions. This loan is still outstanding.[155]

3.14 BUNGE - UNITED STATES

Bunge is an American agribusiness and food company founded in 1818 in the Netherlands and headquartered in White Plains (New York). Bunge has over 22,000 employees in over 30 countries. The company supplies fertilizer to farmers in South America, originates, transports and processes oilseeds, grains and other agricultural commodities worldwide, produces food products for commercial customers and consumers and supplies raw materials and services to the biofuels industry.[156] In 2006 Bunge realised net sales of US$ 26.3 billion, resulting in a net profit of US$ 521 million.[157]

Bunge supplies corn to several producers of ethanol in the United States. Bunge also is a minority partner in a small number of corn ethanol plants that are being developed near its American facilities.[158]

In September 2007 Bunge acquired Agroindustrial Santa Juliana, a sugarcane mill and ethanol production facility located in the state of Minas Gerais, Brazil. Bunge plans to expand the processing capacity from the present 1.6 million tons of sugar cane to 4.0 million tons of per year.[159] Ethanol production figures are unknown.

In July 2008 a Brazilian newspaper reported that Bunge will invest around R$ 1 billion (US$ 639 million) in three sugar and ethanol mills in Tocantins state (Brazil). The first mill is expected to start operations in 2011. Bunge is also planting 2,200 hectares of sugarcane, which will be increased to 100,000 hectares, to supply the three mills.[160]

Bunge is one of the most important soy traders and crushers in Latin America. Its crushing capacity amounts to 30,100 tons per day in Brazil and 27,400 tons per day in Argentina.[161] Bunge also is the largest soybean crusher in the European Union, owning crushing plants in Denmark, France, Germany, Italy and Spain.[162] Bunge also supplies vegetable oils (especially soy) to various producers of biodiesel. Bunge also is a minority investor in some biodiesel plants in Europe, the United States and Argentina.[163]

In October 2006 Bunge announced it will build two soybean-based biodiesel plants in Spain in a joint-venture with Acciona and other local partners. Bunge will be a minority partner. The plant in Bilbao is expected to have a capacity of 200,000 tonnes per year. The other plant will be located in Cartagena. [164]

In Argentina Bunge owns a 50% shareholding in Ecofuel, a joint-venture with AGD, producing 253 million litres of biodiesel per year. The feed stock is soy.[165] Bunge also plans to build another biodiesel plant with a capacity of 127 million litres per year.[166]

Bunge has been using a large number of bank facilities over the past five years to finance acquisitions (especially of Cereol in October 2002), working capital needs (which includes supplying inputs and seed to farmers which produce agricultural products for Bunge) and to back-up bond issuances. The credit facilities were secured by three subsidiaries of Bunge:

Bunge Asset Funding

Bunge Asset Funding is a financing subsidiary of Bunge, which has secured a revolving credit facility from an international banking syndicate. This facility is renewed annually. It is used for working capital purposes.

In July 2003 Bunge Asset Funding renewed its existing revolving credit facility into a US$ 600 million revolving credit facility arranged by JP Morgan Chase (United States) and Citigroup (United States). The facility was split into a one-year US$ 376 million tranche and a two-year US$ 224 million tranche. Among the 19 banks participating in the lending syndicate were **Deutsche Bank** (US$ 15 million) and **WestLB** (US$ 38 million).[167]

In June 2004 Bunge Asset Funding renewed the facility into a three-year US$ 600 million revolving credit facility provided by an international banking syndicate arranged by JP Morgan Chase (United States), Citigroup (United States), BNP Paribas (France), Credit Suisse (Switzerland) and Rabobank (Netherlands). Among the 27 banks participating in the lending syndicate were **Deutsche Bank** (US$ 23.1 million) and **WestLB** (US$ 23.1 million).[168]

In June 2007 Bunge Asset Funding renewed the facility into a three-year US$ 600 million revolving credit facility provided by an international banking syndicate arranged by JP Morgan Chase (United States) and Citigroup (United States). Among the 27 banks participating in the lending syndicate was **Deutsche Bank** (US$ 20 million).[169]

Cereol / Bunge Finance Europe

Cereol was one of the largest edible oil trading, crushing and refining companies in Europe. In October 2002 the company was acquired by Bunge and later renamed into Bunge Finance Europe. To finance its working capital needs, Bunge Finance Europe uses a large revolving credit facility from an international banking syndicate which is renewed regularly.

In May 2003 Bunge Finance Europe replaces its existing loan facilities with a US$ 650 million revolving credit facility from an international banking syndicate arranged by Société Générale (France), HSBC (United Kingdom) and BNP Paribas (France). The facility is split into a one-year US$ 455 million tranche and a three-year US$ 195 million tranche. Among the 31 banks participating in the lending syndicate were **HypoVereinsBank** (US$ 25 million), **KfW** (US$ 12.5 million), **WestLB** (US$ 25 million) and Landesbank Rheinland-Pfalz, a subsidiary of **Landesbank Baden-Württemberg** (US$ 12.5 million).[170]

In May 2004 Bunge Finance Europe extended the US$ 455 million one-year tranche of its May 2003 revolving credit facility with another year, while the three-year US$ 195 million tranche remained unchanged. The banking syndicate changed slightly. Among the 34 banks participating in the lending syndicate were **HypoVereinsBank** (US$ 26 million), **Kreditanstalt für Wiederaufbau** (US$ 13.5 million), **WestLB** (US$ 35 million) and Landesbank Rheinland-Pfalz, a subsidiary of **Landesbank Baden-Württemberg** (US$ 20 million).[171]

In July 2004 the US$ 195 million tranche was repaid.[172]

In May 2005 Bunge Finance Europe extended the US$ 455 million one-year revolving credit facility with one year. The banking syndicate remained unchanged.[173] In December 2005 the US$ 455 million one-year revolving credit facility was repaid. [174]

In December 2006 Bunge Finance Europe entered into a three-year revolving credit agreement with a banking syndicate arranged by BNP Paribas (France) and HSBC Bank (United Kingdom). The facility expires January 2010 with an aggregate borrowing capacity of US$ 600 million. Borrowings under the revolving credit facility may be used for general corporate purposes. Among the 23 banks participating in the facility was **Commerzbank** (US$ 18 million) and **HSH Nordbank** (US$ 29 million).[175]

Bunge Limited Finance

Since 2002 Bunge Limited Finance, a subsidiary of Bunge, has secured a large revolving credit facility from an international banking syndicate. The facility is used for working capital needs, which includes supplying inputs and seed to farmers which produce agricultural products for Bunge, and to back-up the bond issuances of Bunge (to assure bondholders that interest and principal payments will be made at maturity date).

In June 2004 Bunge Limited Finance replaced its existing facility with a five-year US$ 850 million revolving credit agreement provided by an international banking syndicate arranged by Citigroup (United States) and JP Morgan Chase (United States). Among the 31 banks participating in the lending syndicate were **Deutsche Bank** (US$ 33.19 million) and **WestLB** (US$ 33.19 million).[176]

In November 2005 Bunge Limited Finance renewed the facility into a 3.5-year US$ 850 million revolving credit agreement provided by an international banking syndicate arranged by Citigroup (United States) and JP Morgan Chase (United States). The facility now allows for borrowing in dollars and euros. Among the 32 banks participating in the lending syndicate were **Deutsche Bank** (US$ 33.19 million) and **WestLB** (US$ 33.19 million).[177]

In November 2007 Bunge Limited Finance renewed the facility into a one-year US$ 1,000 million revolving credit agreement provided by an international banking syndicate arranged by Citigroup (United States) and JP Morgan Chase (United States). Among the 22 banks participating in the lending syndicate was **Deutsche Bank** (US$ 25 million).[178]

3.15 CARGILL - UNITED STATES

The privately-owned American company Cargill is the largest commodity trader in the world. Cargill is an international provider of agriculture services, food ingredients and applications, fertilizer, salt and steel products and services, grain, oilseeds and other agricultural commodities, risk management and financial solutions.[179]

Cargill is headquartered in Minneapolis (Minnesota) and has 158,000 employees in 66 countries. In the fiscal year 2006/2007, Cargill realised annual sales with a total value of US$ 88.3 billion, resulting in a net profit of US$ 2,343 million.[180]

Cargill is one of the most important soy traders and crushers in Latin America. Its crushing capacity amounts to 15,700 tons per day in Brazil and 25,700 tons per day in Argentina.[181] In Paraguay, Cargill has a crushing capacity of 3,000 tons/day.

In 2006 Cargill acquired a 63 percent shareholding in Cevasa (Central Energética Vale do Sapucaí Ltda.), in Patrocínio Paulista (state of São Paulo). Cevasa has an

annual processing capacity of 1.4 million tons of sugarcane, generating 125 million litres of ethanol.

Cargill also acquired a 43.75 percent share in Itapagipe mill (Usina Itapagipe Açúcar e Álcool Ltda.), in the state of Minas Gerais, and has a share in TEAS, the ethanol export terminal in Santos, state of São Paulo.[182]

Cargill is also involved in the production of biofuels in Europe and North America. In the United States, Cargill produces ethanol in Iowa and Nebraska, as well as biodiesel in Iowa. In the United Kingdom, Cargill owns a 25% stake in Greenergy Biofuels, which operates two biodiesel plants in Immingham with a combined capacity of 200,000 tonnes per year. The plants use rapeseed, soy, palm and used cooking oils as feedstock. In Germany, Cargill is involved in biofuel production in a joint venture with Agravis Raiffeisen in Wittenberge, and a biodiesel plant in Frankfurt-Hoechst. In Barby the company is building a 100,000 litres bioethanol plant, using wheat as feedstock. In Belgium Cargill is involved in a joint-venture building a 250,000 tonne biodiesel plant in Ghent. [183]

Bond issuances are Cargill's primary instrument to finance its working capital requirements, which are a.o. needed to finance inputs, supplies and prepayments to the plantations which supply agricultural products to Cargill. The most bond issuances are made by Cargill on the North American capital markets, but recently Cargill has made two bond issuances on the European capital market as well. The following information was found on the involvement of European banks in Cargill's bond issuances:

In March 2004 Cargill issued US$ 500 million five-year bonds on the American capital market. The bond issuance was managed by **Deutsche Bank** with two other banks.[184]

In September 2004 Cargill for the first time issued bonds on the European capital market. The 4.5% ten-year bond issuance had a value of € 500 million and was managed by **Deutsche Bank** with two other banks.[185]

In April 2006 Cargill made its second issuance on the European capital market. The 4.375% seven-year bond issuance had a value of € 750 million and was managed by **Deutsche Bank** with two other banks.[186]

In January 2008 Cargill issued five-year bonds with a total value of US$ 1,000 million on the international capital market. The issuance was managed by **Deutsche Bank** with three other banks.[187]

3.16 CASCADE GRAIN PRODUCTS - UNITED STATES

Cascade Grain Products, which is owned by the investment company Berggruen Holdings, is developing a 409 million litres per year corn-based ethanol plant in Oregon. The plant is expect to start production in the second quarter of 2008.[188]

German banks contributed to the expansion of this company in the following way:

In June 2006 Cascade Grain Products secured a US$ 100 million senior secured credit facility for the construction of its ethanol plant. The facility was arranged by **WestLB**.[189]

3.17 CONESTOGA ENERGY PARTNERS - UNITED STATES

Conestoga Energy Partners is an American ethanol producer, developing three ethanol plants in Kansas with an annual capacity of 416 million litres per year each.[190]

German banks are financing the expansion of this company in the following way:

In December 2007 Arkalon Ethanol, a subsidiary of Conestoga Energy, secured a US$ 113 million financing package for its proposed ethanol plant in Kansas. The deal consists of a US$ 97 million term loan for the construction of the plant and a US$ 16 million working capital facility for operations. The financing package was arranged by Merrill Lynch (United States) and **WestLB**.[191]

3.18 CORNHUSKER ENERGY - UNITED STATES

Cornhusker Energy is a small American ethanol company, producing more than 151 million litres of ethanol annually at a plant in Nebraska. Construction is currently in the works to expand the plant to an annual capacity of 569 million litres.[192]

German banks contributed in the following ways to the expansion of this company:

Together with another bank, **WestLB** arranged a US$ 50 million financing for Cornhusker to finance its ethanol plant in 2006.[193]

3.19 COSAN - BRAZIL

Cosan is one of the world's largest producers of sugar and ethanol. The company cultivates, harvests and processes sugarcane, and produces ethanol. Cosan employs about 39,000 employees and owns 17 manufacturing units in Santos, a city in the state of São Paulo and the largest port in Latin America.

Cosan's key figures for the 2006/2007 harvest are:

- Net sales: R$ 3.6 billion (€ 1.4 billion)
- Sugarcane grinding: 36.1 million tons
- Sugar production: 64 million bags = 3.2 million tons
- Ethanol production: 1,322 million litres
- Direct employment: 39,000 employees
- Cultivated area: 580,000 hectares

In November 2005, Cosan conducted the initial public offering of 18.4 million shares on the São Paulo Stock Exchange, raising R$ 886 million (€ 344 million). **Deutsche Bank** was one of the seven banks in the offering syndicate.[194]

In January 2006, Cosan issued US$ 300 million (€ 206 million) in five-year 8.25% perpetual notes. The notes are listed on the Luxembourg Stock Exchange. The bond issuance was managed by **Deutsche Bank** with two other banks.[195]

In February 2006, Cosan issued an additional US$ 150 million (€ 103 million) in perpetual bonds under the same conditions as the preceding issue in January.[196]

In January 2007, Cosan issued US$ 400 million (€ 275 million) in 7% senior notes, due in 2017. These notes are also listed on the Luxembourg Stock Exchange. The bond issuance was managed by **Deutsche Bank** with two other banks.[197]

3.20 CROPENERGIES - GERMANY

The German company CropEnergies is one of the leading European producers of bioethanol. The company operates three factories in Germany, France and Belgium with a combined annual capacity of 760 million litre. CropEnergies primarily uses cereals – mainly wheat, but also barley, triticale and maize – as well as sugar beet syrups as feed stock. CropEnergies is 70% owned by the German SüdZucker Group, the largest sugar producer in Europe.[198]

German banks contributed to the expansion of this company in the following way:

In September 2006 made an Initial Public Offering on the Frankfurt stock exchange. The share issuance was managed by **Deutsche Bank**. Proceeds of € 200 million were used to expand production.[199]

3.21 ENVITEC BIOGAS - GERMANY

The German company EnviTec Biogas covers the entire value chain for the production of biogas - including the planning and turnkey construction of biogas plants as well as their commissioning. The company provides the biological and technical service and also offers the full plant and operating management. In addition, EnviTec also operates its own biogas plants. In the German state of Mecklenburg-Western Pomerania, EnviTec is currently constructing what it believes to be the world's largest biogas park with an electrical connected load of 20 megawatts.[200]

German banks contributed to the expansion of this company in the following way:

At the end of 2006, EnviTec Biogas had loans outstanding to Bremer Landesbank, a subsidiary of **Norddeutsche Landesbank** (€ 1.2 million) and **Landessparkasse zu Oldenburg** (€ 2.8 million).[201]

In July 2007 EnviTec Biogas made an initial public offering (IPO) on the stock exchange, issuing shares with a total value of € 242.5 million. Dresdner Kleinwort, a subsidiary of **Dresdner Bank**, was the global coordinator of the share offering. Participating in the issuing syndicate were **Berenberg Bank** and **WestLB**.[202]

3.22 FIAGRIL - BRAZIL

Fiagril is a medium-sized soybean trader and biodiesel producer in Mato Grosso, Brazil. Annual trading volumes amount to 600,000 tons of soybeans and 300,000 tons of corn. In January 2008 the company opened a biodiesel factory in Mato Grosso with an annual capacity of 120 million litres. 70% of the feedstock will be soybeans (190,000 tons per year), while 30% will be animal grease.[203]

German banks contributed to the expansion of this company in the following way:

In August 2006 Fiagril secured a two-year US$ 15 million export pre-payment facility from **WestLB**.[204]

In September 2007, Fiagril secured a US$ 48 million financing package for the construction of its biodiesel plant. The 8.5 year financing package was arranged by **WestLB**.[205]

3.23 FIRST UNITED ETHANOL - UNITED STATES

First United Ethanol is a small American company building an ethanol plant in Georgia with an annual production capacity of 379 million litres. Total development costs are approximately US$ 195 million. Production start is expected in the fall of 2008.[206]

German banks contributed to the expansion of this company in the following way:

In November 2007 First United Ethanol secured a loan package of US$ 115 million from a banking syndicate arranged by **WestLB**. The package consists of US$ 100 million of long-term debt and a revolving credit of US$ 15 million.[207]

3.24 GREENHUNTER ENERGY - UNITED STATES

GreenHunter Energy an American renewable energy company which owns and operates the nation's largest biodiesel plant in Texas, a biomass facility in California and wind projects located in California, Montana and New Mexico. The biomass facility processes cow manure into electricity and has a capacity of 18.5 MW. The biodiesel plant has an annual production capacity of 397 million litres per year and will start production in June

2008. The plant will use variable feedstocks located either domestically or internationally, including vegetable oils (soy bean, palm oil and jatropha oil) and/or animal/poultry fats.[208]

German banks contributed to the expansion of this company in the following way:

In December 2007 GreenHunter Energy secured a US$ 43.5 million financing package from **WestLB** to finance the development of its biodiesel plant. The financing package consists of a US$ 38.5 million term loan facility and a US$ 5 million working capital facility.[209]

3.25 GTL RESOURCES - UNITED KINGDOM

GTL Resources is a British company owning a 85% interest in Illinois River Energy, which owns and operates a 189 million litres per year ethanol production facility in Illinois (United States). Capacity expansion to 379 million litres per year is scheduled to be completed by April 2009. The corn is supplied by Cargill.[210]

In February 2007 Illinois River Energy secured a US$ 140 million financing package to refinance existing indebtedness and to expand the capacity of its ethanol plant from 189 million litres per year to 379 million litres per year. The banking syndicate was arranged by **WestLB**.[211]

3.26 HAWKEYE ENERGY - UNITED STATES

Hawkeye Energy is an American company operating two ethanol plants in Iowa with a total capacity of 814 million litre per year. Two plants with an annual production of 416 million litre per year each are under construction in Iowa.[212]

German banks contributed in the following ways to the expansion of this company:

In March 2005 Hawkeye Energy secured a US$ 185 million financing package to finance the expansion of its first plant and build its second plant. The banking syndicate was arranged by Credit Suisse (Switzerland).[213] **WestLB** was involved in the banking syndicate.[214]

3.27 HEARTLAND ETHANOL - UNITED STATES

Heartland Ethanol is an American ethanol company, planning to build at least three ethanol facilities in Illinois.[215]

German banks contributed in the following ways to the expansion of this company:

WestLB has been mandated to arrange a US$ 375 million financing for Heartland Ethanol to finance its ethanol plants in 2006.[216] It is unclear if this financing has been realised.

3.28 IMCOPA - BRAZIL

The Brazilian company Imcopa is one of the largest soy traders and crushers in Brazil. In 2006 the company crushed 2.3 million tons of soybeans and exported 1.6 million tons of soy meal. The company concentrates on GMO-free soy.

Imcopa in May 2007 opened a ethanol plant in Paraná which uses soy molasses, a by-product of soy meal production, as a feedstock. The plant produces 25 million litres per year.[217]

German banks contributed in the following ways to the expansion of this company:

In February 2008 Imcopa secured a US$ 35 million export pre-payment facility from **WestLB**.[218]

3.29 LOUIS DREYFUS - FRANCE

The French privately-owned company Louis Dreyfus is one of the largest commodity traders in the world. Principal activities of the Louis Dreyfus Group consist of worldwide processing, trading and merchandising of various agricultural and energy commodities. The Louis Dreyfus Group is also significantly involved in the ownership and management of ocean vessels; in the development and operation of telecommunications infrastructures; and in real estate development, management and ownership. Louis Dreyfus companies are present in over 53 countries, with major offices in Beijing, Buenos Aires, London, Paris, São Paulo, Wilton (Connecticut) and Memphis (Tennessee). Aggregate average annual gross sales in recent years have exceeded US$ 20 billion.[219]

The Louis Dreyfus Group has extensive oilseed crushing and refining operations in South America, where it is the third largest oilseed processor in the region. Through SACEIF Louis Dreyfus & Cia., its Argentine subsidiary, the Group owns and operates the General Lagos crushing plant and port facility on the Parana River with deep-water access for large export-bound, ocean-going vessels. With a crushing capacity of 12,000 tons a day, it is one of the largest and most efficient plants in the world. Another subsidiary, Coinbra, owns and operates oilseed crushing facilities in Brazil with a combined crushing capacity of over 8,000 tons a day and a combined oil refining capacity of over 600 tons a day. Louis Dreyfus is also trading soybeans in Paraguay and Uruguay. [220]

German banks contributed to the expansion of this company in the following way:

In February 2006 Louis Dreyfus secured a US$ 560 million revolving credit from an international banking syndicate. The facility was split in a US$ 280 million one-year tranche and a US$ 280 million two-year tranche. The syndicate was arranged by four banks, including **Bayerische Landesbank**.[221]

3.30 MARQUIS ENERGY - UNITED STATES

Marquis Energy is an American producer of ethanol, operating a plant in Illinois with an annual capacity of 379 million litres per year. The company is a subsidiary of the American investment company Babcock & Brown.[222]

German banks contributed in the following ways to the expansion of this company:

WestLB arranged financing for the ethanol plant of Marquis Energy.[223]

3.31 NESTE OIL - FINLAND

The Finnish company Neste Oil is a refining and marketing company focused on advanced, clean traffic fuels, with a strategy that prioritizes growing its refining and premium-quality biodiesel businesses. Neste Oil has one biodiesel plant in Finland and a second one will come on stream in 2009. The company is planning a biodiesel plant with an annual capacity of 800,000 tons in Singapore and a plant with an annual capacity of 1.2 million tons in the Netherlands. This will be the two largest biodiesel plants in the world. The plants will use palm oil as feedstock.[224]

German banks contributed in the following ways to the expansion of this company:

In 2005 Neste Oil secured a € 1.5 billion revolving credit facility from an international banking syndicate. The facility will be used for general corporate purposes. 20 banks participated in the syndicate, including **HSH Nordbank** (€ 68 million), **Dresdner Bank** (€ 68 million) and **Deutsche Bank** (€ 48 million).[123]

3.32 NOBLE GROUP - HONG KONG

The Hong Kong based Noble Group is an important international trader in agricultural, industrial and energy products. Noble's diverse product lines and global presence of over 80 offices in 40 countries is managed by a team of 3,000 employees.

Noble Group is one of the most important international traders in ethanol, sourced from various producers. The company is also a very important trader in the agricultural feedstocks for biofuel, such as corn, soy and sugar. In South America, Noble operates an extensive network of warehouses and elevators across Brazil, Argentina, Uruguay and Paraguay sourcing oilseeds and grains. Noble Group is sourcing both cane and beet sugar in Brazil, Central America, Thailand, South Africa, India, Europe and Russia.[226]

In February 2007 Noble Group has acquired Usina Petribu Paulista (UPP), a sugar mill company capable of producing both sugar and ethanol in São Paulo (Brazil). The crushing capacity of the mill will be upgraded soon to 4 million tons of sugar cane, resulting in 333 million litres of ethanol annually. Noble will further invest up to US$ 200 million in this project over the next few years and will expand its crushing capacity to up 10 million metric tons of cane.[227]

German banks contributed to the expansion of this company in the following way:

In February 2006 the Noble Group secured a 18-month US$ 60 million financing package from **WestLB**, which will be used as pre-payments of the 2005/2006 soybean crop to a universe of over 50 Brazilian soybean producers, farmers and co-operatives.[228]

In July 2007 Noble Group secured a three-year US$ 1.2 billion revolving credit facility, which will be used to refinance existing debt and for general corporate purposes. The banking syndicate was arranged by 7 banks. Among the 34 banks participating in the syndicate were **Dresdner Bank**, **Commerzbank**, BHF-Bank (a subsidiary of **Sal. Openheim & Cie.**), **HSH Nordbank** and **WestLB**.[229]

In April 2008 Noble Group secured a two-year US$ 700 million revolving letter of credit and guarantee facility, which provides Noble with additional capacity to issue guarantees and stand-by letters of credit in support of its continuing revenue growth. The banking syndicate was arranged by four banks. Among the 16 banks participating in the syndicate were KfW IPEX-Bank (part of **KfW**), **Commerzbank** and **Deutsche Bank**.[230]

3.33 NORTHERN ETHANOL - CANADA

Northern Ethanol is a Canadian company developing three corn-based ethanol plants in Ontario (Canada) and New York (United States) with a total annual capacity of 1,226 million litres.[231]

German banks contributed to the expansion of this company in the following way:

In December 2006, the company mandated **WestLB** to solicit and arrange for senior debt and subordinate debt financing for up to 75% of the construction costs (to a maximum of approximately US$ 365 million) of the first two mills the company is planning to build. The financing is not arranged yet.[232]

3.34 NOVA BIOSOURCE FUELS - UNITED STATES

Nova Biosource Fuels is an American company operating two biodiesel plants in Iowa and Illinois, with a combined annual production capacity of 265 million litres. New biodiesel plants are being built in Wisconsin and Mississippi. In the next three years Nova Biosource Fuels aims to build up to seven biodiesel refineries with production capacities ranging from 20 to 379 million litres each per year. The company uses low-cost feedstocks, including rendered animal fats and oils and recycled vegetable and animal-based greases.[233]

German banks contributed to the expansion of this company in the following way:

In January 2008 Nova Biosource Fuels secured a US$ 41 million credit facility from **WestLB** to finish the construction of the biodiesel plant in Illinois. The facility includes a US$ 36 million construction loan and a US$ 5 million working capital facility.[234]

3.35 PACIFIC ETHANOL - UNITED STATES

Pacific Ethanol is an American company operating four ethanol plants in California, Oregon, Idaho and Colorado with a total annual capacity of 712 million litres. The company is developing two additional plants in California and aims to operate over 1,560 million litres of annual capacity by 2010 in the Western part of the United States. The company also is working to identify and develop other renewable fuel technologies, such as cellulose-based ethanol production and bio-diesel.[235]

German banks contributed to the expansion of this company in the following way:

In February 2007 Pacific Ethanol secured a US$ 325 million credit facility, to finance the construction of various ethanol plants. The facility includes a US$ 300 million senior secured construction and term loan, and a US$ 25 million working capital and letter of credit facility. The banking syndicate was arranged by **WestLB** and Mizuho Corporate Bank (Japan). Twelve banks participated in the syndicate, including **Norddeutsche Landesbank**.[236]

3.36 RENEWABLE ENERGY GROUP - UNITED STATES

The American company Renewable Energy Group is the American market leader in production and sales of biodiesel. The company has developed seven biodiesel plants that currently produce approximately 840 million litres per year. Three additional REG-affiliated plants are under construction. The feedstock used by REG to produce biodiesel is soy.[237]

German banks contributed to the expansion of this company in the following way:

In February 2008 Renewable Energy Group entered into a revolving credit facility with **WestLB**. The facility is initially set at US$ 28 million with the ability to grow to US$ 100 million.[238]

3.37 SABARÁLCOOL - BRAZIL

Destilaria de Álcool Sabará (Sabarálcool) is a family-owned Brazilian company producing sugar and ethanol in Paraná. In 2007/2008 the company produced 2.1 million tons of sugarcane, which were processed into 135,000 tons of sugar and 75 million litres of ethanol.[239]

German banks contributed to the expansion of this company in the following way:

In December 2006 Sabarálcool secured a three year US$ 12 million pre-export financing facility from **WestLB**.[240]

3.38 SÃO MARTINHO - BRAZIL

São Martinho is a corporate organization that purchases, cultivates, harvests and crushes sugarcane - the main raw material used in its sugar and ethanol operations. The company currently owns two sugar and ethanol mills in the state of São Paulo: the Iracema mill in Iracemápolis and the São Martinho mill in Pradópolis. Net revenue: R$ 827 million (€ 321 million)

São Martinho´s production figures for the 2006/2007 harvest were:[241]

- Sugar cane crushed: 9.3 million ton
- Sugar production: 678,000 ton
- Ethanol Production: 394 million litres

In addition, the Company has begun construction of a third mill, Boa Vista, in the city of Quirinópolis in the state of Goiás and is expected to begin operating in the 2008/2009 harvest with an initial estimated annual sugarcane crushing capacity of 1.7 million tons and annual ethanol production capacity of 95 million litres.

German banks contributed to the expansion of this company in the following way:

In February 2007, São Martinho issued its initial public offering of 13 million shares for R$ 424 million (€ 165 million) on the São Paulo Stock Exchange. Deutsche Bank was one of the four banks coordinating the offering.[242]

3.39 SOLENA - UNITED STATES

The American company Solena develops, builds, owns and operates renewable bio-energy plants worldwide. Solena's plasma technology uses all biomass including woods, shrubs, grasses and other agricultural products as well as municipal and industrial waste. Acciona, Spain's largest supplier of renewable energy, is Solena's largest institutional shareholder. Acciona is the exclusive developer of all Solena's projects throughout Spain and a co-investor with Solena in projects worldwide.[243]

Together with Rentech, Solena is developing a commercial-scale biojet fuel production plant in California. The plant is scheduled to be completed in 2011 and would produce 64 million litres per year of syngas generated from municipal, agricultural and forestry waste. The biobased syngas is then

cooled, cleaned and converted it into clean-diesel liquid fuel, which is then upgraded to jet fuel.[244]

German banks contributed to the expansion of this company in the following way:

Deutsche Bank provides structure financing, equity and debt financing for all of Solena's projects.[245]

In March 2008 Solena Group announced that financing for the biojet fuel production plant in California is to be arranged by **Deutsche Bank**, at an estimated cost of US$ 250 million.[246]

3.40 TEREOS - FRANCE

Tereos is a French cooperative group: the beet growers are both the company's suppliers and shareholders; they control the processing facilities for their own raw materials. The group brings together 14,000 farmers, grouped into 13 cooperatives. Tereos holds a total of 35 industrial facilities and employs 17,000 permanent employees. It is based on three continents, in Europe (France and the Czech Republic), in South America (Brazil) and Africa (Mozambique and Ile de la Réunion). The company's head office is based in Lille.[247]

Tereos' key figures are:

- Sales: € 3.1 billion
- 930,000 hectares of farmland cultivated
- Sugar and glucose production: 4.3 million tons
- Alcohol production: 1,300 million litres

In 2000, Tereos established an interest in Brazil in the State of Sao Paulo through the Brazilian subsidiary Guarani. The Tereos Group holds approximately 63% of Acucar Guarani.[248]

Acucar Guarani owns three factories: Severinia, Cruz Alta and Sao José. Acucar Guarani's figures for the 2006/2007 harvest:

- Sugar cane grinding: 8.2 million tons
- Sugar production: 1.1 million tons
- Ethanol production: 309 million litres

Acucar Guarani estimates that its grinding capacity will increase to 12.7 million tons of sugarcane in the 2007-2008 harvest and to 14.2 million tons by the 2008-2009 harvest.[249]

In April 2006, Tereos replaced an existing loan facility with a new € 1.5 billion five-year loan facility. It is split into a € 450 million seven-year term loan, a five-year € 488 million revolving credit, a two-year € 363 million bridge loan and a € 200 million five-year term loan. The bookrunner was Calyon, part of Crédit Agricole (France). **Commerzbank** was among the 11 banks participating in this facility:[250]

1.41 VERASUN ENERGY - UNITED STATES

The American company VeraSun Energy Corporation has more than 3.8 billion litres per year of production capacity through 11 operating ethanol production facilities in Iowa, Nebraska, South Dakota, North Dakota, Ohio, Indiana and Michigan. VeraSun is in the process of merging with U.S. BioEnergy Corporation, which will add five more plants. Total production capacity will then be 6.2 billion litres per year. VeraSun has six further facilities under construction or development with a combined capacity of 2.5 billion litres per year.[251]

Three ethanol plants were acquired by VeraSun in August 2007, through the acquisition of ASAlliances Biofuel. This was a joint-venture company comprising Cargill, Fagen, United Bio Energy and AS Alliances Holdings. [252] The company has developed three corn-based ethanol plants in Indiana, Nebraska and Ohio, which each have an annual capacity of 416 million litres. The three plants started operations at the end of 2007 and early 2008. They are supplied with corn by Cargill.[253]

The following German bank financing contributed to the expansion of VeraSun Energy:

In February 2006 ASAlliances Biofuel secured a US$ 275 million senior credit facility with a banking syndicate arranged by **WestLB**, for the development, construction and operation of its first three plants. 16 banks participated in the syndicate. WestLB contributed US$ 20 million.[254] The loan is taken over by VeraSun Energy.[255]

3.42 VERBIO - GERMANY

The German company Vereinigte BioEnergie (VerBio) is one of the largest producers of biodiesel and bioethanol in Europe. The company owns two ethanol plants and two biodiesel plants in Germany. Nominal capacity currently amounts to around 450,000 tons of biodiesel and 300,000 tons of bioethanol per year. To produce biodiesel, VerBio uses up to 70 per cent rapeseed oil, as well as soy bean oil and fatty acids. The feedstock it uses for bioethanol is rye. It supplies its products directly to European mineral oil corporations, mineral oil traders, independent gas stations and haulage companies.[258]

The following German bank financing contributed to the expansion of VerBio:

In October 2006 VerBio made an initial Public Offering (IPO) on the Frankfurt Stock Exchange. The issuance raised € 235 million for the company, which will be used to finance expansion plans. Managing the issuance syndicate were Credit Suisse (Switzerland) and Dresdner Kleinwort, a subsidiary of **Dresdner Bank**. The other banks participating in the issuing syndicate were **Landesbank Baden-Württemberg** and **Sal. Oppenheim & Cie**.[257]

In July 2007 VerBio secured a € 10.0 million secured credit line from **Euler Hermes Kreditversicherungs** to pay for imports. At the end of 2007 € 9.7 million was used.[258]

In September 2007 VerBio secured a € 20.0 million secured credit line form **Dresdner Bank** to pay for imports. At the end of 2007 € 11.9 million was used.[259]

At the end of 2007 VerBio had loans outstanding to **Landesbank Baden-Württemberg** (€ 11.0 million), **Allianz** (€ 9.4 million), Bremer Landesbank, a subsidiary of **Norddeutsche Landesbank** (€ 7.5 million), Deutsche Kreditbank, a subsidiary of **Bayerische Landesbank** (€ 7.4 million), **HypoVereinsBank** (€ 4.5 million) and DaimlerChrysler Bank, which is now called **Mercedes-Benz Bank** (€ 1.7 million).[260]

3.43 VICENTIN - ARGENTINA

Vicentin is an important Argentinean trader and crusher of soybeans, sunflower and cotton. At present Vicentin is developing the Renova joint-venture with Oleaginosa Moreno Hermanos, a manufacturer of edible oils which is owned by Glencore (Switzerland). It involves the construction of a biodiesel plant and a refinery in San Lorenzo in the province of Santa Fe, with the capacity to produce 330,000 tons per annum of refined oil, and 200,000 tonnes of biodiesel. The feedstock is soy.

The following German bank financing contributed to the expansion of Vicentin:

In July 2007 the Renova project secured a US$ 27 million financing facility from **WestLB** to support the construction of its biodiesel plant.[261]

3.44 WHITE ENERGY - UNITED STATES

White Energy is the dominant producer of ethanol in the state of Texas in the United States. The company operates three ethanol plants in Texas with a total annual capacity of 984 million litres per year. Corn is supplied by ADM.[262]

German banks contributed in the following ways to the expansion of this company:

In August 2006 White Energy secured a US$ 173 million debt facility for the acquisition of a 170 million litre per year ethanol plant and the construction of a 379 million litre per year ethanol plant, both in Texas. **WestLB** acted as lead arranger and sole bookrunner of the banking syndicate.[263]

In November 2006 White Energy secured a US$ 298.5 million credit facility to refinance its existing US$ 173.5 million credit facility and to fund the acquisition and construction of an additional 379 million litres per year ethanol facility in Texas. The plant started production in early 2008. The banking syndicate was arranged by **WestLB**.[264]

3.45 SUMMARY

Table 2 summarizes the findings on the involvement of German banks in the financing of a sample of bioenergy producers. Without doubt German banks will be involved in many more bioenergy producers, but the findings can be considered as a significant sample.

German banks were found to be involved in 41 bioenergy producers and 2 large soy traders (who are supplying soy oil to biodiesel producers in Europe). Most bioenergy producers are producing ethanol or biodiesel, but electricity, biogas and biojet fuel are also produced. Table 2 lists the companies in alphabetical order, mentioning their country of origin, the type of bioenergy they are producing, the main feedstocks they are using, and the German banks which have been involved in financing the company in the past five years.

As shown in Table 2, 15 German financial institutions were found to be involved in financing bioenergy producers. In Table 3 an overview of these 15 German financial institutions is presented, listing the number of bioenergy producers they are related to. For each bank, the primary feedstocks are mentioned which are used by the bioenergy producers they are financing. Also, the location of the bioenergy plants of the bank's clients is mentioned. It should be noted, however, that some bioenergy producers use imported feedstocks (from outside the region they are located in).

As is shown in Table 3, WestLB is most involved in financing bioenergy producers. Among the 43 bioenergy producers found, 28 are financed by WestLB. The clients of WestLB use all kinds of feedstocks and are located in Germany, Europe, Asia, South and North America.

Significantly behind WestLB, Deutsche Bank is the second most important financier of bioenergy producers among German banks. The bank is found to finance 12 companies, which also use a range of feedstocks. These companies are located in Germany, Europe, Asia, South and North America.

Relatively important are also Dresdner Bank and HSH Nordbank, both financing 5 bioenergy producers. The clients of HSH Nordbank are fairly concentrated, mostly in South America and Asia, and use palm oil, soy, sugar or corn. The clients of Dresdner are more dispersed and use a broader range of feedstocks.

TABLE 2: ERMAN BANKS AND BIOENERGY PRODUCERS, PER COMPANY

Company	Country	Type of bioenergy	Feedstock	German banks involved
Abengoa	Spain	ethanol, biodiesel	wheat, sugar, corn, wine alcohol	WestLB, HVB
Advanced BioEnergy	United States	ethanol	corn	WestLB
Agrenco	Brazil	biodiesel	soy	WestLB, Deutsche, HSH Nordbank, HVB
André Maggi	Brazil	-	soy	WestLB, HSH Nordbank
Arcadis	Netherlands	biogas	municipal waste	KfW
Archer Daniels Midland	United States	ethanol, biodiesel	soy, corn	Deutsche
Bakrie Sumatera	Indonesia	biodiesel	palm oil	WestLB
Bayernfonds BestEnergy 1	Germany	electricity	wood residues	BayernLB
BioEnergy International	United States	ethanol	corn	WestLB
Biopetrol Industries	Switzerland	biodiesel	rape, soy, palm oil	Dresdner
Brasbiofuel	Brazil	biodiesel	sunflower	Deutsche
Brasil Ecodiesel	Brazil	biodiesel	soy, castor, jatropha	Deutsche
Bunge	United States	ethanol, biodiesel	soy, sugar, corn	Deutsche, WestLB, KfW, LBBW, Commerzbank, HSH Nordbank
Cargill	United States	ethanol, biodiesel	sugar, corn, soy, rapeseed, palm oil, used cooking oils	Deutsche
Cascade Grain Products	United States	ethanol	corn	WestLB
Conestoga Energy	United States	ethanol	corn	WestLB
Cornhusker Energy	United States	ethanol	corn	WestLB
Cosan	Brazil	ethanol	sugar	Deutsche
CropEnergies	Germany	ethanol	wheat, sugar	Deutsche
EnviTec Biogas	Germany	biogas	municipal waste	NordLB, Landessparkasse zu Oldenburg, Dresdner, Berenberg, WestLB
Fiagril	Brazil	biodiesel	soy	WestLB
First United Ethanol	United States	ethanol	corn	WestLB
GreenHunter Energy	United States	biodiesel	soy, palm oil	WestLB
GTL Resources	United Kingdom	ethanol	corn	WestLB
Hawkeye Energy	United States	ethanol	corn	WestLB
Heartland Ethanol	United States	ethanol	corn	WestLB
Imcopa	Brazil	ethanol	soy	WestLB
Louis Dreyfus	France	-	soy	BayernLB
Marquis Energy	United States	ethanol	corn	WestLB
Neste Oil	Finland	biodiesel	palm oil	HSH Nordbank, Dresdner, Deutsche
Noble Group	Hong Kong	ethanol	sugar	Dresdner, Commerzbank, Sal. Openheim & Cie., HSH Nordbank, WestLB, KfW, Deutsche
Northern Ethanol	Canada	ethanol	corn	WestLB
Nova Biosource Fuels	United States	biodiesel	rendered animal fats, greases	WestLB
Pacific Ethanol	United States	ethanol	corn	WestLB, NordLB
Renewable Energy Group	United States	biodiesel	soy	WestLB
Sabarálcool	Brazil	ethanol	sugar	WestLB
São Martinho	Brazil	ethanol	sugar	Deutsche
Solena	United States	biojet fuel	wood, municipal waste	Deutsche
Tereos	France	ethanol	sugar	Commerzbank
VeraSun Energy	United States	ethanol	corn	WestLB
VerBio	Germany	ethanol, biodiesel	rape, soy, rye	Dresdner, LBBW, Sal. Openheim & Cie., Euler Hermes, NordLB, BayernLB, Mercedes-Benz Bank, HVB
Vicentin	Argentina	biodiesel	soy	WestLB
White Energy	United States	ethanol	corn	WestLB

TABLE 3: GERMAN BANKS AND BIOENERGY PRODUCERS, PER BANK

Bank	Bioenergy producers	Feedstocks used	Location of bioenergy plants
Bayerische Landesbank	3	wood residues, rape, soy, rye	Germany, Europe
Berenberg Bank	1	municipal waste	Germany
Commerzbank	3	soy, sugar, corn	South and North America
Deutsche Bank	12	wood, municipal waste, palm oil, sunflower, soy, sugar, wheat, rapeseed, castor, jatropha, corn, used cooking oils	Germany, Europe, Asia, South and North America
Dresdner Bank	5	municipal waste, rape, soy, rye, sugar, palm oil	Germany, Europe, Asia, South America
Euler Hermes	1	rape, soy, rye	Germany
HSH Nordbank	5	palm oil, soy, sugar, corn	Europe, South and North America, Asia
HypoVereinsbank	3	rape, soy, rye, wheat, sugar, wine alcohol	Germany, Europe, South and North America
KfW	3	municipal waste, soy, sugar, corn	South America
Landesbank Baden-Würtemberg	2	rape, soy, rye, sugar, corn	Germany, Europe, South and North America
Landessparkasse zu Oldenburg	1	municipal waste	Germany
Mercedes-Benz Bank	1	rape, soy, rye	Germany
Norddeutsche Landesbank	3	rape, soy, rye, municipal waste, corn	Germany, North America
Sal.Openheim & Cie.	2	sugar	South America
WestLB	28	wine alcohol, municipal waste, palm oil, soy, corn, wheat, sugar, rendered animal fats, greases	Germany, Europe, Asia, South and North America
Total	**43**		

Chapter 4 - Bioenergy policies of German banks

4.1 INTRODUCTION

This chapter evaluates for each of the German banks identified in Chapter 3 if they have established credit policies for the bioenergy sector. The following points are evaluated:

- Is the financing of bioenergy producers and traders an important activity for the bank?
- Does the bank has a general sustainability policy which acknowledges that the bank has the responsibility to minimize the negative social and environmental impacts of its financing activities?
- To which existing sustainability standards the bank has committed?
- Has the bank developed its own credit policies for specific issues and sectors?
- Has the bank established, or is it on its way to establish, a specific credit policy for the bioenergy sector?
- To which extent are the involvement of stakeholders in new project developments (e.g. Free Prior Informed Consent, level of participation, etc.) and "Good Governance" addressed within the credit policies of the bank?
- What kind of procedures does the bank have in place to evaluate and monitor if its financing activities meet its sustainability standards and credit policies?
- Does the bank have established mechanisms for non-compliance and if so: how are they implemented?

The evaluation points mentioned here are evaluated in descending order, as for the points further down the list usually the earlier points are a precondition. For instance: a bank which does not acknowledge its responsibility to minimize the negative social and environmental impacts of its financing activities will not, as a matter of course, develop its own credit policies. To avoid repetitive comments, we therefore did not comment on points further down the list when the answer to one of the earlier points is negative.

4.2 BAYERISCHE LANDESBANK

Importance of bioenergy for the bank: No information found.

Acknowledgement of responsibility: In July 2007 BayernLB's Board of Management established a sustainability policy that governs all the bank's activities which are geared towards improving its commitment to sustainability. The policy consists of seven general points, including "BayernLB endeavours to minimise – and, where possible, prevent altogether – any negative impact, whether direct or indirect, on the environment" and "the bank's goals are to be achieved in compliance with all legal regulations and in consideration of all human rights, whereby, as far as BayernLB is concerned, these requirements pose minimum standards."[265]

Commitment to standards: Bayerische Landesbank is a signatory of the UNEP FI Statement. In 2004 the bank committed to complying with the environmental and social standards of the World Bank in its bank-wide credit risk strategy. [266]

Development of credit policies: Bayerische Landesbank has integrated the World Bank standards, which comprise around 70 guidelines, into checklists designed for its internal workflows. "In this way we have succeeded - in contrast to many other banks - in making the World Bank's standards practicable and part of our own standard procedure."[267]

Credit policy on bioenergy: No information found.

Stakeholder involvement and good governance: These issues are part of the World Bank standards, but no specific information was found on how Bayerische Landesbank deals with these issues.

Mechanisms for evaluating and monitoring: No information found.

Mechanisms for non-compliance: No information found.

4.3 BERENBERG BANK

Importance of bioenergy for the bank: No information found.

Acknowledgement of responsibility: Berenberg Bank does not acknowledge its responsibility to minimize the negative social and environmental impacts of its financing activities.[268]

4.4 COMMERZBANK

Importance of bioenergy for the bank: Commerzbank claims to be the leading bank in the renewable

energy sector in Germany. The bank holds one of the largest loan portfolios in the area of renewable energy throughout Europe, with a volume of € 3.5 billion. Commerzbank's activities in the renewable energy sector are grouped together in its own *Renewable Energies Center of Competence (CoC)*. In addition to pure financing, the staff's know-how also covers technical opportunities, legal frameworks and economic feasibility studies in the renewable energy sector. This know-how enables the bank to provide its customers with comprehensive, sound advisory services.[269]

Commerzbank also has introduced a specific renewable energy investment fund, the *cominvest Green Energy Protect* capital preservation fund. The fund invests in the leading companies in solar and wind energy, water power and bioenergy.[270]

Acknowledgement of responsibility: All financing projects in which environmental or social aspects play a significant role are checked and evaluated intensively by the Commerzbank's *Reputation and Sustainability Management* team. [271]

Commitment to standards: Commerzbank has committed itself to the UN Global Compact and the UNEP Finance Initiative.

The majority of the export loans that Commerzbank is providing are backed up by export guarantees from the countries in question. When evaluating a business for its environmental impact, the bank relies on the checks that government credit insurers perform in every case as part of the guarantee-granting process. The checks are based on the criteria stipulated in the OECD standard *Common Approaches*, which contain specifications for reviewing environmental and social impacts when granting state credit insurance for export and project financing.

In the field of project financing, Commerzbank is rarely involved with projects in developing countries. In these cases, the bank works with either international institutions (such as the International Finance Corporation, IFC) or national export credit insurance providers, as the standards of those institutions or the national export credit insurance arrangements as laid down by the OECD in its *Common Approaches* automatically apply.[272]

Development of credit policies: No information found

Credit policy on bioenergy: No information found.

4.5 DEUTSCHE BANK

Importance of bioenergy for the bank: Since 2005 Deutsche Bank has a *Climate Strategy*, which rests on four pillars. One of these is "promoting green energies". Deutsche Bank claims to be among the leading financial services providers in financing for renewable energies. At the end of 2007 the bank had lent a total of about € 750 million to renewable energy companies. Although the focus is on wind and solar energy, this also includes biomass. [273]

Acknowledgement of responsibility: Deutsche Bank considers itself to be "one of the leading banks in the area of sustainable operations". Its "New Client Adoption Procedure" ("Know your customer") and the global guideline "Group Reputational Risk Management Program Policy" underline the importance of assessing sensitive deals, activities, and transactions.

Commitment to standards: The Deutsche Bank sustainability policy is developed on the basis of the ten principles of the UN Global Compact and the principles of the UNEP FI Statement. Deutsche Bank works in compliance with the relevant guidelines published by international organizations - like the UN, the World Bank, the OECD, the ILO - and national organizations like BaFin, Germany's Federal Financial Supervisory Authority. [274]

Development of credit policies: Deutsche Bank has developed global group policies for lending (*Credit Directives*), which include social, ethical, and ecological factors. They state that Deutsche Bank will not participate in any financing activities that the bank believes will entail significant dangers for the environment or for society. The policies also consider embargoes, and similar restrictions, as well as betting and gambling, military goods, and pornography. The approval procedures require detailed analyses of transactions and activities, also from social, ethical and ecological vantage points.[275]

Credit policy on bioenergy: The *Credit Directives* of Deutsche Bank are internal guidelines and not for public use. The CSR department of Deutsche Bank therefore no willing to confirm if these Credit Directives deal with bioenergy.[276]

Stakeholder involvement and good governance: No information found.

Mechanisms for evaluating and monitoring: The sustainability program of Deutsche Bank is audited annually by the independent certifier Det Norske Veritas. The Sustainability Management System will be reviewed with regard to compliance with the standards and ongoing improvement. From 2008 to 2011, Deutsche Bank plans to focus on further measures related to the climate change challenge, an extension of its range of sustainability-oriented products, a continued reduction of its carbon footprint, and a refinement of its steering tools, particularly in the area of operational environmental protection.[277]

Mechanisms for non-compliance: No information found.

4.6 DRESDNER BANK

Importance of bioenergy for the bank: Dresdner Bank sees renewable energy as an important market. In 2004 it founded its Renewable Energy Competence Centre to bundle the bank's existing expertise in the field of renewable energy investments and lending criteria. In particular, Dresdner has developed specific expertise and financial involvement in on-shore wind energy, solar power and biomass.[278]

Acknowledgement of responsibility: According to Dresdner Bank, a systematic form of sustainability management improves the risk management by the bank. [279]

Commitment to standards: Dresdner Bank is a member of the World Business Council for Sustainable Development and a signatory of the UNEP FI Statement and the Equator Principles.

Development of credit policies: Dresdner Bank is in the process of developing a systematic and preventive approach of ecologic, political, ethical and social aspects of its financing decisions. This approach is embedded in the *Allianz Climate Change Strategy* of its parent company Allianz.[16]

Credit policy on bioenergy: The *Allianz Climate Change Strategy* does not make explicit references to bioenergy. It only states in general that Dresdner Bank has to "define clear risk requirements for clients regarding carbon risk reduction and market strategies (e.g. by discussing impacts on rating with clients)."[281]

4.7 EULER HERMES

On behalf of the German government and together with PriceWaterhouseCoopers, Euler Hermes manages the *AuslandsGeschäftsAbsicherung der Bundesrepublik Deutschland (German Foreign Trade and Investment Promotion Scheme)*. All information mentioned below refers to this scheme.

Importance of bioenergy for the bank: The German government gives priority to the export of renewable energy technologies by German companies. Germany took the initiative for a test period in the framework of the OECD Common Approach in which the maximum term of export credits to be guaranteed is extended to 15 years (from the normal 5 to 10 years) for renewable energy projects. These efforts resulted in a strong increase of the value of German renewable energy projects covered by German export credit guarantees, from € 104 million in 2005 to € 237.6 million in 2007. Most of these are hydropower and wind projects. If bioenergy projects are involved is unclear.[282]

Acknowledgement of responsibility: The Federal Government attaches great importance to the vision of global, sustainable development. Therefore, apart from the economic effects of an export transaction in Germany (e.g. the creation or preservation of jobs or the support of small and medium-sized enterprises), environmental aspects in their wider sense, i.e. ecological, social and developmental effects an export transaction may have in the buyer country (hereinafter referred to as environmental aspects), constitute an important aspect to be assessed and evaluated when export credit cover is requested for an export transaction, in order to determine whether it is eligible for support.[283]

Commitment to standards: All projects with a repayment term of two years or longer and a value of 15 million euro or more have to be categorised and reviewed according to the OECD Common Approaches. Basis for such reviews are the World Bank Safeguard Policies and the IFC Environmental Health and Safety Guidelines, which take environmental as well as social criteria into account.

Transactions with a value below 15 million euro will be reviewed more closely with regard to their environmental effects only if they obviously involve specific environmental risks. This holds particularly true for projects in especially sensitive areas which deserve protection. Short term transactions with a value higher than the above-mentioned threshold will be screened to identify and evaluate any serious environmental effects.[284]

Development of credit policies: As Euler Hermes uses the World Bank Safeguard Policies and the IFC Environmental Health and Safety Guidelines, no separate policies are developed.[285]

Credit policy on bioenergy: Eurler Hermes does not have a special policy on social and environmental criteria for bioenergy projects.[286]

Stakeholder involvement and good governance: The Common Approaches have specific provision with regard to stakeholder exchange. In addition, World Bank Standards foresee information and consultation processes with project affected people Apart form that, there is no other policy within the German export credit system, but we carry out dialogues with NGOs on individual projects (none of them were out of the bioenergy sector) as well as on a regular basis on sector topics. Furthermore, experts of German CSOs participate in the inter ministerial committee as the decision making body of the Federal Export Credit Guarantees. [287]

Mechanisms for evaluating and monitoring: In case the support is given with conditions, Euler Hermes will monitor supported projects. Such monitoring would include regular written reports and sometimes site visits. [288]

Mechanisms for non-compliance: No information found.

4.8 HSH NORDBANK

Importance of bioenergy for the bank: In 2007, HSH Nordbank has lead arranged over US$ 3.0 billion of project finance in renewable energy. The bank claims to be one of the world's leading financers in the renewable energy sector, especially in Germany and the United States. Its clients include developers of energy generating projects, operators of energy producing projects and manufacturers, suppliers and utilities. Within its energy portfolio, HSH Nordbank has a clear focus on wind energy (59%) and solar energy (12%). Other renewables, which include biomass, geothermal and hydro energy, account for 4% of the portfolio.[289]

Acknowledgement of responsibility: No information found.

Commitment to standards: HSH Nordbank is a signatory of the UNEP FI Statement.

Development of credit policies: No information found.

4.9 HYPOVEREINSBANK (HVB)

Importance of bioenergy for the bank: HypoVereinsbank claims to be a pioneer in financing renewable energy, especially wind energy but also solar energy, biomass and biogas. Its expertise in this field has been consolidated recently in a competence structure. At the end of 2006, HVB had a loan portfolio outstanding to producers of renewable energy with a total of around € 3.6 billion.[290]

However, when asked specifically on the importance of bioenergy financing for the bank, a representative of HVB states: "In general we can say that we had only a very small handful of costumers in this sector. Our engagement in this sector is very small, due to the uncertain political, economical and sustainable framework."[291]

Acknowledgement of responsibility: Already in 2000 HypoVereinsbank pledged to harmonise its economic success with ecological and social standards, which were defined in its Environmental Policy. The bank aims to achieve these goals among others by environment risk checks for loans: "The Unicredit Group also places considerable emphasis on preventing so-called "indirect" environmental impacts caused by the actions of outside entities whose actions we can influence through targeted decisions in the area of purchasing and loan approval policies, and in the innovation of services and determination of strategic action plans."[292]

Commitment to standards: HypoVereinsbank and its parent company, Unicredit (Italy) are signatories of the Equator Principles, the UNEP FI Statement and the UN Global Compact. Already in 1998, HVB decided to adopt the strict World Bank environmental and social standards as a minimum requirement for all project loans. The World Bank standards are normally also applicable for foreign trade loans, even if they are harder to enforce and supervise in this instance. [293]

Development of credit policies: HVB has set up a competence centre tasked with applying the Equator Principles and World Bank standards, consisting of employees from the divisions involved and the Sustainability Management department. Among other things, the centre is responsible for organising training events, informing management and the entire workforce about latest developments and developing the necessary analysis tools and implementation manuals. The competence centre receives expert support from qualified trainers.[294]

Credit policy on bioenergy: HVB has no specific credit policy for financing the bioenergy sector, because it is up to now a very small sector. In case of credit requests from this sector, HVB is using the World Bank standards and the Equator Principles as minimum standards. And HVB is following the discussions regarding sustainable standards, e.g. the RSPO (Roundtable on Sustainable Palm Oil). [295]

Stakeholder involvement and good governance: Stakeholder consultation and good governance is obligatory for the credit decisions of HVB.[296]

Mechanisms for evaluating and monitoring: In project finance HVB is using independent environmental and/or social experts for the monitoring and reporting.[297]

Mechanisms for non-compliance: In case that these issues and the obligations concerning the financing are not fulfilled through the borrower HVB can withdraw the credit. [298]

4.10 KFW BANKENGRUPPE

KfW Bankengruppe is a public law institution which gives impulses for the economy, society and ecology in Germany, Europe and the world over. KfW Bankengruppe is owned by the federal government (80%) and the Länder (20%). It operates under five different brand names:

- KfW Mittelstandsbank
- KfW Förderbank
- KfW IPEX Bank
- KfW Entwicklungsbank
- Deutsche Investitions- und Entwicklungsgesellschaft (DEG)

The information below summarizes the relevant data for the KfW Bankengruppe as a whole.

Importance of bioenergy for the bank: KfW IPEX-Bank claims to have very limited experience in fi-

nancing biofuel projects. The bank says it has financed one project in Germany and two projects in the United States.[299]

DEG (together with the Dutch Rabobank) in March 2001 provided US$ 24 million investment loans to Grupo André Maggi (see paragraph 3.5) to finance the construction of five soybean storage silo's in Mato Grosso.[300] This financing falls outside the period researched in this report (past five years).

In September 2007, DEG announced it is currently pursuing biodiesel projects.[301] This has not resulted in concrete financings yet.

Acknowledgement of responsibility: KfW Bankengruppe is well aware of its special social responsibility, from which it draws consequences for sustained action. For KfW sustainability means using available resources in a way that ensures the basis of life and the quality of life of future generations. For this reason all projects are examined for environmental and social aspects.[302]

Commitment to standards: KfW IPEX-Bank is a signatory of the UNEP FI Statement and of the Equator Principles.

Development of credit policies: Environmental and social impacts for all projects (co-) financed by KfW Bankengruppe in the area of international project and export finance. The Sustainability Guideline of KfW IPEX Bank stipulates that projects must be at least equal to the corresponding material standards of the World Bank Group, set out in the so-called Environmental, Health and Safety Guidelines, and the Performance Standards of the World Bank subsidiary IFC. Standards of European Union environmental legislation may also be applied or German environmental standards may also be applied. Where relevant, KfW IPEX-Bank may also consider the results of international initiatives such as the World Commission on Dams.

Any permanent or temporary deviations from these regulations will need to be justified. In case of a temporary deviation the client will have to give credible evidence of how the target standard will be met. As the case may be KfW IPEX-Bank will make approval of the project dependent upon acceptance of the justification.[303]

DEG has formulated *Environmental and Social Standards* and *Guidelines on the Social Compatibility*, which set broad social and environmental standards for all financing decisions. These two sets of standards demand compliance to the Environmental and Social Policies and Guidelines of the World Bank Group as well as to the Conventions of the International Labour Organisation (ILO).[304]

Credit policy on bioenergy: The KfW Bankengruppe has no specific policy on bioenergy itself, but will apply policies of the World bank in this field. However, in June 2008 KfW Entwicklungsbank published a position paper on the relationship between agrofuels and development. The bank comes to four conclusions:[305]

- Agrofuels create many dangers, but they can also be seen as a chance, when tied to tight sustainability criteria;
- Minimum criteria are a clearly positive balance on climate change, no disturbance of tropical forests, clear development incentives, no deterioration of the food security and respect for the ILO core labour standards;
- To ensure this a political process (certification) is needed, which is transparent, has a broad participation and is developing mandatory criteria;
- But even when tied to tight sustainability criteria, agrofuels can only be treated as a transitional solution in energy politics which can replace fossil fuels only to a limited (although not unimportant) extent.

The position paper can not (yet) be seen as a credit policy, but it can be seen as a step in a process in which KfW Bankengruppe is developing criteria on the issue.

Stakeholder involvement and good governance: The client must establish a procedure for the duration of the project (preparation and operation) under which it receives and addresses complaints submitted by employees and the affected population. Cases and results of the procedure must be documented and are part of the reporting. [306]

Mechanisms for evaluating and monitoring: Financing agreements for environmentally and socially relevant projects must stipulate the obligation to monitor and report the implementation of the mitigation measures. The client or KfW IPEX-Bank commissions an independent expert to perform the monitoring or assess the client's own monitoring. The overall monitoring is also conducted in close cooperation with the Central Sustainability Unit of KfW Bankengruppe and contracted as a service of this unit where appropriate.

If any unusual adverse environmental or social impacts occur in project financings KfW IPEX-Bank will use its influence as far as possible to help overcome the problem and to contain any damage already occurred. [307]

Mechanisms for non-compliance: KfW IPEX-Bank makes its readiness to finance a project contingent on the fulfilment of environmentally and socially relevant covenants.[308] It is not clear what will happen if the lender defaults on one or more covenants.

4.11 LANDESBANK BADEN-WÜRTTEMBERG

Importance of bioenergy for the bank: Landesbank Baden-Württemberg (LBBW) sees renewable energy as an important growth area. The bank is systemati-

cally addressing and developing investment funds designed around the issue of renewable energies. In June 2006 LBBW also issued a structured bond, which is based upon a Biofuels index.

In the field of project finance, 56% of the project finance arranged by LBBW in the energy sector is considered sustainable (wind power, biomass, and solar).The bank's equity division is also developing new markets and attracting new customers by building and expanding its analysis and industry expertise concerning renewable energy companies. In 2006 LBBW was a leader in Germany in assisting renewable energy companies with their initial public offerings. But none of these was active in bioenergy.[309]

Acknowledgement of responsibility: LBBW's sustainability policy is being developed step-by-step on the foundation of its environmental policy, which has been in place for many years now. As part of this sustainability policy, LBBW is implementing six measures in its banking products. including: "taking into consideration sustainability issues in analyzing risks in our lending business". [310]

Commitment to standards: Landesbank Baden-Württemberg (LBBW) is a signatory of the UNEP FI Statement.

Development of credit policies: An evaluation of environmental risks is performed for loans to companies in Germany starting with an approved aggregated total exposure of € 500,000. The audit is conducted based on a customer survey. The results and any justified doubts must be evaluated and documented. LBBW is still in the process of defining sustainability standards for international financing.[311]

4.12 LANDESSPARKASSE ZU OLDENBURG

Importance of bioenergy for the bank: No information found.

Acknowledgement of responsibility: Landessparkasse zu Oldenburg does not acknowledge its responsibility to minimize the negative social and environmental impacts of its financing activities.[312]

4.13 MERCEDES-BENZ BANK

Importance of bioenergy for the bank: No information found.

Acknowledgement of responsibility: Mercedes-Benz Bank does not acknowledge its responsibility to minimize the negative social and environmental impacts of its financing activities.[313]

4.14 NORDDEUTSCHE LANDESBANK

Importance of bioenergy for the bank: With a total commitment of € 3 billion, Norddeutsche Landesbank (NordLB) claims to be one of the leading financers in the area of renewable energies in Germany, Europe and the USA. Most of this amount is used fro the financing of wind farms, but the bank also aims to expand in the financing of biofuels, which it sees as a high-yield niche market.[314]

NordLB's subsidiary Bremer Landesbank presents itself as a specialist in financing renewable energy. Although its experience is mainly based on financing wind energy, it also mentions solar energy and biogas.[315]

Acknowledgement of responsibility: NordLB has integrated sustainability into its corporate mission statement as one of its central values. Its system of sustainability management, installed in 2006, aims at integrating ecological and social requirements into the activities of all the divisions in the group. NordLB therefore take aspects relating to sustainability into account in its risk management system. [316]

Commitment to standards: No information found.

Development of credit policies: No information found.

4.15 SAL. OPENHEIM & CIE.

Importance of bioenergy for the bank: No information found.

Acknowledgement of responsibility: Sal. Openheim & Cie. and its subsidiary BHF-Bank do not acknowledge their responsibility to minimize the negative social and environmental impacts of its financing activities.[317]

4.16 WESTLB

Importance of bioenergy for the bank: WestLB is one of the most important financiers of bioenergy in the world, especially of ethanol plants in the United States. At the end of 2007 WestLB had successfully syndicated US$ 2 billion and had been mandated on over US$ 2 billion of ethanol financings.[318]

WestLB now plans to expand its financing of biofuels in other countries. "In view of the huge climate protection potential of biofuels, the demand for financing solutions will grow sharply also in the biodiesel market." [319] Especially in Brazil the bank sees many opportunities for German companies to invest in production of ethanol and biodiesel.[320]

Acknowledgement of responsibility: For WestLB, sustainability management means minimising ecological

and social risks and, through this, seizing economic opportunities and ensuring the bank's continued growth. At the same time, the bank wantd to be a role model and make a contribution to the economically stable, ecologically responsible and socially fair development of our society. These objectives have become integral elements of WestLB's corporate strategy.[321]

Commitment to standards: WestLB is a signatory of the UNEP FI Statement, the UN Global Compact and the Equator Principles. [322]

Development of credit policies: WestLB has almost finished the development of an umbrella sustainability policy and aims to finish "sector-specific concepts" before the end of 2009. Roll-out of the sustainability policy and the development of management processes have to take place in 2009. WestLB is also reviewing options for a product-related sustainability management system. In the field of project finance, WestLB has already implemented the Equator Principles. The development of a concept for the integration of NGO expertise in project finance should be finished in 2008. Training of employees is also to be intensified.[323]

Credit policy on bioenergy: With regard to biodiesel, WestLB notes that "some ecological and social conflicts have already arisen, as the required plantations may pose a hazard to primeval forests and savannas or affect the production of food. In order to serve our clients in this market reliably and in accordance with sustainability aspects, we participate, among other things, in the international Roundtable on Sustainable Palm Oil (RSPO) and take suggestions from the World Wide Fund for Nature (WWF) into account." [324]

WestLB is working at present with several NGO representatives on the banks sustainability strategy. Within this a profound bioenergy policy is elaborated.[325]

Stakeholder involvement and good governance: WestLB aims to integrate social and governance aspects in its sustainability management system and its sustainability policies in the course of 2009. [326]

Mechanisms for evaluating and monitoring: WestLB states itself: "When it comes to anchoring sustainable project evaluation in the business processes, WestLB is probably best in class." [327] No information is found on monitoring clients after financing has been provided.

Mechanisms for non-compliance: No information found.

4.17 SUMMARY

Table 4 provides a summary of the findings on the credit policies of German financial institutions which are involved in the financing of bioenergy companies.

As the table shows, 8 out of 15 financial institutions found to be involved in financing bioenergy companies, indicate that the financing of the renewable energy sector (including the bioenergy sector) is an important business segment to them. But at the same time, 5 out of 15 financial institutions do not even acknowledge publicly that they have a shared responsibility for the environmental and social impacts of the activities they finance. Of these 5 financial institutions, 4 do not see renewable energy as an important sector and were found to be involved in one or two bioenergy companies. But HSH Nordbank sees the renewable energy sector as very important and was found to be involved in the financing of 5 bioenergy companies. This makes the absence of its responsibility acknowledgement worrying.

But clearly the acknowledgement by a financial institution that it shares a responsibility for the environmental and social impacts of the activities it finances, is only the first step. This acknowledgement needs to be translated in concrete actions: development of standards, screening of clients on social and environmental impacts and mechanism to ensure that clients will (continue to) meet the standards.

A first step in this process can be the commitment to existing international standards. 10 out of 15 banks have committed to one or more standards. Of these, the broad non-specific standards as the UNEP FI Statement, the UN Global Compact and the report of the World Business Council for Sustainable Development are mostly useful as reaffirmation that the financial institution takes sustainability issues seriously.

More detailed, and therefore more useful for screening bank clients on social and environmental issues, are the World Bank Standards and the standards derived from these (OECD Common Approach and the Equator Principles). 6 financial institutions out of 15 have committed to one or more of these.

Just committing to one of these standards does not imply that they are applied on all financial services, however. The World Bank standards are developed by a multilateral bank, which has a different position than commercial banks. Moreover, the Equator Principles only apply to project finance and the OECD Common Approach only to export credits. It is therefore desirable that financial institutions develop their own credit policies, tailored to their circumstances, financial services and organisation. 2 financial institutions claim to have done that, while 4 indicate to be in the process. Two others apply the World Bank standards on all transactions.

As the bioenergy sector has specific social and environmental characteristics, it would also be recommendable if financial institutions develop a specific screening policy for this sector. None of the 15 financial institutions has done so yet, although WestLB indicates to be developing a bioenergy policy. KfW Bankengruppe has recently published a position paper on agrofuels, which can be seen as an important step in the development of a credit policy on the topic.

TABLE 4: EVALUATION OF BIOENERGY POLICIES OF GERMAN BANKS

Bank	Bioenergy clients Total	Importance for the bank	Acknowledging responsibility	Standards *	Credit policies	Bioenergy policy	Stakeholder involvement	Evaluation and monitoring	Non-compliance
Bayerische Landesbank	3	Low	Yes	UNEP WB	Yes	-	-	-	-
Berenberg Bank	1	Low	No	No	-	-	-	-	-
Commerzbank	3	High	Yes	UNEP GC CA	-	-	-	-	-
Deutsche Bank	11	High	Yes	UNEP WB GM GC	Yes	-	-	Yes	-
Dresdner Bank	5	High	Yes	UNEP WBC EP	Under dev.	-	-	-	-
Euler Hermes	1	High	Yes	CA	Follow WB	-	Yes	Yes	-
HSH Nordbank	5	High	No	UNEP	-	-	-	-	-
HypoVereinsbank	3	Low	Yes	UNEP GC EP WB	Under dev.	-	Yes	Yes	Withdrawal
KfW	3	Low	Yes	UNEP EP WB	Follow WB	Under dev.	Yes	Yes	-
Landesbank Baden-Würtemberg	2	High	Yes	UNEP	Under dev.	-	-	-	-
Landessparkasse zu Oldenburg	1	Low	No	No	-	-	-	-	-
Mercedes-Benz Bank	1	Low	No	No	-	-	-	-	-
Norddeutsche Landesbank	3	High	Yes	No	-	-	-	-	-
Sal.Openheim & Cie.	2	No	No	No	-	-	-	-	-
WestLB	28	High	Yes	UNEP GC EP	Under dev.	Under dev.	Under dev.	-	-

** Standards:*
- *UNEP= UNEP FI Statement*
- *GC = UN Global Compact*
- *EP = Equator Principles*
- *WBC = World Business Council for Sustainable Development*
- *WB = World Bank Standards*
- *GM = OECD Guidelines for Multinational Enterprises*
- *CA = OECD Recommendation on Common Approaches*

Chapter 5 - Recommendations to the German government

1.1 INTRODUCTION

After a few years in which the development of bioenergy was hailed in a one-sided way as the perfect alternative energy source capable to solve climate change problems, the discussion has become more balanced in the recent year. The possible negative social and environmental consequences of a strong growth of bioenergy production have gained more recognition, also from the German government.[328]

Governments can take policy initiatives in a broad range of policy fields to try to prevent and minimise the undue social and environmental consequences of a further growth in global bioenergy production. As this report deals with the financing of bioenergy projects by German and multilateral banks we will concentrate at the policy options with regard to the financing of bioenergy which the German government could take. The options available will be discussed in the following paragraphs.

1.2 MULTILATERAL BANKS

Germany is an influential member of all four multilateral bank groups discussed in Chapter 1:

- African Development Bank: German voting share 4.065%;
- Asian Development Bank: German voting share 3.752%;
- Inter-American Development Bank: German voting share 1.896%;
- World Bank: German voting share in IBRD 4.49% and in IFC 5.36%.

All four multilaterals are stepping up their efforts in helping member countries to develop bioenergy policies and by financing small-scale bioenergy initiatives. Some banks, notably the IFC and the IADB, are also financing large-scale biofuel producers which seem to have sufficient other sources of finance available.

Germany can use its influence to press all four development banks to further develop their social and environmental criteria for financing bioenergy projects, and rethink their role as development banks in this sector. As developments in this sector are going very fast and many production country government as well as the multilateral development banks themselves lack sufficient insight in the conditions under which bioenergy could be beneficial to development and the environment, a joint initiative of all development banks could be an option. Consistent, transparent standard setting, allowing full participation of affected communities and other interest groups, would be much needed.

A close collaboration between the four multilaterals and the *Roundtable on Sustainable Biofuels* in a truly global multi-stakeholder process, could therefore be a useful option. In this process, the recent investments by the four multilaterals in bioenergy projects could be assessed against the draft *Global principles and criteria for sustainable biofuels production*. Germany could use its influence in the four multilaterals to ascertain that lessons will be learned from such an assessment for future financings.

1.3 PRIVATE BANKS

As discussed in paragraph 4.17, no less than 8 out of 15 German financial institutions found to be involved in financing bioenergy companies, indicate that the financing of the renewable energy sector (including the bioenergy sector) is an important business segment to them. But at the same time, 5 out of 15 financial institutions do not even acknowledge publicly that they have a shared responsibility for the environmental and social impacts of the activities they finance.

The German government could address this issue by bringing the banks involved together and share insights on the possible negative social and environmental consequences of bioenergy projects, as well as on the responsibility of investors to avoid such consequences. From this acknowledgement, a joint project could develop in which German banks aim to amend the draft *Global principles and criteria for sustainable biofuels production* of the *Roundtable on Sustainable Biofuels* into a concrete credit policy applicable to all their financing activities in this sector. WestLB and KfW Bankengruppe have taken first steps into this direction, and the German government could work together with these forerunners to convince the financial sector as a whole.

In parallel, this project could develop mechanisms for (joint) verification, to ascertain if the bioenergy companies which are being financed do meet (and continue to meet) the social and environmental criteria set by the banks. This verification should be complemented by an independent compliant mechanism for affected people, like the ones established by the multilateral banks. A precondition for such a verification and complaint mechanism is increased transparency by the German banks with regard to the bioenergy companies they have been financing.

1.4 BANKING REGULATION

The German government initiative described in paragraph 5.3, could be taken in the framework of German government initiatives to promote (voluntary) *Corporate Social Responsibility* initiatives in the German financial sector. However, the German government could also explore possibilities to sharpen and clarify existing German financial sector regulations. By providing additional guidance how existing regulations need to be interpreted to avoid undue sustainability risks, the financial sector could be shown how to take its responsibility towards society. The following provisions are most relevant:

Risk management: The Solvency Ordinance (*Solvabilitätsverordnung*), which came into force in January 2007, contains detailed provisions on the capital requirements for credit institutions, groups of institutions and financial holding groups. According to the Solvency Ordinance, there are three main types of risks a financial institution is confronted with:[329]

- credit risks: risks which are related to specific clients and products;
- market risks: risks which are related to the general developments on the financial markets;
- operational risks: risks which are related to the operation of the financial institutions itself.

All these three groups of financial risks do have a relationship with the sustainability risks which are evident in the bioenergy sector, in the form of default or reputation risks. The Solvency Ordinance demands from German banks to take appropriate measures to manage and monitor different risks. This would mean: research how sustainability issues affect credit, concentration, market and reputational risks, develop a policy to deal with these risks and apply this policy. The regulation on the Minimum Requirements for Risk Management *(Mindestanforderungen an das Risikomanagement)* could be amended by the *Bundesanstalt für Finanzdienstleistungsaufsicht (BaFin)* to make these consequences more explicit.

Millionenkredite: According to the Großkredit- und Millionenkreditverordnung of December 2006, large exposures and Millionenkredite (loans to one borrower totalling 1.5 million euros or more) have to be reported on a quarterly basis by German banks to the two supervisors, BaFin and the Bundesbank. The Bundesbank keeps a register for these Millionenkredite, which is used as a source of information on the risk management policies followed by the banks. The bank reports on Millionenkredite could therefore be complemented by a bank statement on how the sustainability risks related to the investment are assessed.

Financial analysis: according to the Financial Analysis Ordinance (*Finanzanalyseverordnung*) financial analyses of securities should be produced and presented with a proper degree of expertise. Implicitly this demands knowledge of the relationship between sustainability issues and the financial performance and risks of specific securities. This type of knowledge could be demanded more explicitly for financial analysts.

Securities prospectus: The Securities Prospectus Act (Wertpapierprospektgesetz) and the Act implementing the Prospectus Directive (Prospektrichtlinie-Umsetzungsgesetz) came into force in July 2005. They deal with the prospectus a company must publish when it intends to offer its securities (shares, bonds, or others) on a public market in Germany. The two laws stipulate that investors must have comprehensive, reliable information on the issuer and the security in question, in order to be able to make proper investment decisions. Such information must be provided in the prospectus. A lack of sufficient information means that the issuer could face liability claims and legal proceedings at a later date.

Implicitly this means that German bioenergy producers, as well as the investment banks helping them to issue shares and bonds, should provide information on sustainability issues which could have an influence on the risks related to an investment in the company. This could include information on the exact sourcing of their feedstocks and agreements with suppliers on social and environmental issues.

Know Your Customer: According to the Money-Laundering Law (*Geldwäschegesetz*), financial institutions have to ensure a risk-oriented basis for transparency in business relationships and financial transactions. In addition to establishing the identity of the customer and of any people other than the customer who may be economic beneficiaries, these also include the general monitoring of the ongoing business relationship – the so-called *Know Your Customer* principle. Such controls enable flows of funds to be tracked and plausibility to be checked.

Sustainability issues, such as sourcing feedstocks from areas were illegal logging takes place or labour laws are disrespected, could lead to illegal proceeds. Therefore the monitoring by the bank of the ongoing business relationship with clients can certainly relate to sustainability issues as well.

Appendix 1 - References

1 *Website African Development Bank (www.afdb.org), Viewed in September 2008.*

2 *Statement Of Voting Power As At 30 June 2008, African Development Bank, Tunis, 30 June 2008.*

3 *Clean Energy Investment Framework for Africa - Role of the African Development Bank Group, African Development Bank, Tunis, 20 February 2008; Website ADB FINESSE Africa (finesse-africa.org), Viewed in September 2008.*

4 *Clean Energy Investment Framework for Africa - Role of the African Development Bank Group, African Development Bank, Tunis, 20 February 2008.*

5 *Clean Energy Investment Framework for Africa - Role of the African Development Bank Group, African Development Bank, Tunis, 20 February 2008.*

6 *Website Bank Information Center (www.bicusa.org), Viewed in September 2008.*

7 *Clean Energy Investment Framework for Africa - Role of the African Development Bank Group, African Development Bank, Tunis, 20 February 2008.*

8 *ADB calls for alternative fuel-producing crops, Xinhua News Agency, Lusaka, 5 August 2008.*

9 *Website African Development Bank (www.afdb.org), Viewed in September 2008.*

10 *Website African Development Bank (www.afdb.org), Viewed in September 2008.*

11 *Website Asian Development Bank (www.adb.org), Viewed in September 2008.*

12 *Website Asian Development Bank (www.adb.org), Viewed in September 2008.*

13 *Environmental and Social Benefits to Steer Bioenergy Development in Greater Mekong Subregion, Press release ADB/FAO/IFAD, Bangkok, 11 June 2007; Biofuel and Rural Renewable Energy Initiative in the Greater Mekong Subregion, ADB, Manila, January 2008.*

14 *Website Asian Development Bank (www.adb.org), Viewed in September 2008.*

15 *ADB to Promote Clean Energy through Private Equity Funds, Press release Asian Development Bank, Manila, 17 April 2008.*

16 *Website Operations Manual ADB (http://lnadbg4.adb.org/dir0035p.nsf?Open), Viewed in September 2007.*

17 *Environmental and Social Benefits to Steer Bioenergy Development in Greater Mekong Subregion, Press release ADB/FAO/IFAD, Bangkok, 11 June 2007.*

18 *Website ADB Operations Evaluation Department (www.adb.org/Evaluation/), Viewed in September 2008.*

19 *Website ADB Compliance Review Panel (www.compliance.adb.org), Viewed in September 2008; Website NGO Forum on ADB (www.forum-adb.org), Viewed in September 2008.*

20 *Website European Investment Bank (www.eib.org), Viewed in November 2008.*

21 *Website European Investment Bank (www.eib.org), Viewed in November 2008; Website European Investment Fund (www.eif.org), Viewed in November 2008.*

22 *EIB Board of Governors' meeting - Focus on a reinforced EIB contribution for clean energy, Press release European Investment Bank, Luxembourg, 5 June 2007.*

23 *Annual report 2007, European Investment Bank, Luxembourg, May 2008; Website European Investment Bank (www.eib.org), Viewed in November 2008*

24 *Annual report 2007, European Investment Bank, Luxembourg, May 2008.*

25 *Website European Investment Bank (www.eib.org), Viewed in November 2008.*

26 *EUR 25 million for Renewable Energy Projects in North-West Europe, Press release European Investment Bank, Luxembourg, 28 September 2007; EUR 25 million EIB financing to support renewable energy projects in Central and South-Eastern Europe, Press release European Investment Bank, Luxembourg, 28 September 2007.*

27 *Website European Investment Bank (www.eib.org), Viewed in November 2008; Website Vivergo Fuels (www.vivergofuels.com), Viewed in November 2008; Website British Sugar (www.britishsugar.co.uk), Viewed in November 2008.*

28 *Website European Investment Bank (www.eib.org), Viewed in November 2008.*

29 *Website European Investment Bank (www.eib.org), Viewed in November 2008.*

30 *Environmental and Social Practices Handbook, European Investment Bank, Luxembourg, September 2007.*

31 *Website European Investment Bank (www.eib.org), Viewed in November 2008.*

32 *Website European Investment Bank (www.eib.org), Viewed in November 2008.*

33 *Website European Investment Bank (www.eib.org), Viewed in November 2008.*

34 *Website European Ombudsman (www.euro-ombudsman.eu.int), Viewed in November 2008.*

35 *Website Inter-American Development Bank (www.iadb.org), Viewed in September 2008.*

36 *Website Inter-American Development Bank (www.iadb.org), Viewed in September 2008.*

37 *Spain and IDB sign letters of intent for $20 million for Sustainable Energy and Climate Change Initiative and new Spanish Fund for Social Entrepreneurship, Press Release IADB, Washington, 8 April 2008.*

38 *Website SECCI (www.iadb.org/secci/index.cfm?language=English), Viewed in June 2008.*

39 *Website SECCI (www.iadb.org/secci/index.cfm?language=English), Viewed in June 2008.*

40 *Website SECCI (www.iadb.org/secci/index.cfm?language=English), Viewed in June 2008.*

41 *IDB targets $3 billion in Private Sector Biofuel Projects Press release Inter-American Development Bank, Washington, 2 April 2007.*

42 *Website Inter-American Development Bank (www.iadb.org), Viewed in September 2008.*

43 *Website SECCI (www.iadb.org/secci/index.cfm?language=English), Viewed in June 2008.*

44 *IDB approves US$830,000 grant to promote technological development for biofuels in Colombia, Press release Inter-American Development Bank, Washington, 16 January 2008; IDB approves US$1.5 million grant for sustainable energy and biofuel strategies in Colombia, Press release Inter-American Development Bank, Washington, 6 February 2008.*

45 *Website SECCI (www.iadb.org/secci/index.cfm?language=English), Viewed in June 2008.*

46 *IDB Sustainable Energy and Climate Change Initiative announced operation to support biofuels in Guatemala, Press release Inter-American Development Bank, Washington, 15 January 2008.*

47 *IDB approves US$925,000 in grants to support Guyana´s bioenergy development plans, Press release Inter-American Development Bank, Washington, 4 April 2008.*

48 *IDB approves $350,000 grant to Honduras for energy efficiency and biofuel programs, Press release Inter-American Development Bank, Washington, 10 December 2007.*

49 *Website SECCI (www.iadb.org/secci/index.cfm?language=English), Viewed in June 2008.*

50 *IDB's Sustainable Energy and Climate Change Initiative (SECCI) backs US-Brazil efforts to promote biofuels in Central America and the Caribbean, Press release Inter-American Development Bank, Washington, 11 January 2008.*

51 *IDB lends $269 million for three Brazilian ethanol plants, Press Release Inter-American Development Bank, Washington, 23 July 2008; Fact Sheet: The Inter-American Development Bank and biofuels, Inter-American Development Bank, Washington, July 2008.*

52 *Environment and Safeguards Compliance Policy, Inter-American Development Bank, Washington, March 2006; Website Inter-American Development Bank (www.iadb.org), Viewed in September 2008*

53 *Inter-American Development Bank Announces Partnership to Develop Sustainable Biofuels, Press Release Inter-American Development Bank, Washington, 5 April 2008.*

54 *Fact Sheet: The Inter-American Development Bank and biofuels, Inter-American Development Bank, Washington, July 2008.*

55 *Website IADB (www.iadb.org), Viewed in September 2008.*

56 *Website IADB (www.iadb.org), Viewed in September 2008.*

57 *Website World Bank (www.worldbank.org), Viewed in September 2008.*

58 *Website World Bank (www.worldbank.org), Viewed in September 2008.*

59 *Website IFC (www.ifc.org), Viewed in September 2008.*

60 *Website IFC (www.ifc.org), Viewed in September 2008.*

61 *Website IFC (www.ifc.org), Viewed in September 2008.*

62 *IFC to Finance a Greenfield Sugar and Ethanol Plant in Brazil's São Paulo State, Press release International Finance Corporation, Washington, 8 March 2007.*

63 *Website IFC (www.ifc.org), Viewed in September 2008.*

64 *Website IFC (www.ifc.org), Viewed in September 2008.*

65 *Website IFC (www.ifc.org), Viewed in September 2008.*

66 *Website IFC (www.ifc.org), Viewed in September 2008.*

67 *Website World Bank (web.worldbank.org), Viewed in June 2008.*

68 *Website World Bank (web.worldbank.org), Viewed in June 2008.*

69 *Performance Standards on Social and Environmental Sustainability, International Finance Corporation, Washington, 30 April 2006.*

70 *Performance Standards on Social and Environmental Sustainability, International Finance Corporation, Washington, 30 April 2006.*

71 *International Finance Corporation's Guidance Notes: Performance Standards on Social & Environmental Sustainability, International Finance Corporation, Washington, 31 July 2007.*

72 *Website International Finance Corporation (www.ifc.org), Viewed in June 2008.*

73 *Website International Finance Corporation (www.ifc.org), Viewed in June 2008.*

74 *Environmental, Health, and Safety Guidelines for Plantation Crop Production, International Finance Corporation, Washington, 30 April 2007.*

75 *Environmental, Health, and Safety Guidelines for Annual Crop Production, International Finance Corporation, Washington, 30 April 2007.*

76 *Environmental, Health, and Safety Guidelines for Oleochemicals Manufacturing, International Finance Corporation, Washington, 30 April 2007.*

77 *Biofuels: The Promise and the Risks - Agriculture For Development Policy Brief, World Bank, Washington, October 2007; Overview of International Financing Institutions Working on Bio-fuels: the World Bank and Inter-American Development Bank, Presentation by Judy Siegel (President of the Energy and Security Group) at the International consultation on pro-poor Jatropha development, IFAD, Rome, 10-11 April 2008.*

78 *A Note on Rising Food Prices - Policy Research Working Paper 4682, Donald Mitchell, World Bank, Washington, July 2008.*

79 *Overview of International Financing Institutions Working on Bio-fuels: the World Bank and Inter-American Development Bank, Presentation by Judy Siegel (President of the Energy and Security Group) at the International consultation on pro-poor Jatropha development, IFAD, Rome, 10-11 April 2008.*

80 *Overview of International Financing Institutions Working on Bio-fuels: the World Bank and Inter-American Development Bank, Presentation by Judy Siegel (President of the Energy and Security Group) at the International consultation on pro-poor Jatropha development, IFAD, Rome, 10-11 April 2008.*

81 *Biofuels: The Promise and the Risks - Agriculture For Development Policy Brief, World Bank, Washington, October 2007.*

82 *Website Bank Information Center (www.bicusa.org), Viewed in September 2008.*

83 *Website Compliance Advisor Ombudsman (www.cao-ombudsman.org), Viewed in June 2008.*

84 *Website Compliance Advisor Ombudsman (www.cao-ombudsman.org), Viewed in June 2008.*

85 *Leading Banks Announce Adoption of Equator Principles, Press release, Washington, 4 June 2003.*

86 *Website Equator Principles (www.equator-principles.com), Viewed in June 2008.*

87 *Financial Institutions Announce Revision of Equator Principles - Underscoring the Global Application of Environmental and Social Risk Management, Press release Equator Principles Financial Institutions, Washington, 6 July 2006.*

88 *The "Equator Principles" - A financial industry benchmark for determining, assessing and managing social & environmental risk in project financing, Equator Principles Financial Institutions, Washington, July 2006.*

89 *The OECD Guidelines for Multinational Enterprises - Revision 2000, OECD, Paris, June 2000.*

90 *The OECD Guidelines for Multinational Enterprises - Revision 2000, OECD, Paris, June 2000; Website OECD (www.oecd.org), Viewed in December 2007.*

91 *The OECD Guidelines for Multinational Enterprises, OECD, Paris, 29 June 2000; Website OECD (www.oecd.org), Viewed in June 2008.*

92 *The OECD Guidelines for Multinational Enterprises, OECD, Paris, 29 June 2000.*

93 *OECD adopts stronger environmental rules for export credits, Press release OECD, Paris, 12 June 2007.*

94 *Revised Council Recommendation On Common Approaches On The Environment And Officially Supported Export Credits (TAD/ECG(2007)9), Working Party on Export Credits and Credit Guarantees of the OECD, Paris, 12 June 2007.*

95 *Website Roundtable on Sustainable Biofuels (cgse.epfl.ch/page65660.html), Viewed in June 2008.*

96 *Global principles and criteria for sustainable biofuels production, Roundtable on Sustainable Biofuels, Lausanne, 13 August 2008.*

97 *Website Global Compact (www.unglobalcompact.org), Viewed in June 2008.*

98 *Website Global Compact (www.unglobalcompact.org), Viewed in June 2008.*

99 *Website UNEP Finance Initiative (www.unepfi.org), Viewed in June 2008.*

100 *Website UNEP Finance Initiative (www.unepfi.org), Viewed in June 2008.*

101 *Website World Business Council for Sustainable Development (www.wbcsd.org), Viewed in June 2008.*

102 *Financial sector - a project of the WBCSD, World Business Council for Sustainable Development, Johannesburg, 2 September 2002.*

103 *Abengoa Bioenergy : The Global Ethanol Company, Presentation Abengoa Bioenergy, Madrid, May 2007; Website Abengoa Bioenergy (www.abengoabioenergy.com), Viewed in May 2008*

104 *Abengoa Bioenergía closes the acquisition of Dedini Agro in Brazil and assumes the control of its operations, Press release Abengoa Bioenergy, Madrid, 26 September 2007.*

105 *Submission to the Comisión Nacional del Mercado de Valores, Abengoa, Madrid, 29 June 2006.*

106 *France - Bioethanol debt inked, Project Finance International, London, 13 April 2007; Abengoa closes bioethanol debt, Project Finance Magazine, London, 13 April 2007; Abengoa's French ethanol debut syndicated, Project Finance Magazine, London, 4 September 2007.*

107 *Abengoa closes on US ethanol, Project Finance Magazine, London, 2 August 2007.*

108 *Website Advanced BioEnergy (www.advancedbioenergy.com), Viewed in May 2008.*

109 *Senior Credit Agreement, Heartland Grain Fuels, Advanced BioEnergy, Minneapolis, 1 October 2007, Advanced Bioenergy Announces Closing Of $118 Million Financing For South Dakota Facilities, Press release Advanced BioEnergy, Minneapolis, 15 October 2007.*

110 *Website Agrenco Group (www.agrencogroup.com), Viewed in June 2008.*

111 *Agrenco muda sede e mira energia, Valor Economico, Saõ Paulo, 18 January 2008; Agrenco concludes IPO and gets market ready, Malta Independent, 4 February 2008.*

112 *Offering Circular for 64,056,486 Common Shares, Agrenco Ltd., Bermuda, 23 October 2007.*

113 *Offering Circular for 64,056,486 Common Shares, Agrenco Ltd., Bermuda, 23 October 2007.*

114 *Offering Circular for 64,056,486 Common Shares, Agrenco Ltd., Bermuda, 23 October 2007.*

115 *Offering Circular for 64,056,486 Common Shares, Agrenco Ltd., Bermuda, 23 October 2007.*

116 *Offering Circular for 64,056,486 Common Shares, Agrenco Ltd., Bermuda, 23 October 2007.*

117 *Offering Circular for 64,056,486 Common Shares, Agrenco Ltd., Bermuda, 23 October 2007.*

118 *Offering Circular for 64,056,486 Common Shares, Agrenco Ltd., Bermuda, 23 October 2007.*

119 *Project number 11344 - Grupo Andre Maggi, Summary of Project Information (SPI), International Finance Corporation, Washington, 9 May 2002; O 'rei' da soja assume o poder, Eduardo Gomes, Diário de Cuiabá, Cuiabá, 31 December 2002.*

120 *O 'rei' da soja assume o poder, Eduardo Gomes, Diário de Cuiabá, Cuiabá, 31 December 2002; Website Grupo André Maggi (www.grupomaggi.com.br), Viewed in April 2008.*

121 *Área plantada das fazendas do Grupo André Maggi pode chegar a 170 mil hectares na safra 2003/2004, Press release Grupo André Maggi, Rondonópolis, 22 January 2004; Website André Maggi (www.grupomaggi.com.br), Viewed in April 2008.*

122 *Grupo André Maggi capta US$ 230 milhões, O Valor, São Paulo, 29 January 2004; Social, Environmental and Economic Profile 2006, Grupo André Maggi, Rondonópolis, 2007.*

123 *Maggi fecha empréstimo de US$ 230 milhões, Gazeta Mercantil, São Paulo, 29 January 2004;*

Grupo André Maggi capta US$ 230 milhões, O Valor, São Paulo, 29 January 2004.

124 *Maggi obtém empréstimo sindicalizado internacional, Gazeta Mercantil, São Paulo, 13 june 2006; Operação injeta US$ 230 milhões na Amaggi, Marianna Peres, Diário de Cuiabá, Rondonópolis, 14 June 2006.*

125 *Sao Joao 24mW biogas power plant comes on stream, Giles Clark, Biofuel Review, London, 29 January 2008.*

126 *Website Archer Daniels Midland (www.admworld.com), Viewed in February 2008.*

127 *Archer Daniels Midland (ADM) strengthens investments in South America, Press release Archer-Daniels-Midland Company, Decatur, 7 April 2000.*

128 *Growing Opportunity, Presentation by Patricia A. Woertz (Chairman and CEO of ADM), CAGNY Conference, 19 February 2008.*

129 *Evolucion y Perspectivas del Complejo Oleaginoso Argentino en Relacion al de Estados Unidos y Brasil - Potencial y Limitantes, Gustavo M. López, Fundaçion Producir Conservando, Buenos Aires, November 2005; Website ADM SAO (www.admsao.com), Viewed in February 2008.*

130 *Annual Report 2007, Archer Daniels Midland Company, Decatur, September 2007.*

131 *Growing Opportunity, Presentation by Patricia A. Woertz (Chairman and CEO of ADM), CAGNY Conference, 19 February 2008.*

132 *A Quiet Giant, Craig A. Johnson, Ethanol Producer Magazine, June 2008.*

133 *Annual Report 2007, Archer Daniels Midland Company, Decatur, September 2007.*

134 *Thomson Financial database, London, 23 March 2004; Increasing size, International Financing Review, London, 26 March 2004.*

135 *Five-year money, International Financing Review, London, 5 March 2005; Thomson Financial database, London, 23 March 2005.*

136 *Prospectus Supplement September 19, 2005 (To Prospectus dated March 3, 2003) $600,000,000 Archer Daniels Midland Company 5.375% Debentures due 2035, ADM, Decatur, 19 September 2005.*

137 *Thomson Financial database, London, 23 March 2006.*

138 *Form 8-K, Archer Daniels Midland, Decatur, 22 February 2007.*

139 *Prospectus Supplement (To Prospectus dated September 22, 2006) $500,000,000 Archer Daniels Midland Company 6.45% Debentures due 2038, ADM, Decatur, 6 December 2007.*

140 *Website Bakrie Sumatera Plantations (www.bakriesumatera.com), Viewed in January 2008.*

141 *RI to get 1st biodiesel plant by 2008, The Jakarta Post, Jakarta, 19 April 2006.*

142 *Announcement to the Surbaya Stock Exchange, PT Bakrie Sumatera Plantations, Jakarta, 20 February 2006; Annual Report 2005, PT Bakrie Sumatera Plantations Tbk., Jakarta, May 2006.*

143 *Biopower investments in strong progress: Wärtsilä delivers six biopower plants to Germany, Energy & Enviro Finland, 15 June 2007.*

144 *$201m financing package in place for Clearfield biorefinery, Giles Clark, Biofuel Review, London, 12 February 2008.*

145 *$201m financing package in place for Clearfield biorefinery, Giles Clark, Biofuel Review, London, 12 February 2008; Bioenergy International closes first tolled ethanol plant, Project Finance Magazine, London, 15 February 2008.*

146 *Website Biopetrol Industries (www.biopetrol-ind.com), Viewed in June 2008.*

147 *Biopetrol successfully launches convertible bond, Press release Biopetrol Industries, Zug, 1 February 2007.*

148 *Brasbiofuel produzirá 1,5 bilhão de litros por ano, Cristina Rios, Gazeta Mercantil, São Paulo, 21 March 2007; Empresa anuncia usina de biodiesel no Paraná, Lyrian Saiki, Paraná-Online, 21 March 2007.*

149 *Brasbiofuel produzirá 1,5 bilhão de litros por ano, Cristina Rios, Gazeta Mercantil, São Paulo, 21 March 2007.*

150 *Website Brasil Ecodiesel (www.brasilecodiesel.com.br), Viewed in November 2008; Die Deutsche Bank und der brasilianische Rizinus-Flop, Norbert Suchanek, Oekosmos.de, 22 October 2008.*

151 *Entrevista: diversificar é saída para alta do preço da soja, diz Brasil Ecodiesel, Gustavo Kahil, InfoMoney, 11 June 2007.*

152 *Demonstrações Financeiras Para O Período De Três Meses Findos Em 31 De Março De 2008, Brasil Ecodiesel, Rio de Janeiro, May 2008.*

153 *Segundo Aditivo aõ Acordo de Acionistas, Brasil Ecodiesel, New York, 15 May 2008.*

154 *Website Brasil Ecodiesel (www.brasilecodiesel.com.br), Viewed in November 2008.*

155 *Material Fact, Brasil Ecodiesel, Rio de Janeiro, 14 August 2008.*

156 *Website Bunge (www.bunge.com), Viewed in May 2008.*

157 *Annual Report 2006, Bunge, White Plains, April 2007.*

158 *Website Bunge (www.bunge.com), Viewed in May 2008.*

159 *Bunge to Acquire Santa Juliana Sugarcane Mill in Brazil, Press release Bunge, White Plains, 17 September 2007.*

160 *Bunge To Invest BRL1 Bln In 3 Brazil Ethanol Mills - Report, Tony Danby, Dow Jones Newswires, São Paulo, 30 July 2008.*

161 *Evolucion y Perspectivas del Complejo Oleaginoso Argentino en Relacion al de Estados Unidos y Brasil - Potencial y Limitantes, Gustavo M. López, Fundaçion Producir Conservando, Buenos Aires, November 2005.*

162 *Website Bunge (www.bunge.com), Viewed in February 2008.*

163 *Website Bunge (www.bunge.com), Viewed in May 2008.*

164 *Bunge to Invest in Biodiesel Plants in Spain, Press release Bunge, Barcelona, 2 October 2006.*

165 *Terminal 6 se lanza a la exportación de biodiesel, On 24, Buenos Aires, 19 October 2007.*

166 *Biodiésel: más de 20 empresas se lanzan con 3 M de toneladas, Infobae Profesional, 12 February 2007; Advierten sobre la concentración geográfica de plantas de biodiesel, Daniel Alonso, La Voz del Interior, 7 December 2007.*

167 *Fifth Amended And Restated Liquidity Agreement Among Bunge Asset Funding Corp. And The Financial Institutions Listed On The Signature Pages Hereto, White Plains, 3 July 2003.*

168 *Sixth Amended And Restated Liquidity Agreement Among Bunge Asset Funding Corp. and The Financial Institutions Listed On The Signature Pages Hereto, White Plains, 28 June 2004.*

169 *Seventh Amended And Restated Liquidity Agreement Among Bunge Asset Funding Corp. and The Financial Institutions Listed On The Signature Pages Hereto, White Plains, 11 June 2007.*

170 *US$650,000,000 Facilities Agreement For Bunge Finance Europe B.V. as Borrower, White Plains, 28 May 2003; France - Loans, Euroweek - Issue: 805, London, 30 May 2003; France - Loans, Euroweek - Issue: 806, London, 6 June 2003.*

171 *Bunge Finance Europe B.V. As Borrower With Hsbc Bank Plc Acting As Agent Amendment Agreement Relating To A Multicurrency Revolving Facilities Agreement dated 28 May 2003, White Plains, 26 May 2004; France - Loans, Euroweek - Issue: 856, London, 4 June 2004.*

172 *Form 8-K: Current Report Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934, Bunge, White Plains, 20 May 2005.*

173 *Form 8-K: Current Report Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934, Bunge, White Plains, 20 May 2005.*

174 *Form 8-K: Current Report Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934, Bunge, White Plains, 21 December 2005.*

175 *US$600,000,000 Facility Agreement for Bunge Finance Europe B.V. as Borrower Arranged by BNP Paribas and HSBC Bank Plc as Mandated Lead Arrangers, White Plains, 20 December 2006.*

176 *$850,000,000 Second Amended And Restated Revolving Credit Agreement Among Bunge Limited Finance Corp., As Borrower, And The Several Lenders From Time To Time Parties Hereto, White Plains, 28 June 2004.*

177 *$850,000,000 Third Amended And Restated Revolving Credit Agreement Among Bunge Limited Finance Corp., as Borrower, and The Several Lenders from Time to Time Parties Hereto, White Plains, 15 November 2005.*

178 *$1,000,000,000 Revolving Credit Agreement among Bunge Limited Finance Corp. as Borrower, The Several Lenders from Time to Time Parties Hereto, White Plains, 19 November 2007.*

179 *Website Cargill (www.cargill.com), Viewed in February 2008.*

180 *Website Cargill (www.cargill.com), Viewed in February 2008.*

181 *Evolucion y Perspectivas del Complejo Oleaginoso Argentino en Relacion al de Estados Unidos y Brasil - Potencial y Limitantes, Gustavo M. López, Fundaçion Producir Conservando, Buenos Aires, November 2005.*

182 *Website Cargill (www.cargill.com), Viewed in February 2008; Website Cevasa (www.cevasa.com.br), Viewed in February 2008.*

183 *Website Cargill (www.cargill.com), Viewed in May 2008; Website Greenergy International (www.greenergy.com), Viewed in May 2008.*

184 *Signs of spring revival for US corporate bond market, Euroweek - Issue: 843, 5 March 2004.*

185 *Bonds - Cargill Inc., Euroweek - Issue: 872, London, 24 September 2004.*

186 *Bonds - Cargill Inc., Euroweek - Issue: 951, London, 28 April 2006.*

187 *US squeezes out paper as mood deteriorates, Euroweek - Issue: 1037, London, 18 January 2008.*

188 *Website Cascade Grain Products (www.cascadegrain.com), Viewed in May 2008.*

189 *WestLB Arranges Project Financing for Oregon's Cascade Grain, Providing over 100 million Gallons of Ethanol a Year for the Northwest, Press release WestLB, Düsseldorf, 9 June 2006.*

190 *Website Conestoga Energy Partners (www.conestogaenergy.com), Viewed in June 2008.*

191 *Arkalon Ethanol LLC closes $113 million ethanol plant financing, Bryan Sims, Ethanol Producer Magazine, December 2007; WestLB Closes $113 Million in Financing for Arkalon Ethanol LLC's 110-MMGY Ethanol Plant in Liberal, KS, Press release WestLB, New York, 19 December 2007.*

192 *Website Cornhusker Energy (www.cornhuskerenergy.com), Viewed in June 2008.*

193 *WestLB Overview - Presentation to Conestoga Energy Partners, Kansas, May 2007.*

194 *Anouncement of the closing of the IPO share offering, Cosan, São Paulo, 17 November 2005; Annual report 2007, Cosan, São Paulo, October 2007.*

195 *COSAN issues US$ 300m in Perpetual Bond, Cosan, São Paulo, 24 January 2006; This week´s New Issues not covered in depth in the bonds section, Euroweek – Issue: 938, London, 27 January 2006; Unaudited Condensed Consolidated Financial Statements, Cosan, São Paulo, December 2007; Prospectus, Cosan, São Paulo, June 2006.*

196 *COSAN to issue additional US$ 150m in Perpetual Bond, Cosan, São Paulo, 10 February 2006.*

197 *Cosan prices bond issue at US$ 400 million, Cosan, São Paulo, 19 January 2007; Vitro issues biggest emerging market high yield bond, Euroweek – Issue: 988, London, 26 January 2007; Unaudited Condensed Consolidated Financial Statements, Cosan, São Paulo, December 2007.*

198 *Website CropEnergies (www.cropenergies.com), Viewed in June 2007.*

199 *CropEnergies AG fixes purchase price and issue volume, Press release CropEnergies, Mannheim, 28 September 2006.*

200 *Website EnviTec Biogas (www.envitec-biogas.de), Viewed in June 2007.*

201 *Prospekt, EnviTec Biogas, Lohne, 29 June 2007.*

202 *Prospekt, EnviTec Biogas, Lohne, 29 June 2007; EnviTec Biogas AG - Greenshoe vollständig ausgeübt, Press release EnviTec Biogas, Lohne, 13 July 2007.*

203 *Fiagril investe para produzir biodiesel no MT, Valor Econômico, São Paulo, 21 August 2006; Lucas R. Verde começa vender biodiesel, Biodieselbr.com, 9 January 2008; Website Fiagril (www.fiagril.com.br), Viewed in June 2008.*

204 *Perfil Institucional, Banco WestLB do Brasil S.A., São Paulo, May 2008.*

205 *Deals of the Year: Fiagril - structured financing, Trade Finance, London, March 2008.*

206 *Website First United Ethanol (www.firstunitedethanol.com), Viewed in May 2008.*

207 *Form 10QSB, First United Ethanol, Pelham, 15 May 2008.*

208 *Website GreenHunter Energy (www.greenhunterenergy.com), Viewed in May 2008.*

209 *Credit Agreement, GreenHunter Energy, Grapevine, 20 December 2007.*

210 *Website Illinois River Energy (www.illinoisriverenergy.com), Viewed in June 2008; Website GTL Resources (www.gtlresources.com), Viewed in June 2008.*

211 *Renewable Energy Project Finance, Presentation for UNEP Finance Initiative by Jimmy Anderson (Director Global Energy WestLB), New York, 27 September 2007.*

212 *Website Hawkeye Energy (www.hawkrenew.com), Viewed in June 2008.*

213 *Hawkeye Renewables: Corn-fed, Project Finance Magazine, London, March 2005.*

214 *Renewable Energy Project Finance, Presentation for UNEP Finance Initiative by Jimmy Anderson (Director Global Energy WestLB), New York, 27 September 2007.*

215 *The thrill is gone, R.L. Nave, Illinois Times, 31 January 2008.*

216 *WestLB Overview - Presentation to Conestoga Energy Partners, Kansas, May 2007.*

217 *Etanol com resíduos de soja, Gazeta Mercantil, São Paulo, 9 March 2007; Website Imcopa (www.imcopa.com), Viewed in June 2008.*

218 *Perfil Institucional, Banco WestLB do Brasil S.A., São Paulo, May 2008.*

219 *Website Louis Dreyfus (www.louisdreyfus.com), Viewed in June 2008.*

220 *Website Louis Dreyfus (www.louisdreyfus.com), Viewed in June 2008.*

221 *Thomson Financial database, February 2006.*

222 *Website Marquis Energy (www.marquisenergy.com), Viewed in June 2008.*

223 *Renewable Energy Project Finance, Presentation for UNEP Finance Initiative by Jimmy Anderson (Director Global Energy WestLB), New York, 27 September 2007.*

224 *Neste Oil to build a NExBTL Renewable Diesel plant in Singapore, Press release Neste Oil, Helsinki, 30 November 2007; Milieudefensie: Zorg voor garanties voor duurzame biobrandstoffen, Press release Milieudefensie, Amsterdam, 4 June 2008; Website Neste Oil (www.nesteoil.com), Viewed in June 2008.*

225 *Syndication of Neste Oil´s 1.5 billion euro credit facility completed, Press release Neste Oil, Helsinki, 18 May 2005; Website Neste Oil (www.nesteoil.com), Viewed in June 2008.*

226 *Website Noble Group (www.thisisnoble.com), Viewed in May 2008.*

227 *Noble Lands Sweet Deal – Acquires Sugar Mill in Brazil, Press release Noble Group, Hong Kong, 8 February 2007.*

228 *Noble Success With Brazilian Bundle, Trade Finance Magazine, London, February 2006.*

229 *Noble Group Closes USD1.2 Billion Revolving Credit Facility, Press release Noble Group, Hong Kong, 9 July 2007.*

230 *Noble Group closes USD 700 million Guarantee Facility, Press release Noble Group, Hong Kong, 29 April 2008.*

231 *Website Northern Ethanol (www.northern-ethanol.com), Viewed in May 2008.*

232 *Form 10-QSB/A2, Northern Ethanol, Toronto, 20 May 2008.*

233 *Website Nova Biosource Fuels (www.novabiosource.com), Viewed in May 2008.*

234 *Nova Biosource Fuels Announces $41 Million Senior Secured Credit Facility, Press release Nova Biosource Fuels, Houston, 2 January 2008.*

235 *Website Pacific Ethanol (www.pacificethanol.net), Viewed in May 2008.*

236 *Pacific Ethanol Announces Closing Of $325 Million Senior Secured Credit Facility, Press release Pacific Ethanol, Sacramento, 28 February 2007; Credit Agreement, Pacific Ethanol, Sacramento, 28 February 2007.*

237 *Website Renewable Energy Group (www.regfuel.com), Viewed in May 2008.*

238 *WestLB and Biodiesel Industry Leader Renewable Energy Group, Inc. Close $28 Million Financing Deal, Press release Renewable Energy Group, Ames, 15 February 2008.*

239 *Website Sabarálcool (www.sabaralcool.com.br), Viewed in June 2008.*

240 *Perfil Institucional, Banco WestLB do Brasil S.A., São Paulo, May 2008.*

241 *Website São Martinho (www.usinasaomartinho.ind.br), Viewed in February 2008.*

242 *IPO Prospectus, São Martinho, São Paulo, 9 February 2007; Interim Financial Statements for the Quarter and Six-Month Period ended September 30, 2007 and Independent Accountants´ Review Report, São Martinho, São Paulo, November 2007.*

243 *Website Solena Group (www.solenagroup.com), Viewed in June 2008.*

244 *Solena to commercially produce jet fuel, Sarah Smith, Biomass Magazine, March 2008.*

245 *Website Solena Group (www.solenagroup.com), Viewed in June 2008.*

246 *Solena Group Plans to Produce Renewable Jet Fuel, Environmental Protection, 27 March 2008.*

247 *Website Tereos (www.tereos.com), Viewed in January 2008.*

248 *Auditors report on the consolidated financial statements, PricewaterhouseCoopers, Paris, January 2008.*

249 *Website Guarani (www.acucarguarani.com.br), Viewed in January 2008.*

250 *France, Euroweek – Issue: 962, London, 14 July 2006.*

251 *Website Verasun Energy (www.verasun.com), Viewed in May 2008; A Quiet Giant, Craig A. Johnson, Ethanol Producer Magazine, June 2008.*

252 *Website Americas Strategic Allainces (www.asalliances.com), Viewed in May 2008.*

253 *Preliminary Prospectus, ASAlliances Biofuels, Dallas, 15 September 2006; Form 10-Q, VeraSun Energy, Brookings, 14 November 2007.*

254 *Credit Agreement, ASAlliances Biofuel, Dallas, 6 February 2006.*

255 *Form 10-Q, VeraSun Energy, Brookings, 14 November 2007.*

256 *Website VerBio (www.verbio.de), Viewed in June 2008.*

257 *VERBIO AG plant Erstnotiz am 11. Oktober 2006, Press release VerBio, Zörbig, 29 September 2006; VERBIO AG: Greenshoe vollständig ausgeübt Press release VerBio, Zörbig, 19 October 2006.*

258 *Annual Report 2007, Vereinigte BioEnergie (VerBio), Zörbig, April 2008.*

259 *Annual Report 2007, Vereinigte BioEnergie (VerBio), Zörbig, April 2008.*

260 *Annual Report 2007, Vereinigte BioEnergie (VerBio), Zörbig, April 2008.*

261 *Biodiesel financing first in Argentina, Trade Finance Magazine, London, July/August 2007.*

262 *Website White Energy (www.white-energy.com), Viewed in June 2008.*

263 *WestLB Closes USD 173 million Senior Secured Debt Facility for White Energy, Press release WestLB, New York, 11 August 2006.*

264 *WestLB's Global Energy Group successfully closes USD 298.5 million Senior Secured Credit Facilities for White Energy, Press release WestLB, New York, 21 November 2006.*

265 *Sustainability Policy, BayernLB, München, July 2007.*

266 *Website BayernLB (www.bayernlb.de), Viewed in June 2008.*

267 *Website BayernLB (www.bayernlb.de), Viewed in June 2008.*

268 *Website Berenbergbank (www.berenbergbank.de), Viewed in June 2008.*

269 *Website Commerzbank (www.commerzbank.de), Viewed in June 2008.*

270 *Website Cominvest (www.cominvest.de), Viewed in June 2008.*

271 *Website Commerzbank (www.commerzbank.de), Viewed in June 2008.*

272 *Website Commerzbank (www.commerzbank.de), Viewed in June 2008.*

273 *Corporate Social Responsibility Report 2007, Deutsche Bank, Frankfurt, June 2008.*

274 *E-mail from Michael Hoelz and Karin Capitain, CSR/Sustainable Development department Deutsche Bank, 12 June 2008.*

275 *Corporate Social Responsibility Report 2007, Deutsche Bank, Frankfurt, June 2008.*

276 *E-mail from Michael Hoelz and Karin Capitain, CSR/Sustainable Development department Deutsche Bank, 12 June 2008.*

277 *Corporate Social Responsibility Report 2007, Deutsche Bank, Frankfurt, June 2008.*

278 *Website Dresdner Bank (www.dresdner-bank.de), Viewed in June 2008.*

279 *Website Dresdner Bank (www.dresdner-bank.de), Viewed in June 2008.*

280 *Website Dresdner Bank (www.dresdner-bank.de), Viewed in June 2008.*

281 *Allianz Climate Change Strategy, Allianz, Munich, March 2006.*

282 *Website Exportkreditgarantien der Bundesrepublik Deutschalnd (www.agaportal.de), Viewed in June 2008.*

283 *Website Exportkreditgarantien der Bundesrepublik Deutschalnd (www.agaportal.de), Viewed in June 2008.*

284 *Website Exportkreditgarantien der Bundesrepublik Deutschalnd (www.agaportal.de), Viewed in June 2008; E-mail Gerhard Himmel, Euler Hermes Kreditversicherungs, 12 June 2008.*

285 *Website Exportkreditgarantien der Bundesrepublik Deutschalnd (www.agaportal.de), Viewed in June 2008.*

286 *E-mail Gerhard Himmel, Euler Hermes Kreditversicherungs, 12 June 2008.*

287 *E-mail Gerhard Himmel, Euler Hermes Kreditversicherungs, 12 June 2008.*

288 *E-mail Gerhard Himmel, Euler Hermes Kreditversicherungs, 12 June 2008.*

289 *Website HSH Nordbank (www.hsh-nordbank.com), Viewed in June 2008.*

290 *Power für Deutschland – Energieversorgung im 21. Jahrhundert, HypoVereinsbank, München, November 2007.*

291 *E-mail Stefan Löbbert, HypoVereinsbank, 20 June 2008.*

292 *Unicredit Group's Environmental Policy, HypoVereinsbank, München, April 2008.*

293 *Creating value – living values, HypoVereinsbank, München, November 2007.*

294 *Creating value – living values, HypoVereinsbank, München, November 2007.*

295 *E-mail Stefan Löbbert, HypoVereinsbank, 20 June 2008.*

296 *E-mail Stefan Löbbert, HypoVereinsbank, 20 June 2008.*

297 *E-mail Stefan Löbbert, HypoVereinsbank, 20 June 2008.*

298 *E-mail Stefan Löbbert, HypoVereinsbank, 20 June 2008.*

299 *E-mail Werner Fassing, KfW Bankengruppe, 5 June 2008.*

300 *DEG finanziert brasilianisches Unternehmen, das Sojabohnen anbaut und vermarktet, OTS, Köln, 13 March 2001; Brazil's Maggi receives German loan to expand soybean storage, FWN Financial, Hamburg, 13 March 2001.*

301 *DEG Horizons 2/2007, DEG, Cologne, September 2007.*

302 *Website KfW Bankengruppe (www.kfw.de), Viewed in June 2008.*

303 *Guideline of KfW IPEX-Bank GmbH for an environmentally and socially sound conduct of business ("Sustainability Guideline"), KfW IPEX Bank, Frankfurt, November 2007.*

304 *Website DEG (www.deginvest.de), Viewed in September 2008.*

305 *Agrartreibstoffe und Entwicklung - Positionsbestimmung für die FZ, KfW Entwicklungsbank, Frankfurt, June 2008.*

306 *Guideline of KfW IPEX-Bank GmbH for an environmentally and socially sound conduct of business ("Sustainability Guideline"), KfW IPEX Bank, Frankfurt, November 2007.*

307 *Guideline of KfW IPEX-Bank GmbH for an environmentally and socially sound conduct of business ("Sustainability Guideline"), KfW IPEX Bank, Frankfurt, November 2007.*

308 *Guideline of KfW IPEX-Bank GmbH for an environmentally and socially sound conduct of business ("Sustainability Guideline"), KfW IPEX Bank, Frankfurt, November 2007.*

309 *Sustainability Report 2006/2007, Landesbank Baden-Württemberg, Stuttgart, February 2008.*

310 *Sustainability Report 2006/2007, Landesbank Baden-Württemberg, Stuttgart, February 2008.*

311 *Sustainability Report 2006/2007, Landesbank Baden-Württemberg, Stuttgart, February 2008.*

312 *Website Landessparkasse zu Oldenburg (www.lzo.com), Viewed in June 2008.*

313 *Website Mercedes-Benz Bank (www.mercedes-benz-bank.de), Viewed in June 2008.*

314 *Annual Report 2007, NordLB, Hannover, May 2008.*

315 *Website Bremer Landesbank (banking.bremerlandesbank.de), Viewed in June 2008.*

316 *Annual Report 2007, NordLB, Hannover, May 2008.*

317 *Website BHF-Bank (www.bhf-bank.com), Viewed in June 2008; Website Sal. Oppenheim & Cie. (www.sal-oppenheim.com), Viewed in June 2008.*

318 *Renewable Energy Project Finance, Presentation for UNEP Finance Initiative by Jimmy Anderson (Director Global Energy WestLB), New York, 27 September 2007.*

319 *Asking Questions - Sustainability Report 2007, WestLB, Düsseldorf, October 2007.*

320 *WestLB expande os negócios no Brasil, Maria Christina Carvalho, Valor Econômico, São Paulo, 29 November 2007.*

321 *Website WestLB (www.westlb.de), Viewed in June 2008.*

322 *Website WestLB (www.westlb.de), Viewed in June 2008.*

323 *Asking Questions - Sustainability Report 2007, WestLB, Düsseldorf, October 2007.*

324 *Asking Questions - Sustainability Report 2007, WestLB, Düsseldorf, October 2007.*

325 *E-mail Dustin Neuneyer, Board Office Sustainability Management of WestLB, 10 June 2008.*

326 *Asking Questions - Sustainability Report 2007, WestLB, Düsseldorf, October 2007.*

327 *Asking Questions - Sustainability Report 2007, WestLB, Düsseldorf, October 2007.*

328 *BMZ Diskurs 011: Entwicklungspolitische Positionierung zu Agrartreibstoffen - Diskussionspapier, Bundesministerium für wirtschaftliche Zusammenarbeit und Entwicklung (BMZ), Bonn, February 2008.*

329 *Website BaFin (www.bafin.de), Viewed in September 2008.*