



# ANNUAL GROUP REPORT JUNE 2015 – MAY 2016

## **BATC DEVELOPMENT BHD**







**COMMUNICATION ON PROGRESS 2015 - 2016** 





## REMARKS BY GROUP EXECUTIVE CHAIRMAN



#### Dato' Seri Mohd Safie M. Jaffri Group Executive Chairman BATC Development Bhd

Energy security and independence are vital to national security and to the socio-economic development of any country. The rise and fall of a nation depends on the strength and sustainability of their energy resources. Unfortunately, the passionate pursuit of energy resources and the high level of dependence on fossil fuel have caused climate change and global warming which must be addressed immediately.

I call upon all leaders in the world to work towards a mutual agreement to coordinate and unify the clean energy and biofuel policies and ensure the market's stabilization in order to secure an efficient, economic and regular supply of clean energy and biofuel to the industry and consumers while securing a steady income to producers and a fair return on capital for those investing in this industry.

BIONAS is willing and able to issue investment to meet the demand of any country for biofuel or waste to energy projects in their respective countries. BIONAS takes proactive steps by collaborating our expertise and technology with any party to make climate action a reality.









#### ZURINA AMNAN Group Chief Executive Officer BATC Development Bhd

10<sup>th</sup> May 2016

To our stakeholders:

I am pleased to confirm that BATC Development Bhd reaffirms its support of the Ten Principles of the United Nations Global Compact in the areas of Human Rights, Labour, Environment and Anti-Corruption.

In this annual Communication on Progress, we describe our actions to continually improve the integration of the Global Compact and its principles into our business strategy, culture and daily operations. We also commit to share this information with our stakeholders using our primary channels of communication.

Sincerely yours,

Zurina Amnan







# THE TEN PRINCIPLES OF THE UN GLOBAL COMPACT

#### **HUMAN RIGHT**

- 1. Bionas support and respect the protection of internationally proclaimed human rights.
- 2. Bionas make sure that we are not complicit in human rights abuses.

#### LABOUR

- 1. Bionas uphold the freedom of association and the effective recognition of the right to collective bargaining.
- 2. Bionas eliminated all forms of forced and compulsory labour.
- 3. Bionas support the effective abolition of child labour.
- 4. Bionas eliminated all discrimination in respect of employment and occupation.

#### ENVIRONMENT

- 1. Bionas support a precautionary approach to environmental challenges.
- 2. Bionas undertake initiatives to promote greater environmental responsibility.
- 3. Bionas encourage the development and diffusion of environmentally friendly technologies.

#### **ANTI-CORRUPTION**

1. Bionas work against corruption in all its forms, including extortion and bribery.





### INTRODUCTION

Agropolitan Technology Bionas Corridor Development Berhad or better known as BATC Development Berhad under its tradename "BIONAS" was incorporated in 2004 and the project launched in 2007 with the objective of promoting Jatropha Curcas planting for fuel production as well as to generate wealth creation within the Malaysian Economy.

Company's The main unique selling proposition lies in its technology, vlqquz chain. branding control, its price leading position, and the relative low entry cost of producing Jatropha biofuels by outsourcing a major portion of its supply chain costs and risks to existing yet idle multimillion dollar refineries, third party nursery partners and partnering land owners and farmers.

### VISION

BIONAS envisage developing new sustainable green economic activity which will enhance economic growth in rural areas and simultaneously eradicate poverty.

## MISSION

To become the leading producer of sustainable third generation renewable which energy, is environmentally friendly, does not contribute to deforestation, does with food not compete production while at the same time providing and improving socio-economic value to local communities.





# CONTENTS

No	Contents	Page
1.	Remarks by Group Executive Chairman	2
2.	Statement by Group Chief Executive Officer	3
3.	The Ten Principles of the UN Global Compact	4
4.	Introduction, Vision and Mission	5
5.	Financial Report	7
6.	About Bionas	8 – 15
7.	Business Overview	16
8.	Jatropha Feedstock Fast Fact	17
9.	Product Overview	18
10.	Jatropha Usage in Bio-Fuel	19
11.	Technology and Implementation Concept	20 – 22
12.	Bionas Products Registration, Certification and Test Reports	23 - 34
13.	Bionas Activities	35 – 45
14.	Bionas Action Plan Towards United Nations Climate Change Conference (COP 21) in Paris 2015	46 – 47
15.	World Clean Energy Hub	47 – 66
16.	Action Plans	67
17.	Behind The Success	68





## FINANCIAL REPORT

Bionas has launched the Jatropha planting program for biofuel in Malaysia in 2007 with paid up capital of RM1.0 Million. In 2011, it's paid up capital was raised to RM100.0 Million. In 2009, the company has started venturing to other countries with more than 40 countries at present.

Not included the sales by its joint venture companies in other countries, Bionas' audited sales in 2008 was RM20.0 Million, 2009 at RM32.0 Million, 2010 at RM61.0 Million, 2011 at RM72 Million and 2012 at RM88 Million.

The sales for year 2008 to 2009 were from Jatropha seeds, seedlings, fertilizer and pressing mills; and the increased sales for year 2010 to 2012 were from 'samples' of biofuel additives.

After the products registration was approved by U.S Environmental Protection Agency (U.S EPA) on January 29, 2013, the company has secured a significant amount of commercial biofuel contracts in many countries and this will contribute to a drastic increase in sales volume for year 2013 to 2015 estimated to reach up to RM5.0 Billion.

The Company has developed eight (8) new clean energy and biofuel products for diesel, gasoline, heavyfuel, jetfuel, energy and power plant industries from various feed stocks including Jatropha, Algae, Canola, Rubber seed oil, Cotton seed oil and Used cooking oil.

Bionas clean energy and biofuel products are offered at the same price or lower than the international fossil fuel prices.







#### DATO' SERI MOHD SAFI'E M. JAFFRI, GROUP EXECUTIVE CHAIRMAN

Dato' Seri Mohd Safi'e M Jaffri, Malaysian, is the Executive Chairman of Bionas Group of Companies.

Prior to Bionas, he has acted in the capacity of Executive Chairman and Chief Executive of several national and notable organizations within the technology, investment and property development sectors in Malaysia and Singapore. These include chairmanships in public companies listed on the Main Board of Malaysia and the property development groups in Singapore.

His vision has led Bionas to take a leading position in the biofuel sectors globally. His unique concept and methodology in developing the Jatropha plantation has not only positioned the company in the global business arena but also contributed in poverty eradication amongst rural community as one of the principle of socioeconomic empowerment.

His investment into Nano-Emulsion and Polarization in biofuel production has created a revolutionary technology to the biofuel industry providing solution to the governments in any country to streamline and implement their National Biofuel Policy. His leadership has resulted in outstanding performance of the company in many countries with good increment in annual profits.

The Company is now a Member of the Climate Technology Centre Network (CTCN), UNEP and the Business Participant of the UN Global Compact (UNGC) and one of the Signatories for Caring for Climate (a joint initiatives of UNGC, UNFCCC and UNEP).

For his remarkable efforts in green and clean energy, he has been acclaimed with award and recognition from California Takshila University for excellent work in promoting energy independency and Appreciation Letter from the United Nations Environment Programme (UNEP).







ZURINA AMNAN, GROUP CEO

Zurina Amnan, Malaysian, is the Chief Executive Officer of BIONAS Group of Companies.

Zurina has been key in mapping out the Group's core strategies. She leads the operational supply chain, and business and corporate relations of the Group.

The Company's investment into Nano-Emulsion and Polarization technology in biofuel production has created a revolutionary in energy sector towards bio-energy sustainability and security. The production cost has reduced tremendously and the use of multi-feedstock has resulted to biofuels are offered at very competitive price.

She spent many years to prove the technology by conducting various tests of performance and emission in various climate conditions in many countries. Her leadership quality has extended the company's global presence to more than 40 countries.

Her passion towards bioenergy is expressed through her offer for technological collaboration to any countries in the world to streamline and implement their National Biofuel Policy.







She became one of the Climate Change Leaders for her participation during the United Nations Environment Programme (UNEP) Governing Council Global Ministerial Environment Forum (GC/GMEF) 2011 in Nairobi. She was one of the speakers at the Jatropha World Summit 2008 in Bali Indonesia, the 1<sup>st</sup> Philippine International Bio Energy Conference 2012 in the Philippines, the World Biofuel Market Conference 2012 in Rotterdam, BIT's New Energy Forum 2012 in China, the 4<sup>th</sup> International Conference on Biofuel Standards 2013 organised by the U.S National Institute of Standard and Technology (NIST) in Washington DC, the World Science Forum 2013 in Brazil and ExpoNaval 2014 organised by Chilean Navy in Chile.

She has received a letter of invitation from the UN Secretary General Ban Ki-moon to attend the UN Climate Summit 2014 in New York on 23 September 2014 of which she was also invited by the UN Global Compact to chair one of the Round Table Discussions of the UN Private Sector Forum.

For her remarkable efforts in green and clean energy, he has been acclaimed with award and recognition from California Takshila University for excellent work in promoting energy independency and Appreciation Letter from the United Nations Environment Programme (UNEP).



**ABOUT BIONAS** 



#### Letter from UN Secretary General Ban Ki-moon to Bionas Group Chief Executive Officer, Madam Zurina Amnan

THE SECRETARY-GENERAL
2 September 2014
Dear Ms. Amnan,
It is with great pleasure that I invite you to the Climate Summit I will
host at United Nations Headquarters in New York on 23 September 2014.
Climate change, and our response to it, will be the defining issue of our
time. Action today will define our ability to achieve the vision laid out in the Charter of the United Nations, from establishing the analytican formation of the United Nations.
justice, to ensuring dignity and equality for all people and nations, and promoting
social progress and better standards of life for all. The health of our people, our
economies and our planet depends upon it.
World leaders today have an unprecedented opportunity to reach a
meaningful agreement and take actions on the ground that can put us on a path to
agreement in 2015. It is up to leaders from all levels of government, civil society
and private sector, to scale up their actions and commitments to make this possible.
This is the task before us at the Summit in September.
This is the first Summit I have hosted that brings together leaders from
Government, private sector and civil society. In our increasingly interconnected
world, vision and ambition must be advanced by a diverse and dynamic public-private partnership. Together, we can leverage our steparthe multiply our
means, and shift the global climate trajectory. The Climate Summit will see the
largest gathering to date of world leaders to catalyse climate action and to raise
political ambition for a meaningful global legal agreement by 2015.
Ms. Zurina Amnan Group Chief Executive Officer
BATC Development Bhd
and look forward to seeing you in Sentember as we endeavour to provide programity
equity and security for this and future generations.
Y
Yours sincerely,
K. M. Ra
1 1 jour our
BANKi-moon





Bionas is a Business Participant of the UN Global Compact and one of the Signatories for Caring for Climate.

Caring for Climate March, 2014 Dear Dato' Seri Mohd Safie M. Jaffri, We wish to thank you and to recognize your vision and leadership in endorsing the Caring for Climate initiative. In addition to your valuable participation to the UN Global Compact, BATC Development Bhd is now part of the largest global business movement to address climate change, endorsed by over 350 companies from 60 countries. The climate change crisis has risen to the top of the international agenda with growing public concern. Companies, local governments and countries have already recognized and are capitalizing on the benefits of moving towards low carbon, climate resilient and green economy pathways. With Caring for Climate, the UN Global Compact, the UN Environment Programme (UNEP) and the secretariat of the UN Framework Convention on Climate Change (UNFCCC) seek to (i) mobilize businesses on a global scale to take a stand for a lowcarbon and climate resilient economy through their processes, products and services; as well as (ii) inform the climate change global policy agenda in order to contribute to progress in the intergovernmental climate change process. Caring for Climate offers ongoing engagement opportunities for signatories, in particular through events, publications and collaborative action platforms. Further information on upcoming engagement opportunities can be found on the initiative's website at www.caringforclimate.org. We welcome BATC Development Bhd to the Caring for Climate initiative and look forward to working with you. Sincerely, Georg Kell **Christiana Figueres** Sylvie Lemmet Executive Secretary Executive Director Director UNEP DTI UN Global Compact Office UN Framework on Climate Change Dato' Seri Mohd Safie M. Jaffri Group Executive Chairman BATC Development Bhd





# Bionas becomes the first Private Sector Member to join the Climate Technology Centre and Network (CTCN).

23 April 2014 Application for CTCN Membership Re: Applicant Reference: N0011 CTCN Reference: 2014/Membership06/BATC Dev. Bhd. Dear Ms. Aminuddin, Thank you for your application for the CTCN membership. We have completed our assessment of your application. I am pleased to inform you that the BATC Development Bhd. has been granted the CTCN membership. As detailed in the information note, which can be accessed on our website at (http://www.unep.org/climatechange/ctcn/Portals/50212/Guideline\_CTN\_membership%20app lication.pdf), CTCN members are invited to play a meaningful role in information sharing and capacity building, to provide as appropriate, technical assistance in response to country requests (response projects), and participate in outreach and networking activities. I look forward to working in close collaboration with the BATC Development Bhd. toward serving the interests of the developing countries by providing high quality and diverse expertise in the transfer of climate technologies. Yours sincerely, 1 Jukka Uosukainen **CTCN** Director Ms. Norazlina Aminuddin BATC Development Bhd. No 87-1 1st Floor, Jalan Raja Mahmud Off Jalan Raja Abdullah Kampung Baru, 50300 Kuala Lumpur Malaysia **Climate Technology Centre and Network** UN City, Marmorvej 51, 2100 Copenhagen, Denmark UNEP CTCN webpage: www.unep.org/climatechange/ctcn Email: ctcn@unep.org





# Bionas becomes the first Private Sector Member to join the Climate Technology Centre and Network (CTCN).



The Climate Technology Network (CTN) Membership Application Assessment (New Application)

	<b>T</b> - b	A	Application	Data	
Reference	TO DE COM	11 Applicant (	Completing I	BATC Development Bbd	
Contact	Date' Sari Maha	Safie's laffi	Contact	safia@biopar.com.mu	
nerson	Ms Norazlina An	nhouddin	email	porazilna@bionas.com my	
Type of insti	tution	Private Sector Organization			
Country of R	egistration	Malaysia	OIBBIII280001		
Date of rece	int of application	24 February 2	014 finitial sul	hmission)/14 April 2014 (additional information)	
Assessment	due date	As the additio	nal informatio	on was provided on 14 April Jater than the	
Assessment	due unte	assessment di	ue date the a	ssessment nerind was extended	
Note		As the additio	nal informatio	n was provided	
INDIC		To the addition	choical An	arairal	
	To be con	I C	chincal App	Preiser	
0	To be con	pieted by onice	er completing	Part II Substantive assessment	
Recommend	lation	Grant membe	rship 🖂	Decline membership	
Thematic an	ea or expertise	Mitigation		Adaptation	
Mitigation si	ectors	Energy, Trans	port (biofuel)		
Adaptation s	sectors	N/A			
Service area	s	Investment, T	echnology dev	velopment and transfer, Collaboration in	
		innovation, Capacity building, Knowledge sharing			
Geographica	al scope	Asia, LAC, Afri	са		
Date of reco	mmendation	organization & blending, stor transport exter The organizati for cultivation The organizati generation an The financial s 2011 and 201 The organizat CTCN code of 17 April 2014	has invested in age and distri ensively in Sou- ion has estable , processing a ion produces ad industrial ap stability was d 2. ion commits t conduct.	n plantation and processing of Jatropha and bution of Jatropha based biofuel for industry and utheast Asia and also in LAC and African countries. lished Joint Ventures in 40 countries internationally and/or storage and distribution of the products. eight additives/biofuel products transport, power pplications with certified quality. lemonstrated by statements for fiscal years 2010, to the mission of the CTCN and to abide by the	
Date of reco	mmendation	17 April 2014	Intorim Notu	ark Managar	
necoramenc		TUKU Magata,	Elect Deci	UIN WIGHBET	
			Final Decis	sion	
	To be c	ompleted by the	Director of t	he CICN or delegated officer	
Final decisio	n	Grant membe	rship 🔀	Decline membership	
Comments	22.0.0				
Date of deci	sion	23 April 2014			
Decision by		Jukka Uosuka	inen, Director	CTCN	
Signature		9	uhd .	lot.	





#### Speaker Invitation to Bionas Group Chief Executive Officer, Madam Zurina Amnan for World Energy Congress – Istanbul 2016

WORLD ENERGY CONGRESS	Istanbul 2016 Organising Committee World Energy Council Turkish Member Committee Cinnah Cad. No:67/15, 06680, Çankaya-Ankara, Turkey T (+ 90) 312 442 82 78 – 79   F (+90) 312 441 9610 www.wec2016istanbul.org.tr   info@wec2016istanbul.org.tr World Energy Council
	5 <sup>th</sup> Floor, 62 – 64 Cornhill, London EC3V 3NH, UK T (+44) 20 7734 5996   F (+44) 20 7734 5926   www.worldenergy.org
Ms. Zurina Amnan	
Group CEO	
Bionas	
15 - 3, Jalan Seri Rejang,	
Rampai Business Park South,	
53300 Setanak	
Kuala Lumpur	
Malaysia	
	2 <sup>nd</sup> December 2015
Dear Ms. Amnan,	
World Energy Cong	ress – Istanbul 2016
Speaker	Invitation
On behalf of both the Organising Committee for the 23 It is our great pleasure to invite you to speak at the ne October 2016.	World Energy Congress and the World Energy Council, ext Congress, to be held in Istanbul, Turkey from 9 – 13
Running since 1924, the triennial World Energy Congr and offers a unique platform for global energy leader strategies. The previous Congress in Daegu in 2013 a included more than 50 government ministers.	ress is the World Energy Council's global flagship event rs to challenge conventional thinking and explore new attracted over 7,500 delegates from 123 countries and
Under the theme of "Embracing New Frontiers", the 2 critical transition in the energy industry and in a we milestone for global dialogue and consensus building Trilemma and deliver practical solutions into a better energy and the solutions into a setter energy and the solutions into a sette	<sup>13<sup>rd</sup></sup> World Energy Congress takes place at a moment of orld of extraordinary change. This Congress will be a to ensure we collaboratively address the World Energy nergy future.
The Congress programme will include a number of pro days. We would be keen to discuss your possible spea your key contact and we would be happy to provide fur	ominent sessions and side events spread over the four aking involvements in these events. Please let us know ther details.
A separate invitation will follow from the Turkish a transferable.	government. Please note that this invitation is non-
We sincerely hope you will accept this invitation to pa please do not hesitate to contact us directly. The key co kidd@worldenergy.org.	articipate in the 2016 Congress. For further information ontact for speaking involvement is Mrs. Charlotte Kidd at
Sincerely yours,	
Junal Junar g.	MR
,	V
lasan Murat Mercan	Christoph W. Frei

Chairman Istanbul 2016 Organising Committee

Secretary General

World Energy Council



## **BUSINESS OVERVIEW**





#### Our core businesses are:

- a. Jatropha Plantation
- b. Production Of Bio-Fuel Additives through Nano-Emulsion & Polarization Technology.

All of our Crude Jatropha Oil (CJO) are use for our internal consumption and further processed as ingredients for our bio-fuel additives.





# JATROPHA FEEDSTOCK FAST FACTS



JATROPHA CURCAS

PROPERTIES	JATROPHA
Climate Type:	Tropical
Seed Oil Content:	37%
Average Annual Yield / Acre (1 <sup>st</sup> – 3 <sup>rd</sup> Year):	3.6 Mt
Average Annual Yield / Acre(4 <sup>th</sup> Year Onwards):	5.0 Mt
Lifespan:	50 Years
Harvest Period:	Monthly after 6 months
Crude Oil Price / Mt	USD 855
Byproducts	Seed Cakes I.e: Biomass Briquette



## PRODUCT OVERVIEW



#### **PRODUCT OVERVIEW:**

The table below entails the products and its respective technology type and stages:

#	Products	Technology & Stages				
		Stage 1	Stag	ge 2		
		Polarization	Nano-Emulsion	Nano-Emulsion & Polarization		
1	B20 Bio-Petrol	-	Yes	-		
2	M30 Petrol	Yes	-	-		
3	B30 Bio-Diesel	-	-	Yes		
4	B25 Bio-Heavy Fuel	Yes	-	-		
5	B25 Bio-Jetfuel	-	-	Yes		
6	Super Bio-Jetfuel	Yes	-	-		
7	Bio Energy Emission Solution (BEES)	Yes	-	-		
8	Bio-Tablet Booster	Yes	-	-		

#### <u>Polarization</u>

Generally and briefly describing, Polarization Technology allows for alignment of positive and negative ions of elements and this is achieved under high pressure and highly magnetic environment. This further allows for the elements to form stable bonds with each other. This technological breakthrough enables the production of new types of additives that when it is blended with fossil fuels and other elements creates a stable mix of a 2<sup>nd</sup> generation renewable fuels.

#### <u>Nano-Emulsion</u>

Nano-emulsion Technology is a chemical process of blending fossil fuel, bio-feedstocks and specific types of chemical which in-turn reacts and mix to form stable bonds with each other.



JATROPHA USAGE IN BIO-FUEL



#### Petrol / Gasoline / Benzene





# TECHNOLOGY & IMPLEMENTATION CONCEPT



Bionas Sdn Bhd, a 100% subsidiary of BATC Development Berhad owns and have invested USD 150 Mil for the development of technology. The key success factor for Bionas lies in the application of its technology for the production of bio-fuel as well as the implementation concept in developing its plantations.

The applied technology and implementation concept is proven to be effective and has been the driving factor for the growth of the Company.

#### Applied Technology For The Production of Bio-fuels



Give back to the farmers by offering the highest buy back price of feedstock





# TECHNOLOGY & IMPLEMENTATION CONCEPT

#### **Implementation Concept For Plantations**



# TECHNOLOGY & IMPLEMENTATION CONCEPT



Implementation Concept For Bio-Fuel Additives



We acknowledged the fact that to build new infrastructures and replacement of engines and machineries specifically for bio-fuels are cost-intensive and impractical. We strive to find ways of conducting businesses using smart approaches and most of our R&D work centers on finding ways to minimize or eliminate the impracticalities.

Today, we have successfully formulated and synthesized a very stable mixture of bio-fuels with Nano Emulsion and Polarization Technology which requires blending & storage tanks to mix bio components and fossil fuels. Even though most of our additives are Jatropha based, we have the technology to formulate "Drop-In" additives derived from other types of feedstock.

As bio-fuels and renewable fuels are comparatively new to existing fossil, we do not wish to be seen as competitor to the oil majors. Instead we opt and prefer to **collaborate** with the oil majors, national oil and energy companies to further enhance their existing products and turning them into renewable fuels. We firmly believe that through collaboration with the oil majors we would be able to speed up the promotion and use of renewable energy, minimize or eliminate investments required for infrastructure setups and utilizing the oil majors' industry knowledge & experience, retailing, and supply chain. Through our technology, we believe this could also reduce the use of fossil thus prolonging the life of oil reserves.





## BIONAS PRODUCTS REGISTRATION, CERTIFICATION & TEST REPORTS

The Company's products registration with U.S. Environmental Protection Agency (EPA).

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY WASHINGTON, D.C. 20460 JAN 29 2013 OFFICE OF AIR AND RADIATION Bio Oil National Corporation Ms. Zurina Amnan Group Chief Executive Officer 1525 Long Beach Blvd. Long Beach, CA 90813 Dear Ms. Amnan: Pursuant to your September 6, 2012 notifications, the following fuel additives have been registered per 40 CFR 79.23 (our internal identification number precedes the name): 267620001 Additive M30 Petrol 267620002 Additive B10 - B30 Bio-Diesel 267620003 Bio-Booster Tablet 267620004 Bio-Booster Liquid Note that per 40 CFR 79.21(f) you would be required to notify us in writing if certain information in your notification were to change. In addition, note, that with your notification, you have provided assurances that you will not represent, directly or indirectly, in any notice, circular, letter, or other written communication, or any written, oral or pictorial notice or other announcement in any publication or by radio or television, that registration constitutes endorsement, certification, or approval by any agency of the United States. Please call (202) 343-9648 if you have any questions. Sincerely, Byron J. Bunker Director **Compliance** Division Internet Address (URL) 

http://www.epa.gov
Recycled/Recyclable

Printed with Vegetable Oil Based Inks on 100% Postconsumer, Process Chlorine Free Recycled Paper





Certificate of Fuel Additive Registration from Department of Energy, Ministry of Energy, Philippines to Bionas Philippines Corporation



REPUBLIC OF THE PHILIPPINES DEPARTMENT OF ENERGY

### Certificate of Fuel Additive Registration

This is to certify that the Department of Energy has duly registered **B30 & M30**, a Diesel/Gasoline Fuel Additive to **BIONAS PHILIPPINES CORPORATION** as Trader of said additive in accordance with the provisions of Section 27, Chapter 3 of R. A. 8749 otherwise known as "The Philippine Clean Air Act of 1999".

This Registration can be revoked anytime for non-compliance with the Department's reportorial requirements and failure to adhere with other conditions prescribed by the Department.

Issued this <u>31<sup>st</sup></u> day of <u>October</u> 20<u>13</u>, at the Department of Energy, Energy Center, Fort Bonifacio, Taguig City, Metro Manila.

CARLOS JÉRICHO PETILLA

Secretarv

Control No. : CFAR 13-08-206/FCF-T





#### Permanent Registration for M30 Bio-Petrol and B30 Bio-Diesel issued by the Ministry of Energy, Philippines for Bionas Philippines Corporation



#### Republic of the Philippines DEPARTMENT OF ENERGY

Dr. Sharif Adzhar H. Sarahadil Chairman & CEO Bionas Philippines Corporation Bgy. East Poblacion, Salug Zamboanga del Norte

Dear Dr. Sarahadil:

This refers to your application for registration of B30 & M30 fuel additive which you intend to market to your clients.

In view of the substantial compliance and merits of your application, and without prejudice to other requirements of the Department of Energy pursuant to the provisions of Section 27, Chapter 3 of R. A. 8749 (*The Philippine Clean Air Act of 1999*), B30 & M30 fuel additive is hereby granted Permanent Registration under your company name with CFAR No. 13-08-206/FCF-T effective from the date of issuance indicated herein.

This Permanent Registration is subject to your compliance of the following conditions:

- Consistency with the guaranteed performance of the product;
- B30 & M30 should only be used as an additive and not for any other purposes; and,
- Submission of and full compliance with the quarterly reportorial requirements (Schedule VII-A).

Non-compliance to any of the above conditions shall automatically result to the revocation of said Permanent Registration.

This registration should not in any way be construed as an endorsement of the product nor be used for advertisement and commercial purposes.

	Λ
	HAP, QUA.
	CARLOS ERICHO L. PETILLA Secretary
·	BEPARTMENT OF ENERGY
	SOE-JLP-13006034



#### Test result by PUSPAKOM (Malaysian Government Vehicle Inspection Agency) with 94% Emission Reduction.







Product: Bionas	Bio-
Booster Tablet	
Emission Test	on
Commercial Bus	
Before: 70%	
After : 4%	





		alexy Phillipping in the					
			TEST	IMONIAL F	ORM		
Produ Date Drive Vehic Mode Type Testin	uct's Name r's Name cle ID el of Engine monial Ref:Number <b>RVATION DATA:</b>	: M30 Bld : January : Jessie N : 0287 : Barako : Motor - :test bior	D PETROL 29, 2014 1. Ticon Kawasaki Kawasaki nas 01/30/	2014	Be 20;2/01/24 HC PPm CO % CO <sub>2</sub> %	fore 21:28 <u>3164</u> 0.20 7.0	******* 20:2/0 24 21:23 HC PPm 3164 C0 % 9.29 C0 <sub>2</sub> % 7.0
NO.	PARAMETERS	INITIAL	AFTER	REMARKS	O <sub>2</sub> % NO PPm λ RPM	11.2 ← 1 1.64 0	02 % 11.2 NO PP 1 λ 1.64 RPM 0 T 011 37,1
1	MILEAGE(KM)				1 011 A	37.1 fter	***************
2	FUEL QUANTITY (L)	3 liters			20;2/01/24 HC PPm CO %	23:12 42 <sup>°</sup> 0.00	****** *******************************
3	EMISSIONS (observation)	0.20	0.00	100% Emission Reduction	O <sub>2</sub> % O <sub>2</sub> % NO PPm λ	20.7 ◀ 0 0.00	⊢ N0 PPm 8

#### COMMENTS:

<u>I am Jessie M. Ticon a tricycle driver.</u> The product of the BIONAS Company is the best. 100% zero (0) carbon result from the emission test. Thank you so much to the BIONAS Company.

Conducted At: LTO (Land Transportation Office), Tagbilaran City, Bohol, Philippines

VESSIE M. TICON

Signature over Printed Name







	Results		Quality Specification		
No.	Test	Method	Units	Sample 2 : Bionas Bio-Booster Tablet in Petrol Ron 95	Min/Max Limit
1	#Copper Corrosion	ASTM D 130	-	1a	N/A
3	#Sulphur	In House by XRF Method	wt %	ND (< 0.01)	N/A
4	#Lead, Pb	ASTM D5185	ppm	4.04	N/A
5	#Flash Point	ASTM D93	°C	38	N/A
6	#Density @ 15°C	In House by Gravimetric Method	g/ml	0.7652	N/A
7	#Pour Point	ASTM D97	°C	-27	N/A

Remark: -

ASTM : American Society For Testing and Materials #Test Method :Not accredited

Approved by

Name: Junaitun Alfarahim Jaafar Department : Laboratory Date: 27 June 2014

The above analysis is based solely on the sample submitted by customer.
The certificate shall not be reproduced except in full without the written approval of the laboratory.
End of Report







				Results	Quality Specification	
No.	Test	Method	Units	Sample 1 : Bionas Superlube Additive	Min/Max Limit	
1	#Copper Corrosion	ASTM D 130	-	1a	N/A	
	#Rust Test:					
2	Distilled Water	ASTM D 665	PASS/FAIL	PASS	N/A	
	Sea Water		12	PASS	N/A	
3	#Kinematic Viscosity @ 40°	ASTM D445	cSt	84.56	N/A	
4	#Kinematic Viscosity @ 100°C	ASTM D445	cSt	8.75	N/A	
5	#Viscosity Index	ASTM D2270	-	72.00	N/A	
6	#Total Acid Number	ASTM D664	mgKOH/g	0.66	N/A	
7	#Total Base Number	ASTM D2896	mgKOH/g	3.21	N/A	

Remark: -

ASTM : American Society For Testing and Materials #Test Method :Not accredited

Approved by

12m

Name: Junaitun Alfarahim Jaafar Department : Laboratory Date: 27 June 2014

The above analysis is based solely on the sample submitted by customer. The certificate shall not be reproduced except in full without the written approval of the laboratory.

- Continue -----





Tests conducted by Lloyd Aereo Boliviano S.A., Bolivia on Bionas Bio-Jet Fuel with 22% savings on fuel consumption.



Test on Boeing 727-200 22% savings on fuel consumption 75% lower vibration 85% emission reduction 12 °C lower engine oil temperature









Refinación SA	IN RC	FORME DE ANAL 6-0006-B-PG-3-LAB-	ISIS 0001			
	PROD PROCEDS FECHA DE MUES REFERS MUE INFORME RG-L	PRODUCTO: BIONAS SUPER BIO-JET FUEL PROCEDENCIA: LAB HA DE MUESTREO: 2014-06-17 / 00:00 N°: 2730 REFERENCIA: RCBA-GDV MUESTRA: NFORME DE ANALISIS RG-LAB-0006-A ANEXO A PG-3-LAB-0009				
PRUE	BA	METODO	UNIDAD	RESULTADO		
Muestra de Avión						
Estabilidad termica		10711 0 0011				
Caida de presion en	el filtro	ASTM D 3241	mmHg	1		
Depositos en precale	ntador	AS1M D 3241	Codigo	<1		
Musetra Tanana Banas da D	nuchoe					
Fetabilidad térmian	uebas					
Estabilidad termica	al films	10711 0 0011	in a start to			
Caida de presión en	el filtro	ASTM D 3241	mmHg	1		
OBSERVACIONES:						
ANDRA STREET	BA	METODO Cochabamba, 25 de junio de 201		RESULTADO		
SBR/sbq Susana Ga Analis	eca O. Nelson Constant of Concerner Science Concerner Science Concerner Science Concerner Mac Concerner Boarrie Concerner Pág. 1 de 1					
-						

⊿





#### Tests conducted by Makassar State University, Makassar, Indonesia on Bionas Bio-Booster Tablet with 20-30% savings on fuel consumption.

			<b>FEST REPO</b>	RT FOR BIONAS	TABLET			
Specification		1	T	2		3	and the second	4
Additive Product	Bionas Tablet		Bionas Tablet		Bionas Tablet		Bionas Tablet	
Inspection Date	1/20/2015		1/31/2015		2/7/2015		2/24/2015	
Type of Engine	Diesel Engine		Diesel Engine		Gasoline Engine		Gasoline Engine	
Engine Capacity	2800 CC		2500 CC		1500 CC		1500 CC	
Type of Pump	Injection pump inline				-			
Type of Governor	Governor Vacuum		-		-		-	
Fuel System	-		Common rial		Carburetor		Electronic Fuel Injection (EFI)	
Condition	car work without extra load		Long Distance Drive		car work without extra load		car work without extra load	
Inspection Items	Solar (Diesel Fuel)	Solar + Bionas Tablet	Solar (Diesel Fuel)	Solar + Bionas Tablet	Premium (Gasoline Fuel)	Premium + Bionas Tablet	Premium (Gasoline Fuel)	Premium + Bionas Tablet
Fuel Consumption	194 km= 14 L	194 km=14 L		Saving 20 - 30%	A. B. Will	Same without Bionas Tablet		Saving 20 - 30%
Power	- 10 A	+	-	+		+		+
Acceleration	-	+	Long ton -	+	19	+	-	+
Emission/Smoke	50%	18 - 37%	+	Sugar - Aster	+		+	-
Engine Sound	+		+	And an and the	+	-	+	-

Note:

A. Inspection result rest

- = Decline
+ = Increase

B. Conclusion

1. For diesel engine fuel consumption efficiency, it needs a treatment in the injection pump (manual)

2. For fuel system with carburetor, fuel consumption is the same without using bionas tablet.

Makassar, 3) March 2015 Head of Performance Test LUM Haruna HL. Expert of Automotive Engineering



# Tests conducted by Makassar State University, Makassar, Indonesia on Bionas Super Bio-Diesel 20-30% savings on fuel consumption.



#### UNIVERSITAS NEGERI MAKASSAR TEST REPORT FOR BIONAS SUPER BIODIESEL ADDITIVE

Specification		1	2		
Additive Product	Super Bio Die	esel	Super Bio Diesel		
Inspection Date	2/13/2015		2/15/2015		
Type of Engine	Diesel Engine	e	Diesel Engine/Heavy Duty		
Engine Capacity	2800 CC		4000 CC		
Type of Pump	Injection pur	np inline	Injection pump inline		
Type of Governor	Governor Va	cuum	Industrial		
Fuel System	-		-		
Condition	car work wit (Climbing)	h load	Constant		
Inspection Items	Solar (Diesel Fuel)	Solar + Super Bio Diesel	Solar (Diesel Fuel)	Solar + Super Bio Diesel	
Fuel Consumption	150 km= 14 L	150 km=10 L	17L/hour	14L/hour	
Power	-	+		Same without Super Bio Diese	
Acceleration	- 1999	4	-	+	
Emission/Smoke	+	100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100	+	-	
Engine Sound	+	La Series	+	- 1	

#### Note:

A. Inspection result rest

- = Decline

+ = Increase

#### **B.** Conclusions

1. For diesel engine/heavy equipment, fuel consumption is more efficient, but the power of engine is the same without using super bio diesel additive

#### Makassar, 3<sup>rd</sup>March 2015

Head of Performance Test,

Haruna HL. Expert of Automotive Engineering



## BIONAS ACTIVITIES 2015 - 2016



Starting with Malaysia 7 years ago, Bionas biofuel products today are sold in more than 40 countries around the world. The latest products registration with the U.S. Environment Protection Agency (EPA) has also led to Bionas opening an operations office in the United States and sales are currently in 5 different U.S. States.

1. Malaysia	10. Hong Kong	19. Saudi Arabia	28. Austria	37. Panama
2. Indonesia	11. Taiwan	20. Qatar	29. Germany	38. Paraguay
3. Philippines	12. China	21. Kuwait	30. France	39. Uruguay
4. Thailand	13. South Korea	22. Bahrain	31. Poland	40. Bolivia
5. Myanmar	14. Pakistan	23. UAE	32. United States	41. Sudan
6. Vietnam	15. Bangladesh	24. U.K	33. Chile	42. Tunisia
7. Cambodia	16. Egypt	25. Belgium	34. Peru	43. Kenya
8. Singapore	17. Turkey	26. Switzerland	35. Ecuador	44. Nigeria
9. Brunei	18. Iran	27. Canada	36. Brazil	45. Ghana









**Barru, South Sulawesi, Indonesia, 4 August 2015** - Soft Launch of Jatropha Press Mill and Additive Processing Plant, attended by the Government officials, the State University of Makassar's Rector, Deans & Head of Departments, the medias and the planters. Barru Regency is Bionas 1st Jatropha Agropolitan - Clean Energy Hub in Indonesia and State University of Makassar is Bionas 1st 'Centre for Excellence' in Indonesia.







Jakarta, Indonesia, 26 August 2015 - Signing of Agreement with Dr Tanri Abeng, Rector - Tanri Abeng University. Dr. Tanri is the President Commissioner at PERTAMINA, Indonesia







**Kuala Lumpur, Malaysia, 1 September 2015** - Signing of Joint Venture Agreement for Jatropha Planting, biofuel and additive processing, storage, marketing and distribution in Egypt.







**Kuala Lumpur, Malaysia, 4 September 2015** - Signing of Joint Venture Agreement for Jatropha planting, biofuel and additive processing, storage, marketing and distribution in the Philippines.







**Bohol, Philippines, 13 October 2015** - The launching of Bionas Gas Station Franchise was officiated by Bionas' Group Executive Chairman, attended by the Mayor of Cortes Bohol, Mr. Roberto L. Tabanera and investors from Indonesia and Malaysia. Also present Bionas' partners form Zamboanga, Ilollo, Cebu, Leyte and Cotabato and the coordinators & planters from all over Bohol.







Jakarta, Indonesia, 25 November 2015 - Signing of MoU with PT. Pertamina in conjunction with Pertamina Energy Forum 2015. Bapak Ahmad Bambang, Director of Marketing signed on behalf of Pertamina, witnessed by Bapak Dwi Soetjipto, CEO-Pertamina.







**Kuala Lumpur, Malaysia, 17 December 2015** - Signing of Joint Venture Agreement for Jatropha planting, biofuel and additive processing, storage, marketing and distribution in Indonesia and Malaysia.







**Zhengzhou, China, 12 January 2016** - Foods container/kiosk contract for energy and food security project in Indonesia.







**Shangqiu, China, 3 February 2016** - Waste processing machines contract for waste management project in Indonesia.







**Guangzhou, China, 25 March 2016** - Mobile gas station contract for energy and food security project in Indonesia.





## BIONAS ACTION PLAN TOWARDS UNITED NATIONS CLIMATE CHANGE CONFERENCE (COP21) IN PARIS, 2015



COMMUNICATION ON PROGRESS 2015 - 2016





# WORLD GO GREEN ROADMAP

The pertaining issues in many countries in the world in relation to energy include:

- 1. The uncertainty and high price of fossil fuels due to tight oil produce/supply.
- 2.Oil dependencies from other nations.
- 3. The need to create new alternative energy sources.
- 4. The creation of new economy and creation of employment.

For these reasons, Bionas decided to capture the opportunity to offer reasonable solutions which will cover all of the pertaining issues in the world through a systematic expansion and competitive strategy – the Road Map to "World Go Green".

-Human Capital and Socio-economic Development for Poverty Eradication

-Non-Food Multi Feedstock Produced by Greenbelt Countries

-Easy Access to Raw Materials for Biofuels/ Renewable Energy in all Countries

-Collaboration with Gas & Oil Industries for Production of Clean Energy using their existing Network & Infrastructure

-Global Technology Transfer & Knowledge Sharing Leading to the Build-up of Green Economies around the Globe

-Consumers save up to 30% on Fuel Consumption and Less Maintenance

-Emission Reduction by 70-90%

-Achieving Global Clean Energy (Sustainability and Security)

-Practical Model to Lead Global Climate Change Efforts post COP21, Paris 2015







#### **BALI CLIMATE CHANGE CONFERENCE – DECEMBER 2007**

The 13th session of the Conference of the Parties to the UNFCCC and the 3rd session of the Conference of the Parties serving as the Meeting of the Parties to the Kyoto Protocol took place in Bali and were hosted by the Government of Indonesia. Also sitting were the twenty-seventh sessions of the Subsidiary Body for Implementation (SBI) and the Subsidiary Body for Scientific and Technological Advice (SBSTA) and the resumed fourth session of the Ad hoc Working Group on Further Commitments for Annex I Parties under the Kyoto Protocol (AWG-KP).

The Bali Climate Change Conference brought together more than 10,000 participants, including representatives of over 180 countries together with observers from intergovernmental and non-governmental organizations and the media.

Governments adopted the Bali Road Map, a set of decisions that represented the various tracks that were seen as key to reaching a global climate deal.





The Bali Road Map includes the Bali Action Plan, which launched a "new, comprehensive process to enable the full, effective and sustained implementation of the Convention through long-term cooperative action, now, up to and beyond 2012", with the aim of reaching an agreed outcome and adopting a decision at COP15 in Copenhagen. Governments divided the plan into five main categories: shared vision, mitigation, adaptation, technology and financing.

Other elements in the Bali Road Map included:

- A decision on deforestation and forest management;
- A decision on technology for developing countries;
- The establishment of the Adaptation Fund Board

• The review of the financial mechanism, going beyond the existing Global Environmental Facility.

The Ad Hoc Working Group on Long-term Cooperative Action (AWG-LCA) was set up to conduct work under the Bali Action Plan. The Ad Hoc Working Group on Further Commitments for Annex I Parties under the Kyoto Protocol (AWG-KP) was to work in parallel. The central task of the AWG-KP was to decide the emission reduction commitments of industrialized countries after the Kyoto Protocol's first commitment period expired in 2012.







### WHY BIONAS SELECTED INDONESIA?

1. Most suitable climates with huge land areas for Jatropha. The farmers are reliable and guaranteed monthly income from selling Jatropha harvest to Bionas\_will contribute in poverty eradication.

2. Stability in politics with full support from the local and federal government.

3. More than 250 Million population guaranteed the buying power.

4. The third Asian economy after China and India, plays a prominent role in the world economy to the point that contribute to 50% of the growth of the global economy over the next five years, according to ASEAN.

5. Strategic location near Straits of Malacca with deep sea offering new routes for the global shipping lines.

6. Indonesia is next to Singapore and located strategically in between of 2 oceans (Hindi and Pacific oceans) and 2 continents (Asia and Australia) offering new logistic and distribution centre for the global trading businesses.

7. Central Kalimantan is mostly flat lands and safe from natural disaster, earthquake and tsunami etc.









### INDONESIA – WORLD CLEAN ENERGY HUB

- The biggest producer in the world of Jatropha Seeds and Crude Jatropha Oil (CJO) by 2018.
- 2. The biggest producer in the world of Jatropha briquette and pallete by 2018.
  - 3. The biggest producer in the world of jatropha base bio-additives for diesel, gasoline, heavy fuel, jetfuel, lubricant and coal by 2020.
  - 4. A reputable Industrial "Center for Excellence" producing professional experts, chemists and engineers feeding the global clean energy needs and requirements to mitigate climate change and global warming.
  - 5. The model of Jatropha Agro-politan Business Clusters developing and transiting Indonesia to be a developed country by 2025.
  - 6. The model of Green City developing and transiting Indonesia to be the World Clean Energy Hub by 2020.
  - 7. The model of e-Government system developing and transiting Indonesia to be a developed country by 2025.









### INDONESIA – WORLD CLEAN ENERGY HUB Proposed Bank-Financial Project Scheme & Financial Services & Investment Management







### **INDONESIA – WORLD CLEAN ENERGY HUB** Value Creation for Acquisition of Bank Dinar







### INDONESIA – WORLD CLEAN ENERGY HUB Project Plans – Energi Mandiri

#### First Clean Energy Hub at Kab. Selayar:

- •To sign JV agreement for Selayar
- •Selayar to get import permit for pressmil land seeds
- •Bionas to deliver pressmill to Selayar
- •Bionas to deliver Jatropha seeds to Selayar
- •Selayar to apply permit/ approval from local PEMDA to produce, blend and supply biofuel
- •Selayar to provide detail proposal for development of Jetty and expansion to its existing oil blending and storage facilities
- •To launch the pressmill & Jatropha planting program
- •To launch Bionas Mini & Medium Pump Franchise Energi Mandiri. Bionas Technology for B30 Bio- Gasoline and Bio- Diesel
- •To launch the 1<sup>st</sup> Clean Energy Hub in Indonesia. To duplicate in other Kabupaten



Picture of Blending Facilities in Selayar, Indonesia.





#### INDONESIA – WORLD CLEAN ENERGY HUB Project Plans

#### GAS POWER PLANT:

#### Location 1: Pelindo 1, Medan

✤Project: To invest and build the Gas based Power Plant and Gas Receiving Terminal.

- To prepare Feasibility Study
- To prepare investment Proposal for Private Placement/ Investment; and IPO (Fundraising)

#### Location 2: Palembang

Project: Coal Mine Project for local and export market. Existing Coal Concession- clean 150. 0 Million Tonnes.

- To prepare Feasibility Study
- To prepare investment Proposal for Private Placement/ Investment; and IPO (Fundraising)

#### AGRO BUSINESS:

#### Location: Sulawesi Selatan/ Bandung/ Jambi/ Palembang

Project: To build Cocoa Processing Factory. Production of cocoa based materials/ products and chocolates for local and export market

- Cocoa produced by PT PP Bajabang Indonesia in Bandung, Jambi & Palembang
- Cocoa produced by local farmers under BUMR Program
- To prepare Feasibility Study
- To prepare investment Proposal for Private Placement/ Investment; and IPO (Fund raising)





### INDONESIA – WORLD CLEAN ENERGY HUB Project Plans

#### AGROPOLITAN DEVELOPMENT:

- Location 1: Palembang
- Project: To build Rubber Processing Factory. Production of vehicles tires for local and export market
- 4000 HA active rubber plantation
- 6000 HA newly planted
- 40,000 HA land bank for timber, then rubber plantation
- Existing infrastructure/ road access 100KM
- End of road access, available 700 HA forindustry
- Location 2: Bandung, Jambi & Palembang (PT. PP Bajabang Indonesia)
- Project:
- To build Rubber Processing Factory. Production of vehicles tires for local and export market
- Proposed Acquisition 50% majority in PT. PP. Bajabang Indonesia
- 2000 HA active rubber plantations in Bandung. 1200 Ha in Jambi, and 2000 HA in Palembang.
- To prepare Feasibility Study
- To prepare investment Proposal for Private Placement/ Investment; and IPO (Fundraising)





### INDONESIA – WORLD CLEAN ENERGY HUB Project Plans

#### KIOSK ACI (AKU CINTA INDONESIA):

- ✤ Location: 6000 SPBU Pertamina & 4700 PT Pos Indonesia
- Project:
- To purchase/ lease 10,700 containers for Kiosk ACI
- To install Kiosks ACI at 10,700 locations in Indonesia
- To produce/ take over existing production and source for raw materials (9 basic home requirements of the people –rice, sugar, flour, cookingoil, egg, meat, chicken etc.)
- To introduce ACI Franchise Program. Kiosks business/ package to be rented out to Franchisee.
- To prepare Feasibility Study
- To prepare investment Proposal for Private Placement/ Investment; and IPO (Fund raising)



Kiosk ACI 20ft

Kiosk ACI 40ft





#### INDONESIA – WORLD CLEAN ENERGY HUB Project Plans

#### Waste Handling Project:

#### Location: Jakarta.

Project: To build 1,000 tons per day municipal solid waste (MSW) handling plant.

• Layout Graph:



- 30 hectares of plant area.
- 42 hectares of land area requirement.
- Plants and machines including sorting machine, shredding machine, drying machine, fermentation plant, dewatering plant, pyrolysis plant, distillation plant, biogas power generator and granulator machine.
- Raw materials are 1,000 tons per day MSW.
- Final products are biogas, crude carbon black, syngas, metal, non-standard diesel, nonstandard gasoline, heavy oil, carbohydrate and fertilizer.







#### INDONESIA – WORLD CLEAN ENERGY HUB Project Plans

- Main machines and plants for handling waste project with processing line:
- 1) Sorting Machine and Shredding Machine



Processing line (1):







#### INDONESIA – WORLD CLEAN ENERGY HUB Project Plans

- Main machines and plants for handling waste project with processing line:
- 2) Pyrolysis Plant



Processing line (2):









#### INDONESIA – WORLD CLEAN ENERGY HUB Project Plans

- Main machines and plants for handling waste project with processing line:
- 3) Power Generator
- Processing Line (3):







#### INDONESIA – WORLD CLEAN ENERGY HUB Project Plans

- Main machines and plants for handling waste project with processing line:
- 4) Distillation Plant



Processing Line (4):







### INDONESIA – WORLD CLEAN ENERGY HUB Project Plans

Distillation Plants Flowchart:







### INDONESIA – WORLD CLEAN ENERGY HUB Project Plans

- Main machines and plants for handling waste project with processing line:
- 5) Granulator Machine (Option)



Processing Line (5):







### INDONESIA – WORLD CLEAN ENERGY HUB Project Plans

Final Products and Usage from Waste Handling Project:

Final Product	Usage		
1. Biogas	<ol> <li>Power generation;</li> <li>Combustion, obtaining energy, such as: boiler combustion (the value of heating: 5500 ~ 5800 kcal / m3)</li> </ol>		
2. Heavy oil	Widely used in industries such as steel and iron factories, ceramics or chemical industries or hotels, restaurants etc. as fuel oil, or used for heavy oil generators to get electricity.		
3. Crude carbon black	Can be used for construction bricks, or widely used as industrial carbon black N774, N660, N330 or color carbon after deep-process.		
4. Syngas	Used as fuel in burning room, saving energy		
5. Metal	Can be sold directly		
6. Non-Standard Diesel oil	Can be used for vehicles mixed together with standard diesel oil or used for vehicles directly after blending with additives.		
7. Carbohydrate	Landfill, bricks for plants etc		
8. Fertilizer	Can be sold directly		





#### TURKEY – CLEAN ENERGY HUB FOR GLOBAL SHIPPING LINES

- 1. Bionas Turkey produces B25 Bio-Heavy fuel = 75% HFO + 24.975% Water + 0.025% Bionas Additive. Proven reduced emission up to 90%, 75% less vibration and 25% savings on fuel consumption.
- 2. The International Maritime Organization (IMO), United Nations -Regulation 13 on **NOx Emission Control Areas (NECA)**, under the International Convention for the Prevention of Pollution from Ships, bringing in stricter controls on emissions of SOx, NOx and PM.
- 3. Turkey's Bosporus Straits are a major shipping "choke point" between the Black and Mediterranean Seas. Turkey shall enforce the New Fuel Sulphur Regulations For Vessels In Turkish Ports, Inland Waterways and Territorial Waters. New fuel sulphur requirements to be imposed on the sale and circulation of marine fuels in Turkish ports, as well as on Turkey-flagged vessels in the Emission Control Areas (ECAs) specified under MARPOL Annex VI.
- 4. Turkey will be the production hub for clean energy (B25 Bio-Heavy fuel) as the solution for the global shipping lines to comply with NECA regulation.
- 5. International Maritime Organisation (IMO) report on international shipping requirement : 250 Million MT of HFO per day.





### **Action Plans**

#### 1.Build pump station in Indonesia.

- a. Build with 20 ft and 40 ft mobile container.
- b. Selling bio-fuel oil with added with Bionas additives.

#### 2.Build retail kiosk in Indonesia.

- a. Build retail kiosk near pump station.
- b. Selling some groceries in the kiosk such as rice, sugar, cooking oil, egg, flour, onion, chilli, chicken and cow's meat.
- c. Build with 20 ft and 40 ft mobile container.

#### 3.Build waste handling plant in Jakarta, Indonesia.

- a. For handling 500 1,000 metric tons of Municipal Wolid Waste (MSW) per day.
- b. b. To convert the MSW into fuel oil and gas for electricity.
- c. This project will be built at each one of these locations according to the Perpres No.18 at:
  - 1. Kota Semarang (Pilot Project)
  - 2. Provinsi DKI Jakarta
  - 3. Kota Tangerang
  - 4. Kota Bandung
  - 5. Kota Surakarta
  - 6. Kota Surabaya
  - 7. Kota Makassar

#### 4.Build Turkey's blending storage and fueling station at Turkish Ports.

- a. Build at important oil ports.
- b. Production hub for clean energy (B25 Bio-Heavy Fuel) as the solution for global shipping lines.





### **BEHIND THE SUCCESS**

'I believe in the laws of nature, we must give first before expecting anything.

The world is desperate for climate change solution, just look at the continuous natural disasters and catastrophic around the world, who actually cares?' - DATO' SERI MOHD SAFI'E M. JAFFRI

We must understand the need of the people, they are not capable to invest on anything but they have some lands for food crops. Give them the seeds, buy back at the right price, good price! Process the seeds in front of their eyes and produce the oil and additive locally for their benefits! This is the only way to bring them out of misery." - ZURINA AMNAN