FOOD OR FUEL - A CHOICE OF SURVIVAL

Study of Biofuels in the Philippines

INTRODUCTION:

In every second, three (3) Filipinos are born and they need food to survive. To produce food we need land where to plant it. But land is a finite resource that needs to be conserved to be able to achieve its function, one of which is for food production.

The rapid growth of the Philippine population which is now pegged at 95 million is a real cause of worry. The Philippine currently ranks 12th as the most populous country in the world and with its ever increasing number of populace, it goes without saying that the demand for food will concomitantly increase to meet the requirements of a fast growing population which right now is already reaching its critical level.

The Philippine is already bursting in the seam but the land area use for food production is slowly diminishing because of the unabated conversion of agricultural lands to non agricultural uses like residential, commercial and industrial developments. The passage of Republic Act No. 9367 or the Biofuel Act of 2006 **made the demand for agricultural land even wsorse.** Lands that are commonly used to produce food crops are now being converted to biofuel plantations not in tens but in hundredth and thousandth of hectares. The passage of the contentious **Joint Administrative Order No. 2008-1, Series of 2008** otherwise known as the Guidelines Governing the Biofuels Feedstock Production and Biofuels Blends Production specifically Section 4 which requires applicants' certification from the Department of Agriculture for the use and/or conversion of agricultural lands into biofuels feedstock production, if allowed to persist, will unquestionably worsen the threat to the food security of the country and will inevitably lead to hunger and depravation.

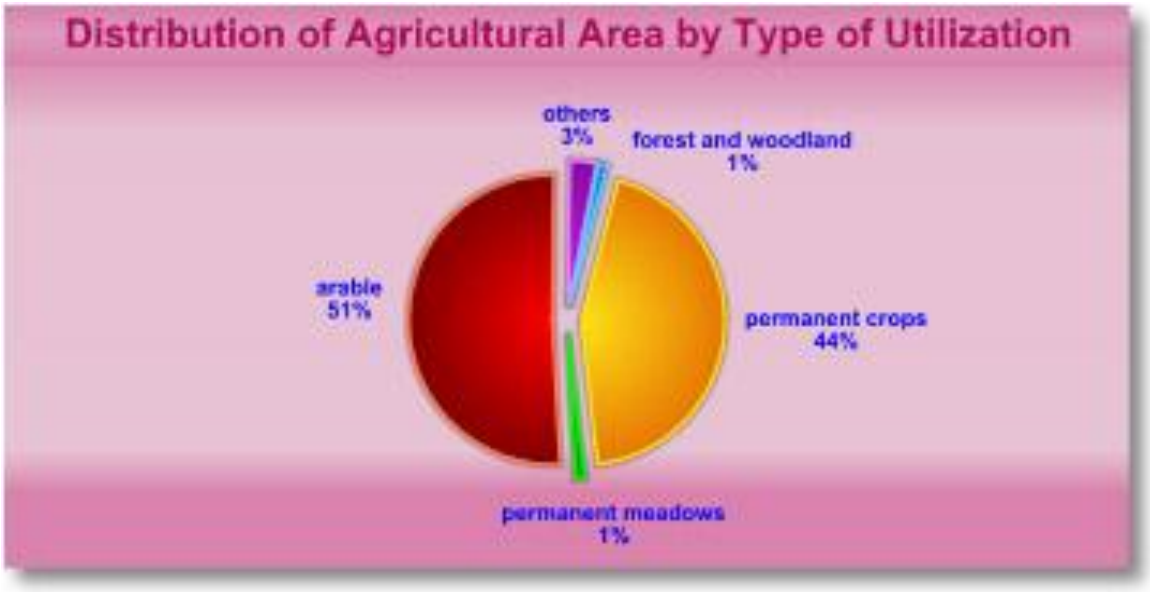
There is no question that the Philippines needs to comply to the international commitments that is has signed to reduced emission of green house gases from the use of fossil fuel, but not at the extent that it will jeopardize our food production. There is a compelling reason right now for the Philippine government to look closely at the carrying capacity of the State to feed its people. The Philippines is archipelagic and mostly hit by more than 20 typhoons every year. The massive flooding in 2009 must always be a grim reminder that the erratic climate changes can abruptly destroy lives and properties especially the agricultural lands planted to food crops that could sustain the food requirements of the country.

The threat to food production due to competition on the use of agricultural lands for biofuel production is something that can no longer be ignored. The utilization of these lands to produce agrofuel feedstock should cause an alarm for possible food shortages. Constant vigilance and strict monitoring of the usage of such lands must be done conscientiously. If we want to ensure that there will be food on every Filipinos' table, then we must make sure that land devoted to food production shall be maintained and protected. With a growing population and a precarious food production, coupled with the increasing need for biofuels, the Philippine

government must prioritize. Must food comes before fuel to enable the country and its people to survive?

THE DIMINISHING AGRICULTURAL LANDS

The Philippines has a total area of 30 Million hectares or 300,000 square kilometers. It is further subdivided into Classified Forestlands (15,039 million hectares), unclassified forestlands (0,753 million hectares) and alienable and disposable lands or the A &D lands (14,208 million hectares) Out of the A&D lands which are classified as agricultural lands, available lands for food production were estimated to be around 9,671 million hectares which is 32% of the total area (30M) of the Philippines. Roughly 4.532 million hectares are devoted to rice production and 2.683 million hectares for corn. The remaining 3.6 million are planted to sugarcane, coconut, cassava and other foodstuff like fruits and vegetables.



Thirty two percent (32%) of the country's total land area (30 M) makes up the agricultural land. Fifty one percent (51%) are arable lands and forty four percent (44%) are classified as permanent croplands.*

Agricultural lands……. 9,671 million hectares
- Arable lands……..4,936 million hectares
- Permanent cropland……..4,225 million hectares
- Permanent meadows/pasture…0,129 million hectares
- Forest lands……..0.074 million hectares
- Other lands……...0.307 million hectares.

TOTAL AGRICULTURAL LANDS PLANTED TO FOOD CROPS

A) RICE……4,532,310 Million hectares
B) CORN……..2,683,890 Million hectares
C) SUGARCANE…… 404,034 Thousand hectares
D) CASSAVA……. 215,933 Thousand hectares
E) COCONUT…… 3,116,000 Million hectares

RICE

Majority of our agricultural lands (**4,532,310 million hectares**).are planted to rice. Being the staple food of the Filipinos, the demand for rice is constantly increasing. Data would show that our rice production cannot feed the rice eating Filipinos and we need to import from countries like Thailand, Vietnam and Pakistan. Right now, Vietnam and Pakistan has advised that they will not be exporting rice, which will make it doubly hard for the Philippines to import rice. The Philippines is the biggest rice importer in the world. The rice shortage in 2008 should have thought a lesson to conserve and preserve all available agricultural lands especially those that are being used to produce the country's food grain requirements, not only the irrigated* and irrigable* areas but also the rainfed* lands that produce rice once a year. The irony of it all, if JAO1-2008 will prevail, rainfed lands will be the first to go to be used for biofuel production, thus eliminating the possible additional rice production that can be produced by these types of lands to the overall rice requirement of the country.

CORN

Corn on the other hand, is also considered a staple food to 20% of the total Philippine population, especially those in Visayas and Mindanao. The land area planted to corn is about **2,683,890 million hectares**, mostly located in Mindanao and some part of Luzon. The utilization of these lands to produce corn should be preserved not only for human consumption but also for the animal feed industry. Corn is the traditional major raw material and source of protein for the production of animal feeds. But since feedwheat coming from Russia, Kazakhstan , Ukraine and Pakistan is a lot cheaper, animal feed producers shifted to wheat. The Philippines will now be sourcing its corn requirement "in" country because of the drought that hit the Baltic States and the severe flooding in Pakistan which destroyed the supply of wheat. The price of corn will surely increase, but with the demand for bioethanol, corn production may not be able to meet the demands of the animal feed millers. If that happens, certainly the price of poultry and meat will also increase thereby making it difficult to be accessed by the impoverished sector. So ultimately, corn is not just limited to human consumption, but also to satisfy the animal feed industry and feedstock for biofuel.

SUGAR

The total area planted to sugar as of 2009 is 392,567 thousand hectares and these lands are the source of sugar for domestic consumption. Both internal (domestic consumption) and external forces (export market) have dictated on the price of sugar. Section 10 of the Biofuels

Act, expecting that there will be problem in the domestic supply of sugar once sugarcane is made feedstock for bioethanol, provided that the *Sugar Regulatory Agency shall at all times, ensure that the supply of sugar is sufficient to meet the domestic demand and that the price of sugar is stable.* The sugar plantations especially in Negros have been a constant cause of conflict because the landlords knowing the full potential of there lands have violently resisted the coverage of their sugar lands under CARP.

As if death of farmworkers fighting to have these lands awarded to them under Agrarian Reform, is not enough, these very lands are now being certified under the Biofuels Act by the DA for the use and conversion into biofuels feedstock production. A very convenient excuse to exempt the lands from the coverage of CARP.

CASSAVA

Cassava can also be considered a staple food especially to the indigenous communities and Filipinos who have difficulty in accessing rice particularly those leaving in the upland barangays. The total area planted to cassava is about 215,933 thousand hectares. ARMM produced about 849,015 tons, followed by Bicol (236,227 tons) and Eastern Visayas (226,634 tons). But these are edible cassavas and fit for human consumption. The variety that is being planted as feedstock for bioethanol is not fit to be eaten and exclusively grown to meet the demand for bioethanol.

COCONUT

Coconut is the primary source of feedstock for **biodiesel production** and the supply is much bigger than the national demand. In 2007, the required capacity of the Philippines for 1% blend is only 62 Million Liters. The country produced 253 Million liters thereby making a surplus of 191 Million liters which was exported to Europe, China, Japan, South Korea and Malaysia. But then again, coconut is also the chief source of vegetable oil and industrial oil. If export of biodiesel will be allowed, it will create a big demand for coconut oil used as feedstock for biodiesel production. If that happens, the price of vegetable oil for domestic consumption will also increase thereby producing a domino effect on the price of almost all basic commodities that use vegetable oil.

The total area planted to coconut is around 3,116 Million hectares. Most of it is located in Mindanao (1,591million hectares), 860,000 thousand hectares in Luzon and 665,000 thousand hectares in Visayas. If there is truth to the plan of PNOC Alternative Fuels Corporation (PNOC AFC) to develop **1.2 million hectares** of agricultural lands for **jatropha** plantation in General Santos, Mindanao, it **will definitely result to over supply or surplus of feedstock for biodiese**l but there will be less supply of food to the hungry Filipinos.

What is agrofuels or biofuels?

The term **'agrofuels'** was first coined by social movements in Latin America to describe the liquid fuels derived from food and oil crops produced in large-scale plantation-style

industrial production systems for export mainly in Europe and North America.. These agrofuels are blended with petrol and diesel for use primarily by motor vehicles.

There are **two types of agrofuel - bioethanol** and **biodiesel.** The feedstock program in the Philippines for **bioethanol** is being source from **sugarcane**, **corn, sweet sorghum** and **cassava.** While for **biodiesel**, it is being derived from **jatropha**, and **coconut.**

Biofuels, on the other hand, are the traditionally used wood, dung and other biological materials that are mainly used for heating and cooking.

Right now, there is no more distinction in terminologies and definitions. In the Philippines, agrofuel and biofuel is discussed in the same breath and this was not corrected in the Biofuel Act of 2007. What is supposed to be termed as Agrofuels was reduced to Biofuels. Even in the definition of terms, biofuel was defined as *"shall refer to bioethanol and biodiesel and other fuels made from biomass and primarily used for motive, thermal and power generation, with quality specifications and in accordance with the PNS"* There was no discussion whatsoever or use of the term Agrofuel in the Biofuel Act of 2007. Be that as it may, it is important to distinguish where **bioethanol** and **biodiesel** is coming from and from there shift the relevant information contained in the law and make the necessary differentiation.

With the ever increasing demand for fossil fuel but also with the growing concern about the effects of climate change due to the unabated release of green house gases, Northern countries like the United States and Europe, started looking for alternatives which will conform to the international negotiations under the UNFCCC. The US started planting hybrid corn in their vast farmland, but not for livestock feeds but for the production of bioethanol which became the reason why the price of corn in the world market shoot up such that our own livestock producers/feed millers shifted to feed wheat.

Agrofuels were considered as less pollutant than the fossil fuels and it is renewable since it can be continuously grown. To be able to sustain the mounting energy needs and to reduce carbon emissions, the quest for land to produce agrofuels is now becoming a problem because of the threat that it will ultimately compete with food production.

THE BIOFUELS ACT OF 2007 OR REPUBLIC ACT 9367

The Biofuels Law otherwise known as the Biofuels Act of 2006 was enacted principally to *reduce dependence on imported fuels with due regard to the protection of public health, the environment, and the natural ecosystems consistent with the country's sustainable economic growth that would expand opportunities for livelihood by mandating the use of biofuels as a measure to:*

a) *Develop and utilize indigenous renewable and sustainably-sourced clean energy sources to reduce dependence on imported oil.*
b) *Mitigate toxic and greenhouse gas (GHG) emissions;*
c) *Increase rural employment and income; and*

d) *Ensure the availability of alternative and renewable clean energy without any detriment to the natural ecosystems, biodiversity and food reserves of the country.(Sec. 2 Declaration of Policy)*

I. Approval of the Biofuels Law

To be able to reduce dependence on imported fossil fuels, the Biofuels Act mandates the **local production** and use of biodiesel and bioethanol. The law also requires that the local demand be satisfied first before any biofuels exports are allowed. The law also ensures a **captive market** for biofuels and provided for incentives like **zero specific tax** on local biofuels components. The sales of raw material used in the production of biofuels are **exempted from payment of the value added tax.**

Also, all water effluents are **exempt** from **wastewater charges** under RA No 9275 or the Philippine Clean Water Act.

Financial assistance are made available and extended to entities and citizens who will engage in the production, storage, handling and transport of biofuel and biofuel feedstock, including the blending of biofuels with petroleum, as certified by the DOE. (*Sec. 6- Incentive Scheme*)

I. Implementing Agencies and Creation of the National Biofuel Board (NBB)

Pursuant to the provision of **Section 8** of the Biofuel Act, the National Biofuel Board was created. **Section 9** provided the powers and functions of the NBB. In effect, the planning and management of implementation of the Biofuels Act rest on the Department of Energy and the members of the NBB.

Members of the National Biofuels Board:

1. Secretary of the Department of Energy, as Chairman
2. Secretary of the Department of Trade and Industry,
3. Secretary of the Department of Science and Technology,
4. Secretary of the Department of Agriculture,
5. Secretary of the Department of Finance,
6. Secretary of the Department of Labor and Employment
7. Secretary of the Department of Environment and Natural Resources
8. Administrators of the Philippine Coconut Authority
9. Administrator of the Sugar Regulatory Authority

It can be surmised from the list of members of the National Biofuel Board that the **Secretary of the Department of Agrarian Reform** is not a member of the NBB. For whatever reason that DAR was not included has to be determined because the Department plays a very crucial role in the identification of agricultural lands.

a) Role of DA as per IRR of RA 9367- THE BIOFUELS ACT OF 2006 (*taken from the presentation of PADCC)*

1. Ensure increased productivity and sustainable supply of biofuel feedstock. Towards this end, it shall institute a program that would guarantee that a sufficient and reliable supply of feedstock is allocated for biofuels production;
2. The DA, through the SRA and PCA, and other attached agencies, and bureaus, shall undertake, the identification and publication of potential areas suitable for the expansion and production of raw materials as feedstock for biofuels; and
3. Coordinate with the DOST in identifying and developing viable feedstock for the production of biofuels;

PADCC is the PIMP of the DA that ensures the availability of locally produced biofuel crops by promoting and facilitating investments in the country's biofuel industry. It helps in the identification of market prospects and evaluation and promotion to the investor community of agribusiness lands suitable for biofuel feedstocks production. PADCC is also into establishment of feedstock nurseries. It facilitates endorsements, accreditation, licenses and permits from concerned government agencies and provides linkages to technology providers and financing facilities. It coordinates with the department of Science and Technology for research and development on alternative biofuel feedstock. Being the one designated to manage the DA Biofuels Feedstock Program, it coordinates with other National Biofuels Board members in the implementation of the National Biofuels Program.

On top of the primary function of PADCC, it also extends general form of assistance to biofuels investors for their projects' basic requirements. **In all the gamut of its function, PADCC encompassed everything and put the program in a silver platter for investors to take especially the identification and evaluation of agricultural lands. It provides assistance and provision of general support to make available agricultural lands to become bio-fuel plantation**s. Since PADCC can coordinate with DAR and DENR being a members of the Council, it can access information on agricultural lands that can be developed into biofuel plantation and instead of these land being covered under the Comprehensive Agrarian Reform Program (CARP) or be subjected to Free Patent applications by DENR, thru the diligence of PADCC, these lands can now be made available for lease contract with the government by biofuel investors or exempted from coverage under CARP based on the certification issued by the DA. **Very expedient and less red tape.**

It facilitates, special services including environmental impact assessment studies, feasibility studies, hydrology/ground water resources study, georesistivity and even perimeter boundary survey and topographic mapping of the landholding. Once the agricultural land has

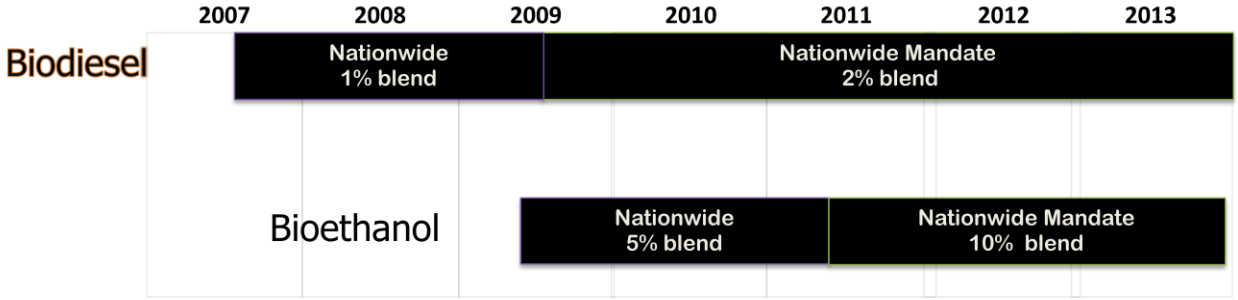
been identified, PADCC can go a bit further by directly endorsing the projects to interested and qualified landowner and providing of complete data and information necessary for the implementation of the project**. In short it is a one stop shop for biofuel investors.**

The performance of PADCC is much better than the implementor of Agrarian Reform. It was able to negotiate and consolidate landholding for biofuel plantation instead of these agricultural lands being covered under CARP.

II. Biofuels Implementation- Mandatory Use of Biofuels

The Biofuels Act of 2007 particularly provided in **Section 4** the gradual phasing out of the use of harmful gasoline additives and/or oxygenates. The mandatory provision as to the use of locally-source biofuels components were clearly defined in **Sec. 5** and the percentage blend in petrol and diesel was set such that compliance became mandatory. Starting from May of 2007 to February 2009, one percent (1%) biodiesel blend was mandated to be part of all diesel engine fuel. This was later on increased to 2% from February 2009 to 2013.

The Act also required that a minimum of five percent (5%) of all gasoline to be blended by bio-ethanol starting from February 2009 to February of 2011. and will be increased to ten percent (10%) by February 2011 to 2013



Supply of Feedstock for Agrofuels

A. Bioethanol

Feedstock for Bioethnol are derived from **sugarcane**, **corn, cassava and sweet sorghum.** Sugarcane is considered the primary source of feedstock for bioethanol and to fulfill the mandated demand and the national blend, sugar production has to increase. To produce the requirement for a 5% blend and supply 208 Million liters of bioethanol for the year 2009, there must be **45,714 hectares** of agricultural land planted to sugarcane to produce an Equivalent Feedstock Volume (EFV) of 2,971,429 million tons of feedstock.

Not to be lost in the implementation is the fact that to be able to fulfill the requirement as mandated in the Law, there is an immediate need to increase the feedstock production especially for bioethanol. To realize this, it will necessitate conversion of agricultural lands to bioethnol production. But prudence dictates that before any conversion of agricultural lands for agrofuels production, an honest to goodness assessment has to be done to determine the areas being planted to sugarcane and corn as source of biethanol. The same determination should also be done in coconut plantation as source of biodiesel.

The **total area required to meet the mandated biofuels blend** was pegged at **660,000 hectares** by DA-PADCC. *But based on the Department of Agriculture through the **Convergence Initiative**, (result of the JAO1-2008) it has intensified and targetted their campaign effort and have generated investor interest in **38 biofuels projects** requiring some **944,800 hectares** and to date there is about 17,222 hectares planted to agrofuels crop"* * But the data obtained from the PADCC reports and from other sources showed that about **1,051,950 million hectares has already been targetted,** which is not far from the figure mentioned in the Converge Initiative (944,800). But what is alarming is the CI figure of 944,800 hectares which is already way beyond the target of 660,000 hectares, the area required to meet the mandated blend. It clearly shows that DA-PADCC is already beyond its target and at the expense what food can be produced in the excess hectarage.

TOTAL AREA PER REGION IDENTIFIED, MATCHED AND UNDERGOING FINAL NEGOTIATIONS FOR AGROFUEL PLANTATIONS

CAR…… .....20,000 hectares
1. Region 1……. 21,000 hectares
2. Region 2……. 34,300 hectares
3. Region 3……. 104,900 hectares
4. Region 4-A..... 2,500 hectares
5. Region 4B…… 17,000 hectares
6. Region 6……... 27,000 hectares
7. Region 7…….. 10,000 hectares
8. Region 8…….. 20,000 hectares
9. Region 9…….. 6,250 hectares
10. Region 10……..... 149,500, hectares
11. Region 12…….. 639,500, hectares

TOTAL 1,051,950 MILLION HECTARES

The **I,051,950** Million hectares identified, and matched by PADCC is way beyond the **660,000** hectares total area required by the Department of Agriculture to meet the mandated agrofuel blend. The frenzied way PADCC is doing its function of identifying and evaluating agricultural lands for agrofuel plantation may already be beyond bounced. The list below can provide the location of the plantations, the name of the Company involve and the total area or extent of the existing and projected Agrofuel Plantations.

OVERALL AREAS PLANTED TO AGROFUELS AND COMPANIES READY TO PUT UP PRODUCTION PLANTS & PLANTATIONS

Cordillera Administrative Region

AREA MATCHED

Highlands Dev't Coop
Jatropha for Biodiesel
Ifugao Province, Municipality of Lamut……20,000 hectares

REGION 1 (Ilocos Region)

BENLINC – (BioEnergy North Luzon Inc)
Coconut for CME production
Province of Ilocos Sur, Municipality of Magsingal, Sto Domingo,
Cabugao, Pasuquin & Pagudpud
100,000 Has TARGETED…….....15,000 hectares
(74 Million US dollars Project in partnership with Japanese Company
Pacific Bio-Fields Corp.)

GLOBAL BIOMAS PHIL PLC CORP.
Giant Reed (Arundo donax)
Province of Pangasinan, Municipality of Malasique…… 6,000 hectares

REGION 2 (Cagayan Valley)

Eastern Renewables Fuels Corp. (ERFC)
Cassava for Bioethanol
Province of Isabela,
Municipality of Quirino and Delfin Albano…….....1,000 hectares

GreenFuture Innovation, Inc..(GFII)
Sugarcane
Province of Isabela,
Municipality of San Mariano, Benito Soliven, Naguillian & Ilagan City
15,000 hectares targeted……6,300 hectares

EcoFund Land Development Inc.
Sugarcane Production
San Mariano and Santa Filomena, Isabela

Philippine Fuhua Sterling Agricutural Technology Development Corporation:
Corn Production
Delfin Albano, Isabela

E-CANE FUEL
Sugarcane & molasses
Municipality of Lallo, Province of Cagayan
Production Plant with 20,000 hectares of New Plantation.....20,000 hectares
Production Capacity- 45 Million liters/ year starting 2011/2012

JCG/ITOCHU
Sugarcane & molasses for Bioethanol
Municipality of San Mariano, Province of Isabela
Production Plant with 7,000 hectares of New Plantation.....7,000 hectares
Production Capacity- 30 Million liters/year starting 2010/2011

REGION 3 (Central Luzon)

PNOC-Alternative Fuels Corp. (AFC) and LGU of Zambales
Jatropha for Biodiesel
Province of Zambales
Municipality of Botolan and Iba……30,000 hectares
Targetted 32,000 has.

BioEnergy Farms Inc.
Jatropha for Biodiesel
Province of Zambales
Municipality of Cabangan and Iba……10,000 hectares

Global Biomass, PLC Phil. Corp.
Arundo Donax (Giant Reed)
Province of Nueva Ecija
Municipality of Cabiao and San Antonio……6,000 hectares

Central Luzon Bioenergy
Sugarcane for Bioethanol
Province of Tarlac…….. 40,000 hectares

First Pampanga Biofuels Corp.
Cassava for ethanol….8,400 has
Sweet Sorghum……5,000 has
Province of Pampanga
Municipality of Floridablanca…….. 13,400 hectares

Eastern Renewables Fuels Corp (ERFC)
Cassava for Bioethanol
Municip of Botolan,Province of Zambales…….....500 hectares

BIOFUELS 88
Molasses for Bioethanol
Province of Bataan
Production Plant
Production Capacity- 18 million liters/year starting 2010/2011

BRONZEOAK CAPAZ
Sugarcane & molasses for Bioethanol
Municipality of Capaz, Province of Tarlac
With existing 5,000 hectare plantation.....5,000 hectares
with planned expansion to 10,000 hectares
Production Plant with Production Capacity of 30 million liters/year starting 2010/2011
With 30 million US dollalrs capitalization.

National Capital Region

CHEMREZ TECHNOLOGIES INC.
CME-Production Plant
Quezon City
Production capacity-75 million liters per year
Current Production 60 million liters/year
W/ Partnersip with British CompanyBronzeoak Ltd. 2.

REGION 4-A –CALABARZON

SENBEL FINE CHEMICALS
CME- Production Plant
Barangay Cotta, Lucena City
Production Capacity- 72 Million liters/year
Current Production- 36 million liters/year

Cavite Biofuel Producers Inc.
Sugarcane & Molasses for Bioethanol
Province of Cavite
Municipality of Magallanes……UNKNOWN Hectarage

CAVITE BIOFUELS
Sugarcane and molasses for Bioethanol
Municipality of Marigondon, Province of Cavite
With existing 2,500 hectare plantations and.....2,500 hectares
with planned expansion to 6,000 hectares
Production Plant with Production Capacity of 37.5 Million liters/year

REGION 4-B- MIMAROPA

PNOC- Alternative Fuels Cdorp. (AFC)
Jatropha for Biodiedsel
Province of Palawan

City of Puerto Princesa……10,000 hectares

PALAWAN BIOENERGY
Sugarcane and molasses for Bioethanol
Municipality of Aborlan and Narra, Province of Palawan
With 7,000 hectares New Plantation.....7,000.hectares
Production Plant with Production Capacity of 30 Million liters/year starting 2011/2012

REGION 6- WESTERN VISAYAS

Global Biomass PLC. Phil. Corp.
Arundo donax (Giant Reed)
Province of Iloilo
Municipality of Barotac Viejo…….....6,000 hectares

ROXOL BIOENERGY CORP.
Molasses for Bioethanol
La Carlota, Province of Negros Occidental
Production Plant
Production Capacity- 30 Million liters/year scheduled start February 2010

BIOFUEL INTERNATIONAL
Sugarcane, sweet sorghum and molasses
Central Negros-Specific location-Unknown
Production Plant with 2,000 hectares Plantation.....2,000 hectares
Production Capacity- 38 million liters/year starting 2010/11

BRONZEOAK SAN CARLOS BIOENERGY
Sugarcane and Molasses for Bioethanol
San Carlos City, Negros Occidental
Production Plant based on 5,000 hectares Plantation.....5,000 hectares
Production Capacity- 30 Million liters/year started in 2009

FUEL INC.
Sugarcane for Bioethnol
Binalbagan, Negros Occidental
Production Plant & 7,000 hectares Plantation.....7,000 hectares
Production Capacity- 30 Million liters/year starting 2010/2011

NEGROS BIOCHEM
Sugarcane & molasses
Bago, Negros Occidental
Production Plant with 7,000 hectare Plantation.....7,000 hectares
Production Capacity- 30 million liters/year starting 2010/2011

REGION 7- CENTRAL VISAYAS

PNOC-Alternative Fuels Corp. (AFC)
Jatropha
Province of Bohol

Municipality of Duero……..10,000 hectares
15,000 has. Targeted

JC SUMMIT
Molasses for Bioethanol
Municipality of Manjuyod, Province of Negros Oriental
Production Plant with Production Capacity of 30,000 liters/year starting 2010/201

REGION 8- Southern Visayas

KIBIO 2007
Jatropha for Biodiesel
Samar
10,000 has…….10,000 hectares

HERMINIO TEVES GROUP
Jatropha for Biodiesel
Province of Negros Oriental
Municipality of Zamboangita & Tamlang Valley…….10,000 hectares
Production plant schedule to start in 2009
W/ MOU with the Spanish Biofuel Company Global Tree Trust

LEYTE AGRI CORPORATION
Molasses for bioethanol
Ormoc, Province of Leyte
Production Plant with a Production Capacity of 9 Million liters/year-started 2009
In cooperation with Indian Company PRAJ

REGION 9- ZAMBOANGA PENINSULA

BASIC ENERGY INC.
Sugarcane for Bioethanol
Province of Zamboanga del Norte
Municipality of Gutalac…….6,250 hectares
10,000 hectares TARGETTED
Production plant with Production Capacity of 49 million liters/year starting 2011
W Joint venture agreement with Canadian company- NEXUM ENERGY

REGION 10-

ABUNDANT BIOFUELS CORPORATION
Jatropha for Biodiesel
Cagayan de Oro
100,000 has……...100,000 hectares
Lumad Ancestral Land –Jatropha-750,000 has.
US Company plans a community Development Project

BIOENERGY 8 CORP.
CME- Production Plant
Sasa, Davao

NIMMO-BELL
Province of Bohol
Municipality of Ubay…….500 hectares

PNOC-Alternative Fuels Corp. (AFC)
Jatropha
Province of Bohol
Municipality of Duero……..10,000 hectares
15,000 has. Targeted

ALSONS POWER
Cassava for bioethanol
Province of Misamis Oriental…….8,000 hectares
Bioethanol Production Plant
Production Capacity- 36 million liters/year starting 2010
W/ Partnership with Thai Comapny-ELECTRICITY GENERATION PUBLIC &
JAPANESE TOYOTA TSUSHO

ISABELA ALCOGAS CORP.
Sugarcane for Bioethanol
Province of Misamis Oriental……20,000 hectares

Southern Bukidnon Bioenergy
Sugarcane for Bioethanol
Province of Bukidnon……2,000 hectares

BRONZEOAK SOUTHERN BUKIDNON
Sugarcane & molasses for Bioethanol
Municipality of Kibawe, Province of Bukidnon
Existing 9,000 hectare Plantation .....9,000 Hectares
11,000has. Planned Expansion
Production Plant with Production Capacity of 45 Million liters/year starting 2010/2011
With 30 million US Dollalrs capitalization

REGION 12- SOCSKSARGEN

PNOC-AFC
Jatropha for Biodiesel
General Santos City .....32,000 hectares
1.2 million hectares targetedWith 105 Million dollars capitalization

PNOC/ELSIA CORPORATION
Jatropha production
General Santos

PETRON CORPORATION
Jatropha production
40% owned by SAUDI ARAMCO

ECO GLOBAL BIO OIL –
Jatropha for Biodiesel
Provinces of Region 12 .....5,000 hectares
100,000 has. targetted

GOLDEN ASIA OIL INTERNATIONAL
CME- Production Plant

PURE ESSENCE INTERNATIONAL
CME-Production Plant

TOYO ENGINEERING CORPORATION.....600,000 hectares
Coconut Plantation
Location-Unknown

Eastern Renewables Fuels Corp. (ERFC)
Cassava for Bioethanol
City of General Santos……....2,000 hectares

EASTERN PETROLEUM
Cassava for Bioethanol
Province of Saranggani, (Cotabato)
Production Plant
Production Capacity- 30 Million liters/year starting 2010/'2011

NORTH COTABATO
Molasses for bioethanol
Province of North Cotabato
Production Plant schedule to start in 2010/2011

ROBSON AGRO VENTURES
Cassava for bioethanol
Province of Cotabato
Production Plant with Production Capacity of 60 Million liters/year, starting 2010/2011

TOTAL 1,051,950 Hectares

The areas for biodiesel and bioethanol feedstock production that have been identified and matched and endorsed by PADCC have a grand total of **1,051,350 million hectares.** The companies enumerated per Region but without specific hectarage yet will of course raise the total areas that will be planted to agrofuels.

Extend of Bioethanol Plantation by Region

REGION 2 (Cagayan Valley)

Eastern Renewables Fuels Corp. (ERFC)

Cassava for Bioethanol
Province of Isabela,
Municipality of Quirino and Delfin Albano…….....1,000 hectares

GreenFuture Innovation, Inc..(GFII)
Sugarcane
Province of Isabela,
Municipality of San Mariano, Benito Soliven, Naguillian & Ilagan City
15,000 hectares targeted……6,300 hectares

EcoFund Land Development Inc.
Sugarcane Production
San Mariano and Santa Filomena, Isabela

Philippine Fuhua Sterling Agricutural Technology Development Corporation:
Corn Production
Delfin Albano, Isabela

E-CANE FUEL
Sugarcane & molasses
Municipality of Lallo, Province of Cagayan
Production Plant with 20,000 hectares of New Plantation.....20,000 hectares
Production Capacity- 45 Million liters/ year starting 2011/2012

JCG/ITOCHU
Sugarcane & molasses for Bioethanol
Municipality of San Mariano, Province of Isabela
Production Plant with 7,000 hectares of New Plantation.....7,000 hectares
Production Capacity- 30 Million liters/year starting 2010/2011

REGION 3 (Central Luzon)

Central Luzon Bioenergy
Sugarcane for Bioethanol
Province of Tarlac…….....40,000 hectares

First Pampanga Biofuels Corp.
Cassava for ethanol….8,400 has
Sweet Sorghum……5,000 has
Province of Pampanga
Municipality of Floridablanca…….....13,400 hectares

Eastern Renewables Fuels Corp (ERFC)
Cassava for Bioethanol
Municip of Botolan,Province of Zambales…….....500 hectares

BIOFUELS 88
Molasses for Bioethanol
Province of Bataan
Production Plant
Production Capacity- 18 million liters/year starting 2010/2011

BRONZEOAK CAPAZ

Sugarcane & molasses for Bioethanol
Municipality of Capaz, Province of Tarlac
With existing 5,000 hectare plantation.....5,000 hectares
with planned expansion to 10,000 hectares
Production Plant with Production Capacity of 30 million liters/year starting 2010/2011
With 30 million US dollalrs capitalization.

REGION 4-A –CALABARZON

Cavite Biofuel Producers Inc.
Sugarcane & Molasses for Bioethanol
Province of Cavite
Municipality of Magallanes……UNKNOWN Hectarage

CAVITE BIOFUELS
Sugarcane and molasses for Bioethanol
Municipality of Marigondon, Province of Cavite
With existing 2,500 hectare plantations and.....2,500 hectares
with planned expansion to 6,000 hectares
Production Plant with Production Capacity of 37.5 Million liters/year

REGION 4-B

PALAWAN BIOENERGY
Sugarcane and molasses for Bioethanol
Municipality of Aborlan and Narra, Province of Palawan
With 7,000 hectares New Plantation.....7,000.hectares
Production Plant with Production Capacity of 30 Million liters/year starting 2011/2012

REGION 6- WESTERN VISAYAS

ROXOL BIOENERGY CORP.
Molasses for Bioethanol
La Carlota, Province of Negros Occidental
Production Plant
Production Capacity- 30 Million liters/year scheduled start February 2010

BIOFUEL INTERNATIONAL
Sugarcane, sweet sorghum and molasses
Central Negros-Specific location-Unknown
Production Plant with 2,000 hectares Plantation.....2,000 hectares
Production Capacity- 38 million liters/year starting 2010/11

BRONZEOAK SAN CARLOS BIOENERGY
Sugarcane and Molasses for Bioethanol
San Carlos City, Negros Occidental
Production Plant based on 5,000 hectares Plantation.....5,000 hectares
Production Capacity- 30 Million liters/year started in 2009

FUEL INC.
Sugarcane for Bioethnol
Binalbagan, Negros Occidental
Production Plant & 7,000 hectares Plantation.....7,000 hectares

Production Capacity- 30 Million liters/year starting 2010/2011

NEGROS BIOCHEM
Sugarcane & molasses
Bago, Negros Occidental
Production Plant with 7,000 hectare Plantation.....7,000 hectares
Production Capacity- 30 million liters/year starting 2010/2011

REGION 7- CENTRAL VISAYAS

JC SUMMIT
Molasses for Bioethanol
Municipality of Manjuyod, Province of Negros Oriental
Production Plant with Production Capacity of 30,000 liters/year starting 2010/2011

REGION 8-

LEYTE AGRI CORPORATION
Molasses for bioethanol
Ormoc, Province of Leyte
Production Plant with a Production Capacity of 9 Million liters/year-started 2009
In cooperation with Indian Company PRAJ

REGION 9- ZAMBOANGA PENINSULA

BASIC ENERGY INC.
Sugarcane for Bioethanol
Province of Zamboanga del Norte.....6,250 hectares
10,000 hectares TARGETTED
Production plant with Production Capacity of 49 million liters/year starting 2011
W Joint venture agreement with Canadian company- NEXUM ENERGY

REGION 10-

ALSONS POWER
Cassava for bioethanol
Province of Misamis Oriental…….....8,000 hectares
Bioethanol Production Plant
Production Capacity- 36 million liters/year starting 2010
W/ Partnership with Thai Comapny-ELECTRICITY GENERATION PUBLIC &
JAPANESE TOYOTA TSUSHO

ISABELA ALCOGAS CORP.
Sugarcane for Bioethanol
Province of Misamis Oriental……20,000 hectares

Southern Bukidnon Bioenergy
Sugarcane for Bioethanol
Province of Bukidnon……2,000 hectares

BRONZEOAK SOUTHERN BUKIDNON
Sugarcane & molasses for Bioethanol

Municipality of Kibawe, Province of Bukidnon
Existing 9,000 hectare Plantation .....9,000 Hectares
11,000has. Planned Expansion
Production Plant with Production Capacity of 45 Million liters/year starting 2010/2011
With 30 million Us dollalrs capitalization

REGION 12- SOCSKSARGEN

Eastern Renewables Fuels Corp. (ERFC)
Cassava for Bioethanol
City of General Santos…….....2,000 hectares

EASTERN PETROLEUM
Cassava for Bioethanol
Province of Saranggani, (Cotabato)
Production Plant
Production Capacity- 30 Million liters/year starting 2010/'2011

NORTH COTABATO
Molasses for bioethanol
Province of North Cotabato
Production Plant schedule to start in 2010/2011

ROBSON AGRO VENTURES
Cassava for bioethanol
Province of Cotabato
Production Plant with Production Capacity of 60 Million liters/year, starting 2010/2011

TOTAL **170,850 Hectares**

TOTAL AREA FOR BIODIESEL PER REGION

Cordillera Administrative Region

AREA MATCHED

HIGHLANDS DEVLOPMENT COOP
Jatropha for Biodiesel
Ifugao Province, Municipality of Lamut……20,000 hectares

REGION 1 (Ilocos Region)

BENLINC – (BioEnergy North Luzon Inc)
Coconut for CME production
Province of Ilocos Sur, Municipality of Magsingal, Sto Domingo,
Cabugao, Pasuquin & Pagudpud
100,000 Has TARGETED…….....15,000 hectares
(74 Million US dollars Project in partnership with Japanese Company

Pacific Bio-Fields Corp.)

GLOBAL BIOMAS PHIL PLC CORP.
Giant Reed (Arundo donax)
Province of Pangasinan, Municipality of Malasique…… 6,000 hectares

REGION 3 (Central Luzon)

PNOC-ALTERNATIVE FUELS INC. (AFC) and LGU of Zambales
Jatropha for Biodiesel
Province of Zambales
Municipality of Botolan and Iba……30,000 hectares
Targetted 32,000 has.

BioEnergy Farms Inc.
Jatropha for Biodiesel
Province of Zambales
Municipality of Cabangan and Iba……10,000 hectares

Global Biomass, PLC Phil. Corp.
Arundo Donax (Giant Reed)
Province of Nueva Ecija
Municipality of Cabiao and San Antonio……6,000 hectares

National Capital Region

CHEMREZ TECHNOLOGIES INC.
CME-Production Plant
Quezon City
Production capacity-75 million liters per year
Current Production 60 million liters/year
W/ Partnersip with British CompanyBronzeoak Ltd. 2.

REGION 4- A CALABARZON

SENBEL FINE CHEMICALS
CME- Production Plant
Barangay Cotta, Lucena City
Production Capacity- 72 Million liters/year
Current Production- 36 million liters/year

REGION 4-B- MIMAROPA

PNOC- Alternative Fuels Cdorp. (AFC)
Jatropha for Biodiedsel
Province of Palawan
City of Puerto Princesa……10,000 hectares

REGION 6- WESTERN VISAYAS

Global Biomass PLC. Phil. Corp.
Arundo donax (Giant Reed)
Province of Iloilo
Municipality of Barotac Viejo…….....6,000 hectares

REGION 7- CENTRAL VISAYAS

PNOC-Alternative Fuels Corp. (AFC)
Jatropha
Province of Bohol
Municipality of Duero……..10,000 hectares
15,000 has. Targeted

REGION 8- Southern Visayas

KIBIO 2007
Jatropha for Biodiesel
Samar
10,000 has…….10,000 hectares

HERMINIO TEVES GROUP
Jatropha for Biodiesel
Province of Negros Oriental
Municipality of Zamboangita & Tamlang Valley…….10,000 hectares
Production plant schedule to start in 2009
W/ MOU with the Spanish Biofuel Company Global Tree Trust

REGION 10-

PNOC-AFC – Region 10
Jatropha for Biodiesel
Province of Bukidnon and Misamis Oriental
10,000 hectares……..10,000 hectares

ABUNDANT BIOFUELS CORPORATION
Jatropha for Biodiesel
Cagayan de Oro
100,000 has……...100,000 hectares
Lumad Ancestral Land –Jatropha-750,000 has.
US Company plans a community Development Project

NIMMO-BELL
Province of Bohol
Municipality of Ubay…….500 hectares

BIOENERGY 8 CORP.
CME- Production Plant
Sasa, Davao

REGION 12- SOCSKSARGEN

PNOC-AFC
Jatropha for Biodiesel
General Santos City
1.2 million hectares targeted…...……32,000 hectares
With 105 Million dollars capitalization

PNOC/ELSIA CORPORATION
Jatropha production
General Santos

PETRON CORPORATION
Jatropha production
40% owned by SAUDI ARAMCO

ECO GLOBAL BIO OIL –
Jatropha for Biodiesel
Provinces of Region 12 ……5,000. Hectares
100,000 has. Targetted

GOLDEN ASIA OIL INTERNATIONAL
CME- Production Plant

PURE ESSENCE INTERNATIONAL
CME-Production Plant

TOYO ENGINEERING CORPORATION.....600,000 hectares
Coconut Plantation
Location-Unknown

TOTAL 880,500 Hectares

*CURRENT AGRIBUSINESS LANDS MATCHING**

Table 1

LOCATIONS	LOC		Area Matched (ha)	Commodity / Production	Name of Company	Remarks
Super Regions	**Province**	**Municipality**				
PHILIPPINES			**187,000.00**			
Northern Luzon Agribusiness Quadrangle (NLAQ)			**57,000.00**			

Cordillera Administrative Region (CAR)	Ifugao	Lamut	20,000.000	Jatropha / 30 million liters per year of biodiesel	HIGHLANDS DEVELOPMENT COOPERATIVE	Consolidated 20,000 hectares thru its cooperative members; already planted 100 hectares
Ilocos Region (Region 1)	Ilocos Sur	Magsingal, Sto. Domingo, and Cabugao	15,000.00	Coconut /	BIOENERGY NORTH LUZON, INC.	Planted 350 hectares
	Pangasinan	Malasique	6,000.00	Arundo donax (Giant Reed)	GLOBAL BIOMASS PHIL. PLC CORPORATION	Signed MOA with PADCC for land identification and consolidation in October 3, 2008
Cagayan Valley (Region 2)	Isabela	Quirino and Delfin Albano	1,000.00	Cassava / 30 million liters per year of bioethanol	EASTERN RENEWABLES FUELS CORPORATION (ERFC)	On-going negotiation with Land Bank for production loan agreement

Table 2

Northern Luzon Agribusiness Quadrangle (NLAQ)			**57,000.00**			
	Isabela	San Mariano, Benito Soliven, Naguillian, and Ilagan City	15,000.000	Sugarcane / 200KLPD of bioethanol	GREEN FUTURE INNOVATION, INC. (GFII)	GFII and PADCC entered into an MOU for land consolidation and issuance of appropriate tenurial instruments
Luzon Urban Beltway (LUB)			**56,500.00**			
Central Luzon (Region 3)	Zambales	Botolan	500.00	Cassava	EASTERN RENEWABLES FUELS CORPORATION (ERFC)	Planted 50 hectares
	Zambales	Botolan and Iba	30,000.00	Jatropha	PHILIPPINE NATIONAL OIL COMPANIES (PNOC) – ALTERNATIVE FUELS CORP. (AFC)	MOU between PADCC, PNOC, and LGU Zambales signed last December 28, 2007

Table 3

Luzon Urban Beltway (LUB)	56,500.00			

Central Luzon (Region 3)	Zambales	Cabangan and Iba	10,000.00	Jatropha	BIOENERGY FARMS, INC.	Signed MOU between BIOENERGY FARMS, INC. and LGU ZAMBALES in April 2008
	Nueva Ecija	Cabiao and San Antonio	6,000.00	Arundo donax (Giant Reed)	GLOBAL BIOMASS PLC. PHILIPPINES CORPORATION	Signed MOA with PADCC for land identification and consolidation in October 3, 2008
MIMAROPA (Region IV-B)	Palawan	Puerto Princesa City	10,000.00	Jatropha	PHILIPPINE NATIONAL OIL COMPANIES (PNOC) – ALTERNATIVE FUELS CORP. (AFC)	MOU between PNOC-AFC and LGU Palawan signed in March 27, 2008

Table 4

Central Philippines (CP)			**26,500.00**			
Western Visayas (Region VI)	Iloilo	Barotac Viejo	6,000.00	Arundo donax (Giant Reed)	GLOBAL BIOMASS PLC. PHILIPPINES CORPORATION	
Central Visayas (Region VII)	Bohol	Ubay	500.00	Ü	NIMMO-BELL, INC.	Currently delineating the land area with DA-RFU VIII
	Bohol	Duero	10,000.00	Jatropha	PHILIPPINE NATIONAL OIL COMPANIES (PNOC) – ALTERNATIVE FUELS CORP. (AFC)	

Table 5

Central Philippines (CP)			26,500.00			
Southern Visayas (Region VII	Negros Oriental	Zamboangita Tamlang Valley	10,000.00	Jatropha	HERMINIO TEVES GROUI	Planted 1,051 hectares and is looking for refinery partner
Agribusiness Mindanao (AM)			47,000.00			
Zamboanga Peninsula (Region IX)	Zamboang del Norte	Gutalac	8,000.00	Sugarcane	BASIC ENERGY INC.	MOA concept covering assistance in term of industry updates approved. Land partnership with the local farmers is bein pursued by the company.

Table 6

Agribusiness Mindanao (AM)			**47,000.00**			
SOCSKSARGEN (Region XII)	General Santos City		2,000.00	Cassava	EASTERN RENEWABLES FUELS CORPORATION (ERFC)	Planted 500 hectares (on-going)
	General Santos City		32,000.00	Jatropha	PNOC-ALTERNATIVE FUELS CORPORATION	MOA between PNOC AFC and TRICAP XII signed August 28, 2007; Signed Agreement with Jubilee Cooperative
SOCSKSARGEN (Region XII)	North Cotabato		5,000.00	Jatropha	ECO GLOBAL BIO OILS, INC.	Planted 11,454hectares

SUMMARY:

Northern Luzon Agribusiness Quadrangle (NLAQ)…….57, 000 hectares
Luzon Urban Beltway ……..56, 000 hectares
Central Phils.(CP) ……..26, 500 hectares
Agribusiness Mindanao (AM) ……..47, 000 hectares

TOTAL 187,000 HECTARES

The prevailing condition with regard to biofuel production:

BIODIESEL

1. The total area planted to coconut is around 3,116 Million hectares making the Philippines as one of the world's biggest producers of coco-methyl ester (CME) which is a derivative of coconut oil. It produces about 1,400 million liters per year. Mindanao produces 60% of the total country's biodiesel production. Coconut oil remains one of the top earners among agricultural exports. Coconut oil is mostly shipped to United States (43%) and Netherlands (33%).

2. For year 2009 to 2014, the country only needs 134 to 161 million liters for the 2% blend. In 2009, there were 12 coco-diesel plants accredited with a projected capacity of producing 395 million liters a year. With a 30 million capacity per plant, the **seven (7) plants** which are already operational in 2008 are already producing more or less **210 Million liters**. With the mandated national blend of 2% for the year starting February of 2009 to February of 2014, the **demand** for biodiesel is only **134 to 161 million liters per yea**r, meaning the total rated capacity of the existing seven (7) accredited plants are more than enough to meet the needs for biodiesel blend. To push the discussion a bit further, right now there is one company, **CHEMREZ Technologies Inc,** the biggest biodiesel producer in the Philippines and who **can supply 75 million liters per year**. If the demand in 2014 is 161 million liters, CHEMREZ can supply almost 50% of the

national requirement. Why should there be a need to plant and cultivate jatropha or (tuba tuba) in about two (2) million hectares of land if the demand for biodiesel blend can already be satisfied by our coconut oil production? Why do we have to produced 5,600 million liters of biodiesel from jatropha in the years to come and deprived the country from producing food products in these same areas to sustain the growing food needs of the country?

3. In **2007**, with a biodiesel **demand of 62 Million liters** to comply with the mandated blend of 1%, there was already **253 Million liters** that was sourced from existing CME producers thereby producing a **surplus** of **191 Million liters**. (*PADCC Presentation)*

4. From **February of 2009 to February of 2010,** with a mandated blend of 2%, the **actual demand is only 134 Million liters,** but the Existing Total Rated Capacity of the 12 accredited plants is **396 million liters** thereby again producing a **surplus** of **262 Million liters** of biodiesel from coconut oil. (*PADCC Presentation)*

5. In **2014**, with a mandated blend of 2%, (which could be increased to 3% or more) the **actual demand is only 161 Million liters**, but the existing/projected Total Rated Capacity of the 12 accredited plants is **720 Ml/yr** thereby again producing a **surplus of 559 Million liters** of biodiesel from coconut oil. 559 Ml/yr is quite a big surplus which can be exported by the Philippines if the country will not put a cap on the biodiesel production. (*PADCC Presentation)*

6. It can be safely concluded with the data mentioned above that the production of biodiesel from coconut oil is bigger than the national demand. With a 12 accredited plants to process the coconut oil, based on the actual production of coconut trees that are already planted and producing, there **is NO more need to plant jatropha to increase the supply because the supply far exceeded the demand that's why there is now a big surplus of biodiesel in the market.**

CARL vs. Biofuels Act

For nearly half a decade of implementation of Agrarian Reform in the Philippines, from RA 3844 to PD 27, until 1988 when RA 6657 was enacted and implemented for twenty years (20), it is only in the new CARPER Law or RA 9700 that the non-negotiability for conversion of irrigated and irrigable land was explicitly provided. Pursuant to Section 65 (*Conversion of Lands**), irrigated and irrigable lands, shall not be subject to conversion.*** Also, Sec. 32 (Repealing Clause) of RA 9700, provides ***that all other laws, decrees, executive orders, issuances, rules and regulations, or parts thereof inconsistent with this Act are hereby likewise repealed or amended accordingly.*** By virtue of this provision, the contrary stipulations in the Biofuels Act of 2006 which was approved January of 2007 and the Joint Administrative Order No. 2008-1, Series of 2008 or The Guidelines Governing the Biofuel Feedstocks Production and Biofuels Blends Production, Distribution and Sales under RA 9367 specifically Sec 4.1 (DA Certification is needed) **are all effectively repealed or amended**. . This JAO, commonly called as JAO1-2008 was considered controversial because it provides the guidelines that regulate the

process of converting agricultural land for biofuel production by a **mere certification**, the jurisdiction of which was placed under the Dept. of Agriculture, thereby usurping the authority of the Dept. of Agrarian Reform when it comes to conversion of agricultural lands.

Section 4 of JAO1-2008 **requires the applicants to secure certification from the Department of Agriculture for the use and/or conversion of agricultural lands into biofuels feedstock production.** This particular provision of the JAO1-2008 is contrary to the provision of RA 6657, Executive issuances, DOJ Opinion and jurisprudences pertaining to the jurisdiction of the DAR to approve conversion of agricultural lands. Definitely, it is outside of the purview of the Department of Agriculture to issue certification for the use/or conversion of agricultural lands into biofuels production. The certificate that will be issued is not binding and has no effect in law because the DA was never granted by any enabling law any authority to convert agricultural lands to non agricultural uses. Not even the law that created the Department gives it the right or authority to issue certification that could effectively change the use of agricultural lands. Not even the Biofuel Act did not give the DA the authority to effect the change of use or conversion of agricultural lands by a **mere certification**. **Simply put, Section 4 of JAO1-2008 has no legal leg to stand on.**

To strengthen the argument that it is only the Department of Agrarian Reform who has sole jurisdiction on conversion of land to any other uses. The following must be considered to settle once and for all the issue of jurisdiction on conversion of agricultural lands.

1. **DAR is mandated to "approve or disapprove applications for conversion" pursuant to Section 4 (j) of Executive Order No. 129-A (1987)**, The DAR being the agency mandated to *"approve or disapprove the conversion, restructuring or readjustment of agricultural lands into non-agricultural uses"* was given the authority to *"have exclusive authority to approve or disapprove conversion of agricultural land for residential, commercial, industrial and other land uses as may be provided by law."*

2. **Section 5(1) of E.O. No. 129-A Series** of 1987 also *vests in the DAR the exclusive authority to approve or disapprove applications for conversion of agricultural lands for residential, commercial, industrial, and other land uses.*

3. **Section 65 of RA 6657** likewise empowers DAR to authorize conversion of agricultural lands.

4. **Section 4 of Office of the President Memorandum Circular No. 54 (1993)** also provides that "*action on application for land use conversion on individual landholdings shall remain as the responsibility of the DAR, pursuant to the provisions of RA 6657 and EO 129-A.*

5. **In the case of Roxas v. CA, G.R. No. 127876, (Dec. 16, 1999)** the authority of the DAR to approve or disapprove conversion was reiterated by the Court:

'Respondent DAR' s failure to observe due process in the acquisition of petitioner's landholdings ***does not ipso facto give this Court the power to adjudicate over petitioner's application for conversion of its haciendas from agricultural to non-agricultural.*** *The agency charged with the mandate of approving or disapproving application for conversion is the DAR."*

6. **DOJ Opinion # 44** also reiterated that the DAR's authority to allow conversion is not only limited to lands awarded under CARP. *"Being vested with exclusive original jurisdiction over all matters involving the implementation of agrarian reform,* ***it is believed to be the agrarian reform law's intention that any conversion of a private agricultural land to non-agricultural uses should be cleared before hand by the DAR.*** *True, the DAR's express power over land use conversion is limited to cases in which agricultural lands* ***already awarded*** *have, after five years, ceased to be economically feasible and sound for agricultural purposes, or the locality has become urbanized and the land will have a greater economic value for residential, commercial, or industrial purposes.* ***But to suggest that these are the only instances when the DAR can require conversion clearances would open a loophole in RA 6657, which every landowner may use to evade compliance with the agrarian reform program.*** *Hence, it should logically follow from the said department's express duty and function to execute and enforce the said statute that any commercial or industrial property should first be cleared by the DAR.*

In this instance, the jurisdiction of the Department of Agrarian Reform (DAR) over conversion of agricultural lands to non-agricultural uses has to be carefully considered. Conversion of agricultural lands into biofuels feedstock production can be immediately considered as converting an agricultural land to non-agricultural use. The mere fact that biofuel plantation requires a vast tract of land to be cost effective, this falls now under agro-industrial plantation and construction of industrial facilities to process the bioethanol or biodiesel would now constitute a conversion of agricultural lands into industrial sites which definitely entails or requires a conversion clearance and being a matter of conversion, it has to go thru the DAR.

Irrigated and irrigable lands **cannot be a subject of a mere certification from the Department of Agriculture (DA)** for the use and conversion of such lands into biofuels feedstock production.

Agrofuel plantation directly competes with food production because the land areas mentioned above are not "**new lands**" as claimed by DA-PADCC. These lands are all agricultural lands planted to food crops before they were converted to agrofuel plantations. To soften the arguments that there is competition between food and fuels, the Department of Agriculture thru PADCC insist that "new lands" pertains to "idle lands".* But idle lands were included in Phase 1 pursuant to Section 7 (Priorities) of RA 6657 that can be covered under the Comprehensive Reform Program (CARP)*. Coverage of idle lands was again reiterated in

Section 7 of RA 9700*. If only DAR has been diligent and conscientious enough to cover idle lands for the last twenty years (20) of its implementation under RA 6657, then by this time, there won't be any idle lands left that can be used for agrifuel plantations. If there are still remaining idle lands which escaped the coverage under CARP, these lands must be covered immediately pursuant to Section 7 of RA 9700.

There is no question that the Philippines needs to comply to the international commitments that is has signed to reduced emission of green house gases thru the use of fossil fuel but not at the expense that it will jeopardize thee food production and the implementation of a social justice program which is agrarian reform.

How Controversial is JAO 1-2008

Pursuant to Section 4 of the Joint Administrative Order No. 2008-1, Series of 2008 or The Guidelines Governing the Biofuel Feedstocks Production and Biofuels Blends Production, Distribution and Sales under RA 9367, the "applicant" who wants to engage in the production of feedstock for biofuel production, must ***secure first a certification from the Department of Agriculture for the use and/or conversion of agricultural lands into biofuels feedstock production.*** As was extensively discussed in the preceding paragraph, this provision has no legal leg to stand on and yet, it remains being implemented by the Department of Agriculture thru PADCC. The provision states:

> ***JAO 1-2008.****Section 4.1. DA Certification is needed:*
>
> ***a.*** *Cereals that can be used both for food and for biofuel production such as, but not limited to, corn and wheat, shall not be used for biofuel production;*
> ***b.*** *The land to be used shall be consistent with natural expansion of municipality or locality, as contained in the approved physical framework and land use plan by the concerned municipality of locality;*
> ***c****. The area that will be used is not the only remaining food production area of the community;*
> ***d****.* ***All agricultural areas shall not be utilized for biofuel feedstock production:***
>
> *1. All areas covered by government funded facilities and all irrigated lands where water is not available for rice and other crop production but are within areas programmed for the DA and NIA irrigation rehabilitation;*
>
> *2. All irrigable lands already covered by irrigation projects with firm funding commitments as certified by NIA at the time of application for land use conversion;*
>
> *3. All privately irrigated alluvial plan lands utilized for rice and corn production;*

4. All agricultural lands that are ecologically fragile, the utilization of which will result in serious environmental degradation.

First, the constructions of the provisions are very misleading. All the stipulations mentioned are definitive of negative conditions or prohibitions "**shall not".** Letter **"d"** even stipulated that **all agricultural areas shall not be utilized for biodiesel feedstock production** and the areas were specifically mentioned. The use of **shall not** is not recommendatory, it is **mandatory.** It is therefore contrary to what was stipulated in Section *4.1,* that a **mere** DA Certification is needed to effectively change the use of the lands enumerated for biofuel production.

Section **4.1 letter (a)** which states that "*Cereals that can be used both for food and for biofuel production such as, but not limited to, corn and wheat, **shall not be used for biofuel production.*** It is again very clear in this provision that all cereals shall not be used for biofuel production**.** Corn is considered as staple to the people of Visayas and Mindanao and can likewise be use as feedstock for biofuel production. With the prohibition stated above, corn can no longer be used as feedstock whether it is planted in irrigated or irrigable areas or not.

The provision cited in **4.1 (*b.)*** *The land to be used shall be consistent with natural expansion of municipality or locality, as contained in the approved physical framework and land use plan by the concerned municipality of locality;* and in **4.1 (c)** that *the area that will be used is not the only remaining food production area of the community;* can be construed as the ones which can be subjected to a DA certification.

With regards to **4.1(b),** each municipality was required to indicate in their Comprehensive Land Use Plan (CLUP) the food production areas that are considered as the NPAAD or the Network of Protected Areas for **Agricultural** and **Agro-Industrial Development**. Within the NPAAD is the Strategic Agriculture and Fisheries Development Zone (SAFDZ) or the areas indentified for agriculture and fisheries production." ***The NPAAD covers all irrigated areas, all irrigable lands already covered by irrigation projects with firm funding commitments; all alluvial plain land highly suitable for agriculture whether irrigated or not; Agro-industrial crop lands or lands presently planted to industrial crops that support the viability of existing agricultural infrastructure and agro-based enterprises, highlands, areas located at an elevation of five hundred (500) meters or above and have the potential for growing semi temperate and high-value crops; all agricultural lands that are ecological fragile, the conversion of which will result in serious environmental degradation, and mangrove areas and fish sanctuaries."(PART OF DEFINITION)***

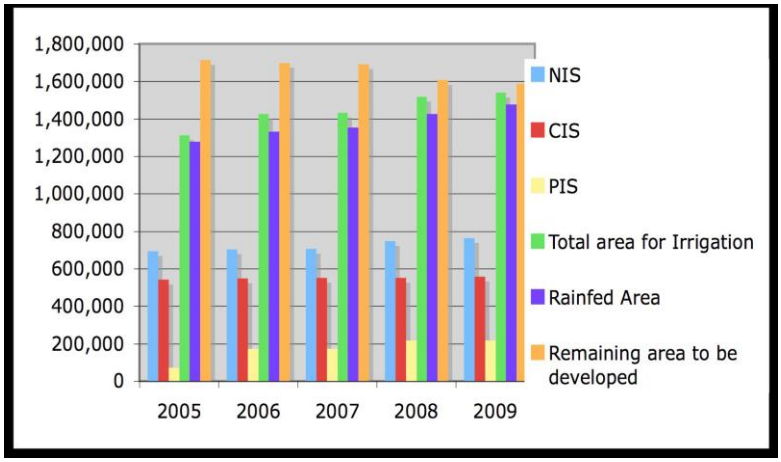
If the area to be certified is within the NPAAD, only ***Agro-industrial crop lands or lands presently planted to industrial crops that support the viability of existing agricultural infrastructure and agro-based enterprises*** can be given certification. All other lands mentioned under NPAAD cannot be subjected to a certification simply because they are part of the Network of **Protected Areas for Agricultural Development.**

Indeed, Section **4.1 (c)** would need a DA certification to ensure that the area to be planted to biofuel ***is not the only remaining food production area of the community***. Section 20 of the Local Government Code provided the required percentage of the total area in the entire municipality that can only be converted to non agricultural uses. Even if the area to be certified is not the only remaining food production area in the municipality, but if the total percentage allowable for conversion to non food production uses has already been used by the municipality, then any other kind of conversion must no longer be allowed.

It is quite clear in Section 4.1 letter ***d.(1)*** *that all areas covered by government funded facilities and all irrigated lands where water is not available* ***for rice*** *and* ***other crop production*** *but are within areas programmed for the DA and NIA irrigation rehabilitation* ***shall not be utilized for biofuel feedstock production.*** This provision runs contrary to the position being ascribed by PADCC. It maintains that irrigated and irrigable lands planted to **STAPLES ONLY** (**rice and corn only**) are excluded from being utilized for biofuel feedstock production. To where they anchor this particular position is beyond the actual and clear provision which states that irrigated and irrigable lands used for **other crop production** cannot also be converted to biofuel plantation.

Section 4.1 letter ***d***. Nos. **1, 2**, **3** and **4** are clearly the areas that cannot be used for biofuel feedstock production. Even **privately irrigated** alluvial plain lands utilized for rice and corn production as stipulated in Sec. 4.1 d. 3 cannot also be utilized for biofuel production.. Privately irrigated lands are those that are being serviced by the **Communal Irrigation System (CIS)** which is an irrigation system managed by a bona fide Irrigators Association and lands being serviced by Private Irrigation System (PIS).

What is actually threatened are the **rainfed areas** (ricelands that are dependent on natural rainfall for irrigation) which according to the data from the Bureau of Agricultural Statistics (BAS) as of 2009, is nearing one million five hundred thousand hectares (1.5M) mark. These areas can be effectively converted to biofuel plantations thereby significantly reducing the total production of rice in the country. This is now the bone of contention. Are we going to sacrifice our rice production simply because the government wasn't able to construct irrigation facilities that would allow water to flow into these unirrigated lands?



Classification of Irrigation Areas in the Philippines, 2005-2009.

EFFECTS OF BIOFUEL TO RURAL WOMEN

The effect of widespread agrofuel plantations to Rural Women and the impact of conversion of lands previously used for food production which are now being planted to agrofuels .

1. The **rights of rural women to own and control land** as embodied in RA 9700 will surely be affected since agricultural lands which can be covered under the CARP wherein rural women can be identified as beneficiaries can no longer be acquired and distributed because these lands are now being converted into biofuel production areas, thus exempted from coverage under CARP.
2. Conversion of lands previously planted to food crops to biofuel production can lead to a **shortfall of food supply** that would lead ultimately to increase in prices. The scarcity of agri-foods will definitely add to the burden being faced by rural women since they are the ones responsible in ensuring that food is available for the family.
3. The change of the use of land previously planted to food but later lease by the husband to biofuel applicants may lead to violence against women especially in cases where the rural women were never consulted in the decision to have the land rented/leased out for biofuel production.
4. The massive and intensive use of chemical fertilizers and pesticides can **affect the health of rural women and children** due to possible seepage of these harmful chemicals to their water supply and ground water table. If the source of water becomes contaminated, it adds to the task of rural women to look for a safe source and fetching water from a considerable distance can add to their burden and aggravate their task in providing clean water for the family.
5. The conversion of agricultural land planted to food crops may lead to **loss of livelihood opportunities for rural women** especially those who are engaged in planting and selling of cash crops to sustain the daily cash needs of the family. The opportunity for the rural women to sell the farm produce that can bring daily income to the family from planting short term harvestable crops like string beans, okra, eggplant etc. will be totally lost.
6. Agrofuel plantation **cannot offer a sustainable livelihood** for rural women since it is a type of monoculture industrial production. In a vast tract of agricultural land planted to sugarcane, corn or cassava, other crops that could sustain the food needs of the community cannot be planted interspersely. Being a monoculture type of plantation, the planting of any other crop that could possibly affect the growth and harvest of the biofuel feedstock planted will be strictly prohibited.
7. Decrease in food production due to conversion of agricultural lands producing food to agrofuels production can ultimately **lead to widespread hunger**. There will be less agri-food in the market and if there is short supply, prices will of course go up which can be beyond the reach of the poor.

8. **Incidence of poverty will increase** because agri-foods which were readily available before at a cheaper price can no longer be availed of by the poor. Money that should be spent to other basic necessities will be allocated for food and since food prices are high, less food can be purchase by the poor.

Establishment of "NEW LANDS" for Biofuel plantation can **increase social conflicts** and undermines the gains of agrarian reform that can impact on the rights of women-farmer to own and control land. In the past 20 year implementation of the Comprehensive Agrarian Reform Program (CARP), rural women were relegated to the back door and their access to land was never recognized. Now, after the enactment of RA 9700, where it was specifically provided in Section 2 which states: *The State shall recognize and enforce consistent with existing laws, **the rights of rural women to own and control land**, taking into consideration the substantive equality between men and women as qualified beneficiaries, to receive a just share of the fruits thereof, and to be represented in advisory or appropriate decision-making bodies. These rights shall be independent of their male relatives and of their own civil status;* there may no longer be agricultural lands that can be awarded to them under CARP because it has already been converted to biofuel plantations.

The extension of the Land Acquisition and Distribution component of Agrarian Reform was set only for five (5) years. If conversion of agricultural lands to biofuel plantation on a massive scale cannot be halted, fewer lands can be covered under CARP thereby lessening the chance for rural women to acquire and own agricultural lands under the Program.

WHY THERE IS A NEED TO ASSESS THE CONFLICT BETWEEN FOOD AND BIOFUELS

1. There is already an existing conflict between the identification of agricultural lands for coverage under the Comprehensive Agrarian Reform Program and delineation of the Department of Agriculture of agricultural lands for biofuels plantation. (ex. 500 hectares located in the Municipality of Ubay, Province of Bohol (Reg. 7) and based on the application NIMMO-BELL Inc.) - The land area applied for is currently being delineated by DA-RFU-7 and once a certification from the DA is issued, the land may no longer be placed for coverage under the Agrarian Reform Program.

2. Coverage of sugar lands and coconut lands under CARP especially in Region 6, 7, and 8 is getting so problematic because landowners are fighting tooth and nail for their property not to be covered because of the high return of investment in the bioethanol and biodiesel production.

3. JAO 1-2008 is a serious threat to the jurisdiction of the DAR to issue conversion order/clearance for the change of agricultural lands to other uses. Section 4 of JAO1-2008 requires applicants, (which refers to any person or entity who proposes to engage in biofuel feedstock production, and biofuel production,

distribution and sale.) to secure certification from the Department of Agriculture (DA) for the use and/or conversion of agricultural lands into biofuels feedstock production. RA 6657 and RA 9700 are very explicit on the jurisdiction of DAR on the issue of conversion. The provision of Section 4 of JAO 1-2008 is directly attacking the provisions on conversion found in RA 6657 and RA 9700.

4. The RA 6657 and RA 9700 did not limit the commodity produce in irrigated and irrigable lands to rice and corn only and Joint Administrative Order being inferior to the provision of a law cannot dictate or supersede what is provided in the law. CARL is an expansive law and its distribution of agricultural lands **regardless of crops or fruits produced** to farmers and regular farmworkers who are landless, irrespective of tenurial arrangement. A mere JAO cannot limit the crops produced in irrigated and irrigable lands such that it will only include rice and corn. There is no provision in CARL and RA 9700 that if irrigated and irrigable lands are planted to other crops, then it can be subjected to conversion and allow biofuels production. The provision of RA 9700 with regards to the non-negotiability of irrigated and irrigable lands to conversion is very clear. The essence of its non-negotiability to conversion to any other non-agricultural uses is to be able to preserve these lands exclusively for food production. **Biofuels production can never be classified as food production.**

POSSIBLE INTERVENTION- Administrative and Legislative

If food sufficiency and food security is the overriding consideration in the assessment of the Biofuels Act, then it requires specific actions and policy changes that might necessitate legislative interventions.

1. **All lands distributed under the Comprehensive Agrarian Reform Program shall conform to the Prohibited Acts and Omissions pursuant to Section 73 (f) of RA 6657which states:** ***The sale, transfer or conveyance by a beneficiary of the right to use or any other usufructuary right over the land he acquired by virtue of being a beneficiary, in order to circumvent the provisions of this Act*****. This provision was further strengthened by Section 12 (Transferability of Awarded Lands) of RA 9700 which states:** ***Lands acquired by beneficiaries under this Act or other agrarian reform laws shall not be sold, transferred or conveyed except through hereditary succession or to the government or to the LBP, or to other qualified beneficiaries through the DAR for a period of ten (10) years.*** **The period set by law is ten (10) years and within this period, the ARB shall be required to use the land awarded to him exclusively for food production and prohibit the use of the land for any other non agricultural use.**
2. **Consolidation of CARP awarded lands shall be strictly prohibited.**
3. **The agricultural land area such shall not exceed the total hectare allowed for industrial plantation as provided in Section__ of RA 6657.**
4. **In conformity to the provision of Section 22 of RA 9700 (Conversion of lands)** ***that irrigated and irrigable lands, shall not be subject to conversion,*** **all lands that**

were given certification by the Department of Agriculture and converted to biofuel plantation, but did not passed thru DAR for the required conversion and issuance of conversion clearance, shall be immediately covered under agrarian reform.

5. **The government must have an honest to goodness determination and inventory of the total area planted to coconut, sugarcane, corn, before any ‘new lands ‘ (public or private) will be made available for biofuel plantations.**

6. **Limit the land area required for biofuel production. Six hundred sixty (660,000K) thousand hectares of agricultural land is the total land area required for biofuel plantations, based on the computation of the Department of Agriculture to satisfy the national mandated blend for biodiesel and bioethanol. If the area required has already been satisfied with the current land being planted to biofuels, then new lands shall no longer be made available to conserve these areas for food production.**

7. ***JAO 1-2008. Section 4 and 4.1 must be clarified by the Department of Agriculture and the intent of that particular provision must be made as an official pronouncement of the Department***

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8. **Development of second-generation biofuel such as algae or seaweed which will affect the fishery sector and the local food security must be strictly prohibited.**

9. **Export of biofuels shall not be allowed.**

Conclusion

Land is a finite resource and with the growing population which is now pegged at 95 million, conflict is inevitable to arise in the use of available lands. Presently, the country is already experiencing food shortages especially on its staple (rice) because of the unabated conversion of irrigated and irrigable lands and change of land use of agricultural lands to residential, commercial and industrial purposes. Despite the prohibitions of the laws enacted purposely to protect irrigated and irrigable lands, (RA # 9700), to capacitate the country to produce its own food grain and other food crop requirement, there is now a **grave threa**t to these lands due to the enactment of the Biofuels Act of 2008 which directly compete in the use of agricultural lands for food production

As if we have not learned a lesson on the Food Crisis that hit us in 2008. Instead of confronting our own evil, we turn our sight to importation of our basic staple. We rely on other countries to supplement our shortage in rice. Right now, rice country exporters like Vietnam and Pakistan have made pronouncements this early that they will not be exporting rice and they will allocate their rice production for their people’s consumption. If our rice production is not enough for our people because lands that should have planted to rice were planted to agrofuels, and we turn to the export market that is unwilling to sell to the Philippines. Then what?

The burden of feeding the Filipino people rest on the political will of the government to preserve and protect the diminishing agricultural lands that we have. The country cannot rely on other countries to provide and guarantee that there is rice in every Filipinos' table. Rice is already getting to be an expensive commodity for the poor. Let's not wait for the Filipinos to go hungry because in their hungry mind, they are capable of thinking drastic measures to relieve their grumbling and hungry stomachs.

Given this scenario, isn't it more prudent for the government to ensure that we are sufficient in our basic staple and this can only be achieved if we try to conserve our agricultural lands, whether irrigated, irrigable, rainfed or with communal irrigation, idle or abandoned, to ensure that we can feed every Filipino?

GLOSSARY:

AGROFUELS, refers to the liquid fuels derived from food and oil crops produced in large-scale plantation-style industrial production systems for export mainly in Europe and North America.. These agrofuels are blended with petrol and diesel for use primarily by motor vehicles.

APPLICANTS refers to any person or entity who proposes to engage in biofuel feedstock production, and biofuel production, distribution and sale.

BIOFUELS, refers to bioethanol and biodiesel and other fuels made from biomass and primarily used for motive, thermal and power generation with quality specifications in accordance with the Philippine National Standards, and added or blended to petroleum fuels to enhance or alter chemical or physical properties and improve performance/usage of the fuels. (RA 9367)

Communal Irrigation System (CIS)" is an irrigation system that is managed by a bona fide Irrigators Association.

Food Security refers to the policy objective, plan and strategy of meeting the food requirements of the present and future generations of Filipinos in substantial quantity, ensuring the availability and affordability of food to all, either through local production or importation, of both, based on the country's existing and potential resource endowment and related production advantages, and consistent with the over all national development objectives and policies. However, sufficiency in rice and white corn should be pursued.

IDLE LANDS-Refers to any agricultural land not cultivated, tilled or developed to produce any crop not devoted to any specific economic purpose continuously for a period of three (3) years immediately prior to the receipt of notice of acquisition by the government as provided in RA 67657, but does not include land that has become permanently or regularly devoted to non-

agricultural purposes. It does not include land which has become unproductive by reason of force majeure or any other fortuitous event, provided that prior to such event, such land was previously used for agricultural or other economic purposes.

Irrigable Lands refer to lands which display marked characteristics justifying the operation of an irrigation system**.** (RA No 8435- AFMA Law)

Irrigated Lands refers to lands services by natural irrigation or irrigation facilities. These include lands where water is not readily available as existing irrigation facilities need rehabilitation or upgrading or where irrigation water is not available year-round. refers to a system of irrigation facilities covering contiguous areas. (RA No 8435- AFMA Law)

Irrigation System refers to a system of irrigation facilities covering contiguous areas.

National Irrigation System (NIS) refers to a major irrigation system managed by the National Irri

"Strategic Agriculture and Fisheries Development Zones (SAFDZ)" refers to the areas within the NAPAAD identified for production, Agro-Processing and marketing activities to help develop and modernize, either the support of government, the agriculture and fisheries sectors in an environmentally and socio-cultural sound manner.

"Network of Protected Areas for Agricultural and Agro-industrial Development (NPAAD)" refers to agricultural areas identified by the Department through the Bureau of Soils and Water Management in coordination with the National Mapping and Resources Information Authority in order to ensure the efficient utilization of land for agriculture and Agro-industrial development and promote sustainable growth . The NPAAD covers all irrigated areas, all irrigable lands already covered by irrigation projects with firm funding commitments; all alluvial plain land highly suitable for agriculture whether irrigated or not; Agro-industrial crop lands or lands presently planted to industrial crops that support the viability of existing agricultural infrastructure and agro-based enterprises, highlands, areas located at an elevation of five hundred (500) meters or above and have the potential for growing semi temperate and high-value crops; all agricultural lands that are ecological fragile, the conversion of which will result in serious environmental degradation, and mangrove areas and fish sanctuaries.

Rainfed Lands- refers to lands that rely on the availability of rainfall for irrigation and produces rice for only one cropping season.

FOOTNOTES:

Global Information and Early Warning System (GIEWS) on the Food and Agriculture of the UN Food an Agriculture Organization (FAO