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## **South–South and triangular cooperation in the biofuels sector: the African experience**

Prepared by the UNCTAD secretariat

### *Executive summary*

This paper explores the possible contribution of South–South and triangular cooperation to the development of the biofuels sector. It argues that such cooperation can, as part of a properly designed biofuels strategy, be consistent with food, climate change mitigation and development goals, and it discusses cooperation initiatives in the sector that have been developed in recent years in Africa.

This brief paper was prepared under coordination of the UNCTAD Biofuels Initiative serving as a unit's contribution to the United Nations High Level Conference on South–South Cooperation held in Kenya in December 1–3 and to the second session of the Multi-year Expert Meeting on South–South and Triangular Cooperation, thematic session on Agriculture Development and Food Security held in Geneva December 14–16, 2009. A final and more complete report is under process edition and will be presented by the end of 2009.

## I. Introduction

1. The sharp increase and growing volatility of energy prices are posing a serious threat to economic development in many countries, and particularly the least developed countries (LDCs), most of whom are heavily or fully dependent on imported energy. At the same time, addressing the challenges of energy poverty and security must also face up to the possible damaging impact of any increased use of carbon-intensive fuels on the climate. These interrelated challenges have focused the attention of policy makers in many developing countries on the need to develop renewable energy sources.

2. Biofuels have, in this context, become an increasingly important potential energy source, particularly for the transportation sector. However, expanding biofuels in a hasty and non-sequenced manner carries an important risk in terms of the adverse impact on food supplies and prices, where crops have been diverted to their production. According to the International Monetary Fund (IMF), “Although biofuels still account for only 1.5 per cent of the supply of global liquid fuels, they accounted for almost half the increase in the consumption of major food crops in 2006–2007, mostly because of corn-based ethanol produced in the United States. Biofuel demand has propelled the process not only of corn, but also for other grains, and dairy through cost-push and demand substitution effects (IMF, World Economic Outlook 2008).

3. However, in a number of net oil-importing developing countries, agricultural conditions are consistent with the development of biofuels from non-food crops raw materials such as sugar cane and non-food oilseeds such as *Jatropha* and castor that could be expanded without threatening the food security of the countries concerned. If well managed, biofuels could provide new economic opportunities in these countries along with new sources of foreign exchange, as well as offering a viable alternative to fossil fuels in the fight against dangerous climate change.

4. In the United States for instance, biofuels consumption is expected to increase from 0.3 million barrels per day in 2006 to 1.9 million barrels per day in 2030 as result of the Energy Independence and Security Act of 2007. The European Union (EU) is similarly expected to have a market of 14 billion to 15 billion litres with the recent approval of its renewable energy policy, and Japan is also set to follow similar path. However, the fastest growing markets are likely to be in developing countries, given their projected increase in energy consumption over the coming decades. Biofuels, including ethanol and biodiesel, have the potential to play a key role in these countries as a substitute for fossil fuels (see figure below).

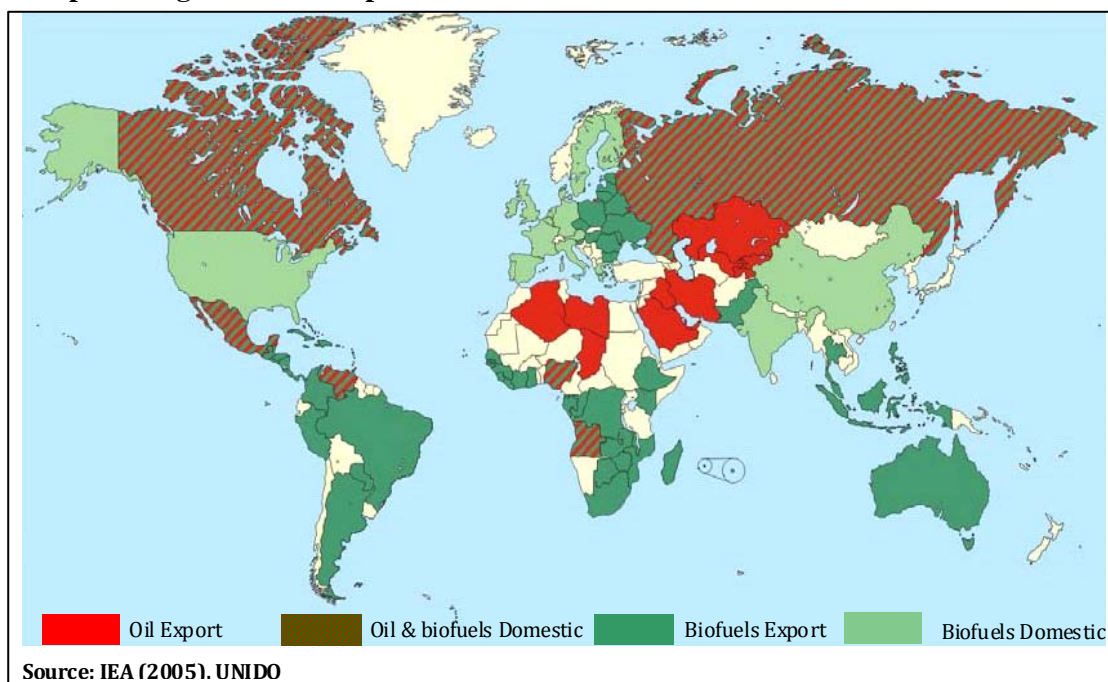
## II. The potential for renewable energy

5. Meeting the combined challenges of rising global temperatures and massive energy insecurity in the developing world will require large and interconnected investments with long gestation periods and across several sectors. The principle aim will have to be an energy transition to reduce reliance on fossil fuels, especially coal and oil, and to increase reliance on renewable sources of energy, especially wind, solar and advanced (non-food) biofuels. However, such a transition must also support and not hinder the meeting of longstanding development goals.

6. The development and the use of renewable energy can contribute to (a) changing the current dependence on fossil fuels in particular in the transport and electricity sectors; (b) reducing greenhouses gases emissions; and (c) promoting development in both developed and developing countries. Biofuels, in this context, can provide opportunities for diversifying energy sources while promoting socio-economic developments in countries

with the appropriate resource mix (box 1). Certainly, this renewable energy technology is not a panacea for the interrelated energy, food and climate crises. Nevertheless, if appropriate measures are taken, particularly those concerning food security and environmental risks, biofuels can become an important part of a sustainable development agenda of a number of countries, including some LDCs. The implementation of a proper biofuels policy in these countries (and the reduction of subsidized biofuels in the developed world), along with significant investments, both public and private, is necessary to capitalize on the potential benefits of biofuels. Already some countries that have implemented appropriate policies on renewable energy sources since the first oil shocks of the 1970s are now serving as example to the rest of the world.

### The possible global biofuels picture in 2030



#### Box 1. The role of alternative fuels

Changing the fuel mix within the transport sector can play an important role in aligning energy policies with carbon budgets. The CO<sub>2</sub> emissions profile of an average car journey can be transformed by using less petroleum and more ethanol produced from plants. Many governments now see biofuels as a technology that kills two birds with one stone, helping to fight global warming while reducing dependence on oil imports. Developing countries have demonstrated what can be achieved through a judicious mix of incentives and regulation in the transport sector. One of the most impressive examples comes from Brazil. Over the past three decades, the country has used a mix of regulation and direct government investment to develop a highly efficient industry. Subsidies for alcohol-based fuel, regulatory standards requiring automobile manufacturers to produce hybrid vehicles, preferential duties and government support for a biofuel delivery infrastructure

have all played a role. Today, biofuels account for around one third of Brazil's total transport fuel, creating wide-ranging environmental benefits and reducing dependence on imported oil. Several countries have successfully changed the national transport sector fuel-mix by using a mixture of regulation and market incentives to promote compressed natural gas (CNG). Prompted partly by concerns over air quality in major urban centres, and partly by a concern to reduce dependence on imported oil, both India and Pakistan have seen a major expansion of CNG use. In India, several cities have used regulatory mechanisms to prohibit a range of vehicles from using non-CNG fuel. For example, Delhi requires all public transport vehicles to use CNG. In Pakistan, price incentives have supplemented regulatory measures. Prices for CNG have been held at around 50–60 per cent of the price of petroleum, with Government supporting the development of an infrastructure for production and distribution. Some 800,000 vehicles now use CNG and the market share is rising fast. Apart from cutting emissions of CO<sub>2</sub> by around 20 per cent, using natural gas creates wide-ranging benefits for air quality and public health. In the developed world biofuel development is one of the energy-based growth industries of the past 5 years.

*Source:* Human Development Report 2008, United Nations Development Programme.

### **III. South-South and triangular cooperation for production, use and trade of sustainable biofuels**

7. Despite being a relatively a new issue, South–South cooperation on biofuels is starting to gain momentum. The experience of some developing countries in the production, consumption and trade of ethanol as a substitute to fossil fuels in the transport sector and other uses has attracted the interest of dozens of countries, especially those with the factors that could potentially lead to the development a biofuels industry. A number of biofuels projects are being implemented, taking into account not only national capacities, but also regional and global market opportunities.

8. Brazil is in the lead in South-South cooperation projects on biofuels. The country has the oldest and possibly the most competitive biofuels policy, based on the production of ethanol from sugarcane. The ethanol–sugarcane complex dates back to the 1940s but was boosted in the 1970s mainly to increase fuel security and save foreign currency (on oil-product imports). This sector has, moreover, played an important role in Brazil's efforts at technological upgrading and its moves to become a technology and knowledge exporter, not only to the developing world but also to developed countries.

9. Brazil has signed a number of agreements on bilateral, regional, interregional and multilateral bases in different levels of cooperation, including technology and knowledge transfer, research and development, and trade and investments. The cooperation also includes the exchange of experiences (failures and success) and the support for the implementation of national and regional biofuels policies for the development of a biofuels industry that involves the concerns and opportunities in developing this type of renewable

energy source. In most of cases, technology and knowledge acquired in Brazil has been transferred without greater concerns over intellectual property rights, probably because the technical package itself is of relatively medium technology levels, at least in what concerns this first generation biofuels. Nevertheless, the circumstances may change in the coming decade with the development of second-generation biofuels that are more capital- and technology-intensive and under development in a limited number of countries mostly, in the developed world where intellectual property rights are one issue of greatest concern. It is still unclear the scope and role that South-South cooperation will play in the second generation of biofuels. Some cooperation in advanced biofuels research and production is starting at an embryonic stage in few developing countries as the case of the programmes of cooperation in the India–Brazil–South Africa (IBSA) framework.

#### **A. South–South cooperation in the biofuels sector in Africa**

10. Achieving stable development paths in Africa has been a longstanding challenge for policymakers at both the national and the international levels. Africa has been left out of both the industrial and agricultural revolutions taking place elsewhere in the developing world. South–South cooperation is now offering the African continent renewed development opportunities in a way that complements and enhances traditional cooperation. Furthermore, Africa’s economic bargaining power has been increasing as a result of the growing demand for its resources.

11. Agriculture development and food security are on the top of the South–South and triangular cooperation agenda on the continent. Biofuels in this context are beginning to play their role in a number of African countries with comparative advantages to develop the sector in a sustainable and development-minded way. The continent has sufficient land for balancing both food security and biofuels and in many cases, one could be strengthened by the other as shown, for examples, by family-based biofuels and agriculture programs in Brazil. Figures from the Food and Agricultural Organization of the United Nations (FAO) indicate that in the Guinea Savannah zone alone, an area covering 25 African countries, there are 400 million hectares suitable for such farming.<sup>1</sup> Africa is one of the largest sugarcane producers and a fair part of it could easily be transformed into biofuels production instead of into sugary products that are causing drastic increases in obesity rates even in developing countries. The development of the biofuels sector in Africa, taking into account the concerns over food security and environment degradation in an appropriate and well-sequenced biofuels development policy, could supply national and regional markets. It could equally supply to the EU and United States markets where many countries, particularly LDCs sugarcane producing countries, have the benefit of free access to these markets.

12. Biofuels production in Africa is being explored in a number of ways. It includes (a) the ethanol and biodiesel use in the transport fuel; (b) the use as substitute to wood-based energy sources for cooking; (c) biofuels as a source of electricity, which is one key issues considering that Africa uses only 3 per cent of electricity used globally and that only one in four African people has access to electricity; (d) promotion of socio-economic rural development; and (e) for its key role in contributing to improving energy supply and energy security in the continent. The last refers also to the needs of a increasing a gross domestic product growth rate from 3.5 per cent to 8 per cent so required for Africa to meet the Millennium Development Goals. Taking into account their existing vulnerability, a number

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<sup>1</sup> FAO Press Release: Africa’s sleeping giant: 400 million hectares of Guinea Savannah land ripe for commercial farming. June 2009

of African countries have implemented or are developing a biofuels strategy at the national and regional levels, mainly from sugarcane raw material for bio-ethanol and *Jatropha* for biodiesel. These include South Africa, Nigeria, Senegal, Ghana, Malawi, Mozambique, Sudan, Kenya, Ethiopia, Mali, Swaziland and Zimbabwe.

13. Biofuels projects are being developed both on a commercial basis and at the family scale of production. A few African countries have started investing in the development of a biofuels market as a substitute to the recent losses they incurred as result of the reforms in the EU sugar trade and subsidy regimes. A number of these African countries have the potential of benefiting from the Everything But Arms (EBA) agreement, which suspends almost all tariffs for products imported into the EU from 50 LDCs. Such products include imports of biofuels with zero tariff levels, creating a huge market advantage over other potential developing countries competing with Africa (like Brazil) in the market access of biofuels into the EU. Similarly, there is potential to be explored under the framework of the United States special agreement African Growth and Opportunity Act (AGOA) that significantly liberalizes access to the United States market for the 38 sub-Saharan African countries. Other potential markets include Asian countries and African countries themselves, as many of them are in the process of setting mandatory blending targets for biofuels.

#### **Box 2. Setting a research agenda for biofuels in Africa**

The global crisis may well lead to a temporary reduction of pressure on biofuel production in Africa, but as the price of oil is likely to rise again, the biofuel issue will return to the top of the agenda. To be better prepared for this, and to avoid a repetition of the historic scenario, research on biofuel production in Africa could throw light on some of the following issues; (a) What type of biofuel crop/feedstock is best suited for African needs and can at the same time secure export markets and incomes over time? Can biofuel generation from other crops than sugarcane or those that require well watered lands represent a potential? (b) What scale of production of biofuel can best promote and protect the interests of African smallholders? How can the rights of smallholders to land and water be protected? Can smallholders to a larger extent produce biofuel to generate energy and incomes for their communities? Can smallholder farmers cooperate with large scale production units to create a win-win situation? (c) Can intercropping of biofuel crops with other crops minimize or avoid the reduction in biodiversity, can it help mitigate climate change, or can biofuel crops be designed so that they both generate food and energy, e.g. as the project developed by ICRISAT (the International Crops Research Institute for the Semi-Arid Tropics) for sweet sorghum?

*Source:* Biofuel and Africa – urgent issues and knowledge gaps, Kjell Havnevik, Senior researcher, Nordic Africa Institute.

## **B. Major achievements and the way forward on South-South and triangular cooperation**

14. South–South cooperation projects seek to develop the biofuels sector in Africa in a sustainable and inclusive way. At a regional level, a concrete strategic plan has been set by the Southern Africa Development Community (SADC) Biofuels Task Force based on the dialogue and exchange of experience. This task force is the most advanced institutional framework aiming to explore the potential of, and constrains, on the biofuels sector with a view of developing a sustainable biofuels industry that attends the needs of both, food security and energy security, as well as socio-economic and technological development. South Africa as one of the most advanced biofuels countries is, together with Mozambique, pushing the initiative. In the particularly case of South Africa, the country has established an important cooperation agreement with Brazil on a bilateral and inter-regional basis through the IBSA Forum dialogue with the signing of a framework agreement for setting a programme for cooperation in first and second generation biofuels.

15. In the case of Mozambique, important initiatives have been undertaken in the framework of the Community of Portuguese Speaking Countries with the signature of cooperation projects and investments by Brazil and Portugal, and in the case of the South African biofuels sector through traditional (Portugal), triangular (United Kingdom and Brazil), and South-South investments. Mozambique produces 2 million tons of sugarcane raw materials<sup>2</sup> annually, making the sector a key priority for the country. A National Policy and Strategy for Biofuels was approved in 2009 after two years of formulation. The strategy establishes a regulatory framework for production of biofuels by the public and private sectors aiming to reduce the country's dependence on imported fossil fuels, to ensure energy security, and to explore the agricultural potential in a way that is consistent with sustainable economic growth. Estimates indicate a potential output of 40 million litres of biodiesel and 21 million litres of ethanol annually.<sup>3</sup> A National Biofuel Council was also approved and will be responsible for monitoring the implementation of policies targeting the sector. The first ethanol plant was established in Mozambique in 2007 with productive capacity of 120 million litres of ethanol per year. Brazil, South Africa, EU countries are becoming key investors in the Mozambique biofuels industry in recent years. The country benefits from both EBA and AGOA agreements for having privileged market access respectively in the EU and United States markets.

16. Africa's biofuels sector attracted further attention with the 2007/2008 food crisis and more recently with the so-called "land grab" issue. Both are complex issues, but to deny the potential of the sector may be a wrong approach with painful results in the future when energy prices may rise again to higher prices. Certainly, there can be no "one-size-fits-all" approach to the development of the biofuels sector in Africa. There is a need for developing national country-based studies and integrating these into regional agendas, as has been the case in SADC. Dialogue and technical cooperation to support nationally appropriate and informed policy formulation remain the most valuable approach to the development of biofuels.

17. In Africa SADC has succeeded in creating a solid mechanism for coordinating biofuels policy coordination and actions towards the development of national and regional biofuels strategies. The bloc has set a working group mechanism for biofuels dialogue including a Biofuels Task Force aiming to explore the potential and the constraints of biofuels production in Southern Africa. This is considered important and necessary for the

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<sup>2</sup> FAOSTAT (2007).

<sup>3</sup> Ministry of Energy of Mozambique (2009).

development of policies that are more adapted to the realities of the region and that can also be an instrument for reinforcing the sustainability of the industry and stressing issues such as food security. In West Africa, the Economic Community of West African States (ECOWAS) is also working in the way of improving dialogue over biofuels industry with recent move of some of the membership in adopting national strategies and policies. Similarly, in the East Africa Community, discussions on biofuels potential featured high in the regional debate. The African Union itself has become a platform for lively debate over risks and opportunities for developing a biofuels sector in the African continent. Many countries have started to see potential not only for domestic markets but also for greater access to international markets where they benefit from privileged market access as in the case of the EU, United States and Japan and, increasingly in emerging developing country markets such as China and India.

### **C. Developing institutional frameworks: the SADC Biofuels Task Force**

18. The SADC biofuel strategy completed in 2005 stresses the need for exploring the potential of implementing biofuel initiatives in SADC countries and calling on all members to develop biofuels national strategies taking into account opportunities and constraints on the sector. A SADC Biofuels Task Force (Commission) was established under the framework of SADC cooperation on energy issues, setting a platform for dialogue on the opportunities and constraints on biofuels improving exchange of experiences, investments and trade opportunities. The task force was operationalized in 2008 with the support of the United Kingdom Department for Environment, Food and Rural Affairs. The inaugural meeting was held in Gaborone. The task force also aims to assist in resolving possible conflicts between production of crops for fuel versus for food, considering that in some member States the crops that are used for biofuels are not necessarily food crops. The German development agency GTZ is also financing biofuels research in SADC countries under the Programme for Basic Energy Conservation a project created to assist with the biofuels initiatives to further develop a competitive and sustainable biofuels industry within the region.

### **D. Biofuels development in West Africa**

19. Like Brazil, tropical countries in West Africa have a real comparative advantage in the production of biofuels obtained from tropical plants such as sugar cane and *Jatropha*. These crops are different from those in the other regions due to their particularly high energy efficiency, their yield and their relatively low production cost. Besides, the subregion has wide expanses of underdeveloped cultivable land, abundant water resources and labour.<sup>4</sup> A number of countries have signed agreements on South-South cooperation with Brazil, as in the case of Senegal, for developing small-scale biofuel production. The Government of Senegal has taken the leadership in the Association of Non-Oil Producing Countries, or the so-called Green OPEC, uniting 15 African countries to exchange experiences technologies and knowledge for the development of biofuels industry<sup>5</sup>.

20. Brazil also established its first overseas Embrapa office in Accra, Ghana, in 2008. Embrapa is a public agriculture and livestock applied research institution with leadership in tropical agriculture, which has boosted cooperation in a many areas, including on biofuels, particularly under the framework of the Pro-Renova. Brazil's State-owned oil company

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<sup>4</sup> UNECA (2008). Biofuels: What strategies for developing the sector in West Africa?

<sup>5</sup> Wade A (2006). Africa Over A Barrel. 28 October.



Petrobrás is also investing in ethanol production in a number of African countries, including Senegal, Nigeria, Mozambique and Angola. India has recently pledged \$250 million to the West African Biofuels Fund, which is to be set up by India's EximBank for Investment and Development (EBID) and ECOWAS, aiming to boost biofuels production in 15 West African countries. A workshop was co-sponsored by EBID and UNCTAD to foster private-public partnerships, and to finance agricultural and industrial production for biofuels. EBID is providing \$35 million for a *Jatropha* biodiesel project in Ghana. Benin, Mali, Nigeria and Senegal are also exploring the potential development of biofuels from *Jatropha*-based biofuels production.<sup>6</sup> China has cemented a long-term cassava supply channel from Nigeria for its domestic ethanol distilleries.

#### **E. IBSA – cooperation on biofuels**

21. Since its establishment in 2003, the India, Brazil, South Africa (IBSA) Dialogue Forum has become one of the most powerful and results-oriented alliances among developing countries. At the first IBSA Summit in September 2006 in Brasilia key areas for cooperation included the energy, agriculture, transportation, trade, science and technology and information society sectors. In what refers specifically to biofuels, a Memorandum of Understanding on Biofuels was signed with the decision to create a Trilateral Task Force on Biofuels to work on concrete areas of common interest. At the IBSA Working Group, held on 12 July 2007, an impetus was given to cooperate in the development of second-generation biofuels, wind, and remote village electrification. The issue of biofuels will be again on the centre of the IBSA IV Summit to be held in 2010 when Brazil will be the host country. A report on the status of cooperation in the agriculture sector is expected to be presented and when new lines for cooperation will also be set.

#### **IV. Triangular cooperation on biofuels**

22. Triangular cooperation, which refers to support of South-South cooperation initiatives by a Northern country (traditional OECD donors) or multilateral agencies have emerged as one innovative mechanism for integrating developed world countries into South-South cooperation programmes. Japan has been in the leadership of triangular cooperation initiatives. Its linkages with the South dates back to the time when Japan was still a developing nation and when it was also one of the attendees of the Bandung Conference in 1955. Japan has been active in implementing bilateral and triangular projects with the Association of South-East Asian Nations (ASEAN). Japan, for instance, has been very active in the East Asia Community project that envisages establishing an EU model of integration for the region in some way, an important example of triangular cooperation with major economies such as China. Canada is also playing an active role in triangular cooperation projects. Some examples are the Brazilian Cooperation Agency (ABC) agreement with the Japan International Cooperation Agency recently signed to implement projects in Mozambique, making use of the Brazilian expertise in agricultural sector for promoting agriculture development and food security in the country concerned. Switzerland's development cooperation agency (SDC) for instance has also signed an agreement of ABC for projects in Haiti in the field of agriculture.

23. This modality has been presented as one valuable opportunity for boosting development cooperation while exploring local capacity in the south and particularly by exploring developing countries' expertise and technology. It is also seen as one opportunity

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<sup>6</sup> Green (2007). OPEC, Biopact and the new scramble for Africa. July.

for preventing or overcoming conditionalities that have been characterized as having adverse effects in the recipient countries. Likewise, it can help avoid that developed aid agencies become mere contract issuing agencies with unclear development impacts. On the other hand, critics of triangular cooperation see this new modality with concern, as in their view it could simply become a “Trojan horse” instrument or a disguised way for donor countries to impose their agenda upon both the emerging actors in development cooperation arena and on least developed recipient countries. At the same time, traditional donors accuse the new actors in development cooperation to disregard decades of development aid work and the well established rules for development aid and cooperation. These and other concerns of traditional donors are well expressed in the Paris Accord for Aid Effectiveness and the subsequent Accra Accord, which have been endorsed by a number of recipient countries. Their obligations are taken into consideration at the Financing for Development Conference and the Monterrey Consensus of 2002 and the Doha Review process which took place in 2008 in Qatar. The establishment of the Development Cooperation Forum in 2007 under the framework of the Economic and Social Council is becoming a more universal platform for dialogue on the contentious issues of both South–South and triangular cooperation with a view to boost the effectiveness of both modalities of cooperation while taking into consideration south and north agendas.

#### **A. UNIDO, Brazil and African Union triangular cooperation**

24. In 2007, a First High-Level Seminar on Biofuels in Africa was jointly organized by UNIDO in cooperation with the African Union Commission and the Brazilian Government. The meeting was an important gathering of experts, policymakers, private sector and institutions, among other stakeholders at national and regional levels to discuss the challenges and opportunities of biofuels in Africa. The seminar was organized within the overall framework of the 2004–2007 Strategic Plan of the African Union Commission that envisages, among other topics, the elaboration of a policy and strategies on new and renewable energy. The seminar was a follow-up meeting to the First Conference of African Ministers in charge of hydrocarbons (oil and gas), held in Cairo on 14 December 2006. At that occasion, the African Union Commission was requested to elaborate policies and strategies for the development of clean, new and renewable energies, particularly biofuels as an alternative solution to hydrocarbons, in response to the rise in oil prices, which has had adverse effects on the African economies. The seminar key objectives were to (a) brief policymakers, the private sector, regional institutions and other stakeholders on the potential, risks and trade-offs of developing biofuels in Africa; (b) facilitate sharing of experiences in developing biofuels among countries in Africa and between Africa and Brazil, other countries and regions; (c) explore the potential and challenges to the dissemination of priority biofuels technologies; and (d) consult key stakeholders towards developing a programme of action for sustainable biofuels development.

#### **B. EU–Brazil–Africa cooperation on agriculture**

25. The European Union has signed a strategic partnership agreement with Brazil at its First EU–Brazil summit, held in Lisbon in 2007. A number of priority areas were defined, including climate change and the development of safer, more efficient and sustainable alternatives to fossil fuels, including types of biofuels that have a positive impact in terms of reduction of greenhouse gas emissions. They view the promotion of renewable energy and the efforts aimed at improving both energy efficiency and access to energy as an important contribution to fulfilling sustainable development needs as well as achieving greater energy security. The EU–Brazil partnership focuses in the increasing energy efficiency and the share of renewable energies in the global mix. A second Summit was

held in December 2008 in Rio de Janeiro with the signature of Joint Action Plan for cooperation between the EU and Brazil.

26. The plan is divided into five main areas, with a number of sub-areas, (a) promoting peace and comprehensive security; (b) enhancing the economic, social and environmental partnership; (c) promoting regional cooperation; (d) promoting science, technology and innovation; and (e) promoting people-to-people contacts and cultural exchanges. Taking into account the emerging concerns over the social and environmental impacts of biofuels, the EU and Brazil have agreed on the development of standards of production, taking into account an inclusive participation of all members involved in the production, trade and consumption of this type of renewable energy.

27. At the Third EU–Brazil Summit, held in Stockholm in October 2009, important emphasis was given to triangular cooperation activities which had been initiated in the second summit the previous year. The EU and Brazil signed a joint declaration reiterating their commitment to the implementation of triangular cooperation projects between the EU, Brazil and interested developing countries, such as the Portuguese-speaking countries in Africa and East Timor, as well as Haiti, in the sectors of health, energy, agriculture, education and other priority areas. It was also agreed that a trilateral meeting at expert level would be organized to discuss the potential for cooperation between the three partners. Special focus was given to agriculture and particularly to biofuels with the decision to launch a joint initiative for the sustainable development of bioenergy in Africa, focusing on biofuels and bio-electricity. The final joint declaration outlined that “developing bio-energy on a socially, environmentally and economically sustainable basis can give an important contribution to tackling climate change, fighting poverty, and promoting access to modern forms of energy, such as for transport, cooking fuels and electricity for rural and urban areas”. It was decided that country studies would be undertaken in interested countries and regional economic communities in Africa, analysing the potential for the production and greater use of sustainable bioenergy, as well as its impact on poverty reduction; private and public investment will be encouraged aiming at the implementation of bioenergy projects; and a coordination group will examine the modalities for this initiative and its work programme.

## V. UNCTAD’s Biofuels Initiative

28. The UNCTAD Biofuels Initiative was set in 2005 and serves as a “meeting point” for existing programmes/initiatives/activities on biofuels in order to share experience and provide support to developing countries. The initiative is one of the outcomes of the Expert Meeting on the New and Dynamic Sectors of World Trade, 7–9 February 2005, held in Geneva, when experts recommended that UNCTAD should give higher priority to work on biofuels, including further research, analysis, technical cooperation and consensus-building. In response, UNCTAD launched, on 21 June 2005, the Biofuels Initiative by convening a “small” international advisory expert group to assist developing countries in capturing the multiple potential advantages of greater production, use, and trade in biofuels resources and technology. In July 2005, the boards of the United Nations Foundation and the United Nations Fund for International Partnerships decided to support the Biofuels Initiative of UNCTAD. A grant programme has enabled UNCTAD’s efforts to (a) assess the trade competitiveness of developing countries in the growing worldwide use and trade in biofuels; (b) address market access and market entry issues related to imports of biofuels into export markets; (c) discuss emerging issues such as food security aspects of biofuels, its climate change benefits, as well as the state-of-play of second generation of biofuels technologies; and (d) undertake country-specific studies, upon the explicit request of beneficiary countries. Since 2005, UNCTAD has closely followed the sector development and the

international debate on biofuels. It has released a series of publications and provided the opportunity for frank, unbiased multilateral debate on various aspects of the biofuels policy option. A series of meetings has been organized at UNCTAD and regionally as the ad hoc expert group meeting on biofuels.

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