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**EU Policy on Biofuels:**

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***ERWANTO***

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Members of the examining committee:

Dr. Rosalba Icaza (supervisor)  
Dr. Kael Jansen (reader)

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***Inquiries:***

Postal address:           Institute of Social Studies  
                                  P.O. Box 29776  
                                  2502 LT The Hague  
                                  The Netherlands

Location:                 Kortenaerkade 12  
                                  2518 AX The Hague  
                                  The Netherlands

Telephone:               +31 70 426 0460

Fax:                       +31 70 426 0799

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## **Keywords**

### **Chapter 1:**

#### **Introduction: The EU Policies on BF**

Since the Earth Summit in 1992 in Rio de Janeiro, the issue of climate change is getting more and more attention from policy makers. The debate is not only about the causes but also how to mitigate it. Unlike the US, the European Union puts its position as one of the leaders in combating climate change. It has adopted various policies, from carbon trade to finding alternative energy of fossil fuels.

One of consideration to put forward the policy on biofuel is to diversify energy dependency from fossil fuels. In the case of EU its very much depend on Russia and Middle East countries.<sup>i</sup> The energy consumption is getting high and higher, especially in transportation. The reduction of using cars and energy consumption has never been a policy option as it believes will not go a long with the economic growth. Biofuel again is an answer for the addicted of energy consumption.

The increasing of public awareness about global warming, biofuel becomes a popular policy option to mitigate climate change. It is hoped that by mixing fossil fuel and biofuel it will reduce carbon dioxide emission to the atmosphere. In European Commission's directive and legislative, mitigating climate change is one of the main considerations to put forward this policy in Europe. However, this idea is being challenged by many environmental groups and several scientific body.<sup>ii</sup> Their main arguments is that the increasing the use of biofuel will threat biodiversity as it can only be produced economically in a big scale and monoculture plantation. As in the case in Indonesia and Malaysia, the opponents of biofuel argue that it has caused of the increasing of deforestation.

They also argue that amount of CO<sub>2</sub> reduction to be released to the atmosphere because of using blended biofuel will be the same amount of pure fossil fuel (if not more) when ones takes into account how much CO<sub>2</sub> will be released from the whole process of converting biofuel. In term of the emission of CO<sub>2</sub> that have been released to the atmosphere because of industries activities, Indonesia is the twentieth polluted country in the world. But If it takes into account the whole CO<sub>2</sub> from the dry up of peat land (naturally keep the CO<sub>2</sub>) and the burning of land, Indonesia become number 3 polluted country in the world<sup>iii</sup>.

One of the industries that very keen and behind of European Commission (EC) policy on biofuels is Genetically Modified Foods and Crops (known as GM or GMOs) companies. After facing fierce public resistance for GMOs products, the biotech company found a new argument to push GM food and crops to be used and produced in Europe; as a raw material for biofuel. Europabia, one of the key biotech lobby groups has enjoyed a strong tie with EC. Other companies that working hand in hand with EC for proposing biofuels is car companies. Cars manufacture, such as Volvo and Volkswagens, advocate biofuels in the context of broader strategy to avoid lower CO<sub>2</sub>-emission criteria for passenger cars. Earlier 2007, the Commission wanted to impose a mandatory efficiency standard for passenger cars which would have enforced lower CO<sub>2</sub> emissions. In response, car manufactures, launched a heavy lobby campaign and managed to water down the reduction target from the intended average 120 gr CO<sub>2</sub>/km to 130 gr/km<sup>iv</sup>.

Governments support for biofuels , with mandatory targets, subsidies and others incentives have also attracted major oil companies to be involved with biofuels business. Since 2003, British Petroleum (BP) has established a partnership with biotech company, Dupont for producing bioethanol. The same attempt was made by Shell, as they cooperate with Logen and Volkswagen in a cellulose ethanol project in German<sup>v</sup>.

Early 2005, EC Directorate General (DG) Research created The Biofuels Research Advisory Council (BIOFRAC). Its members were mostly from industry who involve with biofuels and several research institute which have strong connection with biofuels<sup>vi</sup>. They produced a report called “biofuels in the EU: a vision for 2030 and beyond. Two important recommendations among other are promoting biofuels up to 25% of fuel transportation and the establishment of European Biofuel Technology Platform (EBFTP). EBFTP mission is “ to contribute to the development of cost-competitive world-class biofuels in the European Union through a process of guidance, prioritisation and promotion of research, development and demonstration. “<sup>vii</sup> This report has become an official Commission documents.

June 7<sup>th</sup> 2006, BIOFRAC was dissolved as its mission was accomplished. On the same day, as it was recommended in BIOFRAC report, a steering committee of the European Biofuels Technology Platform (EBFTP) was appointed and launched the next day in Paris. A key role of the EBFTP is the elaboration of EU’s strategic Research Agenda (SRA) on biofuels and its main objective is to implement the major proposals outlined in the BIOFRAC’s vision report<sup>viii</sup>.

The promoting biofuels in Europe have faced severe opposition particularly from environmental NGO’s and scientific bodies. Mainly there are two main arguments they put forward to challenge the idea of promotion biofuels. Firstly is connected with social impact of using biofuels. The current argument is about the close relationship between producing biofuels and food crisis. Although the food crisis is not a product of single cause, but the competition of land use for food and for machine is sometimes to be blamed and also “feeding men or machine” is a one of their common slogan. another argument is about the impact to environment. Instead of mitigating climate change, the opponents of using biofuel argue that it has become a new source of accelerating global warming<sup>ix</sup>.

It seems that biofuels becomes a dominant answer the problem of oil dependency and the problem of global warming. It is shown by the heavy interventions of the EU in ensuring the production of biofuels which is on the same time inline with the eagerness of business sector to get involve in this business. This paper is about addressing the central question of this research which is how the discourse on capitalist interest is being served in the making of EU Policy on biofuels. Based on theoretical framework and the research finding the answer to the research question will be: first, in the Neo-Marxism view one of the state roles is to facilitate the sustaining capital accumulation. Regarding to this the state (supra state) policy options is have to be inline with capital accumulation or at least it will not damage its processes. The second answer is about mainstreaming the dominant group view on biofuels through the involvements of the like-minded group only in defining the future development of biofuel, as it shows in the memberships of BIOFRAC and EBFTP.

To elaborate the answer to the central question this paper will employ the neo-Gramsci theory particular which give more explanations about the building up hegemony, the

process of creating historical block and to some extent Neo-Marxism theory particularly about the relation between state and business sector in capital accumulation.

This paper is based on desk study which rely on the secondary data from EU papers (legislatives, directives, white paper, green paper and other form of communication from EC to the interested bodies), reports that have been published by NGOs, scientific bodies, and academic articles.

As organizational matter, this paper is organized into six chapters. Chapter one deals with the introduction of this research paper, while chapter two provides a theoretical frame work which is used to analyze the case that is presented in this paper. In the first section of chapter three this paper tries to indentify and to analyse the EU key strategic areas in the making of its policies and in the second section it will give a background of EU policy on biofuel through reviewing various EU papers which contribute to building up foundation for the current policy.

Chapter four examines the two main organisations that was created by the EC. First part is about BIOFRAC and followed by EBFTP. Chapter five will divided into two section. The first section is showing the business sectors that may have advantage with the development EU policy on biofuels and in the second section will focus on analysing the key strategic areas in the making of the EU policies on Biofuels. It is done by analysing how the current EU and business sector assumption are being challenged by organisation that rise the critical voices about the current EU policy on biofuels. This paper is finalized with the conclusion and some reflection about the fact and analyses that have been presenting in this paper.

## **Chapter 2: Theoretical Framework: The building up hegemony**

This chapter will discuss about the theoretical framework that are going to be used as the means to operationize the driving questions of this research. It also provides a guidance when it comes to analyse the case of this paper; EU policy on biofuels, the institutions that have significant roles in shaping the future EU policy on biofuel and how the interlinks between business sectors and EU apparatus is taking place.

In order to address the central question paper, the EU policies on biofuel is need to be put in the context of neo-liberalism agenda in the EU. It implies that these policies are part of an attempt and securing capital accumulation. Regarding to this, I will use the critical theory of political economy which is able to give perspective about the correlation between state and market and the direction of policy making. This paper uses EBFTP/BIOFRAC as the case study, it examines how business sectors influencing the EU to make sure that their interests are well represented in the policies on Biofuels. It will discuss the Neo-Gramsci theory particularly on hegemony, the creation of historical block and the Neo-Marxism theory which provides strong analytical tool in seeing the supremacy of capital interest compare to other interests.

### **2.1. Hegemony and Securing the Business Interests in Policy Making**

Classic Marxist and realist orthodox argue about the asymmetries power relation between one state to another. It focuses on how one state become a dominant to the others. To some extends this concept is inline with the notion of power proposed by Weber (Power to). But different to this concept Gramsci, with its hegemony theory gives more emphasis on correlation between social forces in a given society. How one idea/value/structure become a superior to the others and manage to get consent from the other subordinate groups. The inferior groups are convinced that those groups that the dominant groups are representing their interest, or a common (universal) interest at the last. In the processes of dominating others, the superior groups use all the means but forces to get consent from the others.

Gramscians analyse the creation and the role of ruling class in to become dominance in to others. (the winning idea/hegemonic). In the context of a state, it is not about capturing state by force but mostly look at how they become dominant through exercising sanctions, punishments or inducements : it also involved, important features, in Gramscians hegemony theory, 'intellectual and moral leadership'. ( Gill).

Hegemony according to Cox (in Gramsci, Hegemony and International Relations, 1990) is "a structure of values and understandings about the nature of order that permeates a whole system of states and non state entities. In a hegemonic order these values and understandings are relatively stable and unquestioned. They appear to most actors as the natural order.

As in the case of biofuels, it is still far and need a long process, and contested by the time whether it can become a hegemonic order or not. For sure currently it is far from that quality. Biofuels for its proponents may be the answer for the problem of global warming, to reduce dependency on oil and to stimulate economic growth in rural areas. But the effectiveness of biofuels as the answers to those problems is being contested as we will see in the next chapter. However, the increasing awareness about climate change



push many policy makers to act immediately. Biofuels by its advocates is the answer to reduce green gashouse emission on the same time it provide alternative fuels for fossil fuels which is blamed as one of the main sources of ozone depletion.

To achieve the stability that is uncontested or to become a hegemonic power, a structure of a value or social order has to pass a period for a long time. It is almost as never ending struggles. Because the ideas/ values need to be consented – as emphasised by Cox – by the whole system of state and non state entities, And in the process there always be a group who challenges and discontents with the status quo view. The emerging of counter hegemony mostly occur as a dialectical process within the building up a hegemonic. As Gill states that “ It is clear that the achievement of hegemony within a particular social formation is a complex and contradictory process, since counter-hegemonic forces will come to challenge the prevailing institutional and political arrangements.” ( Gill P. 41. 1993)

Currently there are many organizations risinh their concern and challenging the EU assumptions about biofuel. They demand a different path for biofuel or to re-thinking putting biofuels as policy option. Because it creates, in their counter arguments, problems in social and environment. The emerging of this group can not be called as what Gill states above: counter hegemonic forces. As biofuels is not a hegemonic order (yet). However the framework of hegemony and counter hegemony is very powerful in analysing the rise up and how they build up to become a dominant view on biofuel, which is currently from EC, business sector, and the emerging of the critical voices that are challenging their assumption about biofuels.

Gramsci theory puts emphasis a lot on the role of history as a vital element in understanding the hegemonic power as most of his concepts were derived from the history (see Cox, op cit) . But it gives strong distinguish between the historical materialism and historical economism. The later concept refers to the interpretation of history through economic only, which is according to Gramsci is a narrow interpretation of history. Historical materialism gives more attention to the correlation between ideas and material. As Cox argues “In Gramsci historical materialism, ideas and material conditions are always bound together, mutually influence one another, and not reducible one to the other. Ideas have to be understood in relation to material circumstances. Material circumstances include both the social relations and the physical means of production. Superstructures of ideology and political organisation shape the development of both aspects of production and are shaped by them.” (Cox: ibid)

The last thing need to be discussed is how a dominant group use intellectual and moral unity as well political and economic purpose to get a consent from other subordinate groups that the dominant group as a genuine representative from others. It will provide a framework in seeing how biofuels in European become a dominat answer to the problem of climate change, the dependency on oil and the problem of rural unemployment.

A dominant group exercise all the power: material, institutional and ideological but not by forces to have domination over other subordinate values/structure. As Gill stated above that the formation of hegemony within a given social formation is a complex and a contradictory process. As quoted by Levy and Egan (2003) for Gramsci, hegemony entails (1971, pp.181-2) “Not only unison of economic and political aims, but also intellectual and moral unity... the development and expansion of the [dominant] group

are conceived of, and presented, as being the motor force of universal expansion... In other words, the dominant group is coordinated concretely with the general interests of subordinate groups, and the life of the state is conceived of as a continuous process of formation and superseding of unstable equilibria between the interests of fundamental groups and those of the subordinate groups – equilibria in which the interests of the dominant group prevail, but only up to a certain point”.

It is not an easy task to apply the hegemony concept in analysing the current EU policies on biofuels. There are many literatures and scholar articles discusses/applies the concept of hegemony in analyzing the dominancy of superior groups and inferior forces in one state as also in the case of applying this theory in analyzing to international relations. But applying this concept to analyze a dominant policy option to the others is rather a new theme, as in the case of the EU policy on biofuels. However the current situation shows that the biofuels is far a dominant choice compare to other available policy options, like wind energy, solar, nuclear, etc. Thus to some extend, the biofuels is arguably on the process of becoming dominant to the other alternatives, as it is believed that it provides the answer to a lot of problems the EU is facing. Therefore Gramscian concept on hegemony is still useful and an appropriate one in analysing how the consent on biofuels is built upon in the EU.

## **2.2. The creation of historical bloc**

Another important features of the concept of hegemony is the creation of historical bloc which defined by Gill (1990) “as historical congruent between material forces, institutions and ideologies, or broadly and alliance of different class forces”. Putting this concept to the process of capital accumulation, the historical bloc, which mostly involves various classes, is an alliance of capitalist interest in a given society for securing the regime of capital accumulation.

Levy and Egan (2003). argues that Gramsci used the term historical bloc to refer to the alliances among various social groupings and also, more abstractly, to alignment of material, organizational, and discursive formations which stabilize and reproduce relations of production and meaning. These two meanings of ‘historical bloc’ are closely related, for the ability to mobilize an effective alliance requires not just economic concessions but also discursive frameworks that actively constitute perceptions of mutual interests.

This notion is very interesting is it gives inspiration of how the alliance (in this case European Biofuel Technology Platform, EBFTP) can be seen as the form of segment or fraction aiming at building a historical bloc. As they represent various social groups in the EU community. It is also interesting to use this concept in analysing how this body exercising, if there is any, its material, organizational, and discursive to define the meaning of biofuels for the European purpose.

But an historical bloc can not exist without a hegemonic social class, whereas the hegemonic class can be defined as a dominant class in a country or in any given social formation.

Intellectuals play a key role in the building of historical bloc. Intellectuals, in Marxism tradition are not a distinct and relatively classless social stratum.....they perform the function of developing and sustaining the mental images, technologies and organisations which bind together the members of a class and of an historic bloc into a common identity.

In the movement towards hegemony and the creation of an historic bloc, Gramsci distinguished three levels of consciousness: the economico-corporative, which is aware of the specific interests of a particular group; the solidarity or class consciousness, which extends to a whole social class but remains at purely economic levels; and hegemony which brings the interests of the leading class into harmony with those of subordinate classes and incorporates these other interests into an ideology expressed in universal terms (Gramsci, 1971:180-95).

Arrighi, (1993) in notion of correlation between a domination and intellectual leadership argues that “ the supremacy of social group manifest itself in two ways, as ‘domination’ and as ‘intellectuals and moral leadership’. ... A social group can, and indeed must, already exercise ‘leadership’ before winning governmental power (this indeed is one of the principal conditions for winning such power); it subsequently becomes dominant when it exercises power, but even if it holds it firmly in its grasp, it must continue to ‘lead’ as well. ( Gramsci, 1971: 57-8).

### **2.3. State and Market : Capital that matter**

This section will try to highlight the correlation between state and market in sustaining capitalism. Unlike the liberal and statist analyses, which assumes that states and markets are two separate spheres of human activities, the critical theory of IPE puts state part of the system of securing capital accumulation. Nawell and Paterson (1998) argue that a perspective which starts from the role of state in promoting capital accumulation can much better explain the content both of state policies and of particular international agreements.

The interdependency between states and the market can be seen, as one example through tax. State needs to provide necessary environment, including protection, to nurture the market which leads to the ability of business sectors to pay tax. The dependency of state on business sectors as most liberal economists argue is regarding their ability in employment provision. But Levy and Egan (2003) argue that “ the influence of business extends beyond the state control of material sources and the intertwining of political and economic elites. The state managers are likely to protect business interests not just because of their structural dependence on business for tax revenues, employment, and investment (Block,1987), but also because state managers have internalized the goal of promoting ‘competitiveness.’” Therefore Gill and David (1989) argue that in modern economies, consistently higher priority is given to an economic growth relative to other goals ( such as conservation),

Burnham (1990) suggests that the role of the state is to identify and advance the general interest of capital. On the one hand, this involves seeking to 'maintain the rule of the market, the rule of money and the sanctity of private property. On the other, it involves promoting the general interests, 'whether the general interest is described as 'economic growth', "capital-in-general" or "capital accumulation". Maintaining capital accumulation is therefore a central part of the maintenance of state legitimacy. (Burnham, *ibid*)

By examining the role of fossil fuel industries in politics of global warming, Newell and Paterson give an explanation for the weakness of responses to global warming. They build their argumentation upon the structural of capital and how this has enabled fossil fuel lobbies to limit the scope of state responses to the problem of global warming (Newell & Paterson, 1998).

They argue further that fossil fuel industries have been able to secure their interests is more adequately understood in terms of structural power of capital. This fundamental feature of capitalist societies helps to explain why governments have been more sympathetic to the concerns of fossil fuel industries than to the other proposals

#### **2.4. EC and business interests**

Because the complexity of EU governance, the traditional theories on state can not automatically be translated to the EU. That is why putting the EU as a unit analysis also needs a proper framework that can justified such choice. The work of Jorgensen and Rosamond can be one of example to analyze the EU and its policy. They made an overview of several scholars from different school of thoughts on the attempt to see the nature of EU policy making. They argue that "The Eu has a formal set of institutions and decision-making procedures, but the implications of action within that framework reach profoundly into diverse national political systems of the member states"(2002. P.191)<sup>x</sup>.

The work of Pollack (2005)<sup>xi</sup> can also be another analytical framework, which like Erik and Rosamond also made several literature reviews on the EU and its policy. But the work of Cram as stated in Erik and Rosamond's paper is more and less capture the main idea of EU policy making. It said that EU has become recently more 'multi-actor', 'multi-level' and multi-processes (Cram et al. 1999 in Erik and Rosamond. 2002).

In analysing the process integration of European Union, Gill (1998) argues that it was an expression of neoliberal disciplinary which supported by other social forces who have the same interest and get benefit form this mode of integration. He states that "these interests help form what, in Gramscian terms, would be called a transnational historic bloc that operates within and across nations and regions and seeks to embed neoliberal hegemony politically". Hooghe (2000) argues that the contention in the European Union is not territorial only but also involves ideological cleavage. She emphasise on the role of ideology and partisanship, particularly the European Unions political elites, senior career official in the European Commission, in shaping contention in EU politics.

Regarding how EU become more and more important lobby arena for cooperates Coen (1998) argues that "the change in the market has altered the lobbying patterns of business. Firms no longer have to voice their concerns in a national market or even to accept the national controls imposed on their domestic product."

However, as the European Commissions' regulatory competencies encroached upon the strategic business issues of business via standard setting, merger regulation and industrial policy, firms found their core interests influenced by the EU institutions. Significantly, the desire reciprocated by the European commissions demand for quick and reliable information. Lindblom (1977 : 170-88) suggest that businesspeople are able to claim an expertise of public value, partly because there is widespread acceptance of the view that economic growth is fundamentally dependent on investment and innovation by private enterprises.

This concept explains very well about the strong ties and influence of business sectors to the European Commission related to the creation of EU policies and Biofuel. It also explains why the preferences and the luxury accesses to the commission are given to this group. As in the case of BIOFRAC/EBFTP, Lindblom view provide a analytical framework when it comes to analysis why the members of these institutions are dominated by business groups. In BIOFRAC case even more extreme, there is no single EU citizen organisation was represented in its members, regardless the important mandate of this organisation that is influencing the EU future policy on biofuel which affect a lot of European people.

The role of energy company lobbies in global warming politics is that they have systematically been able to secure their interests, and that the most plausible explanation for this is that their interests are taken as necessary for furthering the interests of 'capital-in-general' ..... not in terms solely of their lobbying efforts. This in tune what Conca (1993) has observed that "it is generally only those environmental initiatives that do not threaten the interests and routines of industrial capitalism that succeed".

## **2.5. Chapter Synthesis**

This chapter has attempted to provide a theoretical framework that can be used in analysing the study cases of this paper. It has discussed the concept of hegemony and the process and what condition is needed to become a hegemonic power. It shows that it is not only taking a lot of time, but its ability to get a consent from other groups, especially from inferior ones. A structure/idea/values could not become a hegemonic if it fails to show that they represents the universal interest. Inherent in the process of building up hegemony, the counter hegemonic forces always come to challenge the views of the dominants. It is a dialectical process. This chapter also provide an analytical tool when it comes to analyse why biofuels it seems to be the dominant answer to several problems that EU facing. It is not only about solving problems the state (supra state) policies have to be inline with the attempt to sustain capital accumulation. Therefore others view that might harm this process is not a popular options. The discussion on historical block contribute in analysing how the domiant groups mainstreaming their view about biofuels in Europe; through domination (no representative other than like-minded group) and exercising its its moral leadership; they represent the "universal" interests.

### **Chapter 3: Background**

This Chapter provide a background to EU policy on biofuel. However the first section is about identifying and analysing the key strategic areas in the making EU policies on biofuels. It is not only one of contribution of this paper, but it also lays foundation to further analysis about interdependency between EC and business sectors and how this key strategic issues being challenged by its opponents (in chapter five). In the second section, the reader will be introduced to the evolution of EU policies on biofuels, as the current policy is the result of dialectic processes within European Communities.

#### **3.1. The Making of EU policies on Biofuels**

The current EU policy on biofuels needs to be seen as a product of a long debates and changes. This section deal with identifying what are the key strategic problems that need to be addressed by building up biofuels policy. It also analyse how EU use these strategic issues to justify it actions in proposing the policy on biofuels. The Key strategic areas are identify trough analysing the EU paper since 1996 and onwards The 1996 was chosen as it was the first time EC encouraged public debates which contributed to lay down a foundation for the EU to establish policies on biofuel. But the idea of biofuels potential to substitute to fossil fuels is much longer then that<sup>xiii</sup>. However the significant contribution to the current policy of the old EU paper was in 1996, as the idea of biofuels in the EU is more profound in related to global warming.

##### **3.1.1. Security energy**

Security energy has been the main consideration which leads to choice of developing biofuels as another source of energy. Security energy translated to into two terms: reduce dependency on oil and diversify geopolitical risk. In the European case, 45% of its oil consumption comes from Middle East which is defined as unstable territory in term of security while 40% of its natural gas consumption comes from Russia.

The oil “shocks” in the 1970 which had severe impact to the world economy also have contribute to start to thinking the dependency on oil. Brazil, currently the world largest bio ethanol production started to develop its renewable energy resources after the oil shocks. The same arguments was adopted by US when its started to develop their ethanol programs.

In 1996 EC adopted green paper on European Strategy on Security Energy Supply, it stated that “Energy supply has been a political priority for the EU since its inception. The foundations of European integration were treaties based on energy considerations (the European Coal and Steel Community and the European Atomic Energy Community, or Euratom).

The world economy today is very much fuelled by fossil fuels. The economic growth is identical with the increasing of fossil fuels consumption. Thus the problem of energy security is not only from geopolitics point of view and the volatility of the price but also how much the fossil fuel reserve is still available. With “business as usual” the EU’s energy import dependence will jump from 50% today to 65% in 2030( EC communication: An Energy Policy for Europe.2007). but the number of dependency on

energy import will even bigger if we look at the EC White Paper on Energy for the Future: Renewable Energy Sources (1997) which highlighted that the EU dependency on energy import will reach 70% by 2020

The introduction of biofuels as an alternative energy resources in the various EU policies very much attach to the reduction of on energy import. This is because the raw material of biofuels can be produced within the EU states.

The EC Proposal Directive on the Promotion of the Use of Energy from Renewable resources (2008), highlighted there main concern of BF for electricity, heating and cooling and transport. The Commission's Green Paper: Toward an European Strategy for Security of Energy Supply (1996) set up a the objective that 20 % of total energy road transport by 2020 has to be from alternative fuels. The chosen of to set up a target consumption of road transportation because it's a key of economic growth and in the case of Europe its would grow some 2% per annum over the coming decade and almost depend fully on energy import . as it EC continued to argue in green paper Toward an European Strategy for Security of Energy Supply (1996) which stated that "Particular attention has been given to the potential of using biomass as the basis for production of alternative motor vehicle fuel (diesel or gasoline) because of the transport sector's almost exclusive dependence on oil." (ibid). It is also because to the fact that of current production of biofuels much more expensive than fossil fuels, so the priorities goes to road transportation as it poses more threat in term of energy security and play role as key of economic growth and road transportation is the biggest contributors to CO2 emission in Europe contribute

EC on the "An EU Strategy for Biofuels," argue that "even using the most modern technologies, the cost of EU-produced biofuels will make it difficult for them to compete with fossil fuels. With the technologies currently available, EU-produced biodiesel breaks even at oil prices around €60 per barrel, while bioethanol becomes competitive with oil prices of about €90 per barrel". (2006. p.34)

EC Paper (EC Communication on Alternative Fuels for Road Transportation and on Set of Measures to Promote the Use of Biofuels (2001) p 20.) has calculated that it will cost EUR 500/1 000-litre to produce biodiesel compare to EUR 200-250/1 000-litre to produce petroleum-based diesel. The cost of production will depend on several factors for instant the cost of raw material ( in the EU case mostly rapeseed), size and type of production plant and the yield and the value of by-products (protein, glycerol) (Ibid). It shows that it is needed at least 300/1000-litre additional cost of producing biodiesel compare to conventional petroleum based. Another extra cost that need to be added is it takes 1100 litres of biodiesel to replace 1000 litres of petroleum-based product

Crude oil price

"Extra cost" – 100% biodiesel

USD 20/barrel	~ EUR 350/1 000-litre
USD 25/barrel	~ EUR 300/1 000-litre
USD 30/barrel	~ EUR 250/1 000-litre
USD 35/barrel	~ EUR 200/1 000-litre

Figure 1. The comparison of crudes oil prices and biodiesel extra cost

Source (EC Communication : “ An EU strategy for Biofuels, 2006)

### **3.1.1.1. Reflection**

The acceptance of to develop biofuels in Europe very much justified by its ability to reduce dependency on oil. Because of its raw material indigenously can be from European state. Even though the current cost production of biodiesel is much more expensive compare to traditional petroleum but the promise of a better technology which can reduce the cost production and it serves as an answer to the problem of security energy make it as sound policy. Even though the increasing of oil consumption is not parallel with the increasing of biofuels production.

### **3.1.2. Stimulating economic growth in rural areas**

Another justification for developing biofuels in the EU is that it will stimulate the economic growth especially in rural areas. For the EU-25, almost half of their population live in rural areas which cover 90 per cent of its territory. These regions have lower incomes compare to urban areas, and face a bigger problem in terms of unemployment and in terms of economic growth still very much depend on the primary sectors in urban areas<sup>xiii</sup>.

EU agricultural policy is very much influenced by Common Agricultural Policy (CAP) as its provided high support price, planting restriction, intervention buying, stock management, and rigid border controls<sup>xiv</sup>. However the reform of the CAP in June 2003 and the second reform package of April 2004 led to big changes and likely to have a significant impact on the economy across the whole rural territory of U-25 in term of employment and wider social and economic conditions in rural areas. (EC, “An EU Strategy for Biofuels, Impact Assessments”. 2006.p. 34)

However, in 2003 the new CAP reform was established with the introduction of especial aid for energy crops that grown on non set-aside land. The EU-25 farmers will get compensate 45 Euro per hectare<sup>xv</sup>. Apart from this EU direct subsidy for its farmers exist for various policies. So this attempt needs to be seen in this context that EU farmers can have two options in farming for food and non food products.



The justification of establishing biofuels policy on biofuels related to the stimulating growth in rural areas can be extended further as that biofuels production is labour intensive. Thus will absorb more labour compare to other industries and solve the main problem of economic situation in rural areas: unemployment.

Although precise numbers of job creation are difficult to evaluate, different studies agree on the scale. The German study performed by the Fraunhofer Institute showed the rate of economic impact to be 16 employees per ktoe/year. The Spanish national plan for biofuels puts the figure at 26 employees per ktoe/year of biofuels produced (source: IDAE). (EC Com on Alternative Fuels for Road Transportation 2001. p.23). The paper explores further by saying that “ Extrapolation of these results would lead to the conclusion that a biofuel contribution of around 1% to total EU fossil consumption would create between 45 000 and 75 000 new jobs. Most of these jobs would be located in rural areas.

The employment impact can be calculated in different ways with different results. For example, the EUR 2 000 million production cost of 4 million m3 of just biodiesel will generate some 50 000 man-years in direct and indirect employment.” (ibid).

In Biomass Action Plan (2005) EC argues that different studies of creating job opportunity produce different figures. If 70-90% of biomass is produced in the EU it will have direct employment up to 250-300 000 people, mostly in rural areas. Compare to conventional fossil fuels producing biofuels are creating up to 50-100 new jobs, biomass electricity 10-20 times and heating creating twice new jobs.

### 3.1.3. Enhancing the EU World Class Technology on Biofuels

<b>Ethanol production</b>	<b>2005 bio litres*</b>	<b>2004 bio litres</b>
<b>Brazil</b>	16.7	14.6
<b>United States</b>	16.6	14.3
<b>European Union</b>	3.0	2.6
<b>Asia</b>	6.6	6.4
China	3.8	3.7
India	1.7	1.7
<b>Africa</b>	0.6	0.6
<b>World</b>	<b>46.0</b>	<b>41.3</b>

**Figure 2: World ethanol production (fuel and other uses)**

\* F.O. Licht's estimate

Source: EC Communication, “ An EU Strategy for Biofuels”. COM(2006) 34.

When EC released its proposal Directive on the Promotion of the Use of Energy from Renewable Resources which later was adopted in 2003 (known as Biofuel Directive) it

highlighted that “Globally, Europe is at the forefront for several renewable energy technologies. Significant employment is associated with the industries concerned in the European Union, involving several hundred companies, mainly small and medium-sized enterprises, in primary assembling/manufacturing alone, without taking into account other service and supply needs”. (p.6)

The involvement of industry at that time was not from big companies, but because of the support from Research and Technology Development and demonstrations from various program such as JOULE- THERMIE, INCO and FAIR, those industries managed to achieve a world leading position<sup>xvi</sup>.

On the EC Communication on EU Strategy for Biofuels (2006), EC committed itself to support research and technological development in the field of biofuels which expected to have result on reducing the current production cost up to 30% by 2010. The EU Seventh Framework (research) Programme (2001-2013) puts priority to biofuels research to further strengthen the competitiveness of the EU biofuel industry. (p.16)

In 2005 EC facilitated the establishment of the industry-led European Biofuels Technology Platform. The purposes of this body are to facilitate any effort to achieve European vision on biofuels particularly for transport application. It represented major European stakeholders on biofuels<sup>xvii</sup>.

The attempt to have a supremacy in biofuel technology was one of consideration to develop biofuels in Europe. As it stated in the EC Communication, 2001 “...in short term, we expect that benefits arising from technology innovation and spill-out will be more important than market creation and imports in EU for agriculture products as dependency on oil will continue to be is an universal situation”. (p.24)

Several fact that has been described above, all of them are in line with the attempt to achieve Lisbon Treaty which visions Europe as the world most competitive knowledge-based economy. The directives 2003/30EC which introduce tax exemptions and other forms of necessary support have boosted the biodiesel production in Europe, doubled the production in 2003 (1 billion tons or equivalent to 1.2 billion litres in 2004).(Peters and Frondel. 2006). But in term of world production the total outcome from the EU countries is still far much below compare with the US and the Brazils, as it shows in the figure 2.

#### **3.1.4. Mitigating climate change**

Another consideration to put forward the policies on biofuels is mitigating climate change.

When EC published its white paper on Energy for the Future: Renewable Energy Resources, it showed a strong correlation between the worried about climate change and the thinking of to diversify its energy resources that not primary for fossil fuels only. As economic activities can not be slow down because of climate concern, it should find another resources that still can run the “engine” of capital accumulation but with less impact to the environment.

To fill this gap, that white paper highlighted the potential of renewable resources that the EU needed to explore to make it available in term of economic : Winds, Solar, and biomass.

The white paper was published one month before the “Third Conference of the Parties to the United Nations Framework Convention on Climate Change” to be held in Kyoto in December 1997. The Paper put forward EU position regarding the negotiation that was still place about how many per cent of green house gas emissions need to be reduced by each country. The European Union adopted a negotiating position of 15% greenhouse gas emissions reduction for industrialised countries by the year 2010 from the 1990 level. To facilitate the Member States achieving this objective, the Commission, in its communication on the Energy Dimension of Climate Change identified a series of energy actions - including a prominent role for renewable. (p.4)

However in the EC Communication on “An EU Strategy for Biofuels”<sup>xviii</sup> still highlighted that the incentive to develop biofuels do not consider its contribution to reduce CO2 emissions. That why “ Linking greenhouse gas benefits to encouraging the provisions of biofuels would help to increase of further improving production pathways in this respect” (p.10).

In the EC Communication on Biomass action which was published in 2005<sup>xix</sup>, the EC forecasted that the EU-25, would reduce greenhouse gas emissions up to 209 million tonnes of CO2 per year. This estimation was built on the assumption that the Member States by 2010 would consume a 12% overall share of renewable energy; a 21% share of renewable energy in electricity generation; and a 5.75% market share of biofuels.

### **3.1.5. Support Development in Developing Countries**

Even though less profound than other key strategic areas, EC in several its paper mentioning one of the considerations (at least the impact) of establishing EU policies on biofuels is to strengthen the EU international cooperation as it will give benefits for developing countries particularly that have rich agricultural resources.

In EC Communiacion {COM(2001)574} argues that the development of biofuels and their use will create a new market for agriculture products, as there is an increasing demand for this product in the EU and world wide. In the ‘ An EU Strategy for Biofuels’ (COM(2006)34, one of the key strategic to develop biofuels because it will support development in developing countries by “ develop a coherent Biofuels Assistance Package’ that can be used in developing countries that have a potential for biofuels”. ( P.15).

The possibility to support development in development countries through developing biofuels policies in Europe is elaborate in clearer way in the EC Communication for the Impact Assessments of An EU Strategy for Biofuel {COM(2006)34}. It acknowledges that development biofuels in Europe could lead a several impact in developing countries such as economic, environment and social impact. In term of economic effect EC argues that biofuels production can contributes to maintaining employment and creating new jobs in rural areas, which leads to diversifying income sources and to some extend will decrease migration to urban areas. They add that “ where biofuels can be produced locally, they are likely to reduce the fossil oil import bill and improve the balance of payments. Moreover, where production can take place for export markets, a further positive effect on the balance of payments will be achieved”. (p.30).

This paper also recognises the possibility of development biofuels will lead to bad impact to biodiversity, water and atmospheric contamination, and soil fertility. In term of social

effect it has possibility to create a problem of competition with food crops production, the increasing food price and put more pressure on vulnerable communities.

However, EC Communication on Biomass Action Plan {COM(2005)628} acknowledge that the “ imported bioethanol is cheaper than European if o import duty is paid, and more expensive if the maximum tariff si paid”. (p.37). Therefore EC further argues that it would be difficult for European producers to stay in the market, if all tariffs on biofuels were removed<sup>xx</sup>. It press release of 2703<sup>rd</sup> Council Meeting on Agricultural and Fisheries, one of the item that was discussed was “ several delegations insisted on the need to keep sufficiently high import tariffs to make the development of Community biomass production possible and to avoid excessive imports of renewable sources of energy such as bio ethanol”<sup>xxi</sup>.

### **3.1.6. Section Synthesis**

This section has identified the five key strategic areas that are going to be addressed with development of biofuels. These main considerations provide a further justification for the EU to put forward its policy on biofuels. The identifications of these key areas is very important in further analysis of these paper, as on the next section it will analyses how business sector justify their support for this policy and how the critical voices raising different opinion about these key strategic issues in order to demand to drop of mandatory target in development biofuels in Europe.

### **3.2. The Evolution EU Policies on Biofuels.**

This section will highlight the evolution of biofuels policies in Europe. It will centre to the enactment of “ Biofuels Directive 2003/30/EC” and onward. The 2003 directive was chosen because it was the first time that the EU set an obligation target to its member state to develop biofuels in EU member countries. But the idea of developing biofuels in Europe can be traced down since 1980, when several EU countries started to experiment of producing bioethanol from the surplus of wine as a result of agriculture subsidy. However in this section of the EU chronology biofuels policy is started in 1996, as it was the first time EC encourage public to seek a foundation for development of EU biofuels policies in Europe. Furthermore, the choice is coherent with the central research of this RP that dealing with the key strategic issues of EU biofuels policies.

One of the oldest paper that produced by EC to encouraged public debate about biofuels was a green paper which called Energy for the Future: Renewable Sources of Energy. It was published in 1996. The debate was followed with the publication of a white paper in 1997 which called Energy for the future: Renewable Sources of Energy. The green paper highlighted Renewable Energy Resources (RES) as one of the possible energy source for the EU beside oil, gas, solid fuels and nuclear. The green paper had laid foundation for further debates on the making the EU policy on RES as white paper on this subject was published one year after. Among other that have been highlighted by this paper was that RES are indigenous so it can contribute to dependency on energy import which would increase security supply and stimulate economic growth in rural areas. The introduction of RES was connected with reducing CO2 emissions. The position of Europe as a

world-wide leading industry needed to be maintained by “by the contribution of the 5th RTD framework programme in which the renewable energy technologies will have a central role to play”. (EC White Paper.p.6). This industry are mainly run by small and companies medium-sized. The paper also set a target that RES would contribute up to 12% of energy consumption by 2010.

To encourage the further debates about the challenge posed by the EU energy security, in 2000 EC published its green paper “ Toward a European Strategy for the Security of Energy Supply”. In this paper EC highlighted the potential of renewable energy sources (RES) has to solve to problem of sustaining energy supply. But it did not define yet to which direction of political choice to develop of RES need to go. It puts wind energy, photovoltaic energy and biomass on equal position.

The paper acknowledge that the doubling target that has been set up by the Commission (from 6% in 1997 to 12 % in 2010) could not be fulfilled without strong action from the Commission. The debates was should financial support for highly profitable energy (gas, oil, nuclear energy) be replaced to deal with technical and non technical barriers that faced by RES to make it attractive in term of economic. It means that in the year 2000 the debates was still about how far the EU needed to support development biofuels in the light of other more profitable policy options.

In 2001 EC published its Communication on Alternative Fuels for road Transportation and on a Set of Measures to Promote the Use of Biofuels. There are two attached proposals directive, first on the promotion of the use of biofuels fro transport and another proposal for Amending Directive 92/81/EEC with regard to the Possibility of Applying a reduced rate of Excise Duty on Certain Mineral Oils Containing Biofuels and on Biofuel.

The Communication acknowledged that for road transportation replacing a few percent of diesel or gasoline with biodiesel or ethanol is the simplest, and establishing plants to produce such alternative fuels being the only long term investment (P.3). The Paper also recognized the three main potential of alternative fuels that can be developed up to 5% for automotives fuel by 2020: Biofuels, Natural Gas, Hydrogen. It argues that the biofuels offer an alternative ideal since the raw material are 100% indigenous which lead to the stimulation on economic growth in rural areas but producing biofuels is more expensive compare to fossil fuels ( It has additional cost approx. 300 Euro/1000 litter if the oil price is at 30 Euro/barrel. So it will reach break even point if the oil price is around 70 uro/barrel). The paper proposes tax incentive break trough the barrier of the higher production cost. It also put forward a scenario of 2% in 2010 and 5% in 2015.

The first directives proposal concerned about a directive requiring and increasing proportion of all diesel and gasoline sold in the Member States with biofuel, for a second phase, and obligation of a certain percentage of biofuels to be blended into all gasoline and diesel. (p.13). Even though not mandatory, It implied an obligation on Member States to introduce legislation and take necessary action to ensure that as from 2005 a minimum share of transport of fuel sold on their territory is occupied by biofuels. The second Directive proposal facilitated the EU Member States to apply differentiated tax rates in favour of biofuels. This proposed tax Directive according to EC helps to provide flexible instruments which, in line with the subsidiarity principle, can be adapted to the budgetary constraints, local conditions and technological choices of each Member State (p.41)

The two proposals directive were adopted by the European Parliament and the Council (first is the 2003/30/EC, known as Biofuels Directive, and the 2003/96/EC, known as Energy Taxation Directives). In Biofuel Directive the EC revived the target to mix up biofuels for transportation fuels in Europe at least 2% by the end of 2005, and then would be added annually up to 0.75% to reach the expectation that in December 2010 the composition of biofuels would be 5.75 %. This proposal was adopted on May 2003. The Energy Taxation Directives proposed Member States to grant tax reductions and tax exemptions to enhance development of biofuel. This second proposal was adopted in October 2003.

To boost the production of biofuels raw material, known as energy crops, EU established its Common Agricultural Policy Reform. With this reform, it allows Member States to give direct aid or incentive to their farmer who grown energy crops for non-set-aside-land, for 45 Euro per hectare. To establish a budgetary ceiling on such outlays, the nereg payments were to be restricted to a maximum guaranteed area of 1.5 MHA (Schnepf :2006).

In 2005, only two countries (Germany and Sweden) out of 21 one country that could meet the 2003 indicative target for biofuels. It was also clear that the target biofuels in 2010 could not be met if there were not new action plan to improve this condition. In December 2005, EC presented a Biomass Action Plan {COM(2005) 628}. This action plan suggesting the use of energy plants that can be converted from forestry, agriculture and waste material. Another important features of this Action Plan was the suggestion to introduce a binding target (contrary to 2003 indicative target) for biofuel in the future policy.

To complement to Biomass Action Plan, in 2006 Commission published “An EU Strategy for Biofuels”. The EC suggested a multi-sectors strategy boost the biofuels production from market-based approach, creating new legislation to producing research measurement. This “EU Strategy for Biofuels” also a preparation to review the 2003 directive target which included a mandatory target for biofuels use in the energy for transportation.

In 2006 the Commission opened a public consultation for reviewing biofuels directive. There were a lot of responds to this consultation, as suumized by the ECN (Energy research centre based in Netherland) the biofuels indicative target should be further pursued. Basing on the respons gathered through the public counsulation in 2006, commission reviewed the Biofuels Directive and thereupon published the “Biofuels Progress Report” in January 2007 (Bolter et al. 2007)

Bolter wrote that “The development of a powerful EU biofuels Strategy is still ongoing: in March 2006 the European Commission set out its vision for a “ Strategic EU Energy review”. In the beginning of 2007 the so-called “ Renewable Energy Roadmap” and the “Energy Policy Europe” were published, aspiring to a 20% share of renewable in the EU’s energy mix and a minimum target of 10% for biofuels in transport by 2020. Member States are required to establish National Action Plans that outline their specific objective and sectoral targets for each of the renewable energy sectors – electricity, biofuels and heating and cooling”. This is very important documents as they lay and stronger foundation and with higher target for development biofuel in Europe.

## Chapter 4:

### Institutional Expression of Historical Block

This section is about analysing two institutions that was created by EC: the BIOFRAC () and EBFTP. These two organisations have a significant mandates in shaping the future EU policy on biofuel. The first institution was aimed to set up a vision for development biofuels in Europe and the second was to deal with technical and non technical barriers that may occur in achieving Erope vision on biofuels.

There are three levels of analysis: the content, the representatives, and the impact of these organisations to development biofuels in Europe. But this chapter only deal with the last two as content analysis will be provided in the chapter five, since it deals with the discourse analysis of EU, business sectors and their opponents to the ideas of keys strategic issue in the making of EU policies on biofuels. The each earlier section of this chapter will be provided with descriptions of these organisations and the analysis will be presented on the last part.

#### 4.1. The BIOFRAC

The Biofuels Research Advisory Council (BIOFRAC) was created by European Commission Director General on Research (EC DG) in early 2005. The members of this Council are from European biofuels stake holders that are mainly from industry or lobby groups and research centres or universities. The criteria of these members according to DG Research Commissioners Janez Potocnic, is based on their past experience, current practice and future expectation<sup>xxiii</sup>. The mission of this high-level Advisory Council was “to develop a vision that addressed all the issues that are relevant to ensure a breakthrough in biofuels technology and increase their deployment in the EU, with an emphasis on research, development and demonstration”<sup>xxiii</sup>.

The member of Biofrac consist of<sup>xxiv</sup>:

Four members from automotive industry

Three from oil company

There from biofuels company

One from biotech lobby group (Europabio), one from food industry, one from a forestry company, one from energy company, and one from farmer organisation

Eight from research centre or universities which mostly have close links with the oil and biotech company ( The full list of BIOFRAC membership is provided in the Annex II)

As it states in its mission, this institution played a crucial role in shaping the future European policies on biofuels. It gave recommendations to the EC about the future development of biofuels in Europe and identified the problems and how to deal with that. But as we can see from the composition of its members, most of them from are the main players in biofuels business and institutes which mostly have strong ties with biofuels chain.

One of the main problem with BIOFRAC is the democratic deficit in its membership. No single representative from EU citizen organisations. But to some extend this form of

exclusivities can be seen as the supremacy groups exercising their domination<sup>1</sup> into other. Arrighi (1993) argues that dominant groups manifest in two ways: the domination and acting as intellectuals and moral leadership. So the unrepresentative of other voices than the supporters biofuels in BIOFRAC can be seen as example of supremacy group to domination the view on biofuels.

It is not surprised when the recommendation about development biofuels in Europe was very much inline with the current EU policies despite a lot of different view about biofuel have been raised.

This phenomenon is also one of the example of what neo-Marxism view about relation state and business sectors. State is viewed as an important institutions to facilitating the sustaining capital accumulations. As biofuels in Europe is on earlier stage of its development , the voice of business sectors need to be considered strongly as their will know in which way the state (surpra state) can facilitate the competitiveness of its industrialists.

The Biofrac has fulfilled its mandate by producing a report called “Biofuels in the EU: a Vision for 2030 and Beyond. In its report the Biofrac highlighted its vision of biofuels in the Europe “By 2030, the European Union covers as much as one quarter of its road transport fuel needs by clean and CO2-efficient biofuels. A substantial part is provided by a competitive European industry. This significantly decreases the EU fossil fuel import dependence. Biofuels are produced using sustainable and innovative technologies; these create opportunities for biomass providers, biofuel producers and the automotive industry”.<sup>xxv</sup>

This vision on biofuels in Europe set a standard which goes beyond what the EU’s legislative and directive build upon. The current EU directive which agreed by the European Head of State, on March 2007, is a 10 % target for the share of biofuels in petrol and diesel 2020, and a 5.75% by 2010. The target that was set by BIOFRAC to the EU was almost doubles to the current target. As it shows in the previous chapter of this paper, the existence of biofuels in the European market very much depends on the heavy support from the EU. One of them is through mandatory target, which gives obligation to member states to develop and give its necessary support to reach the European target. By doubling the current target of biofuels (25 % in 2030), its shows how the business sectors get a lot of advantage and make sure that the support will not be ended.

One of direct impact of BIOFRAC’s vision is on defining the EU research agendas which institutionalised in the EU Seventh Framework Programme for Research and Technological Development (FP7). The FP7 is the EU main instrument of research funding over the period 2007 to 2013. It is one of the main vehicle to achieve the Lisbon agenda which aims to develop Europe as “ the most dynamic and competitive knowledge-based economy in the world capable of sustainable economic growth with more and better jobs and greater social cohesion, and respect for the environment by 2010”. By recommending what are the main obstacles of achieving biofuels vision this organisation is defining in which way the EU funds need to be spent.

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EU Commissioners on Research, Janez Potocnik was also welcome Biofrac recommendation to establish a technology platform on Biofuels that would coordinate all commission's work on agrofuels.

#### **4.1.2 Synthesis**

BIOFRAC is an organisation that was created by EC which aimed to build vision about development biofuels in European. The business sectors (from the membership) use this opportunity to push forward the higher mandatory target on biofuels then currently applied in Europe. The lack of democratic representative of this body can be seen as the way the dominant groups exercising their power in maintaining their view toward biofuels. This is one the answer to the central question of this research paper: How the discourse on capitalist interest is being served in the making of EU Policy on Biofuels. It is through dominating the view on biofuels by establishing public-private organisation which have ability to shape the future EU policy on biofuels.

#### **4.2. The European Biofuels Technology Platform (EBFTP)**

This section will discuss another institution that was created by the EC. The establishment of EBFTP need to be seen not only to follow up what BIOFRAC has been recommended but it also part of the attempt where the dominant group exercising their power in maintaining their dominant view in this case biofuels. The same like BIFRAC, this organization also has a lot of problems with democratic representative regardless the impact of this body to define the future development of biofuels and how public money (from research) need to be spent in relation to biofuels.

On June 2006, with its mission accomplished, BIOFRAC was dissolved. On the same day, in line with the recommendations in the Biofuels Vision report, a steering committee of the European Biofuels Technology Platform(EBFTP) was appointed and the new Platform was officially launched a day later, in Paris. (CEO briefing paper). It implies the impact of BIOFRAC take a very strong shape in the European Commission policy. It is not only because it has adopted BIOFRAC recommendation fully, but it also the launch of EBFTP the day after BIOFRAC was dismantled shows the urgent need from EC to continue to work and to involve business sectors in developing biofuels. This fact also shows what Gill and David (1989) argue that in modern economies, higher priority is

always be given to an economic growth relative to other goal. Therefore one can argue further by saying that the establishment of EBFTP was much shaped by economic interests compare to other interests.

The mission of the European Biofuels Technology Platform (Biofuels TP) is to contribute to the development of sustainable, cost-competitive, world-class biofuels technologies, to the creation of a healthy biofuels industry and to accelerate the deployment of sustainable biofuels in the European Union through a process of guidance, prioritisation and promotion of research, development and demonstration.<sup>xxvi</sup>

To achieve its mission, the EBFTP, as it states in her term of reference, will focus its activities on:

- Elaborate a Strategic Research Agenda (SRA) with detailed identification of key RD&D working lines for the next 10 years necessary to achieve the Vision 2030.
- Elaborate a Deployment Strategy which anticipates the key elements required to implement the SRA, such as mechanisms to mobilise investments, demonstration activities, regulations, education and training actions and communication.
- Identify on-going biofuels RD&D activities and players relevant to the Platform mission.
- Facilitate the deployment of the SRA by stimulating EU private and public investment in RD&D projects that make best use of all available support instruments, such as the 7th Framework Programme 2007-2013 aimed at promoting public-private partnership.
- Coordinate with other bodies and initiatives engaged in biofuels RD&D, including other EU Technology Platforms, Member State initiatives and international (ex-EU) cooperation.
- Communicate the outcome of the platform activities above in order to supporting the mission objectives.

The EBFTP, which is the youngest of all the technology platforms dealing with agrofuels, sees its role as in building “synergies” with others platforms, such as the

Forest-Based Sector Technology Platform (FTP), the Hydrogen and Fuel Cell Technology Platform (HFP), the European Road Transport Research Advisory Council (ERTRAC), and the Biotechnology Platform (Plants for the Future) – creating a “knowledge based bio economy”.(CEO briefing Paper)<sup>xxvii</sup>

Technology platforms are created by EC DG Research which serves several functions:

- Provide a framework for stakeholders, led by industry, to define research and development priorities, timeframes and action plans on a number of strategically important issues where achieving Europe's future growth, competitiveness and sustainability objectives is dependent upon major research and technological advances in the medium to long term.
- Play a key role in ensuring an adequate focus of research funding on areas with a high degree of industrial relevance, by covering the whole economic value chain and by mobilising public authorities at national and regional levels. In fostering effective public-private partnerships, technology platforms have the potential to contribute significantly to the renewed Lisbon Strategy and to the development of a European Research Area of knowledge for growth. As such, they are proving to be powerful actors in the development of European research policy, in particular in orienting the Seventh Research Framework Programme to better meet the needs of industry.
- Address technological challenges that can potentially contribute to a number of key policy objectives which are essential for Europe's future competitiveness, including the timely development and deployment of new technologies, technology development with a view to sustainable development, new technology-based public goods and services, technological breakthroughs necessary to remain at the leading edge in high technology sectors and the restructuring of traditional industrial sectors.<sup>xxviii</sup>

In relation to this the establishment of EBF<sup>r</sup>TP can be seen as part of instrument to maintain the regime of capital accumulation, in Lisbon words “to build Europe as the competitive world knowledge-based economy”. Within this frame the “stage” is only given to actors which can contribute to this purpose to challenge it, as out of 145 EBF<sup>r</sup>TP only two from citizen organisations and no single representative in the Steering Committee. (The full list of EBF<sup>r</sup>TP membership is provided in the Annex III)

The Structure of EBFTP consist of three main bodies:

1. Steering Committee (SC)
2. Working Groups (WG)
3. General Assembly (GA)/ Stakeholder Plenary

#### **4.2.1. Steering Committee**

April 2006, European Commission called for application to be member of SC and WGs. There were about 60 nominations for SC and 300 nominations for WGs. The members of SC were selected by the chair (Anders Roj from Volvo) and vice-chairs (Oliviert Appert from Institut Francais du Petrole and Javier Salgado from Abengoa Bioenergy). About the EBFTP membership criteria, the chaired in charge said that “ after consultation with the Commission. The main criterion for selection has been the candidates' recognised international standing and their ability to advice and influence stakeholders in planning research, implementing deployment programmes, fostering partnerships and managing resources. In addition, a careful sector and country balance has been pursued.”<sup>xxxix</sup>

Members serve in a personal capacity, therefore in general the appointment of substitutes is not permitted. Each stakeholder may however assign one alternate that may attend SC meetings on behalf of the Member if they are unable to attend for justified reasons.<sup>xxx</sup> Apart from its rhetoric about open participation, there is not a single citizens' organisation representative on the Steering Committee.<sup>xxxi</sup>

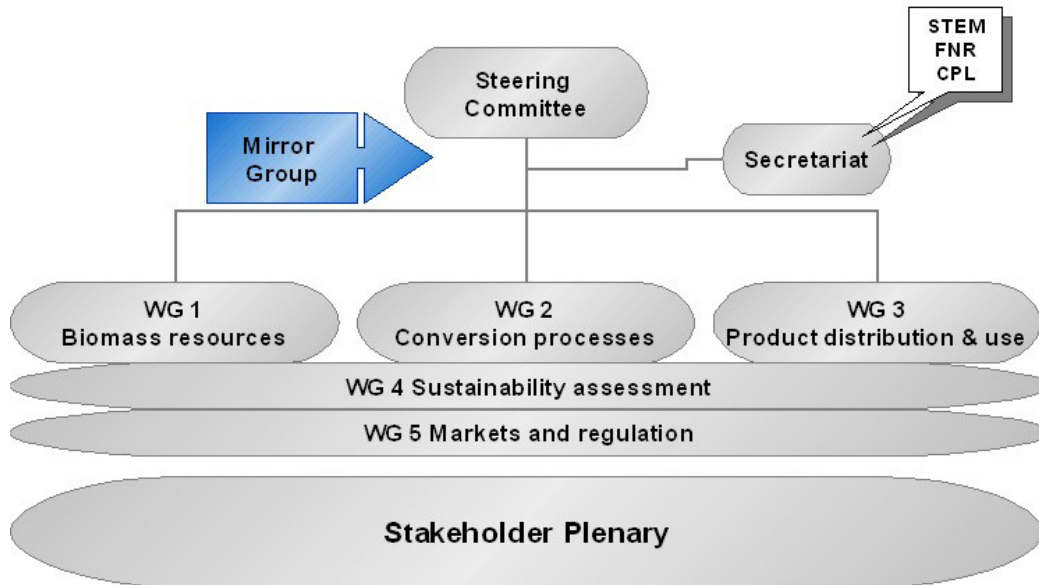


Figure 3: the Organisational Structure of EBFTP

Source: EBFTP report, “A Vision for 2030 and Beyond”

In its term of reference the EBFTP defines the role of its SC as a decision making body and functioned as executive arm, therefore directs all activities of EFBT. They responsible for:

- Defining the roles and responsibilities within the Platform and outlining operations.
- Compliance with the Platform Mission and related activities.
- Approval and launching of activities: objectives, timing, scope.
- Follow-up activities and approval of deliverables.
- Setting high-level policy: coordination with external bodies and initiatives, communication and general organization.
- Final elaboration of key deliverables (Strategic Research Agenda and Deployment Strategy) with support from Secretariat based on the reports from the Working Groups outcomes, thus ensuring harmonization of content and integrity of the messages.

Meetings of the Steering Committee will be held periodically, at least three times a year. The Steering Committee will submit the Strategic Research Agenda and its positions,

opinions, recommendations and reports to the European Commission, the Member States Mirror Group and all stakeholders in due course. (EBFTP ToR)

The Steering Committee is supported by a secretariat. The secretariat staffs are under contract with the European Commission. It is coordinated by the Swedish Energy Agency (STEM, Eskilstuna, Sweden) in association with Fachagentur Nachwachsende Rohstoffe e.V (FNR, Gülzow, Germany). The website and 'public presence' of the activity is the responsibility of CPL Press (CPL, Newbury, UK)<sup>xxxii</sup>. As Lindblom (1977: 170-88) argued that business people are give preferential in claiming public expertise, because there is widespread acceptance about the view on economic growth that is fundamentally dependent on investment and innovation by private enterprises.

#### **4.2.2. Working Groups**

The Working Groups will be established on the initiative of Steereing Committee. The SC proposes a chairperson and vice-chairperson in which later will assist the SC in the recruitment the members of WG. Right now there are five working groups : Biomass Resources, Conversion Process, Product Distribution & Use, Sustainability Assesment, Markets and Regulation.

Out of 145 members of EBFTP, there are only two from NGOs: WWF and European Environment Bureau.

#### **4.2.3. Stakeholder Plenary**

Plenary is seen as a mean for information dissemination among participants, and facilitate and encourage cooperation among stakeholders. The plenary meeting is organised once in a year. In 31<sup>st</sup> January 2008, the EBFTP organised its plenary meeting and launched its strategic Research Agenda for sustainable biofuel production in Europe.

This move towards industry-driven research fits in with the European Union's Lisbon Agenda, which aims to make Europe "the most dynamic and competitive knowledge-based economy in the world." Priority is being given to research into new areas of

industry – with little opportunity to question the wider impacts of this work. (CEO briefing paper).

The EBFTP has around 145 members, like BIOFRAC it mainly from Industry and research group with only two members from NGO (WWF and European Environmental Bureau).

#### **4.2.4. Chapter Synthesis**

This chapter provides information and analysis about two important organisations that were created by EC. The purpose of these organisations is to shape the EU policy on biofuels. As it has been discussed earlier that the establishment the EU policy on biofuels is need to be seen in the context of operationalisation of Neo-liberal agenda in the EU. Regarding to this frame, maintaining the capitalist interest is the dominant views in shaping this policy. The attempt to be a dominant power is expressed through democratic deficit of those bodies. The contribution of this section to address the central question of this paper is by providing analyses how the discourse on capitalism being served, is through institutional setting which exclude other voices which may have difference view or challenging the assumption of the dominant groups.

## **Chapter 5**

### **Analysing the Key Strategic Areas in the Making of EU Policies On Biofuels**

This chapter deals with analysing different perspective of EC, business sectors, and its opponents regarding the key strategic issues in the making of biofuels policy on biofuels. As has been discussed in theoretical framework Biofuels is not and hegemony power (yet?) therefore the opponents of this policy can not be seen as the merging of counter hegemonic forces. However he theory on hegemony lays a foundation in analysing how the dominant view maintaining their power and how the critical voices challenging their assumption. Within this framework the second part of this chapter will provide a comparison analysis about the different view of the dominant groups and the critical voices. The dominant view here represented by the EU and business sectors while the critical voices are represented by several organisations/ institutions and NGOs. However both the dominant and critical voice is not an hemogen view, as in the EU there are different (sometimes contradictory) between the DG environment and the TREN and the DG industry. The last two the DGs are the supporters of EU policy on biofuels while DG environment argues that the biofuels mandatory target need to be dropped as it creates environmental and social problems. Similar thing occur in citizen organisations, as there are many view regarding biofuel, there are supporters, moderate and very critical to the EU policy. But this paper can not address the different spectrum in seeing EU policy on biofuels.

In the first section in this chapter will be provided information about who is benefitting from EU current policy on biofuels. I try to figure out some fact, but my conclusion mostly derived from one the theoretical framework, which sees that capital accumulation is more matter that other concerns, in which I assume that there certain group of business sector get advantage from this policy (which can be read as their main supporter).

#### **5.1. How EU policies on biofuels serve business sectors<sup>xxxiii</sup>**

This section will highlight the main players of biofuels industries in Europe and howthe current EU policies on biofuels serve them.



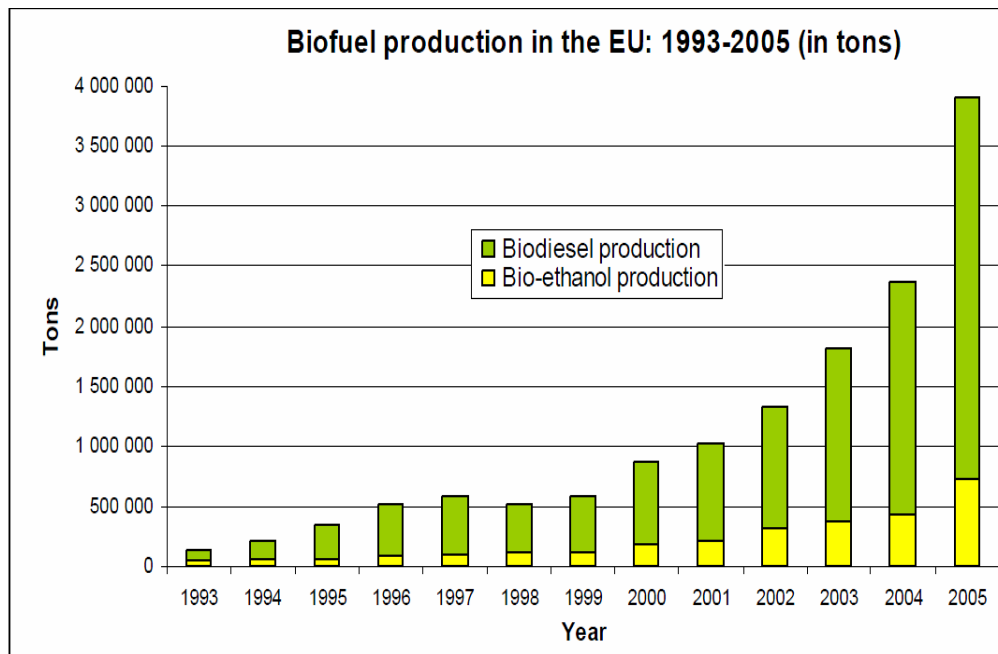


Figure 3.8: Biofuel production in the EU, 1993-2005 (Based on EurObserv'ER, 2005; EurObserv'ER, 2006)

**Figure 4 : Biofuels Production in the EU, 1993- 2005**

Source: Antjes, J.C (2007: P.45)

The biofuels industry chains in Europe can be categorised into several sectors: ( the full list of organisation which involve in the making of biofuels in Europe can be seen in the Annex I)

**5.1.1. Agrobusiness Companies**

Agro industry enjoy a bubble business in biofuel sector as they provide raw material for producing biofuels in which traditionally they only serve food for human and animal but currently they need to ‘feed’ a new client: machine. Those companies extend their business from sugar trade, palm oil and forestry. This new business is as a result of mandatory target that has been set up in Europe and the heavy subsidy in US on the same times. It creates a mix of the expansion of Agrofuel business from the North to the South countries and the happy recipient from developing countries of a wave of investment.

In Ghana, the Norwegian firm Biofuels has secured 38,000 hectares and also doing another expansion to Ethiopia and Mozambique. The same pattern goes to other continent like Asia and Latin America. Indonesian government recently declares its ambitious to become the world largest palm oil exporters and provide the amount of land that are needed.

### 5.1.2. Biotech Companies

In Europe, the development of Biotech companies have faced a fierce public resistance as they rejected Genetic Modified (GM) crops for human consumption. The GM crops was only served as food for animal. With development of biofuels policies in Europe, the biotech companies find their new justification to produce and import GM crops to Europe as energy crops. Biotech companies are also invest heavily to engineer the crops that can best suit for energy crops.

One of the main players that try to shape the EU policies on biofuels is EuropaBio. It is a biotech lobby group that is headed by Bayer Cropscience, DuPont/Pioneer, Monsanto and Syngenta. EuropaBio was one BIFORAC member and is an active member of European Biofuel Technology Platform.

Recently, Syngenta has applied in Europe for authorisation to import a type of GM maize, named Event 3272, specifically intended for ethanol agrofuels. This maize can help convert itself into ethanol by growing a particular enzyme (which breaks starch into simpler molecules of carbohydrate easing the transformation into ethanol). (CEO briefing Paper, 2007).

### 5.1.3. Oil Companies

For oil companies the biofuels serve two functions: first as the solution for reducing CO<sub>2</sub> from refineries process which the same like industries rejected the path of machineries efficiency to emit less Green gashouse emission. The second, biofuels provide a new expansion of business in energy. As the higher promised in this sector and the damage image of oil industries, there are any oil companies reposition themselves as BP called "Beyond Petroleum" and call themselves as energy companies (not an oil companies as it used to be).

The involvement of oil companies in biofuels business is much related to the heavy EU support in this sectors, through mandatory target, direct subsidy and tax exemption and other facilities. As in other sectors of biofuels oil companies tend to build alliance with other companies who spurt development of biofuels in Europe. Since 2003 BP and Dupont has been working together on the project called biobutanol. Shell has joint alliance with DaimlerChrysler, Volkswagen and CHOREN (German biofuels company) to develop a synthetic fuel or Biomass to Liquid (BTL).

In BIOFRAC oil companies had three members and become active members of European Biofuel technology platform.

### 5.1.4. Automotive Companies

Automotive industries have been the heavy supporters of establishment EU policies on biofuels. For biofuels provides the best escape gate from obligation to make more efficient engine in order to reduce CO<sub>2</sub> emission. The attempt to influence EU policies by car industries can be seen by their involvement with BIOFRAC and EBFTP. In BIOFRAC they represented four out twelve of its member, and took chair position (Anders Roj from Volvo).

In earlier 2007, the Commission wanted to impose a mandatory efficiency standard for passenger cars which would have enforced lower CO<sub>2</sub> emissions. In response, car manufactures launched a heavy lobby campaign and managed to water down the reduction target from intended average 120gr CO<sub>2</sub>/km to 130gr/Km (CEO briefing paper. 2007).

In its another briefing paper<sup>xxxiv</sup>, CEO quoted what European and American car makers viewed about how to deal with GHG emission from automotive, it stated that “Reducing further CO<sub>2</sub> emissions through vehicle technology only is the most expensive and least cost-effective option for society.”

Another channel for car companies to influence EU policies on biofuels is trough CARS21. It is a high-level advisory group that was set up in 2005 under initiative Industry Commissioner (Mr. Verheugen). This advisory group is another heavy supporter of the development European policies o biofuels.

CO<sub>2</sub> emission from transportation is an important consideration for development of EU policy on biofuels. It is the main contribution of EU Greenhouse Gas Emission (30%) and expected the 90% of the increasing EU CO<sub>2</sub> emissions is from this sector. The road transports also use 98% of fossil fuel energy that mostly are imported. So a mandatory for 5.75 in 2010 and 10 % in 2020 of biofuel in energy transport serve as justification to develop biofuels in Europe.

Other sectors that contribute to the development European policy on biofuels is corporate funders. These companies have found their new promised portfolio business since EU adopted its indicative target for biofuels. The Barclays Bank (UK-Based bank), ABN AMRO Bank and Rabo Bank (Netherlands based) AXA and Societe Generale (France Based) , Commerz bank, Desutche Bank and HSH Nordbank ( German Based), Credit Suisse ( Switzerland Based) are the example of finance sector that are active in investing in biofuels business. The list can be expanded if we include the players that are based outside EU countries such us Carlyle Group, Morgan Stanley, Goldman Sachs and George Soros.

Another important players in supporting the development of biofuels in Europe is European Investment Bank ( EIB). EIB is the EU long-term lending bank which was set up in 1958 by the treaty of Rome and its share holders is EU member states. It supports six EU priority objective which include energy and environmental sectors. In energy policy EIB has five core areas : renewable energy, energy efficiency, research, development and innovation in energy, Security and diversification of internal energy supply and external energy security and economic development.<sup>xxxv</sup>

## **5.2. Analysing the Key Strategic Areas in the Making of EU Policy on Biofuels**

There are several important issues that has been highlighting in chapter 3 that was considered as the main justification to develop policy on Biofuels by European Union. This section the Key Strategic Areas of the ma has been highlighting in the chapter 3 particularly on the section of “ The Making of the EU policies on Biofuels”.

This section seeks to analysis those Key Strategic Areas particularly in the relation what the business sector views regarding to this, and how these main assumption have been challenging by it various organisations. There are two main resources of analyses of this section. First, it comes from the paper that was published by BIOFRAC and the Paper that was published by EBFTP and several articles that was published in EBFTP website. It also looks at the articles that were published in four main biofuels lobby organisations in Europe namely : **EBB European Biodiesel Board, EBIO, AGQM, UFOP**. Those four organisations were chosen as they represent almost the whole chain of biofuels industry. For their full membership is provided in the annex....

The second resources of analysis comes from various organisations that have different view or challenging the main assumptions of European Union provided in the making of EU policies on Biofuels. The purposes of providing different view about biofuels in Europe is to strengthening the understanding of the similarities/ differentiation between the perception of EU and business sectors regarding the key strategic issues in developing biofuels. There are several important documents that have been used n this section: OECD/FAO report, European Environment Agency, a study by Wetlands International and Delft Hydraulics, EU Joint Research Committee, and briefing papers from several NGOs like Oxfam International, Friend of the Earth, Green Peace, WWF and other environmental NGOs.

### 5.2.1 Security Energy

Concern about energy security can be expressed in two ways, is there enough energy availability to fuels economy and where these energy come from?. It is also need to be mentioned about the volatility of the price of fossil fuels. Currently, fossil fuels provide more than 85 percent of current energy demand globally and more than 90 percent of energy needs in developing countries. (Verrastro and Laislaw 2007). In case of EU 45 percent of its oil consumptions come from Middle East whereas 40 percent of its natural gas has to be imported from Russia.

Indeed energy security has been concern by developed countries right after the oil crisis in 1970s. The OECD countries (Organisation for Economic Cp-operation and Development) which mostly do not have fossil fuels resources, contrary to OPEC (organisation of Petroleum Exporting Countries) as the main oil exporter countries, established International Energy Agency (IAE) with goal, to reduce the dependency on energy imports from the OPEC countries (Thuil, Roos and Beursken 2003: p.3).

One of the key strategic issues that want to be solved by developing biofuels in Europe is to reduce dependency on oil and to diversify demographic risk. As the raw material for biofuels can be produce locally (indigenous plants) and can be imported from developing countries which have a lot agricultural potential.

In line with EU assumption, business sectors tend to use the ability biofuel to substitute fossil fuels as their justification to support EU policies or as BIOFRAC suggested to put higher mandatory standard in 2030 ( up to quarter of energy use for transportation). BIOFRAC report stated that “Crude oil reserves are limited and unevenly distributed in the world, with the most important reserves in politically unstable regions”. They argued further by adding that “ a diversity of primary energies for fuels production will be necessary, especially to energy forms that are either locally available or at least more evenly distributed than crude oil” ( P.8)

But to what extent is biofuels replicable to fossil fuels. The case of Brazil up to 30 percent of its transportations is run by bio ethanol. The cheap price of raw material for producing bio ethanol and the current high oil price make this option compatible to fossil fuels. In the case of EU current production of bio diesel and bio ethanol more expensive up to three times compare to the production of fossil fuels. However consideration what is at stake for the fossil fuel dependency EU has affirmed its support for development of biofuels in Europe. In several its proposal EU argues that the higher cost of production can be cut trough investing in converting process and to encourage producing raw material in massive scale. It looks like that EU is choosing the path of Brazil and US in developing biofuels : massive subsidies, felicities and if needed protection of its ‘infant’ biofuels industry.

The EEA (European Environment Agency)<sup>xxxvi</sup> has estimated about the amount of arable land that are needed in Europe to grow biofuels raw material to meet 10 percent target. They argue that even if all arable land in Europe is converted in to energy corps plantation it would not enough to reach that target. “In the view of the EEA Scientific Committee the land required to meet the 10 % target exceeds this available land area even if a considerable contribution of second generation fuels is assumed. The consequences of the intensification of biofuel production are thus increasing pressures on soil, water and biodiversity”.<sup>xxxvii</sup> Therefore they argue that the EU biofuels 10 percent target is an ambitious and should be suspended.

But different view with the EEA, in BIOFRAC report states that it is needed four to eight percent of the EU agricultural land to produce the amount of biofuels in order to meet the 2003 directive (2 percent of biofuels by 2005 and 5.75 percent by 2010).

In America case, there are several NGOs have been reported about how much corn needed to produce bio ethanol. Approximately 18 percent of the U.S. corn corps is converted to 4.5 billion gallons of ethanol. This replaces approximately 3 percent of US oil-gasoline consumption (Barbara 2007).

### **5.2.2. Stimulating Economic Growth in Rural Areas**

One of the consideration to push forward the policy on biofuels is to stimulate economic growth in rural areas. Biofuels, EU argues that will create a new opportunity for farmers as the new market is created. Traditionally the agricultural commodities are only use to feed men and animals with developing biofuels the biomass can also be converted as source of energy. In term of choice farmers can select their preference whether to plant traditional corps or energy corps.

BIOFRAC in its report argue that “Biofuels production represents a major opportunity for the European economy. Developing innovative technologies can secure new jobs in rural areas, but also within industrial companies. In addition, new job opportunities could also arise from technology export. A study estimates that if the EU target for renewable energy in the European Union is met in 2010, the growth in net employment in the biofuels sector could be as high as 424 000 jobs with respect to the year 2000”.

But contrary to this EU earlier argument put forward that the current production is more expensive in Europe is because the technology is not really well developed yet and the production of biomass is not on a big scale yet. The big scale of plantation companies by many organisations is used to justify to drop the EU mandatory target it creates social and environmental problems. For further discussion about the social and environmental impact of this policy to rural areas in developing countries that produce biofuels is provided in the next section. However, cautious still need to be arisen whether the big scale plantations that is owned by a few people will give a better benefits for a EU farmers or not.

### 5.2.3. Mitigating Climate Change

Ever since the Earth Summit in 1992 in Rio de Janeiro, global warming become of the central issues for policies makers. The ideas about how to mitigate it was more profound in the follow up Rio meeting, Kyoto Conference. One of the important outcome of Kyoto conference was the Kyoto Protocol. Under this protocol, industrialized countries agreed to reduce their collective GHG emissions by 5.2% compared to the year 1990.

As has been elaborated in the chapter three, mitigating climate change is of the key strategic issue that EU wants to address when it develops the policies on biofuels. In line with this, the business sectors also use this argument to put forward their support of developing biofuels in Europe. BIOFRAC report acknowledged that “Reducing greenhouse gases (in particular carbon dioxide) in the transport sector is one of the most important drivers to promote biofuels”. (p.15).

In EBFTP report on Biofuels Strategy research Agenda recognised that “Favourable political environment reflected in directives and policy documents, including the recent “Energy Package” confirmed by the European Council in March 2007. Priority given to biofuels research in the Seventh RTD Framework Programme (FP7) and bioproducts identified as a lead market. High oil prices tend to enhance the competitive position of biomass and biofuels in the market place “. (p.5)

They argue further that using biofuels for transportation in big amount is necessary in order to meet EU commitment on Kyoto protocol “Greater use of biofuels for transport forms an important part of the package of measures required ***if the EU*** (italic and bold is added) is to comply with CO2 reduction commitments from the Kyoto Protocol as well as of any policy packages set up to meet further commitments in this respect”. (p)

There are several counter arguments that have been proposed to challenge the assumptions that producing biofuels is a way to mitigate climate change. One of the arguments is that there is a cheaper way to cut carbon dioxide emission from transportation. In Oxfam briefing paper (2008) quoted a study that has been done by University of Leeds which cooperated the UK motor Industry Research Association.

They argued that “a study in the UK found that emissions from transport could be reduced by 8 per cent if speed limits were enforced through Intelligent Speed Adaptation systems.<sup>31</sup> This compares extremely favourably with the UK’s biofuel legislation which mandates the blending of 2.5 per cent biofuels, at a current annual cost of £550m (\$1bn) to the Treasury. Assuming (generously) that the biofuels consumed offer GHG savings of 30 per cent, this will achieve overall emissions reductions of less than 1 per cent”.

(p.13)

As in the earlier chapter of this section, the car lobby industries have managed to water down the attempt of EC to have more efficient machines as main ways to reduce CO<sub>2</sub>. For car industry supporting biofuels is the best way to escape from the obligation to reduce carbon dioxide emission through machine efficiency. (to some extent oil industry also chose the biofuels path when it comes to have more environmental friendly in their refineries process).

The other argument that have been put forward by the opposants of biofuels policy is about the current practice of producing biofuels is accelerating climate change. A recent study that was done by the Delft Hydraulic and the Wetlands International found that Indonesia is the third world largest green gashouse emission if it takes into account the amount of GHG that have been released to the atmosphere from destruction of its peat lands because of palm oil plantation. “estimates that emissions from Indonesia’s destruction of its extensive peat bogs releases 2 billion tonnes of carbon dioxide a year -- about ten percent of world greenhouse gas emissions from human activities. For comparison, the United States, the world’s largest emitter of heat-trapping gases, produces about 7.3 billion tons of greenhouse gases per year”.<sup>xxxviii</sup>

Indonesia, Colombia, some African countries and several Mercosur nations have expanded its energy corps to the potential of higher demand of raw material to be converted into biofuels in Europe and US.

Another odd story about the EU consideration to mitigate climate change through development biofuels is due the fact that the Brazil and US (the two world most advance countries in development biofuels) hardly use mitigating climate change is their main consideration on the earlier stage of development their policies on biofuels. In the case of US until Bali Meeting, they always reject to cut down its green gashouse emission and never signed Kyoto protocol as it argued that it will bad for their economy but for the same time they passed several legislations to support (through subsidies and facilities ) the development of its biofuels.

#### **5.2.4. Enhancing EU World Class Technology on Biofuels**

The development of EU policies on Biofuels need to be seen as over attempt in the EU to make its economy more competitive to other regions, notably US, China, Japan etc. These policies are also inline with EU ambitious- which is well known as Lisbon Treaty – to make EU the world most competitive knowledge-based economy. So it is not surprise when the EU main research instrument (2002 -2006), the Sixth Framwork Program allocated 68 Million Euro for development of biofuels out of 17,5 billion Euro funding availability.

As it was reported Global Subsidies Initiative “Total funding available under the Sixth Framework Programme (2002–2006) was € 17.5 billion. Reportedly, € 68 million was

made available under the Sixth Framework Programme to “support research in the area of biomass to develop second-generation biofuels, new technologies for clean and cost-efficient power generation from biomass, integrated biomass use through bio refineries and overcoming market barriers.” Fourteen projects in the specific area of biofuels have been approved for a total cost of € 89.1 million. The financial participation of the European Commission amounted to € 48.8 million (Table 4.16). Less than 50 percent of these funds are dedicated to projects for the development of second-generation biofuel technologies”. (Kutas, Lindberg, Steenblik 2007: 61). The subsidy is not only come at EU level but it also comes from at national level.

In EBFTP report also acknowledges that “Highly competent R&D capacity in EU27 in terms of human resources and research infrastructures, methodologies and tools. Good partnerships within and beyond EU borders, providing the basis for future research work and transfer of knowledge and technology”.



## **Chapter 6: Conclusion**

The development EU Policies of biofuels are a complex process in terms of the involvements of parties, the time sequences and the problems that need to be solved. Different interests of the parties will have different views in seeing the problems and the best options to deal with that. But the idea of biofuels policies is more profound because of the issue of climate change, the problem of too dependent and fossil fuel in which it attaches the volatility of its prices and the promise of economic potential that is posed by development of biofuels as alternative fuels.

This research paper highlights the key strategic areas of development of the EU policies on biofuels. It attempts to address the central question of this RP. This paper seeks to analyse how the discourse on capitalist interests is being served in the making of EU policy on biofuels. This paper has identified and analysed the key strategic areas in the making of EU policies on biofuels. It is very much rooted in addressing the problems of climate change, the potential of biofuels to become a substitute for fossil fuels makes it a popular option in the light of reducing oil dependency. The EU papers also argue that building biofuels in Europe will stimulate economic growth in rural areas which have higher unemployment compared to urban areas and in terms of economy very much depends on economic activities in urban areas. Developing biofuels could be a solution to prevent migration from rural to urban areas. Another reason to push forward the policy on biofuels is because it is in line with recent EU ambition to build the world's most competitive knowledge-based economy. In fact, the findings show that the current EU biofuels production is far much less compared to the US and Brazil. It is contradictory to the ability of EU research and development.

The theoretical chapter laid a foundation to analyse the case studies of this paper. It has discussed about how the dominant power has been exercising their superiority through institutional setting by excluding different actors that may have different views or challenge the dominant vision on biofuels in Europe. The analyses of two hybrid public-private institutions provide an answer to how the capitalist interest is being served in the making of EU policy on biofuels. Besides its institutional setting, the analysis of these institutions also provides a frame which shows that supremacy of capital interest is above other interests. It can be seen through the domination of the business sector to become members of these organisations.

The chapter five provides a comparison analysis of the views of the dominant groups and the groups that challenge this view. The dominant view of biofuels in Europe is very much shaped by its ability to secure capital accumulation. It also provides information on who may benefit from the current EU policy on biofuels. As final conclusions, this paper stresses that the making of EU policy on biofuels is part of the long process of interdependency between the EU apparatus and its business sectors. The capitalist interest is being served by institutional setting which leads to democracy deficits in the institutions which have a powerful mandate in shaping the future EU policy on biofuels.

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## Notes

- <sup>i</sup> See EC Communication : An Energy Policy for Europe (2007)
- <sup>ii</sup> WWF, Friends of the Earth, Green Peace, to mention from many, and also from several scientific body like European Environment Agency's Scientific Body, EU Joint research Committee
- <sup>iii</sup> A study by Wetlands International and Delft Hydraulics. <http://news.mongabay.com/2006/1103-indonesia.html>
- <sup>iv</sup> Corporate Europe Observatory (CEO) 2007, briefing paper: Car Industry flexes its muscles, Commission bows down.
- <sup>v</sup> Ibid. The EU's agrofuel folly: policy capture by corporate interest.
- <sup>vi</sup> For the full member of BIOFRAC see annex....
- <sup>vii</sup> Newsletter one, European Biofuels Technology Platform (EBFTP), 2007
- <sup>viii</sup> EBFTP website: <http://www.biofuelstp.eu/overview.html>. Accessed 11 september 2008
- <sup>ix</sup> The document about this argument can trace through several report of these organisations: WB/IMF, OECD, European Environment Agency's Scientific Body, EU Joint research Committee, and environmental NGOs.
- <sup>x</sup> Jorgensen, Erik Knud, and Rosamond, Ben ' Europe Regional Laboratory for a global Polity? In 'Toward a Global Polity. Ougaard, Marten and Higgott, Richard (ed) (2002).. Routledge. London
- <sup>xi</sup> Pollack, A Mark (2005). ' Theorizing EU Policy Making' in ' Policy-Making in the European Union. Oxford.
- <sup>xii</sup> One of the interesting paper which give a full explaination about biofuel history can be seen in the Jan Kees Antjes paper : Driving Biofuels in Europe (see in the reference).
- <sup>xiii</sup> EC, " AN EU Strategy for Biofuels, Impact Assesment". COM(2006) 34.
- <sup>xiv</sup> Congressional Report Service (CRS) Report for Congress, @ European Union Biofuels Policy and Agriculture: An Overview". 2006
- <sup>xv</sup> [http://ec.europa.eu/agriculture/capreform/infosheets/energy\\_en.pdf](http://ec.europa.eu/agriculture/capreform/infosheets/energy_en.pdf)
- <sup>xvi</sup> Another example project was EUROBIODIESEL which was launched in 1992 to demonstrate the technical and economic feasibility of producing and using biodiesel with having much problems for tractors, buses, and cars.
- <sup>xvii</sup> Further analysis if this body will be provided in another chapter of this RP.
- <sup>xviii</sup> COM(2006) 34.
- <sup>xix</sup> COM(2005) 628
- <sup>xx</sup> European producers can produce bioethanol at the cost around 900 Euro/toe by 2010 while the cheapest imported bioethanol can be bought in European market at the cost around 680 Euro/toe (From Brazil). {COM(2005)628 }
- <sup>xxi</sup> Brussels, 23 January 2006
- <sup>xxii</sup> Biofrac final report: Biofuels in the European Union, a vision for 2030 and beyond
- <sup>xxiii</sup> <http://www.biofuelstp.eu/overview.html>, accessed on 1 October 2008-10-01
- <sup>xxiv</sup> The full list of the name BIOFRAC members provided in Annex A
- <sup>xxv</sup> Biofrac final report: Biofuels in the European Union, a vision for 2030 and beyond
- <sup>xxvi</sup> <http://www.biofuelstp.eu/newsletter.html>. accessed on 1 October 2008
- <sup>xxvii</sup> Industry Pushes for 25% Agrofuel Target
- <sup>xxviii</sup> [http://cordis.europa.eu/technology-platforms/home\\_en.html](http://cordis.europa.eu/technology-platforms/home_en.html). EU publication office. Accessed 1 October 2008
- <sup>xxix</sup> [http://www.biofuelstp.eu/downloads/Steps\\_to\\_TP\\_LCJS.pdf](http://www.biofuelstp.eu/downloads/Steps_to_TP_LCJS.pdf). the official website of EBFTP. Accessed 1 October 2008
- <sup>xxx</sup> EBTP ToR
- <sup>xxxi</sup> CEO briefing paper: The EU's Agrofuel folly: Policy Capture by corporate interests. 2007
- <sup>xxxii</sup> <http://www.biofuelstp.eu/secretariat.html>. accessed on 2 October 2008
- <sup>xxxiii</sup> For full list of companies/ organizations that interest in Biofuels development is provide in the Annex....
- <sup>xxxiv</sup> CEO Briefing paper. Car Industry Flexes Its Muscles, Commission Bows Down. Amsterdam. 2007
- <sup>xxxv</sup> Haral JHAN, slide presentation during EBFTP meeting in Brussels, 31<sup>st</sup> January 2008.
- <sup>xxxvi</sup> The Scientific Committee assists the EEA Management Board and the Executive Director by providing scientific advice and delivering professional opinions on any scientific matter in the areas of work undertaken by the Agency. The committee is composed of 20 independent scientists from 15



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EEA member countries, covering a variety of environmental fields relevant for the Agency's areas of activity.

xxxvii <http://www.eea.europa.eu/highlights/suspend-10-percent-biofuels-target-says-eeas-scientific-advisory-body>

xxxviii <http://news.mongabay.com/2006/1103-indonesia.html>. accessed 7 November 2008.

Annex....

Companies/associations that are interests in Biofuels development

N°	Acronym	Name	Address	Tel/web site
1	ACEA	European Automobile Manufactures Association	Rue du Noyer 211, B-1000, Brussels, Belgium	+32-2-7325550 <a href="http://www.acea.be">www.acea.be</a>
2	BAFF	BioAlcohol Fuel Foundation	Box 73, SE-891 22 Örnsköldsvik, Sweden	+46-70-5521505 <a href="http://www.baff.info">www.baff.info</a>
3	CARGILL	CARGILL	PO Box 9300, Minneapolis, MN 55440-9300 USA	+1-952-7427575 <a href="http://www.cargill.com">www.cargill.com</a>
4	CEPI	Confederation of European Paper Industries	Avenue Louise 250, Box 80, B-1050 Brussels, Belgium	+32-2-6274911 <a href="http://www.paperonline.org">www.paperonline.org</a>
5	CONCAWE	The oil companies' European organisation for environment, health and safety	Boulevard du Souverain 165, B-1160 Brussels, Belgium	+32-2-5669169 <a href="http://www.concawe.be">www.concawe.be</a>
6	COPA -COGECA	Committee of Professional Agricultural Organisations in the European Union - General Confederation of Agricultural Co-operatives in the European Union	Maison européenne de l'Agriculture, Rue de la Science 23-25, B-1040 Brussels, Belgium	+32-2-2872711 <a href="http://www.copa-cogeca.be">www.copa-cogeca.be</a>
7	EBB	European Biodiesel Board	Boulevard Saint-Michel 47, B-1040 Brussels, Belgium	+32-2-7377613 <a href="http://www.ebb-eu.org">www.ebb-eu.org</a>
8	EFOA	The European Fuel Oxygenates Association	Avenue E. Van Nieuwenhuysse 4 Box 2, B-1160 Brussels, Belgium	<a href="http://www.efoa.org">www.efoa.org</a>
9	EFPPRA	European Fat Processors & Renderers Association	Boulevard Baudouin 18, Box 4, B-1000 Brussels, Belgium	+32-2-2035141
10	Ethanol Union	Ethanol Union	Rue Chateaubriand 27/29, 75008 Paris, France	+33-1-42990180 <a href="http://www.ethanolunion.com">www.ethanolunion.com</a>
11	EuropaBio	The European Association for Bioindustries	Avenue de l'Armée 6, B-1040 Brussels, Belgium	+32-2-7350313 <a href="http://www.europabio.org">www.europabio.org</a>
12	ENGVA	European Natural Gas Vehicle Association	Kruisweg 813-A, 2132 NG Hoofddorp, The Netherlands	+31-23-5543050 <a href="http://www.engva.org">www.engva.org</a>
13	EREC	European Renewable Energy Council	Renewable Energy House, Rue du Trône 26, B-1000 Brussels, Belgium	+32-2-5461933 <a href="http://www.erec-renewables.org">www.erec-renewables.org</a>
14	EUBIA	European Biomass Industry Association	Rond-Point Schuman 6, B-1040 Brussels, Belgium	+32-2-2828420 <a href="http://www.eubia.org">www.eubia.org</a>
15	EUCAR	European Council for Automotive R&D	Rue du Noyer 211, B-1000, Brussels,	+32-2-7387366

N°	Acronym	Name	Address	Tel/web site
			Belgium	www.eucar.be
16	EUFORES	European Forum for Renewable Energy Sources	Renewable Energy House, Rue du Trône 26, B-1000 Brussels, Belgium	+32-2-5461948 www.eufores.org
17	Europaia	European Petroleum Industry Association	Boulevard du Souverain 165, B-1160 Brussels, Belgium	+32-2-25669100 www.europaia.be
18	FEDERANE	European Federation of Regional Energy and Environment Agencies	Rue du Beau-Site 11, B-1000 Brussels, Belgium	+32-2-6468210 www.federeane.org
19	FEDIOL	EC Seed Crushers' and Oil Processors' Association	157, avenue Churchill, B – 1180, Brussels, Belgium	+32-2-771 53 30 www.fediol.be
20	F.O. Licht	F.O. Licht	Am Mühlengraben 22, 23909 Ratzeburg, Germany	+49-4541-88920 www.fo-light.com
21	LYONDELL	LYONDELL	Via Torino 2, 20123 Milano, Italy	+39-02-72546611 www.lyondell.com
22	NBB	National Biodiesel Board (USA)	3337a Emerald Lane • PO Box 104898 Jefferson City, MO 65110-4898, USA	+1-800-8415849 www.biodiesel.org
23	NOVAOL	NOVAOL	Via Madre Cabrini 10, I-20122 Milano, Italy	+39-2-5821051 www.novaol.it
24	SNPAA	Syndicat National des Producteurs d'Alcool agricole	Rue du Général Foy, 75008 Paris, France	+33-1-44700015
25	UEPA	Union Européenne des Producteurs d'Alcool	Avenue des Nerviens 65/25, B-1040 Brussels, Belgium	+32-2-7729830

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