

BIO **TECH**

INNOVATION

for a **SUSTAINABLE**
FUTURE

SUSTAINABILITY
REPORT
2015



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BIO TECH

INNOVATION

for a

SUSTAINABLE FUTURE



Through the dedication of all Bio Farma's personnel and because innovation is our culture, since 2011, we have been determined and committed to producing a wide range of biotechnological innovations.

The implementation of Environmentally Friendly and Innovative Business Processes related to the environment and CSR have resulted in Bio Farma becoming the only Indonesian Pharmaceutical industry to achieve a Gold PROPER from the Environment and Forestry Ministry.

In 2015, Biotechnology Innovation resulted in the development of Biological Erythropoietin (EPO), as well as other life science product developments. Now is the time for Bio Farma to continue making biotechnology innovations to create a sustainable future.

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BIO **TECH**
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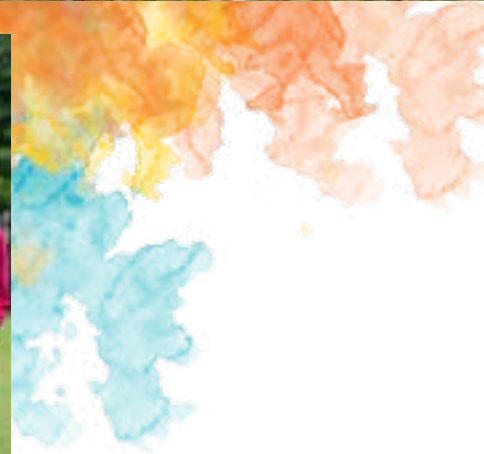


*We have a strong commitment to transparency
and sustainable decision-making.*



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GRI AND THE SUSTAINABLE DEVELOPMENT GOALS

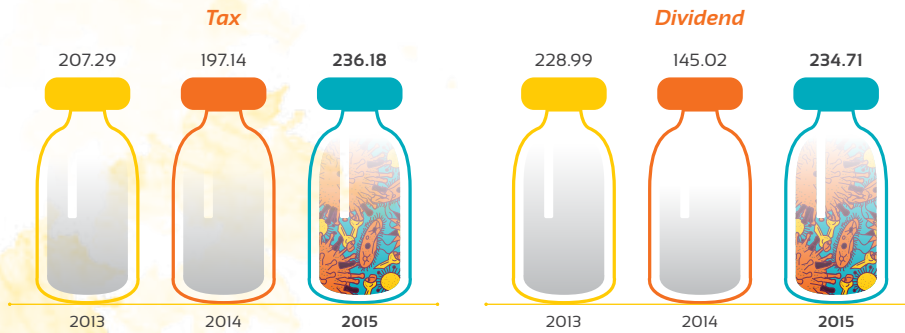
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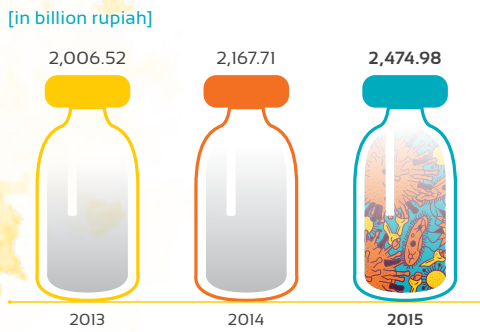


ECONOMIC PERFORMANCE

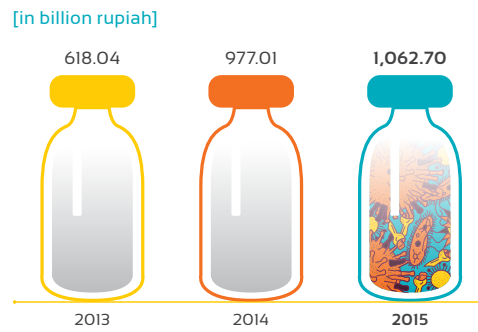
CONTRIBUTION TO THE NATION [in billion rupiah]



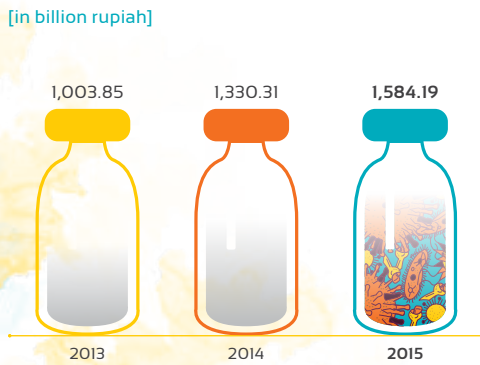
ECONOMIC VALUE GENERATED [in billion rupiah]



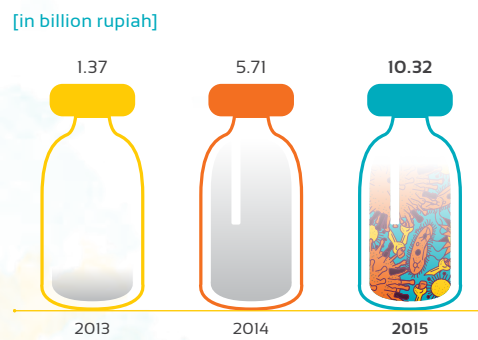
TOTAL ECONOMIC VALUE DISTRIBUTED [in billion rupiah]



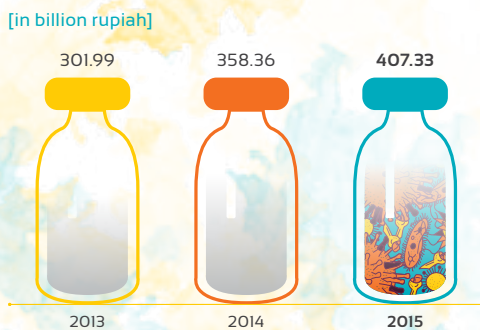
PAYMENTS TO SUPPLIERS & EMPLOYEES [in billion rupiah]



COMMUNITY DEVELOPMENT FUND AND COMMUNITY SOCIAL CONTRIBUTION [in billion rupiah]

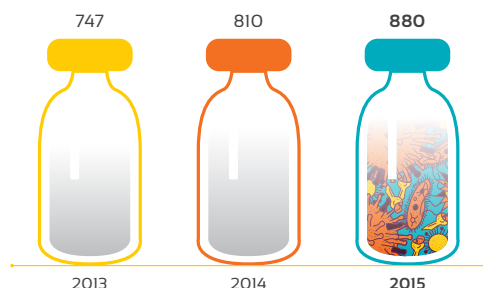


EMPLOYEE WAGES AND BENEFITS [in billion rupiah]

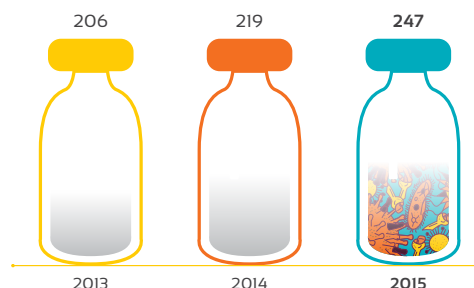


SOCIAL PERFORMANCE

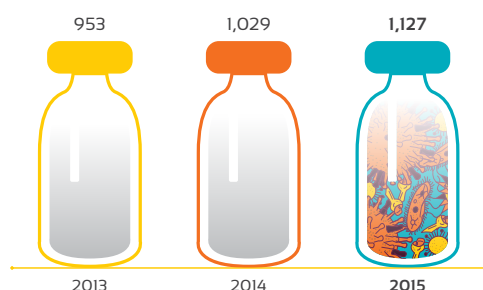
NUMBER OF MALE WORKERS



NUMBER OF FEMALE WORKERS



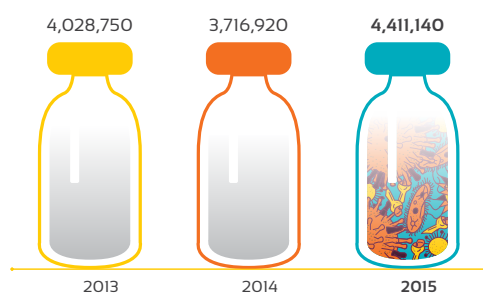
TOTAL NUMBER OF WORKERS



Employees Receive Annual KPI	: 100%
Labour strike/Labour strike by employees	: Nil
Human Rights Violations Case	: Nil
Union Membership in process registered in Labour	: 1,095 Person
Union Member	: 463 Person
Union Pension Fund	: Enough
Cases of Infringements of Workers Regulations	: Nil

ENVIRONMENTAL PERFORMANCE

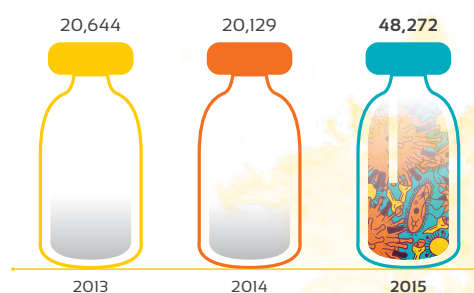
DIESEL CONSUMPTION [in liter]



Diesel is used for the production process in generators and boilers, as well as for the incinerator. Following is diesel consumption for 2014 and 2015:

EQUIPMENT	DIESEL CONSUMPTION (LITER)		
	2013	2014	2015
Genset Diesel	2,282,020	1,948,020	2,835,710
Incinerator	94,290	97,380	106,120
Boiler	1,646,040	1,671,520	1,469,310
Genset Hepatitis	6,400	0	0
Total	4,028,750	3,716,920	4,411,140

TREE PLANTING

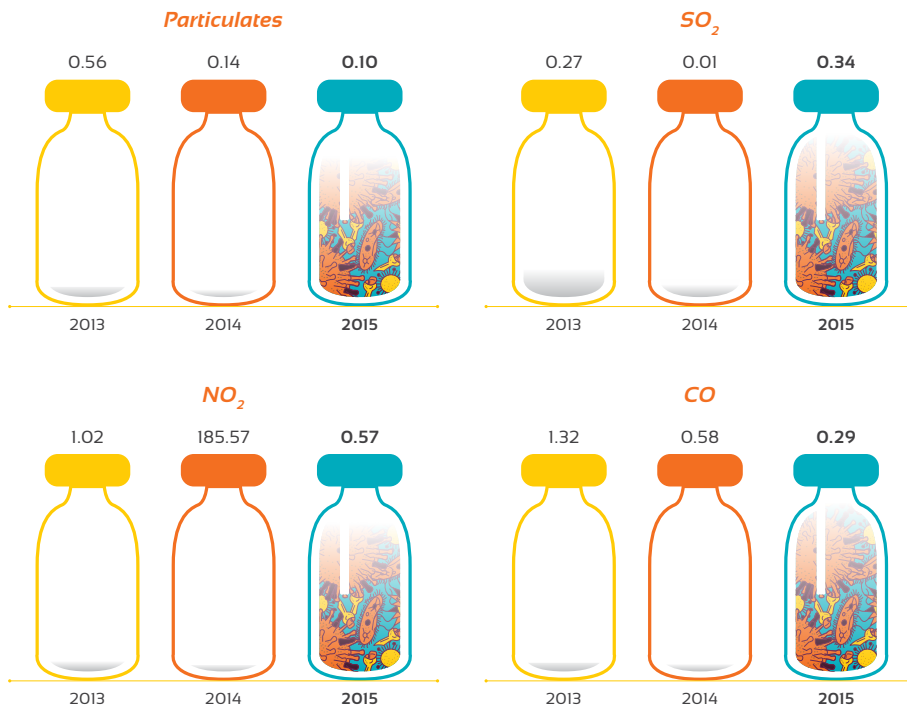


The total number of trees planted between 2011 and 2015 is:

YEAR	TOTAL
2011	41,468
2012	42,388
2013	20,644
2014	20,129
2015	172,901

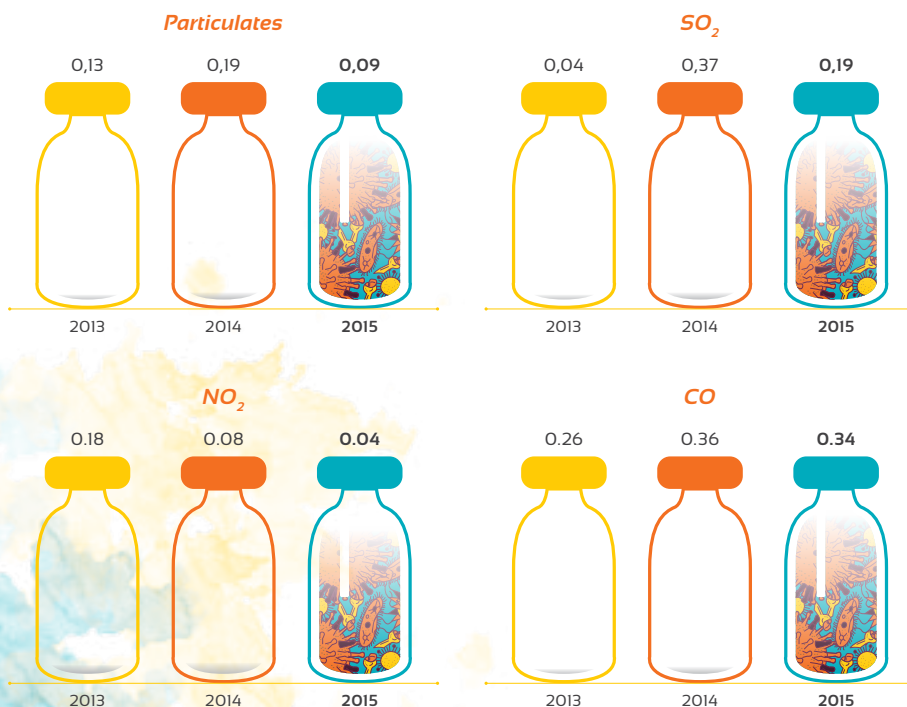


EMISSIONS [ton/year]



Conventional exhaust gas emissions originate from two sources: in production from the generators and boilers, and in the supporting process from the incinerators. Total emissions from production (tons/year) – diesel generators and boilers.

TOTAL EMISSIONS FROM THE SUPPORTING PROCESS – INCINERATORS [ton/year]

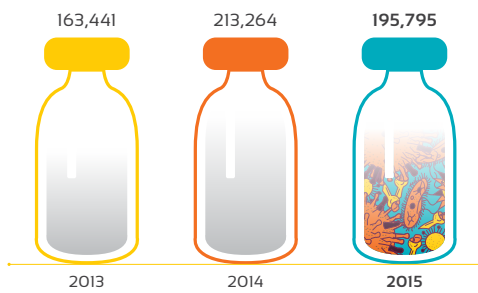


Emission sources in Bio Farma derive from the diesel-powered generators and boilers (related to the production process) and the incinerator in the supporting process. To reduce emissions from conventional pollutants (particles, CO, SO₂ and NO₂), Bio Farma implements preventative maintenance and periodic overhauls on machinery that generates these emissions.

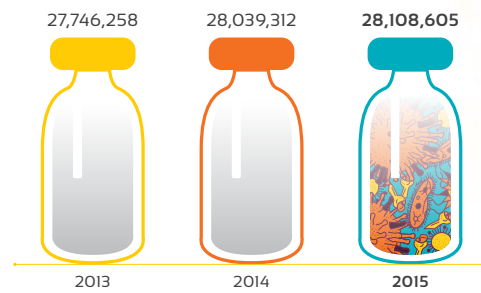
To reduce greenhouse gas emissions, Bio Farma undertakes a range of activities, such as the following:

ACTIVITIES	CO ² reduction equals with Absolute result (TON CO ₂ EQ./THN)		
	2013	2014	2015
Tree Planting	523,07	609,34	1,461.28
Electricity savings and renewable energy Program:			
Application of solar panel systems for water pump	-	3,97	3,97
The use of LEDs, motion sensors and solar panel systems for public parking lighting in the building basement	13,2	51,88	51,88
Exhaust Air energy reuse (recovery) from the production room	178,73	144,49	144,49
Application of solar panel systems for garden lighting	1,67	5	17,86
Lamps replacement using LED lamps (energy saving lamps)	7,86	5,8	8,97
Timer dispenser	8,26	9,74	9,74
Environmentally friendly cooling medium	10,21	10,8	10,8
Timer control AHU	1462	1462	1462
Chiller pump inverter	65	65	65
Inverter and night mode on 25 laminar air flows	60	60	60
Turning off office electrical appliance when not in use	81,67	81,67	81,67
Recycling of organic waste	188,24	181,5	112,15
selective control installation for Public Elevator #2	-	-	2,62

WATER USAGE [in m³]



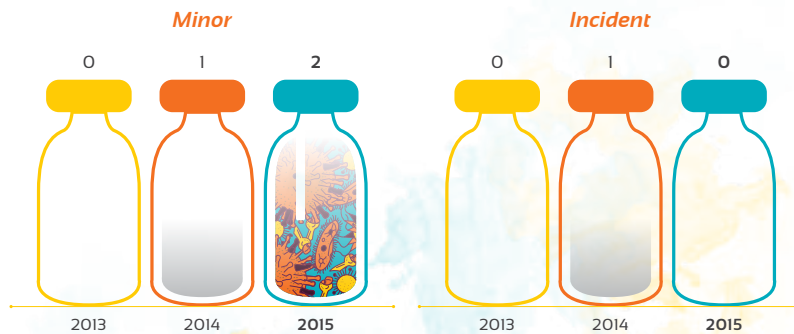
ELECTRICITY USAGE [in KWh]



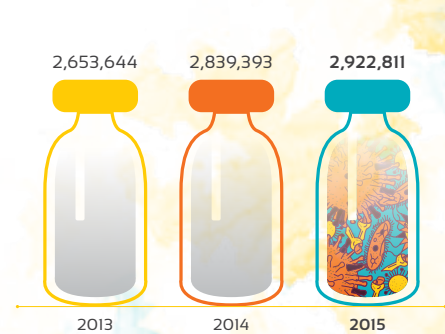
Bio Farma has two sources of water, clean water provider PDAM and artesian wells. The company has 4 (four) artesian wells and 2 (two) pipelines from PDAM.

SAFETY PERFORMANCE

WORKING ACCIDENT



SAFETY WORKING HOURS



WORK SAFETY AWARDS

Zero Accidents Award from the Manpower and Transmigration Ministry in 2009 and 2013 and 2015.

Bio Farma has consistently implemented an internationally acknowledged occupational health and safety management system with OHSAS 18001:2007 certification awarded in 2009 that has been sustained to date.



AWARDS AND CERTIFICATIONS

AWARDS



1



2



3



4

1

Innovation for Domestic Medicine Development

11 February 2015

Bio Farma received an award from Food & Drugs Supervision Agency (BPOM) for the active innovation of domestic medicine development. The award is bestowed by Coordinating Minister of Human Empowerment and Culture, Puan Maharani, and received by Bio Farma President Director, Iskandar.

2

Green Era Award 2015

23 March 2015

Other ways Association Management & Consulting. The Green Era Award is given to companies that develops innovation and committed in environmental management.

3 - 7

Indonesia Green Award category: Water Resource Conservation

4 June 2015

Bio Farma received the 2015 Indonesia Green Award from La Tofi School of CSR for the Water Resource Conservation category.

Indonesia Green Award category: New and Renewable Energy Development

4 June 2015

Bio Farma received the 2015 Indonesia Green Award from La Tofi School of CSR for the New and Renewable Energy Development category.



**Indonesia Green Award category:
Biodiversity Development**

4 June 2015

Bio Farma received the 2015 Indonesia Green Award from La Tofi School of CSR for the Biodiversity Development category.

**Indonesia Green Award category:
Pioneering In Polution Mitigation**

4 June 2015

Bio Farma received the 2015 Indonesia Green Award from La Tofi School of CSR for the Pioneering In Polution Mitigation category.

**Indonesia Green Award category:
Developing Integrated Waste Management**

4 June 2015

Bio Farma received the 2015 Indonesia Green Award from La Tofi School of CSR for the Developing Integrated Waste Management category.

Best of Indonesia Green Award:

4 June 2015

Bio Farma again achieved the Best of Indonesia Green Awards 2015 from La Tofi School of CSR.

8

Zero Accidents Award

31 August 2015

Bio Farma received an award from the Republic of Indonesia Ministry of Manpower for achievements in occupational health and safety (OHS) program implementations. The award was bestowed by the Department of Labor Bandung.



9



10



11

9

BUMN Marketers Award 2015 for the Silver Category in Best Tactical Award

5 September 2015

Bio Farma achieve the Silver Category award in the BUMN Marketers Award 2015 for best tactical award held by Insight, MarkPlus, The Jakarta Chief Marketing Officer Club (CMO), and Indonesia Marketing Association (IMA).

10

BUMN Marketers Award 2015 Silver Category in the Best Strategic Award

5 September 2015

Bio Farma received the Silver Category award in the BUMN Marketers Award 2015 for the Best Strategic Award held by BUMN Insight, Mark Plus, The Jakarta Chief Marketing Officer Club (CMO), and Indonesia Marketing Association (IMA).

11

Primaniyarta Award

21 October 2015

Bio Farma awarded the Primaniyarta Award 2015. It was the sixth time in a row Bio Farma has received the award since 2010.

The award was presented by President Joko Widodo the Production Director of Bio Farma, Juliman, accompanied by Minister of State Owned Enterprises, Rini Soemarno, Minister Commerce, Thomas Trikasih Lembong, and leaders of state institutions, as well as Embassy representatives for the Bio Farma Director of Production Juliman.

Bio Farma is one of the 30 Indonesian exporters that have been honored with the 2015 Primaniyarta Award, and one of seven companies in the category for Outstanding Performance Exporter Domestic Owned Share (PMDN).



12

Annual Report Award

22 September 2015

In order to encourage domestic companies to implement Good Corporate Governance (GCG) principles, Bio Farma managed to get 3rd place in the category of Non-Finance Non-Listed SOEs.

ARA award is held in cooperation with seven agencies, namely, the Financial Services Authority (OJK), the Ministry of State Owned Enterprise, Bank Indonesia, Directorate General of Taxation, National Committee on Governance, BEI, and the Indonesian Accountants Association.



13

1st Runner Up Tropical Building Category

07 October 2015

Bio Farma Public Building II achieved 1st Runner up Tropical Building Category, at the ASEAN level. This award is best owed in the Gala Dinner of the 33rd ASEAN Ministers of Energy Meeting, in Kuala Lumpur, Malaysia.



14

Bio Farma Received Infobank Award BUMN 2016

23 Oktober 2015

Infobank Magazine again held the award for SOE in 2016 at the Shangrila Hotel Jakarta, Friday, 23 October 2015. For the sixth year of the award, this year Bio Farma achieved the 2015 best of the best award, Golden Trophy Infobank category.



15



16



17



15

Bio Farma Again Achieved Gold PROPER

23 November 2015

PT Bio Farma (Persero) has achieved Gold PROPER for the second time from the Ministry of Environment and Forestry (KLHK) bestowed by the Vice President, Jusuf Kalla, received by the Director of Finance Bio Farma, Pramusti Indrascaryo.

Gold PROPER is the highest award in the field of environment which means that a company has implemented a comprehensive environmental management and sustainable.

16

Bio Farma Received Sustainability Report Award 2015

15 December 2015

Closing the year 2015, PT Bio Farma (Persero) awarded the first runner up in the Manufacturing category Sustainability Report Award 2015 from the National Center for Sustainability Reporting (NCSR). Second award received by Bio Farma since 2014 is the result of sustainability report which refers to the Global Reporting Initiative (GRI) version 4 standard, which includes economic, social and environmental aspects.

17

Bio Farma received the 2015 Public Disclosure award

15 December 2015

Bio Farma again awarded the 2015 Public Disclosure award from the Central Information Commission. The award was bestowed by President Joko Widodo to the Bio Farma Director of Production, Juliman, at the State Palace. This is the third award since 2013, as well as Bio Farma's commitment to implement the Law No. 14 year 2008 about Public Information Transparency (KIP), which requires the State Owned Enterprises to disclose information to the public. With a score of 89.8 Bio Farma is ranked second in the SOE public bodies category, followed by PT PLN at third place and PT TASPEN in first place.



18

18

Bio Farma Received an award at the 4th National Energy Efficiency Award 2015

2015

Bio Farma received an award from the Ministry of Energy and Mineral Resources of the Republic of Indonesia for the category of Energy Management in Industry & in Large Industrial Building on the 4th National Energy Efficiency awards 2015.



19

19

West Java Regional Blue PROPER

22 December 2015

Bio Farma achieved the Blue award from West Java BPLH for the Cisarua animal breeding program.



CERTIFICATION

I. Recognition from the World Health Organization (WHO)



1. Polio Virus Vaccine

Given on 9 April 1997, no Expiry date.

2. Measles 10 doses

Given on 9 April 1997, no Expiry date.

II. CPOB Certificate (Good Manufacturing Practice) from Food & Drugs Supervision Agency of the Republic of Indonesia (BPOM-RI)



1. Given on 4 April 2011, valid until 4 April 2016.



4. Given on 16 September 2013, valid until 16 September 2018.



2. Given on 4 April 2011, valid until 4 April 2016.



5. Given on 29 April 2014, valid until 31 March 2019.



3. Given on 16 September 2013, valid until 16 September 2018.



6. Given on 29 April 2014, valid until 31 March 2019.



7. Given on 29 April 2014, valid until 31 March 2019.



11. Given on 29 April 2014, valid until 31 March 2019.



8. Given on 29 April 2014, valid until 31 March 2019.



12. Given on 29 April 2014, valid until 31 March 2019.



9. Given on 29 April 2014, valid until 31 March 2019.



13. Given on 29 April 2014, valid until 31 March 2019.



10. Given on 29 April 2014, valid until 31 March 2019.



14. Given on 29 April 2014, valid until 31 March 2019.



15. Given on 29 April 2014, valid until 31 March 2019.



16. Given on 29 April 2014, valid until 31 March 2019.



17. Given on 14 January 2015, valid until 14 January 2020.



18. Given on 14 January 2015, valid until 14 January 2020.

III. Certificate from Lloyd's Register Quality Assurance Ltd. Certification Body, Singapore



19. Valid until 12 July 2018.

IV. Occupational, Health And Safety Management System OHSAS 18001:2007 from Lloyd's Register Quality Assurance Ltd. Certification Body, Singapore



20. Valid until 12 July 2018.

V. Certificate from Lloyd's Register Quality Assurance Ltd. Certification Body, Singapore

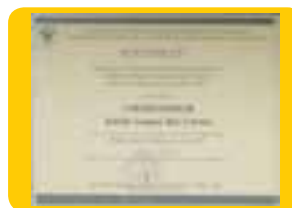


21. Valid until 30 June 2016.

VI. Laboratory Accreditation from WHO Regional South East Asia



X. Immunology External Quality Strengthening Program from Medical & Health Development Support Service



VII. Vaccine Vial Monitor Certificate from World Health Organization (WHO)



23. Bio Farma received certification after following the Immunology External Quality Strengthening Program. Given on 21 April 2015, no expiry date.

VIII. Bill & Melinda Gates Foundation Certificate of Appreciation from Bill & Melinda Gates Foundation



XI. Laboratorium Extra Quality Strengthening Program Indonesian Doctors Association of Specialist in Clinical Pathology and Medical Laboratory (PDS PatKLIN) in the field of Micobiology from PDS PatKLIN



24. Bio Farma received certification after following the Laboratorium Extra Quality Strengthening Program by Indonesian Doctors Association of Specialist in Clinical Pathology and Medical Laboratory (PDS PatKLIN) in the field of Micobiology. Given in June 2015, no expiry date.

IX. Geopark Cileutuh from Indonesian National Commission for UNESCO, Ministry of Education and Culture



XII. Laboratorium Extra Quality Strengthening Program Indonesian Doctors Association of Specialist in Clinical Pathology and Medical Laboratory (PDS PatKLIN) in the field of Hematology, Clinical Chemistry, Coagulation from PDS PatKLIN



22. Geopark Cileutuh fostered by Bio Farma received certification as a National Geopark according to UNESCO standards. PT Bio Farma (Persero) collaboration with Department Of Culture And Tourism & West Java Government Office. Given on 22 December 2015, no expiry date.

25. Bio Farma received certification after following the Laboratorium Extra Quality Strengthening Program by Indonesian Doctors Association of Specialist in Clinical Pathology and Medical Laboratory (PDS PatKLIN) in the field of Micobiology. Given in August 2015, no expiry date.



SIGNIFICANT EVENTS

15 JANUARY 2015

WLB Launching & Inauguration of the President Director as the WLB Ambassador

In order to increase awareness and implementation of WLB in Bio Farma, the Company Launched the WLB Program.



21 JANUARY 2015

Car Emission Test

Bio Farma held the Vehicle Exhaust Emission Test. This acts as one of the Company's commitment and compliance with the environmental regulations in order to create a clean emission in the Company's area. Emissions Testing for this year, Emission Tests was also done to motorcycles.



30 JANUARY 2015

vaccine flu complimentary for employees

There is still a chance to protect the family to be free of influenza throughout the year. Bio Farma facilitates employees and families with flubio vaccination.



3-4 FEBRUARY 2015

Motorcycle Emission Test

Bio Farma organized Exhaust Emission Test for motorcycles. This activity is one of the Company's commitments in environmental protection by creating the clean emission in the Company's area. Bio Farma is recorded as the first company in West Java that perform the Motorcycle Vehicle Emissions Testing.



11 FEBRUARY 2015

Domestic Medicine Development Innovation Award

Bio Farma received an award from BPOM for its active role in the innovation of domestic medicine development.



23 MARCH 2015

Green Era Award 2015

Other ways Association Management & Consulting. The Green Era Award is given to companies that are in innovation development and committed in environmental management.



30 MARCH 2015

Bio Farma Held Earth Hour Event

PT Bio Farma (Persero) held Earth Hour, a global event organized by World Wide Fund for Nature (WWF) which is annually held simultaneously around the world on the last Saturday in March. This year Earth Hour activities in Bio Farma took the theme "Padamkan Lampu Nyalakan Langit" that was held on 28 March 2015. The activities consisted of turning off the electricity for one hour in the office area of Bio Farma and campaigns for employees to participate in the Earth Hour 2015 movement by turning off the lights for one hour at the respective residences. For Bio Farma this was held for the third time, since 2013.



8 APRIL 2015

PT Bio Farma (Persero) and the Financial and Development Supervisory Agency of West Java Province (BPKP) signed a Memorandum of Understanding (MoU)

PT Bio Farma (Persero) and the Financial and Development Supervisory Agency of West Java Province (BPKP), re-signed a Memorandum of Understanding (MoU) on Wednesday, 8 April 2015, which is held in the Administration Building II, Bio Farma Bandung. Second MoU after the year 2012 is a agreement of support from BPKP West Java to Bio Farma, in the form of Good Corporate Governance (GCG), Risk Management, Key Performance Indicators, the implementation of the Fraud Control Plan, Financial Information Systems, Asset Management, Procurement of goods and services, evaluation and development of internal control systems and business processes as well as education and training in the latest internal control. Memorandum of Understanding signed by the President Director of Bio Farma, Iskandar, with the Head of BPKP West Java Hamonangan Simarmata, and witnessed by the President Commissioner of PT Bio Farma, Ahmad M Ramli, and Deputy State Accountant, Billy Darmasto, as well as a range of structural and functional officials from both parties, the MoU is aimed to cooperate in Development, Implementation and Strengthening of Good Corporate Governance in PT Bio Farma (Persero).



13-15 APRIL 2015

Bio Farma strengthened and realized the research efforts of downstream products to the industries, building synergy with research institutes, universities and, with the signing of the MoU

Bio Farma strengthened and realized efforts for downstream research products to the industries, building synergy with research institutes and universities, with the signing of Memoranda of Understanding, which was held in the "National Innovation Forum (NIF) 2015" organized by Ministry of Research and Technology, and Higher Education of Republic of Indonesia on Monday, 13 April 2015 at Graha Widya Bhakti Puspipstek area, Serpong, South Tangerang.

On this occasion the President of Indonesia, Joko Widodo, together with Minister of Research and Technology and Higher Education of Republic of Indonesia, Mohamad Nasir, was present and witnessed firsthand, the signing of a Memorandum of Understanding between Bio Farma with various institutions, as well as several universities. One is a Memorandum of Understanding on "Assessment and Application of Science and Technology, in the Field Development and Production of Hepatitis B vaccine based on Protein Recombinant" with the Agency for the Assessment and Application of Technology (BPPT), Eijkman Molecular Biological Institute, Indonesian Institute of Sciences (LIPI), Bandung Institut of Technology (ITB), and University of Al-Azhar. In addition, President Director of Bio Farma, Iskandar, also signed a Memorandum of Understanding with LIPI, and Gadjah Mada University in Biological Eritopoetin product development (EPO). In his speech, the President said that the clear concrete cooperation and collaboration between researchers, businesses, and universities can provide a clear manifestation and produce a variety of products that are beneficial to the people.



16 APRIL 2015

Free Medical Treatment in Cikopomayak Village and Neglasari in Jasinga District

Located in the village of Cikopomayak and Neglasari in Jasinga District, Bio Farma held free Medical treatment for public in the form of 1,500 treatment packages, 500 supplementary food packages, 500 packages of hygienic and healthy behavior, as well as dental examination. The event was attended by Andjang Kusumah, HR Director who oversees the CSR Division along with the Team.





30 APRIL - 3 MAY 2015

The 9th International Conference on Typhoid & Invasive Non-Typhoid Salmonella Disease

The 9th International Conference on Typhoid & Invasive Non-Typhoid Salmonella Disease exposed the research results of typhoid vaccine to approximately 200 health stakeholders from all over the world. The exposure of research results Bio Farma for the typhoid vaccine showed progress, even an acceleration in the manufacturing of typhoid vaccines and invasive non-typhoid Salmonella (INTS). And apparently, Bio Farma will immediately able to produce typhoid conjugate vaccine ward off typhoid and INTS.



8 MAY 2015

Media Workshop The Second "School Of Vaccine For Journalist" (SVJ)

The Second Media Workshop School Of Vaccine For Journalist (SVJ), besides filled with the curriculum about vaccines by dr.Soedjatmiko of Immunization Task Force Central IDAI; media competence development by Arif Zulkifly, Tempo Magazine Head Editor, also equipped with materials related to Corporate Social Responsibility (CSR), with guest speaker, Setiadi Ehsan Latif, Communications Observer and Commissioner of Bio Farma, and N. Nurlaela Arief, Corporate Communications of Bio Farma. The workshop was attended by 40 participants from media from Bandung, Jakarta, Yogyakarta, Solo, Semarang, as well as representatives of national media bureaus in Yogya.



13-15 MAY 2015

Inauguration of Public Health Center (Puskesmas) Tamanjaya

The inauguration of the Public Health Center at the Health Center Ciemas Tamanjaya District of Sukabumi was held on 13 - 15 May 2015. This is a follow-up to the realization of development of Ciletuh Geopark development in the health sector. This activity also provided free medical treatment in order to improve the public health conditions as a form of Ciletuh Geopark area development.



22 MAY 2015

Bio Farma Board of Commissioners Succession

BOC Biofarma member Herman L. Djuni, received the end of duty decree as a Commissioner Bio Farma from the Deputy Ministry of SOEs, and is succeeded by Muhammad Subuh, who currently serves as the P2PL Director General of the Ministry of Health as the BOC of Bio Farma from the Deputy Ministry of SOEs.



4 JUNE 2015

Indonesia Green Awards (IGA) 2015

Bio Farma was awarded The Best of Indonesia Green Awards 2015, which was initiated by The La Tofi School of CSR. Bio Farma received 5 awards, namely:

- Water Resources Conservation Category,
- New and Renewable Energy Development,
- Biodiversity Development,
- Pioneering in Pollution Prevention,
- Integrated Waste Management Development.



3 JULY 2015

Bio Farma Gives Education Package Aid

Bio Farma held Taushiyah Ramadan in Masjid Annur Bio Farma as well as granting Improved Education and Health Aid package given by Andjang Kusumah, HR Director of Bio Farma, to 100 orphans in Bandung and its surroundings.



31 JULY 2015

Inauguration of Pakidulan House of Batik

PT Bio Farma (Persero) inaugurated Pakidulan House of Batik which is part of Bio Farma CSR program, in the village of Purwasedar, Ciracap District, Sukabumi. Pakidulan House of Batik unveiled by Sukabumi Regent Drs. H. Sukmawijaya, MM and the President Director of Bio Farma, Iskandar, Drs., Apt, MM, is one of the foster partners of Bio Farma since 2014 that produces batik with unique Geopark Pakidulan Sukabumi natural beauty motif, which is still relatively new in Indonesia batik industry.



13-15 AUGUST 2015

BUMN Hadir untuk Negeri

In commemoration of the 70th anniversary of the Indonesian Independence Day, the Ministry of SOEs sets the theme "BUMN Hadir untuk Negeri"; therefore Bio Farma held social events, blood donation, medicine, as well as free vaccination. Still in a series of commemoration of 70th Indonesian Independence Day, Bio Farma also carried out counseling and health education simultaneously from 13 to 15 August 2015 in five cities that has been designated as the Road Show locations. On this Road Show, the team selected high school students that excel in those five cities. At the climax of the roadshow, on 16 August 2015, five ambassadors were chosen from the five respective cities which are expected to help provide education about the health of the environment to each city. The five ambassadors selected were; Erwin Widyantoro (Purwokerto), Zakwan Aman (Tegal), Winda Aryanti (Pati), Amilia Esnida (Solo) and Frans Jaya (Semarang).



24 AUGUST 2015

Inauguration of Garut Sheep Breeding Village

PT Bio Farma (Persero) officially opened the Garut Sheep Breeding Village, which is part of Bio Farma CSR program, in the village of Wanajaya, District Wanaraja Garut. Rumah Kampung Breeding Sheep opened by the Regent and Director of Bio Farma.





26-27 AUGUST 2015

National Vaccine Research Forum

National Vaccine Research Forum (FRVN) held for the fifth time on 26 dan 27 August 2015. FRVN was opened directly by Minister of Health, Nila Moeloek and President Director PT Bio Farma (Persero), Iskandar, bringing up the theme "Downstream National Life Science Research Results to Improve the Quality of Life of the Nation".



22 SEPTEMBER 2015

Annual Report Award

In order to encourage domestic companies to implement Good Corporate Governance (GCG) principles, Annual Report Award (ARA) in 2014 was held. Chief Executive Inspector of Capital Markets, Financial Services Authority (FSA), Nurhaida, said ARA is an annual event that has been held 14 times. The goal, to encourage companies to conduct good governance. Bio Farma managed to get 3rd place in the category of Non-Finance Non-Listed SOEs.



07 OCTOBER 2015

1st Runner Up Tropical Building Category

Bio Farma Public Building II achieved 1st Runner up Tropical Building Category, at the ASEAN level. This award was bestowed in the Gala Dinner of the 33rd ASEAN Ministers of Energy Meeting, in Kuala Lumpur, Malaysia.



8 OKTOBER 2015

Bio Farma Donates 1,945 Blood Flasks for PMI Bandung

President Director of PT Bio Farma (Persero), Iskandar Bandung invites people to conduct humanitarian social activities. One of them is through blood donation delivered at the peak Gebyar Donor Darah 1945 Labu Darah untuk Bangsa event, which took place on 8 October 2015 at the Multipurpose Building Bio Farma.



The philosophy of 1945 blood flasks is taken from the year of Indonesia's Independence in 17 August 1945, therefore the event was held in order to celebrate the 70th Republic of Indonesia Independence Day.

21 OCTOBER 2015

Bio Farma Achieved Its 6th Primaniyarta Award

Bio Farma returns to receive the Primaniyarta Award 2015. It was the sixth time in a row Bio Farma received the award since 2010. The award was presented directly by President Joko Widodo the Production Director of Bio Farma, Juliman, accompanied by Minister of State Owned Enterprises, Rini Soemarno, Minister Commerce, Thomas Trikasih Lembong, and leaders of state institutions, as well as some representatives of ambassadors.



Bio Farma is one of the 30 Indonesian exporters that have been honored with the 2015 Primaniyarta Award, and one of seven companies in the category for Outstanding Performance Exporter Domestic Owned Share (PMDN).

8 DECEMBER 2015

Bio Farma Held Suppliers/ Vendors Meeting and Socialization

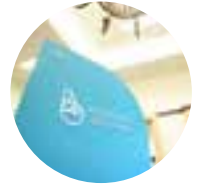
PT Bio Farma (Persero) held Partner Socialization event with the theme "Towards Reliable and Trusted Partnership", held at the Multipurpose Building Bio Farma, attended by 200 partners from Bandung, Jakarta and representatives of international partners. Ema Asmarawati, Head of Procurement Division in her report for the purpose of meeting gathering and dissemination activities of the Company's current and future plans, as well as aligning the company's future strategic plans. According to Andjang Kusumah, HR Director of Bio Farma, expressed in his speech that the partners have an important role in the continuity and sustainability of the Company, the purpose of this meeting to get more acquainted and we also want to hear and to get feedback from the partners about the service of the Procurement team. The event presented five speakers who gave a presentation related to important aspects to be known by the partners, namely Mamay Ramali, Chief of the Division of Budget and Accounting, Iin Susanti, Head of Division of Quality Assurance, Tomy Zulfikar Head of Engineering and Maintenance, Ema Asmarawati, Head of Procurement Division and Ida Farida, Head of Finance Division.



17 DECEMBER 2015

Inauguration of Bio Farma Museum and Heritage Area

Bio Farma Heritage Building Area was inaugurated by Iskandar, President Director of Bio Farma and Ahmad M. Ramli, Commissioner Bio Farma, also attended by Aleut Community, the Head of Museum in Bandung and West Java, Indonesia Museum Association (AMIDA) as well as other invitees. Heritage Building Area is the oldest building in the area of Bio Farma, formerly Landskoepok Inrichting en Instituut Pasteur, from the work of architect Prof. Dr. Ir. CPW Schoemaker, built in 1926. In 1997, the Society of Bandung Cultural Heritage Preservation or Bandung Heritage, have inventoried that the building is included as Cultural Heritage. The determination as one of the heritage buildings in the city of Bandung is through Bandung Regional Regulation No. 19 year 2009.



28 DECEMBER 2015

Bio Farma-LIPI Developed Second Generation Erythropoetin

PT Bio Farma (Persero) in collaboration with Indonesia Institute of Sciences (LIPI) developing the production of second generation 'Erythropoetin' (EPO) which will be launched within the next few years. The consortium is a continuation of the erythropoetin consortium that is a part of the national research incentives and innovation systems. This product will be useful for the treatment of kidney failure, chemotherapy and anemia, Iskandar said that the development of EPO which is part of the research system incentive national innovation (insinas) Ministry of Research and Higher Education and has been going on since 2012. Cooperation between LIPI with Bio Farma marked with the handover of the EPO research cell bank (RCB) from P2 Biotechnology LIPI to Bio Farma which will be developed into a product.





REPORT FROM THE BOARD OF COMMISSIONERS (G4-1)



Respected Stakeholders,

First of all, we convey our gratitude to Allah and our appreciation for Bio Farma for the continued commitment this year to publish the 2015 Sustainability Report. Amid the serious challenges faced both at home and overseas, Bio Farma has been able to maintain business continuity, paying attention to social and environmental aspects.

Climate change triggered by global warming due to increasing emissions of carbon dioxide (CO₂) in the atmosphere has become a global issue that is troubling for us all and for the future of the Earth, therefore we must work together to address the solutions. Climate change will not only adversely affect society, but also has financial implications for every company, in any type of industry, including Bio Farma.

The government has committed to reducing greenhouse gas (GHG) emissions by 26% by 2030. To this end, the Board of Commissioners appreciates the efforts taken by Bio Farma's management in its GHG emission reduction program. Bio Farma has shown encouraging results in 2015 through its GHG emission mitigation program. Compared to 2014, GHG emission intensity per batch of production in 2015 was reduced by 18%.

PROPER GOLD AND SDGS

BIO FARMA has implemented various strategic measures to reduce GHG emissions and to preserve the environment, both within and outside the Company's operations, which led in 2015 to Bio Farma receiving the PROPER GOLD award from the Government for the second time. The Board of Commissioners expresses its great appreciation to the Board of Directors and the employees for achieving this satisfactory environmental performance, reflecting Bio Farma's real action and commitment to running a pro-environment and pro-social business.

Furthermore, the Board of Commissioners also welcomes programs related to the Sustainable Development Goals (SDGs), from those that provide direct benefits to the community, to internal programs to improve the working environment, innovations, use of energy efficiency and high quality programs to improve the competence of employees.

Assistance for communities has a significant impact on improving the living conditions of marginalized communities, especially health and education programs. Implementation in 2015 of the Partnership and Community Development Program (PKBL), as well as the CSR Program, also showed improved performance. This is real implementation of the Board of Directors' commitment that should be appreciated. The Board of Commissioners supports every effort undertaken by the Board of Directors to develop and supervise the disbursement of Partnership Program funds so they can run more efficiently and effectively. Through this program, we hope to spur economic growth in small businesses, in accordance with the Government's expectations.

Similarly, Community Development funds are disbursed for use to improve educational facilities, infrastructure and help improve public health; a program that is in line with the government's efforts to improve people's lives.

The Board of Commissioners has mandated that the Board of Directors work hard to run community empowerment programs. As an economic entity, State Owned Enterprises also act as agents of development, participating in some of the Government programs to alleviate poverty.



SUSTAINABILITY IN BIO FARMA

The Board of Commissioners noted several important events related to sustainability in 2015. Achieving a PROPER Gold rating for the second time was followed by appreciation for the application of environmentally friendly production, or a green award from foreign institutions, as well as a number of other awards, which are proof of Bio Farma's commitment to sustainability and can be seen in the Company's awards and important milestones chapter. In addition, achieving the 2015 health and safety target of Zero Accidents should be appreciated in the midst of operations that include high-risk biotechnological business processes.

Other strategic measures in the context of sustainability include programs related to innovation in various functions. Increasing employee expertise and competence must be implemented consistently and measurably. This program includes maintaining employee safety and health, respect for human rights, fair and equitable treatment and equal opportunities between genders.



Board of Commissioners' Member



LEFT → RIGHT:

- H. Muhammad Subuh – Commissioner • Ihsan Setiadi Latief – Commissioner
- Ahmad M. Ramli – Board of Commissioner • Nizar Yamanie – Commissioner
- Heridadi – Commissioner • Paruli Lubis – Commissioner

CLOSING

Over the last five years, Bio Farma has successfully achieved significant growth in sales and profits. However, with rising stakeholder expectations, Bio Farma must be ready to face tougher challenges in the future, particularly the acceleration of research and development into new vaccine products for the public. Finally, the Board of Commissioners would like to thank the Board of Directors and all the employees, who have worked hard to achieve sustainable performance in 2015. We are fully aware that the Bio Farma Vision to become a world-class, globally competitive life science

company cannot be achieved without the cooperation with all stakeholders, both internal and externally.

Jakarta, Mei 2016,

Ahmad M. Ramli – Board of Commissioner



REPORT FROM THE BOARD OF DIRECTORS (G4-1)



Respected Stakeholders,

During 2015 we achieved sustainability performance to be proud of as a result of the long drive for sustainability practices implemented by all employees at Bio Farma. This year, Bio Farma once again received the PROPER GOLD rating from the Environment and Forestry Ministry. PROPER GOLD is the highest appreciation for the Government of Indonesia on Business Entities that run company operations in a pro-environment and pro-social manner. This highest ranking can only be achieved by ensuring that for every decision, we first consider the impact of that decision on environmental and social aspects. This is a strategic step in the principle of sustainable operations, which we have been implementing to date.

In 2015, Bio Farma was also incorporated as a member of the Organizational Stakeholders (OS) of the Global Reporting Initiative (GRI) in the Netherlands, which demonstrates our commitment to fulfilling sustainability aspects, as well as the management's seriousness in contributing and being actively involved in the OS community.

CONSERVING THE ENVIRONMENT

In inter-party meetings in Paris in October 2015, the Indonesian Government expressed its commitment to mitigating greenhouse gas emissions (GHG) by 26% by 2030. Bio Farma also supports this commitment by participating in efforts to mitigate GHG emissions, which is a global community program. We have implemented various strategic measures in GHG emissions mitigation programs, among others through energy efficiency and conservation, as well as production process innovations and a tree planting movement.

In 2015, we successfully reduced GHG emission intensity by 21%, from 11.4 tons CO₂eq / batch production in 2014 to 9 tons CO₂eq / batch production in 2015. This could be achieved because of production process innovations and efficient energy use throughout the whole production line, with improvised equipment, redesigned production processes and reorganizing production operations process patterns. In addition, Bio Farma also reduced vehicle emissions, reduced electrical power consumption in support

facilities, as well as improving operational vehicle performance management. Energy consumption in production for 2015 decreased 3.36% from the previous year, namely from 13,170.26 Kwh / batch production in 2014 to 12,727.5 Kwh / batch production in 2015.

Environmental conservation efforts beyond the Company's operations in 2015 included conservation activities and tree planting in the Ciletuh Geopark area around Tamanjaya village-Sukabumi regency, Jasinga district, Bogor regency, mangrove conservation in Karangsong coastal areas, Indramayu regency, West Java. While in relation to other biodiversity, we worked with Cikananga Animal Rescue Center (PPSC) in Sukabumi, releasing as many as 21 species of primates, including orangutans, gibbons, macaques, ebony leaf langur and silvery langur.

SHARING WITH THE COMMUNITY

In 2015, we implemented various strategic measures to improve the lives of marginalized people, in line with the Sustainable Development Goals / SDGs program. Community assistance over the last 3 years has increased by 274% from Rp 1.37 billion in 2013, rising sharply to Rp 5.13 billion in 2015. We continue to increase assistance for the development of marginal communities in various fields, including education and training, health, infrastructure construction and renovation, environmental conservation, and assistance for victims of natural disasters. In addition, for community economic development, as of the end of 2015, we had distributed 3,671 soft loans to foster partners totaling to Rp87,014,325,000.

Community empowerment

One focus of our CSR this year has been to encourage Ciletuh Geopark, located in Ciemas district, Sukabumi, West Java, to receive special attention from UNESCO. Some time ago, Bio Farma and the Sukabumi Regional Government, as well as representatives of Padjadjaran University, presented the potential of Ciletuh Geopark in Canada. We uphold the principle that as Bio Farma's operations and perspective become more global, we have to prioritize local content and respect local wisdom.



We only realized after the President of the Asia Pacific Geopark Network, Ibrahim Komoo, said that Bio Farma was the only corporation to pay such close attention and fully support the recognition process for Ciletuh Geopark to be recognized by UNESCO.

Based on this is why corporations have a commitment to implementing CSR-based Create Shared Value, how corporate expertise can provide solutions for community development, how corporations are able to provide added benefits through their own knowledge and expertise.

We also seek to continue helping so that the Ciletuh Geopark area has excellent Bio-Diversity and Geo-diversity, and even elements of Cultural-Diversity. Currently, we are selecting arts and culture for the Geopark, as well as culinary specialties that can add to the attraction for national and international tourists, as well as being able to develop the community's economy.

As a company that prioritizes employees, we believe that our employees' artistic abilities cannot be underestimated, of the communities we support, one is an arts and cultural community that aims to preserve art and culture that is at risk of extinction. This practice also can color the development of arts and culture in new areas, especially the Geopark.

We hope that our target of national recognition for Ciletuh Geopark in early January 2016 and UNESCO recognition in 2017 can be achieved. This will increase the number of Indonesian geoparks with global recognition.

PRIORITIZING CONSUMER HEALTH

We give high attention to consumer health by providing products that are safe, effective and of high quality. Every product we produce passes through processes that are in accordance with applicable standards and regulations, therefore, during the reporting period, we were not subject to any sanctions in the form of fines or other sanctions by the authorities.

Bio Farma has received recognition from the World Health Organization (WHO) since 1997 as a pharmaceutical company that produces quality products at an affordable price. To date, Bio Farma has contributed to the advancement of national and international health. Our products have been used and utilized by more than 130 countries.

DEVELOPING BIO FARMA'S EMPLOYEES

As a partner in achieving the Company's vision and mission, we continue to develop the professionalism of all Bio Farma's employees based on the principle of equality, which does not distinguish between gender, religion, ethnicity and race. This principle is applicable from the recruitment stage, through training and development, performance appraisal, to career development, and includes remuneration. We ensure that there are no breaches of the Minimum Municipal Wage (UMK) provisions set by the government.

Every employee has equal opportunity to improve their competencies in accordance with their potential, ability and skills. During 2015, the Company disbursed funding for employee competency of Rp23,681,647,964 billion.

OCCUPATIONAL HEALTH AND SAFETY

In the field of Occupational Health and Safety (OHS), we continue to apply an OHS management system in accordance with international standards and continue to sharpen our policies for the prevention of workplace accidents and diseases. Prevention is far more important than taking curative measures to minimize workplace accidents and avoid the risk of occupational disease. In 2015, we invested in OHS equipment to a total of Rp 296.26 million. We also successfully achieved our 2015 OHS target of Zero Accidents, however, we will continue to implement improvements throughout the OHS system and policies as required, in accordance with the dynamically changing environment.

CHALLENGES AND OPPORTUNITIES

We support the efforts of the global community, including the Government of Indonesia, in addressing climate change. Various steps must be undertaken together to reduce GHG emissions. Climate change is also predicted to have grave implications on human health with outbreaks of new diseases. This is both a challenge and an opportunity for Bio Farma to continue conducting research and innovations in accordance with Bio Farma's core business. In the next 3-5 years, Bio Farma will continue to conduct research and development to produce new products that are beneficial to improve the quality of life, in accordance with environmental conditions.

Board of Directors' Member



LEFT → RIGHT:

- Pramusti Indrascaryo – *Finance Director* • Andjang Kusumah – *Human Resources Director (HR)*
- Iskandar – *President Directors* • Mahendra Suhardono – *Marketing Director*
- Juliman – *Production Director* • Sugeng Raharso – *Planning & Development Director*

With the hard work of all Bio Farma's employees and support from the government and other stakeholders, we believe that these challenges can be overcome and the available opportunities can be celebrated.

The successful sustainability performance achievements in 2015 cannot be separated from their direction of the Board of Commissioners and shareholders, as well as the involvement of other stakeholders. Similarly, the passion and hard work of all Bio Farma's employees has been a great benefit to improving Bio Farma's sustainability performance.

Finally, on behalf of the Board of Directors, I express my gratitude to all our stakeholders for their support and participation in our sustainability performance achievements.

Jakarta, May 2016

Iskandar – *President Director*



Welcome to the 2015 PT Bio Farma (Persero) Sustainability Report. This report is our fourth sustainability report. This report is an integral part of the 2015 annual report and contains our economic, environmental and social performance as additional information to the financial statements. Bio Farma publishes a sustainability report every year [G4-30].

The previous year's report, the 2014 sustainability report, which the theme "Bio For Sustainable Life", was published in June 2014 [G4-29].

With the existence of this report, we expect that our stakeholders can assess the extent to which Bio Farma has fulfilled its responsibility to the environment. In addition, through this report, Bio Farma's role in the achievement of the Sustainable Development Goals (SDGs) can also be evaluated, namely in the improvement of the quality of life and environment in a beneficial manner, for Bio Farma itself, the local community and society in general. At the end of this report (page 119), we provide the cross-references for this report related to the 2030 SDGs.

GUIDELINES FOR REPORTING

This report has been prepared based on the G4 sustainability reporting guidelines issued by the Global Reporting Initiative (GRI). As with the previous year, we chose the Core option for this year's report [G4-32.a]. We have asked GRI to verify our G4 Materiality Disclosures to ensure compliance with the G4 criteria (see GRI Materiality Disclosure Mark page 115). While to ensure that this report has been prepared in accordance with the GRI G4 Core requirements, we have asked the National Center for Sustainability Reporting (NCSR) to conduct a G4 In Accordance Check (See page 114).

To facilitate finding the GRI indices applied in this report, we provide the GRI index on every relevant page in brackets in red. Meanwhile, the complete GRI index list can be found on page 115. [G4-32]

To date, we have not commissioned an independent external assurer to do assurance on Bio Farma's sustainability reports. [G4-32.c] [G4-33]

This report can also be assessed as to what extent Bio Farma has contributed to the achievement of the Sustainable Development Goals (SDGs), and for that we present the GRI-SDG Linkage on page 119.

REPORTING PERIOD AND BOUNDARY

As with the financial statements, this report also covers the reporting period from 1 January to 31 December 2015 [G4-28]. PT Bio Farma (Persero) is a single business entity and does not have any subsidiaries [G4-17], therefore the boundary of this report, in its organization, only covers PT Bio Farma (Persero) and all the divisions within the company. Meanwhile, the boundary outside the organization, such as dealers and distributors, is not included in this report because at this time we cannot control and request data on their sustainability performance.

CHANGES FROM THE PREVIOUS YEAR

There have been no fundamental changes in the company during 2015, so it has not been necessary to restate the previous year's data in this report [G4-22]. Similarly, there have been no significant changes from the previous year's report regarding the scope and boundary aspects of the report. [G4-23]

REPORT CONTENT DETERMINATION PROCESS AND BOUNDARY ASPECTS

[G4-18.a]

The process to determine the contents of this report consists of four (4) steps.

First step; Identification, which is to identify important aspects relevant in the context of sustainability. In addition to the essential aspects, the location of where these aspects occur (boundary) should also be identified. This identification process was done through a Focus Group Discussion (FGD) attended by the Sustainability Reporting Team, which consists of various elements within Bio Farma. This forum tests the materiality of all the important aspects provided in the GRI G4 Guidelines by every participant filling in the paper work in order to obtain a list of the important aspects identified within the company's boundary. The FGD was conducted at the Bio Farma Head Office in Bandung on 12 February 2016.

Second Step; Prioritization, namely prioritizing the sustainability aspects or issues identified in the previous step in order to establish the level of materiality of the important issues to be reported. We undertook this process by using the same paperwork as in the first step and asked questions about the impact and influence of these aspects for stakeholders and the company. Then these important aspects were grouped into several issues for inclusion in a survey to determine the level of materiality, which was sent in a questionnaire to stakeholders, including within the company. This process is based on the principles of materiality and stakeholder inclusiveness. The survey results are presented in the form of an information graphic on page 34. (Materiality Level)

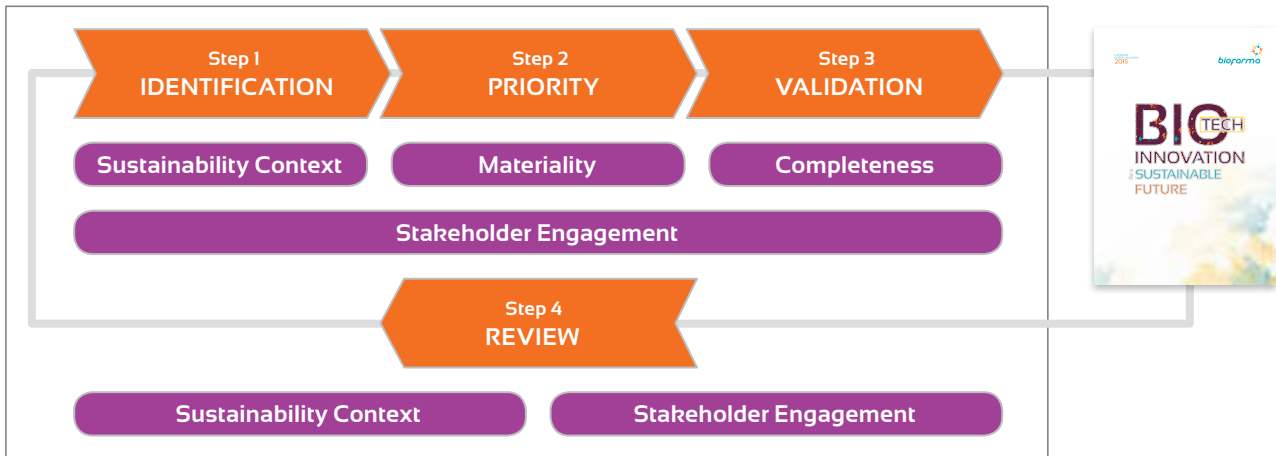
Third step; Validation, namely validating these material aspects based on the principle of completeness and stakeholder inclusiveness.

Through this process, we were also able to identify the GRI G4 indicators to be reported below in the Disclosure on Management Approach (See page 34).

Fourth step; Review, which is to consider the feedback and review results on the previous annual report so that this report can be improved. (See Report Content Determination Process Flowchart).



Report Content Determination Flow Process



PRINCIPLES OF CONTENT REPORT DETERMINATION [G4-18.b]

In accordance with GRI G4, we applied the four (4) main principles to determine the report content, namely:

1. Stakeholder inclusiveness; this principle requires that the stakeholders are involved in the reporting process, ranging from determination of the report content to providing feedback / response on reports that have previously been published.
2. Materiality; This principle requires that the report contains material/important issues or aspects that are required by the stakeholders to make decisions.
3. Sustainability context; this principle requires that the report includes issues in the context of sustainability that are relevant to the report issuer.
4. Completeness; This principle requires that the report is prepared with a clear scope for a specific reporting period and supported by comprehensive data for the scope and reporting period.

LIST OF KEY ASPECTS AND BOUNDARIES [G4-19] [G4-20] [G4-21]

The process of determining the report contents mentioned above identified the following important GRI G4 aspects, boundary and indicators:

MATERIAL ASPECT	GRI G4 INDICATOR	BOUNDARY	
		BIO FARMA	OUTSIDE BIO FARMA
[G4-19]		[G4-20]	[G4-21]
Economic			
Economic Performance	G4-EC1	√	
Market Presence	G4-EC5	√	√

MATERIAL ASPECT	GRI G4 INDICATOR	BOUNDARY	
		BIO FARMA	OUTSIDE BIO FARMA
[G4-19]		[G4-20]	[G4-21]
Indirect Economic Impact	G4-EC7, G4-EC8		
Environment			
Energy	G4-EN3, G4-EN5, G4-EN6, G4-EN7	√	√
Water	G4-EN8	√	
Biodiversity	G4-EN13, G4-EN14		√
Emission	G4-EN15, G4-EN16, G4-EN18	√	√
	G4-EN19, G4-EN21	√	√
Waste Water and Emission	G4-EN23	√	
Product and Services	G4-EN27	√	
Social			
Employees			
Work	G4-LA1, G4-LA2	√	
Industrial Relationship	G4-LA4	√	
Occupational, Health and Safety	G4-LA5, G4-LA6	√	√
Training and Education	G4-LA11	√	
Diversity and Equal Opportunity	G4-LA12	√	
Equal Remuneration Between Male and Female	G4-LA13	√	
Human Rights			
Freedom of Association and collective bargaining	G4-HR4	√	
Community			
Local Community	G4-SO1		
Anti Corruption	G4-SO3, G4-SO4, G4-SO5	√	√
Compliance	G4-SO8	√	
Product Responsibility			
Labeling and Service	G4-PR3, G4-PR4, G4-PR5	√	

PERSONAL CONTACT

[G4-31] For questions or to deliver feedback about this report, please contact:

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PHILOSOPHY, VISION AND MISSION

PHILOSOPHY

Dedicated to Improve Quality of Life.

VISION

To become a World-Class life Science Company with Global Competitiveness.

MISSION

Provide and develop life Science Products of International Standards to Improve the Quality of Life.

Description on Changes to The Philosophy, Vision, Mission And Values

On 6 March 2014, Bio Farma transformed its Philosophy, Vision, Mission and Values in accordance with the Joint Decision of the Board of Commissioners and the Board of Directors of PT Bio Farma (Persero) No. KEP-07/DK /BF/ III/2014, No. 01103/DIR/III/2014 on Changes to the Joint Decision of the Board of Commissioners and the Board of Directors of PT Bio Farma (Persero) No. KEP-05/Dk /BF/ II/2013, No. 01024/DIR/II/2013 on the Code of Conduct of PT Bio Farma (Persero) Article I verse 1.5 and 1.6.

The new Philosophy, Vision, Mission and Values have been disseminated by the Company to its employees through:

- Training programs held on 21-25 April 2014 at GH Universal Bandung, with the theme of "Internalization of Corporate Vision, Mission and Values".
- Directors' Induction on 26 May 2014 in Bio Farma's Multi-Purpose Building
- Mail moderator on 30 June 2014.

Explanation of the Company's Vision

Bio Farma's Vision is stipulated in the Document MBF-01 revision 12, dated 30 June 2014, that is to be a world-class producer of vaccines and antisera with global competitiveness. This vision emphasizes Bio Farma's role in fulfilling the national and global needs for vaccines, repositioning itself from a vaccine producer to a life science company in the spirit of greater transformation. The world-class status is achieved through innovation in various segments, increasing efficiency in various environmentally-friendly business processes, technological updating, implementation of world-class CSR activities, and enhancement of world-class human capital quality.

Explanation on The Company's Mission

Bio Farma's Mission in order to make its Vision come to life has been formulated by taking into consideration the Company's primary competencies and the strategic challenges it faces. Bio Farma continuously implements innovations by producing, marketing, and distributing vaccines and antisera with international standards of quality. To maintain quality, Bio Farma has deployed various integrated systems that have been certified with ISO 9001:2008, ISO 14001:2004, OHSAS 18001:2007, CPOB, ASEAN GMP, WHO GMP, and followed the global development of cGMP requirements. In running its mission, Bio Farma continues to uphold the principles of GCG. Its presence for 123 years is expected to contribute optimally to all of the Company's stakeholders.

CORPORATE POLICY AND CULTURE

CORPORATE POLICY

1. High quality products.
2. Environmentally friendly products.
3. Global competitiveness.
4. Customer satisfaction.
5. Continuous improvement.
6. Pollution control.
7. Prevention of occupational accidents and work-related diseases.
8. Conservation of energy and natural resources.
9. Compliance to laws and other regulations.

CORPORATE CULTURE

Each organ of the Company acts and thinks in a professional manner, with high integrity, spirit of teamwork, innovation-driven and customer service-oriented.

- **Professional**
Committed to executing all tasks with responsibility, efficiency, effectiveness, forward-orientation, and procedural compliance.
- **Integrity**
Honest, transparent, and accountable, in line with the Company's objective.
- **Teamwork**
Working together by respecting others' roles and opinions.
- **Innovation**
Carrying out continuous improvement and development to generate new ideas.
- **Customer Oriented**
Understanding the needs of customers and providing the right solutions to them



COMPANY NAME [G4-3]

PT Bio Farma (Persero).
Establishment 6 August 1890.

HEAD OFFICE [G4-5]

Jl. Pasteur No.28, Bandung 40161, Indonesia.

AREA OF OPERATION [G4-6]

Factory Location : Bandung

Marketing Area : All of Indonesia and Overseas.

OWNERSHIP AND LEGAL FORM [G4-7]

Legal Form: Limited Company (PT) - State Owned Enterprise (Persero).

Our Articles of Association last change was passed through the Minister of Justice of the Republic of Indonesia on March 5, 1998 with No. C2-I423HT.01.01. Year 1998. Ownership: 100% Government of the Republic of Indonesia.

BUSINESS SECTOR & PRODUCT [G4-4]

Production, Biological Product Marketing, Health Device and Pharmacy Product.



SCALE OF ORGANIZATION [G4-9]

- Total Employee 2015: 1.557 Person
- Total Operation 2015: 1 (one) location factory in Bandung
- Net Sales: Rp. 2,35 Trillion
- Share Capital 31 December 2015. Rp. 5,68 Trillion , consist of:

- Total Debt : Rp636.5 Billion
- Total Equity: Rp5.04 Trillion
- Total : Rp5,68 Trillion
- Authorized Capital: Rp 5 trillion, comprising 5 million shares with a nominal value of Rp 1 million per share.
- The issued and paid-up capital: Rp1.25 trillion, consisting of 1.25 million shares with a nominal value of Rp 1 million per share.
- Total production in 2015: Production in 2015 consisted of viral vaccines, bacterial vaccines, combination vaccines, Sera & Diagnostika. Total production in 2015 amounted to 3.2 billion vaccine doses. Further details on each of these vaccines can be found on page 42.





BIO FARMA MILESTONES

6 AGUSTUS 1890

Bio Farma was established under the name of "Parc Vaccinogene" on 6 August 1890 based on the Decree of the Governor of the Dutch Indies No.14 of 1890, in the Weltevreden Military Hospital, Batavia, which now function as the military Hospital (RSPAD) Gatot Soebroto, Jakarta.

1895-1901

The Company's name was changed to "Parc Vaccinogene en Instituut Pasteur."

1902-1941

The Company changed its name again to "Landskoeboek Inrichting en Instituut Pasteur." In 1923, Bio Farma was relocated in Jalan Pasteur No.28 Bandung, and led by L. Otten.

1942-1945

During the Japanese occupation, Bio Farma changed its name to "Bandung Boeki Kenkyusho" and was led by Kikuo Kurauchi.

1945-1946

The Indonesian name of "Gedung Cacar and Lembaga Pasteur" was attributed to the Company, which was then led by R.M.Sardjito, the first Indonesian officer who led the Company. Under his leadership, the head office was moved to Klaten.

1946-1949

During the Military Aggression, when Bandung was taken over by the Dutch army, the Company changed its name once more to "Landskoeboek Inrichting en Instituut Pasteur."

1950-1954

The Company changed its name again to "Gedung Cacar and Lembaga Pasteur", and was one of the institutions under the auspices of the Ministry of Health of the Republic of Indonesia.

1955-1960

During the nationalization of Dutch companies in Indonesia, the Company later changed its name to "State Company Pasteur". The Company was then more popularly known as PN. Pasteur.

1978-1996

Based on Government Regulation No.26/1978, the Company changed its name to Bio Farma public company, better known as Perum Bio Farma.

1961-1978

Company renamed to "State Bio Farma Company", or better known as PN. Bio Farma.

1997-2011

Bio Farma succeeded in obtaining WHO Prequalification for 12 types of vaccines, marking WHO's approval for entering global market.

2008

The launch of a new logo reflected the spirit and optimism towards entry into the world class vaccine industry.

2013

The Roadmap towards the Lifescience industry began. Launching of the latest Pentavalent vaccine (Diphtheria, Tetanus, Pertussis, Hepatitis B, HiB) and the launching of a national immunization program.

1997

Based on Government Regulation No. 1 1997, the Company name changed to Perum Bio Farma (Persero), known today as PT Bio Farma (Persero).

2009

Under the new management team, Bio Farma stepped forward as a worldclass vaccine company with global competitiveness.

2015

Inauguration of the new Heritage Building and Bio Farma Museum.

2014

Enhancement of a new Vision, "To be a World Class Lifescience Company with Global Competitiveness".

PRODUCTION DETAILS

VIRAL VACCINES



1. **Oral Polio Vaccine**
For poliomyelitis type 1, type 2, and type 3 prevention.
2. **Bivalent Oral Poliomyelitis Vaccine**
For poliomyelitis type 1 and type 3 prevention.
3. **Monovalent Oral Poliomyelitis Tipe 1 Vaccine (mOPV1)**
For the prevention of type 1 poliomyelitis disease.
4. **Measles Vaccine (Freeze Dried)**
For measles prevention.
5. **Recombinant Hepatitis B Vaccine**
For Hepatitis B prevention.
6. **Flubio Vaccine**
For seasonal influenza disease prevention.

BACTERIAL VACCINES



1. **TT Vaccine**
For tetanus and Neonatal Tetanus (Tetanus in newborns) prevention.
2. **DT Vaccine**
For diphtheria and tetanus prevention.
3. **DTP Vaccine**
For diphtheria, tetanus and pertussis prevention.
4. **BCG Vaccine (Freeze Dried)**
For tuberculosis prevention.
5. **Td Vaccine**
For tetanus and diphtheria prevention, for children aged 7 years and over..

COMBINATION VACCINES



1. **DTP-HB Vaccine**
For prevention of Diphtheria, Tetanus, Pertussis (whooping cough) and Hepatitis B.
2. **Pentabio Vaccine (DTP-HB-Hib)**
For Diphtheria, Tetanus, Pertussis, Hepatitis B and Haemophilus influenza type B prevention.



ANTISERA



- 1. Anti-tetanus Serum**
For treatment of tetanus.
- 2. Anti-diphtheria Serum**
For curing diphtheria diseases.
- 3. Anti-snake Venom Serum**
For curing the poisonous snakes bite which contains neurotoxin effects (Naja sputratix/cobra and Bungarus fasciatus/ striped snake) and hemotoxin effect (Ankyrodon rhodostoma/ground snake).

DIAGNOSTIC



- PPD RT 23 (Purified Protein Derivative)**
To test the sensitivity of a person against tuberculosis infection.

MARKET SHARE [G4-8]

Customers are the most important aspect of our business. Bio Farma is committed to continually maintaining and building good customer relations, as well as ensuring social responsibility to its stakeholders. Even though Bio Farma does not currently operate in certain countries, its vaccine products are used in more than 130 countries. [G4-6]

12 vaccine products have been acknowledged by WHO for pre-qualification (PQ) since 1997. Few vaccine producers have the capacity to supply vaccines to prevent contagious diseases globally and are entrusted to improve the quality of global health.

Bio Farma's market segmentation is as follows:

- 1. Government**
Bio Farma supplies vaccines to Indonesia's National Immunization Program through the Health Ministry, which are then distributed to the public by the local health agencies at provincial or regency level, as well as community health centers, mother and baby clinics and other health services.
- 2. Private**
Bio Farma supplies vaccines to the private sector through appointed distributors, which are then distributed to hospitals, doctors, clinics, pharmacies, etc.
- 3. International**
Bio Farma provides vaccines globally through international institutions, including the United Nations Children's Fund (UNICEF), Global Alliance of Vaccines and Immunization (GAVI) and the Pan-American Health Organization (PAHO), for further distribution to countries that need to support their own national immunization programs. To meet demand for general exports, Bio Farma supplies vaccines directly to bilateral partners and various appointed third party agents.

COLD CHAIN SYSTEM

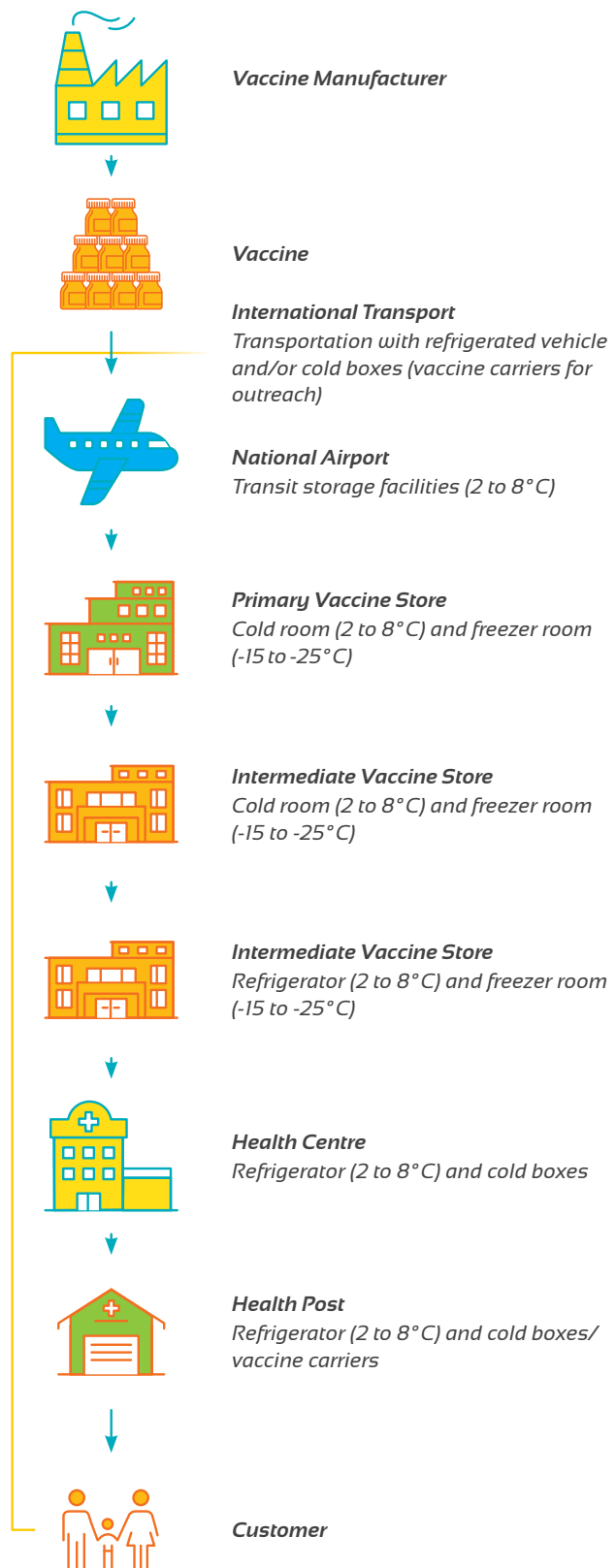
Vaccine is a biological product that requires special handling in its distribution.

A special system called the Cold Chain System is required for the distribution of vaccines, starting from the manufacturer, distribution, storage at the destination, storage of stock vaccines, up to the delivery of vaccines to the customers.

Vaccine temperature must be maintained within the range of 2 to 8 degrees Celsius, for BCG, DTP, TT, Td, DTP-HB-Hib, Measles, Hepatitis B, and Influenza vaccines. Polio vaccines must be stored at -20 (minus twenty) degrees Celsius.

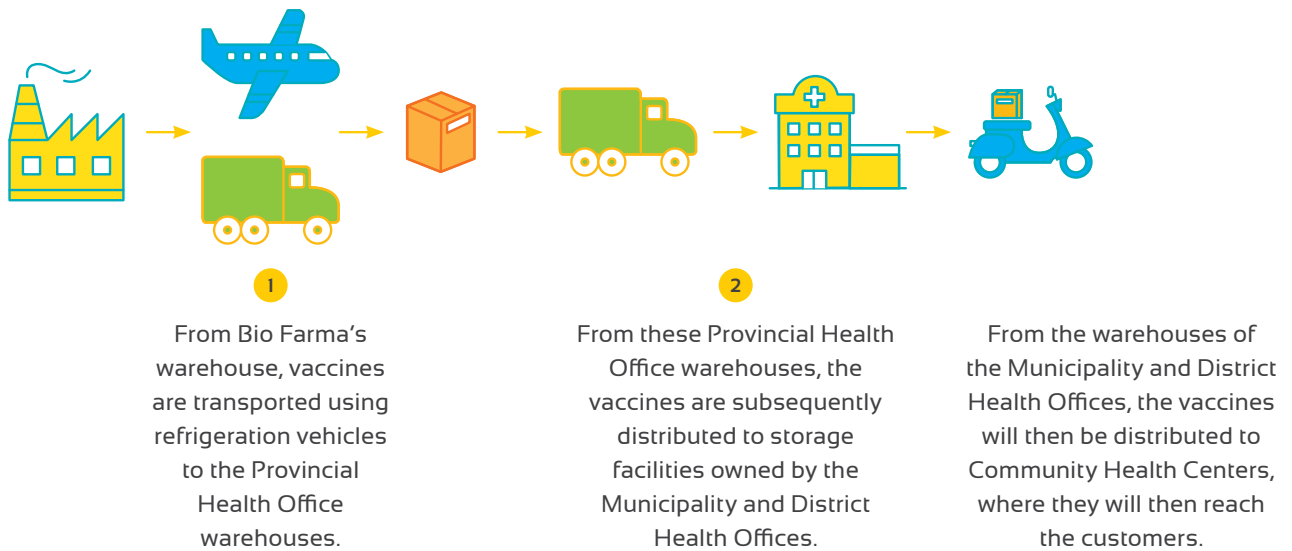
The Cold Chain System is a procedure to keep vaccines in a stable condition, so that their safety, efficacy, and quality will be maintained and thus the recipients obtain the benefit of protection and prevention from various infectious diseases.

Deadline for delivery of all vaccines must not exceed 48 hours, as stipulated in WHO guidelines, and with due regard to the Cold Chain System for all types of vaccine.

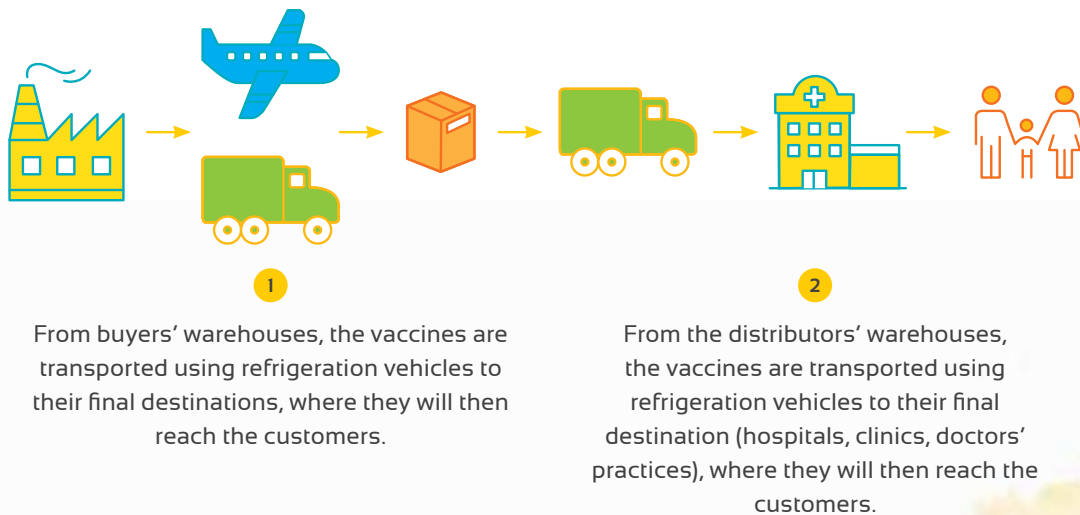


THE JOURNEY OF A VACCINE

DISTRIBUTION OF VACCINES IN THE GOVERNMENTAL SECTOR



DISTRIBUTION OF VACCINES IN THE PRIVATE & EXPORT SECTOR





Every aspect of the production activities Biofarma, have to meet the standards of current Good Manufacturing Practice (cGMP) set by the World Health Organization (WHO).



ENVIRONMENTALLY FRIENDLY BUSINESS PROCESSES [G4-12]



ENVIRONMENT AWARDS



PROPER GOLD 2015
from the Indonesia
Ministry of
Environment and
Forestry



**INDONESIA GREEN
COMPANY AWARD**



**GLOBAL GREEN
AWARD** Berlin
March 2015



SUSTAINABILITY GOVERNANCE

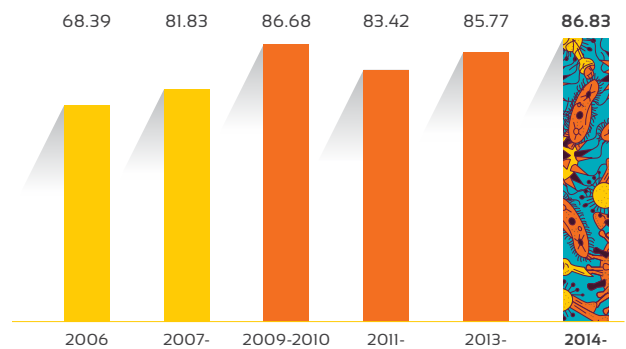
Sustainability Governance emphasizes the company's management based on environmental and social aspects. Arrangements and mechanisms of relations between the powers and responsibilities of Commissioners, Directors and executives is not measured solely by the financial aspects but also by paying attention to other measures in the environmental and social aspects.

Governance of the dimensions of sustainability requires that the implementation of Good Corporate Governance (GCG) is not merely only to comply with rules and regulations, but also by applying a various standards, principles, initiatives and customs prevailing in the international level (best practices). Therefore, the governance of sustainability is viewed more widely than just conventional governance. However, in practice still use TARIF principle, namely (1) Transparency; (2) Accountability; (3) Responsibility; (4) Independence; and (5) Fairness.

These principles form the basis for the company's long-term planning oriented toward sustainability for all economic, social and environmental aspects.

For improving the quality of GCG implementation, we regularly commission a third-party, independent and competent consultants, to assess the implementation of GCG. The assessment results showed an increase in scores through out the years, since 2006, as seen in the graph below.

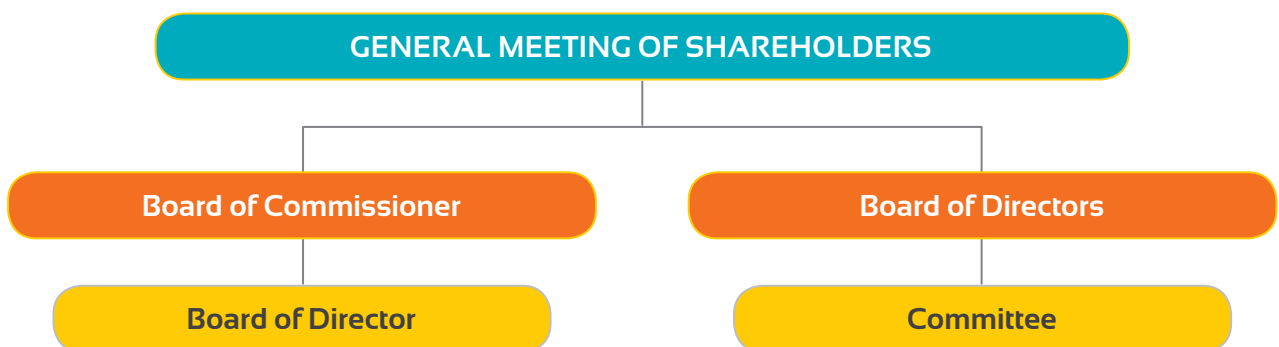
GCG Assessment Scores 2006 -2015



GOVERNANCE STRUCTURE [G4-34]

In accordance with Law No. 40 of 2007 on Limited Liability Companies, the company's governance bodies consist of the General Meeting of Shareholders (GMS), Board of Commissioners and Board of Directors, which have authority and responsibilities as defined in Company's Articles of Association and Laws and Regulations, as well as initiatives and efforts that result in best practices.

Corporate Governance Structure



GENERAL MEETING OF SHAREHOLDERS (GMS)

The GMS is the highest organ in Bio Farma's governance structure. The GMS has the authority and responsibility to make various strategic decisions regarding a range of corporate action plans. The authority of the GMS includes determining the mechanism to appoint members of the Board of Commissioners and Board of Directors.

The performance of members of the Boards of Commissioners and Directors is measured through a Key Performance Indicator (KPI) mechanism, the evaluation of which is the responsibility of the GMS.

BOARD OF COMMISSIONERS

The Board of Commissioners oversees the management of the Company as implemented by the Board of Directors, as well as advising on and overseeing implementation of the Company's Long-Term Plan, its Work Plan and Budget, stipulations in the Articles of Association, General Meeting of Shareholder Decisions and applicable legislation and regulations, to ensure Bio Farma performs well. The Board of Commissioners' oversight duty encompasses overseeing the implementation of all strategic decisions. The Oversight Report is made to the GMS.

The composition of the Bio Farma Board of Commissioners complies with the minimum requirements stipulated in the Articles of Association. The Company prohibits members of the Board of Commissioners from holding concurrent posts or having family or financial relationships with members of the Board of Directors.

BOARD OF DIRECTORS

The Board of Directors has the duty of implementing all actions related to the Company's management, in the interests of the Company and in line with the Company's purpose and objectives, as well as representing the Company in and out of court on all matters and for all occurrences, with limits regulated in legislation and regulations, the Articles of Association and/or Decisions of the General Meeting of Shareholders.

In 2015, the Bio Farma Board of Directors consisted of six Directors led by the President Director, who is assigned to coordinate the Directors' activities. Each Director serves in a field of his competence and according to the division of duties and authority agreed within the GMS, including economic, environmental and social aspects. In accordance with the Articles of Association, Bio Farma prohibits the holding of concurrent positions and having family or financial relationships with members of the Board of Commissioners and other Directors.



BOARD OF DIRECTORS AND BOARD OF COMMISSIONERS COMPOSITION (G4-38)

In the reporting period, the highest of the Governance Board, which consists of the Board of Commissioners and Board of Directors, is as follows:

Composition of the Board of Commissioners / Directors

NO.	NAME	GENDER	COMMISSIONER/DIRECTORS	TERM OF OFFICE
1.	Ahmad M. Ramli	Male	President Director	Since 23-01-2014
2.	Paruli Lubis	Male	Independent Commissioner	Sejak 05-11-2012
3.	Herman L. Djuni	Male	Commissioner	28-05-2012 s/d 22-06-2015
4.	Nizar Yamani	Male	Commissioner	Since 28-05-2012
5.	Ihsan Setiadi Latief	Male	Commissioner	Since 01-05-2013
6.	Heridadi	Male	Independent Commissioner	Since 23-01-2014
7.	H.M. Subuh	Male	Commissioner	Since 22-06-2015
8.	Iskandar	Male	President Director	Since 12-04-2013
9.	Juliman	Male	Director	Since 12-04-2013
10.	Sugeng Raharso	Male	Director	Since 12-04-2013
11.	Mahendra Suhardono	Male	Director	Since 12-04-2013
12.	Pramusti Indrascaryo	Male	Director	Since 12-04-2013
13.	Andjang Kusumah	Male	Director	Since 04-02-2013

Board of Commissioners is the representative of the Government as shareholder (Shareholder representation).

Besides this, there are 2 (two) Independent Commissioners. The Proposal of members of the Board of Commissioners and Board of Directors is filed by shareholders, in this case the Minister of SOE, after going through the process of due diligence, including economic issues and understanding of the environmental and social impacts.

COMMITTEES UNDER THE BOARD OF COMMISSIONERS

The Board of Commissioners has formed two committees to support it in its oversight duties. These are the Audit Committee and the Risk, Development and GCG Committee.

The Audit Committee was established in 2004 which serves to assist the Board of Commissioners in carrying out the task of supervision of the management of the

company in accordance with the principles of good corporate governance. Audit Committee members are appointed and dismissed by the Board of Commissioners and reported to the AGM.

Committee members that comes from the BOC resigned automatically when his/her term as member of the Board of Commissioners ends.

NO.	NAME	POSITION	APPOINTMENT BASIS
1.	Paruli Lubis	Chairman	Decree of the Board of Commissioners No. : KEP-10/DK/BF/09/2015 dated 30 September 2015
2.	Herman L. Djuni*	Vice Chairman/Member	End of term: Decree of the Board of Commissioners No.: KEP-10/DK/BF/09/2015 dated 30 September
3.	Ihsan Setiadi Latief**	Vice Chairman/Member	Decree of the Board of Commissioners No : KEP-10/DK/BF/09/2015, dated 30 September 2015
4.	Abu Bakar	Member (external)	Decree of the Board of Commissioners No : KEP-10/DK/BF/09/2015, dated 30 September 2015
5.	M. Asawir Harahap	Member (external)	Decree of the Board of Commissioners No : KEP-10/DK/BF/09/2015, dated 30 September 2015

* End of Term.

** From Risk, Development and GCG Committee to Audit Committee.

Risk, Development and GCG Committee is under the control and supervision of the Board of Commissioners. This committee is in charge and responsible for providing recommendations to the Board of Commissioners. The composition of this Committee in the reporting period are as follows:

NO.	NAME	POSITION	APPOINTMENT BASIS
1.	Heridadi	Chairman	KEP-06/DK/BF/II/2014 dated 19 February 2014
2.	M. Subuh**	Vice Chairman I/Member	KEP-02/DK/BF/VI/2015, dated 09 July 2015
3.	Nizar Yamanie	Vice Chairman II/Member	KEP-06/DK/BF/II/2014 dated 19 February 2014
4.	Ihsan Setiadi Latief*	Vice Chairman II/Member	KEP-06/DK/BF/II/2014 dated 19 Februari 2014 Renewed with Decree of the Board of Commissioners No: KEP-10/DK/BF/O9/2015, dated 30 September 2015
5.	Afrizal	Member (external)	KEP-06/DK/BF/II/2014 dated 19 February 2014
6.	Dadang Epi Sukarsa	Member (external)	KEP-06/DK/BF/II/2014 dated 19 February 2014

* From Risk, Development and GCG Committee to Audit Committee.

** Newly appointed as a member of Risk, Development and GCG Committee.

CORRUPTION RISK ASSESSMENT (G4-DMA)

In the reporting period, we have conducted assessments of the entire (100%) the operating companies associated with the risk of corruption. The assessment is part of the implementation of the Internal Audit Unit division (IAU) work plan in 2015 in implementing the monitoring process on evaluation of the effectiveness and efficiency of management performance and compliance with procedures that have been established, including the risk of corruption.

The Internal Oversight Unit (SPI) is the work unit assigned to oversee and control internal matters with reference to Financial Accounting Standards, General Guidelines for Inspection Implementation, and the Internal Audit Charter of PT Bio Farma (Persero).

We prioritize the examination of units prone to irregularities and corruption. In 2015, the SPI conducted Operational Oversight of 10 work units and generated 9 Audit Reports. [G4-S03], [G4-S05]

Corruption prevention efforts were also carried out on suppliers and our other partners by issuing a variety of measures in order to create a clean business and employment relationships, for example, with the obligation of suppliers to sign an Integrity Pact which contains various prohibitions related to corruption.

ANTI CORRUPTION AND COMMUNICATION AND TRAINING [G4-S04]

We have made various strategic measures to prevent corruption and communicate it to all employees (100%) including Commissioners and Board of Directors through various communication channels, such as public discourse, training in prevention of fraud, and seminars. Whistleblowing system that the company has built also intended to prevent corruption. In addition, to improve SPI staff competency, each of

the staff required to own internal auditor professional certificate; Qualified Internal Auditor (QIA) issued by a credible institution. They are also required to attend various education and training related efforts to prevent corruption, including fraud in procurement contracts for goods and services.



One of the Company's efforts to support anti corruption is the application of a whistle blowing system, based on Directors' Circular No. 01026/DIR/II/2013. This system has been created to allow both internal and external parties to report any actions related to corruption, fraud, theft, bribery, gifts, conflicts of interest or violations of the law or the Company's policies/procedures. There are several ways provided to report any suspected violations, including by e-mail to pelaporan.wbs@biofarma.co.id, official letter addressed to the Violation Reporting Team at Jalan Pasteur No. 28 Bandung 40161, or via the Company's Drop box. In addition, Bio Farma is currently developing a GCG portal to provide another medium to submit suspected violations reported either internally or externally to the Company. The preventative actions taken by the Company against the types of violations mentioned above are noted in the Integrity Pact, which is a statement signed by Bio Farma's people stating they are committed to carrying out their duties and responsibilities in accordance with the principles of GCG, are willing to implement the GCG guidelines and Code of Conduct to the best of their abilities, are committed to reporting any violations and agree to be sanctioned in accordance with applicable regulations. This Pact was signed by all Bio Farma's directors and employees on 28 April 2015 and is renewed annually

MECHANISM TO SUBMIT OPINIONS TO THE BOARD OF DIRECTORS

Internal communication is very important to Bio Farma to improve the Company's performance and implement its vision and mission. This mechanism facilitates the relationship with employees. Formal mechanisms to submit opinions to the Board of Directors include: Labour Union meetings with the Management, work meetings, morning coffee, executive meetings, work visits by the Directors and letters or e-mails.

to restate their consistent commitment to each point noted in the statement.

To promote the spirit of anti-corruption and to ensure accurate understanding, we also hold meetings on the subject that are attended by the Board of Directors, Division Heads, Department Heads, Staff and Supervisors, as well as permanent and contract employees. During 2015, 98.86% of employees attended such meetings promoting the anti-corruption stance.

Our commitment to preventing corruption is not limited to within the Company. Our anti-corruption policies and procedures are also promoted to external parties, such as suppliers and business partners. All contracts and employment agreements with the company must contact in the integrity pact statement and be signed by the supplier or business partner, so that they are also committed to maintaining integrity and do not attempt to bribe employees or the company's officials.

COMPANY INFORMATION MANAGEMENT POLICY

We realize the importance of managing Company information transparently for our stakeholders. Several of our policies on the management of company information are contained in established guidelines, including Governance of Public Information Management, Information Dissemination and Communication, Public Information Service and, of course, on Social Media. Bio Farma use of various kinds of media to provide information to its stakeholders, including the Company's website (www.biofarma.co.id), mass media, the Annual Report, meetings with distributors, clinical meetings, coffee mornings, Management Review Meeting, conference calls, field visits, national immunization meetings, as well as participation in conferences and associations to provide relevant information in line with application legislation.

GOODS/SERVICES PROCUREMENT POLICIES

The procurement of goods and services is conducted through healthy competition in accordance with applicable legislation and regulations. In relation to this, Bio Farma issued Directors' Circular No: 02461/DIR/IV/2011 dated 29 April 2011 on Procedures for the Procurement of Goods/Services in PT Bio Farma (Persero).

To certain suppliers, we conduct a strict selection related to their compliance with employment legislation.

RISK MANAGEMENT

Bio Farma is aware that the Company's operations involve inherent risk, both that which the Company can control and that beyond its control. For this reason, risk must be managed comprehensively, optimally and sustainably as an inseparable part of the practice of good corporate governance. Risk management is a responsibility borne by everyone, thus every employee must recognize the risks inherent in their work and manage these proactively.

Since 2009, the Risk Management System implemented in Bio Farma has been based on COSO Enterprise Risk Management – Integrated Framework. In line with the design of the Bio Farma Integrated Management System, Bio Farma's Risk Management has been amended to combine ISO 31000 (2009) and COSO Enterprise Risk Management – Integrated Framework.

In 2015, Bio Farma had six corporate risks, of which four were from routine activities and two related to projects. Having determined the corporate risks and strategic steps to manage these, the Corporate Risk Management (CRM) division, as the party responsible for corporate risks, evaluates and oversees the management of the risks in each unit.

Each Division Head/risk unit is responsible for every risk and its management, which, as a whole, form an effective measurement method for risk management in Bio Farma.

The details of the corporate risks are as follows:

NO.	RISK TYPE	RISK BEING FACED	STRATEGIC STEPS TAKEN BY THE
I.	Risk to Routine Activity	<p>I. Change of National and International Policy/Regulation</p> <p>The Company exports its products to various countries for their national immunization programs, including some supplied through UNICEF, which has standard requirements for products that meet WHO prequalification. Thus, product quality recognition by WHO plays an important role in smooth export sales. The Company must always follow the policies and requirements stipulated International mainly by WHO.</p>	<ul style="list-style-type: none"> The implementation of consistent and continuous Quality Management System in accordance with WHO so that the company may remain to maintain the prequalification status. Working with bulk consumers to maintain Quality Management System in order to avoid WHO delisting . Take an active role in international activities both WHO and other organizations especially related to the vaccine so stay updated for any developments. Search for another bulk consumers to reduce dependence on bulk sales only to certain consumers. Assurance of product development appropriate to regulatory demands; including design product development, qualification and validation implementation. Accelerating and increasing sales of new products / merchandise to anticipate declining sales of Oral Polio Vaccine. Increase the production capacity of bulk vaccine has met the WHO prequalification and are still needed by the market such as Measle and Hib Technologies cooperation for vaccine formulation of IPV (Inactivated Polio Vaccine) as long as Bio Farma has yet to produce on its own. Accelerate the production readiness of IPV vaccine. Strategies for JPH Law , the company established a Halal Product Preparation Team, to prepare and coordinate internally and externally which is regulated Letter of Decree Number 00718 / DIR / II / 2015. File a judicial review on JPH Law that the vaccine be excluded from the list of products that must have halal certification, considering the strategic role of vaccines in national health, with very strict regulations. Prioritize the use of non-animal materials in the research of new vaccines.



<p>2. Foreign Exchange Rate Fluctuations</p>	<p>In carrying out its business activities, the Company also faces financial risk that is fluctuations in foreign currency, which can have an impact in the form of vulnerability to foreign exchange fluctuations. Fluctuations in foreign currencies, mainly in US Dollars, greatly affect the cost of production.</p> <p>To fulfill purchases of imported goods/materials, the Company will optimize the ongoing availability of foreign currency to pay for import transactions. A highly probable risk is that the exchange rate will fluctuate between opening the L/C when the goods/materials are ordered and the bill falling due when the goods/ materials are received.</p>	<ul style="list-style-type: none"> • Analyzing exchange rates that will be used when the L/C is opened for imported goods/ materials. Maintaining/always communicating with vendors regarding the arrival schedule for goods/materials. • Making weekly Cash Flow in a period of 3 months.. • Conducting natural hedging by balancing the amount of assets with liabilities currency at a certain period. • Exploring the application of hedging by means of forward buying USD / IDR against future USD liabilities. • Forward selling USD/IDR against exports. • Attempt for the sale of foreign currency rate at least equal to Jisdor or middle rate on a new transaction day..
<p>3. Increasing Global Competition</p>	<p>In today's era of free market, competition in the pharmaceutical sector and biological products will be intense with the increasing number of emerging international companies. The competition arises in various aspects, such as the more powerful operational capabilities of international competitors, innovative products, changes in market demand, as well as the people's limited purchasing power. Threats from competitors products such as China or India for WHO prequalified products and ASEAN sole market, becomes a serious issue for the continuity of the company.</p> <p>Likewise, more competitors are obtaining PQ WHO, which increases competition; they can then fight for increased market share both domestically and internationally. For this reason, ensuring products are in line with market trends must be an important factor for the Company's continuity. Products brought to market must meet market requirements and be available on time. Any delay in providing new products to the market will result in potential market loss.</p>	<ul style="list-style-type: none"> • Preparing new vaccine products and life science products according to the market needs: <ol style="list-style-type: none"> a. Through the development of products such as sIPV, MR vaccines, Rotavirus vaccine, Hexavalent Vaccine, Hepatitis B, Pneumococcus Whole cell, Pertussis aP etc. b. Through research like: Trastuzumab, Pam2cys delivery system, Lipovaksin, stem cell, TB vaccine, EPO and others. • Improving pilot scale production facilities that already exist in order to meet the standards of GMP • Conduct research cooperation and technology transfer with other institutions / organizations at home and abroad to accelerate the development of new vaccines. • Cooperation with other institutions / other institutions to accelerate the optimization of production, process preclinical testing and clinical trials • Establish a pilot-scale facilities for the development of life science products that meet GMP standards • Prepare researchers reliable for research and development • Setting up a packaging technology more advanced vaccines such as prefill injection. • Oversee the product registration process to BPOM in order to have on time delivery of products launching to the market .

	<p>4. Delays to Vaccine Supply</p>	<p>The Company is the only vaccine manufacturer in Indonesia that supplies all the vaccines needed for the nation's immunization program. In addition to fulfilling the government's needs, the Company also exports vaccines to various institutions, as well as other countries.</p> <p>The time frame to meet demand is very tight considering the long production process and quality control (QC) required, while the production capacity is very limited, which could lead to the disruption of fulfillment of products to consumers bilateral / institutions of other countries.</p> <p>This risk arises from some of the risks related to sudden changes forecast or product demand or sudden production plans changes followed by material supply shortage due to the limited ability of suppliers to meet the specification of goods and quantity.</p> <p>Other than that,, Delays to contract signing can shorten the time available to supply products, leading to delays in product fulfillment, which is detrimental to the Company's good name and reputation and/or may result in a fine being imposed.</p>	<ul style="list-style-type: none"> • Optimizing supply chain management based on information technology. • Optimize production schedules and QC in accordance with the market needs . • Conduct a better supply management policies and strategies, and adaptive towards changes and conditions of the company. • Perform multiple supplier strategy. In order to ensure continuity of supply when there is interference, it is necessary to have flexible supplies so that it can easily switch from one supplier to another. • To coordinate continuously with the LKPP parties and the Ministry of Health and other buyers so that contracts can be signed on time.
<p>2. Project Risk</p>	<p>5. Realized Investment Not On Schedule</p>	<p>The Company must maintain the availability of products that are aligned to market needs. Therefore, the Company conducts research and development for new products. Adequate facilities are required to support this research and development program and the production phase, so that product development may be carried out in a timely manner, and the product can be introduced to the market while the need is still there.</p> <p>Delay in investment programs that support the research and development stage or the production stage will result in loss of potential market. Thus, planning and implementation of the Company's investment programs must be as prompt and accurate as possible.</p>	<ul style="list-style-type: none"> • Additions of a consultant planner / supervisor GMP-related building investments • Planning documents are already available in the budget year • Budget terms to be made multiyear • Business Process Improvement and increase the number and competent human resources in the Procurement Division.
	<p>6. Unpreparedness of Influenza Vaccine Production In facing pandemic.</p>	<p>In anticipation of a flu pandemic, the government, through the Health Ministry, intends to build a production facility for human influenza vaccines. The plan is for the facility to be handed over to Bio Farma after construction is completed.</p> <p>The company has mastered the flu vaccine production technology and is able to produce but in a limited capacity, while the government projects until now is still uncertain, it goes so that production of the vaccine on a large scale can not be done at any time flu pandemic actually occurs.</p>	<ul style="list-style-type: none"> • Setting up small-scale vaccine facilities for seasonal flu which at times can be utilized for the manufacture of pandemic influenza vaccine if necessary and make efforts so that these facilities receive a certificate of GMP from BPOM, in order to maximize the production according to existing capacity, doing stockpiling bulk and conduct technology maintenance. • To meet the needs of a flu pandemic, human clinical studies performed after obtain BPOM GMP certification and Licensing.



PRECAUTIONARY APPROACH [G4-14]

The Company applies a precautionary approach with a variety of methods in the environmental field, among others by following international standard ISO 14001 and other certifications, including that of the Indonesian food and drug control agency. In addition, the company also takes preventive action to protect the environment, as well as innovating in the green and environmental field, while being committed to energy efficiency.

ADOPTION AND SUPPORT OF INTERNATIONAL INITIATIVES

Our commitment to offer high quality and innovative products is shown by performance that always refers to international standards and the most recent quality management systems. Bio Farma has implemented a wide range of integrated systems, among others: current Good Manufacturing Practices (cGMP) from the World Health Organization (WHO), Good Laboratory Practices (GLP), Good Clinical Practices (GCP), Good Distribution Practices (GDP), an integrated management system incorporating ISO 9001:2008, ISO 14001:2004 and OHSAS 18001:2007, as well as world-class standards, among others CSR ISO 26000, Enterprise Risk Management ISO 31000 and International Financial Reporting Standards (IFRS).

[G4-15]

COMPANY ETHICS AND CULTURE [G4-56]

Ethical standards and work culture to be used in interaction with the company's stakeholders are set forth in Joint Circular of the Board of Commissioners and Board of Directors No. Kep 07/DK/BF/III/2014 and No. O1103/DIR/III/2014 regarding the Bio Farma Code of Conduct. Everyone in Bio Farma not only complies with legislation and regulations but is also required to comply with the norms in the world of business at the international level.

Bio Farma has five main behavior values, namely Professional, Integrity, Teamwork, Innovation and Customer Oriented (PITIC). Internalization of the key culture and behaviors includes economic, environmental and social aspects. The approach taken by the Company in disseminating these values includes promotion by the directors at face-to-face meetings with employees, guidance during induction training and the publishing of a handbook containing the rules of Behavior.

A strong work culture behavior and organizational culture will create a professional working attitude and reduce the impact of negative atmosphere in the workplace.

MEMBERSHIP IN INDUSTRY ASSOCIATIONS [G4-16]

To expand the Company's views and network, during 2015, Bio Farma played an active role in various organizations, including:

NO.	Organization Name	STATUS
1.	National Vaccine Research Forum (FRVN)	Founder
2.	Developing Countries Vaccine Manufacturer Network (DCVMN)	President
3.	Health Minister-level Conference of Nations of the Organization of Islamic Cooperation (OIC)	Vice Chairman
4.	SOE Public Relations Forum	Member
5.	Indonesian Pharmaceutical Manufacturers Association	Steering Committee
6.	Immunization Advocacy Team	Chairperson

STAKEHOLDER INVOLVEMENT

We understand that stakeholders have a strategic role to play in maintaining the Company's long-term growth. Meanwhile, the Company's performance also has an influence on our stakeholders from the business, financial, operational, environmental and social aspects. For this reason, we continue to strive to improve the harmonious relationship with stakeholders through various direct meetings.

The following table explains our relationship and interaction with stakeholders during 2015.

NO.	STAKEHOLDER [G4-24]	BASIS FOR DETERMINING STAKEHOLDERS [G4-25]	FREQUENCY OF MEETINGS WITH STAKEHOLDERS [G4-26]	TOPICS DISCUSSED [G4-27]
1.	Employees / Union	Representation	Bipartite Cooperation once a month	Welfare, HR development, Occupational Health and Safety, work discipline
2.	Shareholder	Influence Responsibility	GMS – Technical / Special /Expose Meetings	Ratifying financial reports, managing performance responsibility, dismissing and appointing Commissioners and Directors, Determining remuneration for Commissioners and Directors
3.	Consumers	Influencer	Clinical meeting once a year Distributor meetings held quarterly National Immunization Meeting held annually	- Product knowledge, new vaccine research to develop loyalty - Product Acceptance Progress Evaluation, product distribution - Product knowledge, new vaccine research
4.	Vendors	Dependency	Bid presentations and activities conducted for each procurement	Service training
5.	Regulator and Overseer	Influencer and Representation	As required	Product safety, regulation compliance, product registration
6.	Community	Proximity	As required	Training with the community, needs assessment, oversight and assessment, social mapping



IMPROVING THE ECONOMY

In line with the sustainable development goals (SDGs), Bio Farma should have a significant impact on economic growth for its stakeholders, as well contributing to improving the Indonesian economy.

Sustainability from the economic dimension is focused on the economic impact arising from the company's operations. In this section, Bio Farma presents different capital flows among different stakeholders. Through this report, the operational impact of Bio Farma on community economies can be judged. The following table illustrates the economic value obtained and distributed. This table shows from where economic value was obtained and to where economic value was disbursed. All the data presented here is sourced from audited financial statements prepared in accordance with Financial Accounting Standard Statements (PSAK). *[G4-DMA]*

ECONOMIC VALUE RECEIVED AND DISTRIBUTED *[G4-ECI]*

As an economic entity, Bio Farma participates in the Indonesian economy as a generator of economic value, which is then distributed to various stakeholders in different forms and with different impacts. Generally, the economic value received from consumers takes the form of sales of the company's products. This economic value is then disbursed to stakeholders in various forms, such as to employees in wages and other contributions, the government as dividends,

lenders as interest, and the public in the form of Community Development. The table below can be used to assess to what extent Bio Farma has created economic benefit for its stakeholders, including its direct economic impact on the Indonesian economy.

Direct Economic Value Generated and Distributed 2013 - 2015

DIRECT ECONOMIC VALUE GENERATED	2013	2014	2015
Income	1,853,681,642,504.99	2,044,080,451,981.35	2,345,918,269,951.53
Interest Income	14,163,439,166.90	34,078,135,784.95	34,944,155,303.75
Revenue Difference in Foreign Exchange Rates	127,501,194,468.28	70,215,332,574.45	78,787,808,690.91
Other Income	11,173,195,315.42	14,336,899,054.77	15,332,041,355.38
Total	2,006,519,471,455.59	2,162,710,819,395.52	2,474,982,275,301.57
Economic value distributed			
Company Cost (supplier)	314,678,070,443.31	384,040,580,209.73	505,224,866,869.02
Employee wages and benefits:			
- Service Department	1,361,206,594.59	914,469,820.57	1,602,027,460.89
- Production Department	112,335,894,655.17	135,683,819,864.20	156,483,416,763.36
- General Affairs and Administration department	173,050,921,211.93	204,508,523,918.98	227,754,014,882.24
- R&D Department	15,243,912,172.36	17,255,650,062.79	21,495,163,734.18
Total employee wages and benefits	301,991,934,634.05	358,362,463,666.54	407,334,622,840.67

DIRECT ECONOMIC VALUE GENERATED	2013	2014	2015
Payment to government			
- Dividend	228,987,287,000.00	145,015,000,000.00	234,707,000,000.00
Community investments			
- Environment Development	5,489,909,000.00	4,061,787,035.00	6,479,182,341.00
- Community Social Contribution	1,367,928,971.00	1,650,420,366.00	3,839,965,637.00
Economic value distributed to the community	1,367,928,971.00	5,712,207,401.00	10,319,147,978.00
Total Economic value distributed:	847,025,221,048.36	893,130,251,277.27	922,878,637,688.02
Economic value retained before dividend	1,388,481,537,407.23	1,414,595,568,118.25	1,552,103,637,613.50
Economic value retained after dividend	1,159,494,250,407.23	1,269,580,568,118.25	1,552,103,637,613.50

Dividend for 2013 is taken from 2013 AGMs Decision over Dividend of 2012 (Accrual basis)

The table shows that over the last 3 (three) years, consumers have had a significant impact on the economic growth of Bio Farma. The economic value received from consumers in the form of revenues (net sales) has grown 26.55% from Rp 1.85 trillion in 2013 to Rp 2.35 trillion in 2015. In contrast, Bio Farma has also provided significant economic impact to its stakeholders over the last three (3) years, with details as follow:

SUPPLIERS

Economic value disbursed to suppliers rose 60.55% from Rp 315 billion in 2013 to Rp 505 billion in 2015.

EMPLOYEES

Employee earnings through salaries and other compensation received has continued to increase over the last 3 years. This will have had a positive impact on the economic condition of employees and have had a chain effect on the local economy. A higher level of employee earnings means better welfare for employees. The percentage increase in the company's spending on salaries and other compensation over the last 3 years rose 34.88% from Rp 302 billion in 2013 to Rp 407 billion in 2015.

GOVERNMENT

As a State Owned Enterprise, the government receives a share of company profits as dividends, the amount of which is determined in the GMS. Not all of the company's profit is allocated as dividends, with the greater part retained for the company's development. In the last three years, the amount of dividends paid to the government decreased compared to the amount in 2013 due to the policy to retain profit to finance the company's expansion.

COMMUNITY

As a State Owned Enterprise, the Government, through the SOE Ministry, requires Bio Farma to implement the Partnership and Community Development Program (PKBL). This program consists of two parts: first, the Partnership Program and second, the Community Development Program. In this section we describe the Partnership Program, which aims to improve the economy of the people. Meanwhile, the Community Development Program is described in the chapter Bio Farma Shares.

Through the Partnership Program, Bio Farma has provided soft loans with a flat interest rate of 6% per year to communities to stimulate economic growth. Accumulated lending through the Partnership Program between 1992 and 2015 totaled Rp 87,014,325,000, which has been distributed to 3,671 Foster Partners, both Cooperatives and Small Enterprises.

Assessment of the Effectiveness level of Partnership Program Fund Disbursement and the level of collectability on these Loans, in accordance with SOE Ministerial Decree No. KEP-MBU/2002 dated 4 June 2002 concerning the Health Rating of State Owned Enterprises, is as follows:

a. Disbursement Effectiveness

NO.	DESCRIPTION	YEAR		
		2013 AUDITED [Rp]	2014 AUDITED [Rp]	2015 [Rp]
1.	Disbursement Effectiveness	15.87%	90.07%	86.44%
2.	Score	3	3	2

b. Collectibility Level

NO.	DESCRIPTION	YEAR		
		2013 AUDITED [Rp]	2014 AUDITED [Rp]	2015 AUDITED [Rp]
1.	Collectibility Level	71.03%	75.72%	76,30%
2.	Score	3	3	3

SOCIAL COMMUNITY INVESTMENT THROUGH PKBL AND CSR

COSTS INCURRED FOR PKBL AND CSR

As a State Owned Enterprise, the Government, through the SOE Ministry, requires Bio Farma to implement the Partnership and Community Development Program (PKBL). The program consists of two parts: first, the Partnership Program and second, the Community Development Program. Other than that, as a commitment to its corporate social responsibility toward society and the environment, Bio Farma also implements CSR programs. In this section, we describe the Partnership Program, which aims to improve the economy of the people. Meanwhile the Community Development Program and CSR are described in the chapter Bio Farma Shares.

PARTNERSHIP PROGRAM (ROLLING FUNDS)

Through the Partnership Program, Bio Farma has provided soft loans with a flat interest rate of 6% per year to communities to stimulate economic growth. Accumulated lending through the Partnership Program between 1992 and 2015 totaled Rp 87,014,325,000, which has been distributed to 3,671 Foster Partners, both Cooperatives and Small Enterprises.



Bio Farma PKBL Foster Partners is given entrepreneurial education and training to increase the knowledge and expertise of their foster partners

THE PARTNERSHIP PROGRAM IMPACT (G4-ECB)

The Partnership Program has created new jobs, thereby reducing unemployment. The Company effectively and efficiently provides assistance to development partners to improve and develop empowerment and skills (capacity building), including administration, accounting, marketing, human resource management, human character and behavior, as well as business development.

Education and training was implemented in 2015 in which 185 business units became candidate development partners. Additionally, a meeting attended

by 63 development partners was held to improve cooperation between partners and to build synergies and business networks to foster success and self sufficiency.

The development partners who had successfully run a business were enrolled in an exhibition by the Company to promote, encourage and increase sales both at home and abroad. To facilitate development partners make installments on their loans, the Company established cooperation with Bank BRI and Bank Bukopin.

The distribution of Partnership Program funds up to 2015 by Business Sector and Region as follow:

	BUSINESS SECTOR												TOTAL	
	INDUSTRY		COMMERCE		SERVICES		ANIMAL HUSBANDRY		FARMING		HANDICRAFT		DISBURSEMENT	
	UNIT	(RP)	UNIT	(RP)	UNIT	(RP)	UNIT	(RP)	UNIT	(RP)	UNIT	(RP)	UNIT	(RP)
Kota Bandung	16	608,000,000	39	835,000,000	2	15,000,000	1	7,500,000	0	-	0	-	58	1,465,500,000
Kab. Bandung Barat	2	90,000,000	10	250,000,000	4	110,000,000	3	60,000,000	2	125,000,000	0	-	21	635,000,000
Kab. Bandung	14	435,000,000	21	552,500,000	8	155,000,000	5	120,000,000	1	15,000,000	0	-	49	1,277,500,000
Kota Cimahi	2	35,000,000	6	140,000,000	1	12,500,000	0	-	0	-	0	-	9	187,500,000
Kab. Garut	4	77,500,000	8	190,000,000	2	40,000,000	0	-	0	-	0	-	14	307,500,000
Kab. Sukabumi	2	80,000,000	6	195,000,000	0	-	0	-	0	-	0	-	8	275,000,000
Kab. Cianjur	0	-	12	352,500,000	0	-	2	52,500,000	0	-	0	-	14	405,000,000
Kab. Sumedang	2	45,000,000	1	50,000,000	0	-	0	-	0	-	0	-	3	95,000,000
Kab. Tasikmalaya	0	-	0	-	0	-	1	45,000,000	0	-	0	-	1	45,000,000
Kota Bogor	0	-	1	50,000,000	0	-	0	-	0	-	0	-	1	50,000,000
Kab. Cirebon	3	115,000,000	0	-	0	-	0	-	0	-	0	-	3	115,000,000
Kab. Kuningan	2	55,000,000	1	25,000,000	0	-	0	-	0	-	0	-	3	80,000,000
Kab. Subang	0	-	0	-	1	25,000,000	0	-	0	-	0	-	1	25,000,000
Jumlah	47	1,540,500,000	105	2,640,000,000	18	357,500,000	12	285,000,000	3	140,000,000	0	-	185	4,963,000,000



CONSERVING THE ENVIRONMENTAL

We have a strong commitment to continue operating activities are pro-environment. It is a basic principle for us as a company sustainable bio-tech or green company. In any decision-making process, environmental issues have always been used as one of the aspects that should be considered first. This commitment to fruition, either, where the Bio Farma achieved the GOLD PROPER 2015. This is the highest award in the environmental field obtained by Bio Farma in the final two years of the Ministry of Environment and Forestry R.I.

We believe that the company will still exist for the long term if every decision in advance consider the impact on the environment. This is a powerfully foundation for the sustainable operation that is run by Bio Farma.

We also participate in the mitigation of greenhouse gas emissions (GHG), which is a program of global society. In the inter-party meeting in Paris in October 2015, the Government of Indonesia has proposed GHG emission mitigation commitments by 26% in 2030. Bio Farma supports the Government's commitment to draw up various strategic measures in the form of GHG emissions mitigation program, whether made in the operational activities company and carried out operational activities, such as tree planting program. Emissions reduction program of operational activities carried out with efficiency and innovation of production processes beside make saving energy which will be described below.

As a green company, Bio Farma has formulated a policy of environmental sustainability, which was divided into five (5) main areas. First; Green Process, which apply the principles of green in the entire business process from selection of raw materials through

environmentally sensitive vendor selection to production processes, formulation, filling, packaging to finished product handling. Second; efficiency in energy use. Third; efficiency and water conservation by applying the principle of the 4Rs (reduce, reuse, recycle, recovery). Fourth; waste management and sorting of waste in five categories. Fifth; efforts to involve employees in order to have a culture and attitude that pro-environmental work including their family culture.

Bio Farma seeks to efficient use of energy in all operational activities

through various policies, such as the utilization of renewable energy, improvising equipment, redesign the production process and the pattern of production operations. In addition through the production process innovation, Bio Farma has also initiated a policy for the reduction of vehicle emissions, the reduction of power consumption in support facilities, as well as increased performance management operational vehicles.

Bio Farma continue to make strategic steps in the control and prevention of pollution. The legal basis for implementation refers to Law No. 32 of 2009, on the Protection and Environmental Management. Bio Farma has a strict policy that the use of energy and natural resources must be done efficiently and effectively, the results of operations of Bio Farma should be able to benefit as much as possible for human beings, both for the human Bio Farma as well as for the wider community.

ENERGY ASPECTS

Since 2008, Bio Farma has implemented a program of new and renewable energy use and energy savings. The top management's full commitment to good energy environmental management can be seen from nine Bio Farma policies, in particular the point on Saving Energy and Natural Resources. In addition, Bio Farma has also established an Energy Saving Team that serves to supervise and carry out energy and resource saving processes in each of the Company's activities. (G4-DMA)

ENERGY CONSUMPTION IN THE ORGANIZATION (G4-EN3)

PT Bio Farma (Persero) use of three power sources. The first is from PLN-1 (the State Electricity Company) with 20 kV voltage, three (3) phases, 50 Hz frequency and a capacity of 3,465 kVA. The second source is PLN-2 with 20 kV voltage, three (3) phases, 50 Hz frequency and capacity of 3,465 kVA. The third is five generator sets, three supplying power of 1,000 kVA, 3.3 kV, 50 Hz, while the other two supply 2,000 kVA, 3.3 kV, 50 Hz. The five generators are operated and interconnected with PLN-1. While two other generators of 1,000 kVA, 380 V, 50 Hz are interconnected with PLN-2. Although the production and administrative building are separate from one another, power can be supplied either from PLN or the generators.

Bio Farma runs energy from the generators connected to PLN-1 and 2 simultaneously, whereby the generators are used for machinery or production equipment that is particularly susceptible to electrical interference, such as the polio / measles vaccine production building and filling line-2 production premises, where a disruption in the electricity supply would result in significant losses. Meanwhile, other areas in the bacterial vaccine production building, pilot scale building, administrative buildings and other buildings, as well as some machinery and production tools, are not as sensitive to the electricity supply and are thus supplied by electricity from PLN- 1 and PLN-2. Nonetheless, the distribution network system is designed so that if there is a power outage at one of the two power sources, the other source can serve as a backup for all the power requirements in Bio Farma.

The following table lists the amount of electrical energy consumption Bio Farma during 2014 and 2015. All of that energy comes from non-renewable energy in the form of electrical energy which is calculated based on invoices from PLN, while for Genset calculated based on direct reading of kWh meter tool that comes with every genset. Recording kWh used from the generator is conducted every month by the electricity distribution section.

Energy Consumption of Electricity in 2014 and 2015

YEAR	MONTH	PLN I (KWH)	PLN II (KWH)	GENSET (KWH)
2014	January	1,295,736	637,328	373,220
	February	1,106,060	590,060	423,500
	March	1,209,804	660,472	479,300
	April	1,183,212	641,420	435,000
	May	1,186,672	707,876	425,700
	June	1,054,748	648,548	646,700
	July	977,040	632,848	675,100
	August	1,002,868	650,532	725,500
	September	1,011,228	667,676	688,700
	October	1,046,500	676,720	753,800
	November	887,408	772,052	761,600
	December	1,085,072	688,312	631,000
Total			28,039,312	



YEAR	MONTH	PLN I (KWH)	PLN II (KWH)	GENSET (KWH)
2015	January	975,896	67,700	722,300
	February	859,816	618,800	724,600
	March	937,636	676,708	809,100
	April	880,388	661,132	762,900
	May	935,988	669,976	823,320
	June	858,888	625,140	916,999
	July	789,844	580,776	824,800
	August	789,844	580,776	935,910
	September	884,024	606,344	870,700
	October	946,604	696,680	807,800
	November	890,160	600,864	857,000
	December	832,244	474,348	1,004,000
Total		28,108,605		

ENERGY USE INTENSITY (G4-EN5)

The intensity of energy use in Bio Farma is the ratio between the electrical energy consumption for the production process with the production batch number for one year. Energy consumption data are used only electrical energy consumption in production, while the rest is the use of support facilities. The energy intensity per production was calculated by the formula; Total energy consumption (kWh) in production divided by the number of batch of production.

Overview of Energy Consumption and Production Support

YEAR	TOTAL CONSUMPTION (KWH)	CONSUMPTION PRODUCT (KWH)	CONSUMPTION SUPPORT (KWH)
2014	28,039,312	17,305,725.37	10,733,586.63
2015	28,108,605	17,016,720.76	11,084,284.24

Then the intensity of energy consumption of associated in the production Bio Farma 2015 and 2014 was as follows:

TAHUN	ENERGY CONSUMPTION (KWH)	TOTAL BATCH PRODUCTION (KWH)	THE INTENSITY OF ENERGY CONSUMPTION (KWH)
2014	17,305,725.37	1,314	13,170.26
2015	17,016,720.76	1,337	12,727.5

From these calculations concluded that energy consumption in production during 2015 decreased to 3.4%, from the previous year, that is from 13170.26 Kwh / year production batch 2014 dropped to 12727.5 Kwh / batch production in 2015.

REDUCTIONS IN ENERGY CONSUMPTION (G4-EN6)

Bio Farma since 2008 has been implementing an austerity programs and implement energy saving electricity. With the implementation of energy efficiency programs, the use of electricity can be reduced by approximately 9-12%.

Specifically for 2015, as reported above, compared with 2014 there was a drop in energy consumption in production sector of 3.4% compared to the previous year, i.e. from 13,170.26 kWh / year production batch 2014 dropped to 12,727.5 kWh / batch production in 2015.

Reduction of energy consumption in 2015 was achieved through the implementation of policies and programs below.

Energy saving program 2015

NO	PROGRAM	TOTAL/SAVING
1	Timer Control installation for 32 AHU cooling systems, which are off at night.	Electrical energy savings: 176 640 kWh / month
2	Installation of inverters for the cooling pump in the Polio-Measles Building and Packing Building	Electrical energy savings: 1958.4 kWh / month (Gd. Packaging) and 5947.2 kWh / month (Gd-Polio Measles), total savings = 7905.6 kWh / month
3	Installation of inverters and night mode on 25 Laminar Air Flows	Electrical energy savings: 7.303,68 kWh/Month
4	Increasing employee awareness to switch off office equipment that is not being used	Electrical energy savings: 9.870 kWh/bulan
5	Use of more environmentally friendly and energy saving coolers in two Cold Rooms and Split AC, previously using R22 now using Musicool Hydrocarbon	Reduce the use of ozone-depleting chemicals electrical energy savings: 1305.15 kWh / month
6	Replacement of TL light bulbs with energy saving LED bulbs	Electrical energy savings: 1085.28 kWh / month
7	Promoting CO ₂ emissions reduction through experts in energy and CO ₂ emissions reduction experts	Increase employee awareness towards energy-saving behavior relation to the reduction of CO ₂ emissions
8	Campaigns on saving electricity, water and diesel held by Bio Farma management and through various Company media	Raising awareness and behavior of employees in an effort to saving energy and natural resources
9	Replacement Lamp courtyard (garden) with the use of solar cell and LED lamps are equipped cell Photo	Electrical energy savings: 2,160 kWh / month
10	Installation of timer controls for 70 drinking water dispensers	Electrical energy savings: 1.77,05/Month
11	Energy recovery from exhaust heat from the HIB and Pertussis Vaccine Production Room	Electrical Savings energy: 21.600 kWh/Month
12	Pumping installation solar cell of Raw Water into the tank.	The energy savings from Solar cell: 480 kWh / month
13	Installation of LED Lights, Motion Sensor and Solar Cell in public buildings 2 basement 1,2 and 3	The energy savings result from LED & Sensor motion: 4880.9 kWh / month Electrical energy savings Solar cell: = 1.265,80kWh, so the total savings of the month December 2015 = 6146.7 kWh
14	Installation of Selective Control on the elevators in public 2	Electrical energy savings: 316.8 kWh / month



Bio Farma technician is maintenance on the solar cell to utilize the sun's energy as a natural electricity generator.



The following table shows the efforts and achievements made in 2 (two) years in the energy-saving program to make comparisons if no energy savings program. Calculations use of electricity (kWh) if no efficiency programs amounted to 30,936,572 kWh, done by summing all of the energy consumption of existing sources of PLN and generator are added to the amount of electricity savings resulting from energy efficiency programs.

Savings Electricity 2014-2015

YEAR	MONTH	TOTAL ELECTRICITY USAGE (KWH) IF THERE IS NO EFFICIENCY PROGRAM	TOTAL ELECTRICITY USAGE (KWH) IN THE PRESENCE OF EFFICIENCY PROGRAM	TOTAL SAVINGS ELECTRICITY (KWH) IN THE PRESENCE OF EFFICIENCY PROGRAM	% SAVINGS ELECTRICITY
2014	January	2,536,745	2,306,284	230,461	9.99%
	February	2,350,081	2,119,620	230,461	10.87%
	March	2,580,896	2,349,576	231,320	9.85%
	April	2,490,952	2,259,632	231,320	10.24%
	May	2,551,568	2,320,248	231,320	9.97%
	June	2,581,316	2,349,996	230,840	9.82%
	July	2,515,828	2,284,988	230,840	10.10%
	August	2,614,424	2,378,900	235,524	9.90%
	September	2,603,344	2,367,604	235,740	9.96%
	October	2,712,510	2,477,020	235,490	9.51%
	November	2,656,403	2,421,060	235,343	9.72%
	December	2,639,798	2,404,384	235,414	9.79%
2015	January	2,601,484	2,365,896	235,588	9.96%
	February	2,438,596	2,203,216	235,380	10.68%
	March	2,658,962	2,423,444	235,518	9.72%
	April	2,539,774	2,304,420	235,354	10.21%
	May	2,664,698	2,429,284	235,414	9.69%
	June	2,636,446	2,401,027	235,419	9.80%
	July	2,430,914	2,195,420	235,494	10.73%
	August	2,542,247	2,306,530	235,717	10.22%
	September	2,597,207	2,361,068	236,139	10.00%
	October	2,686,874	2,451,084	235,790	9.62%
	November	2,584,144	2,348,024	236,120	10.06%
	December	2,555,182	2,311,592	243,590	10.54%
Total		30,936,572	28,108,605		
Total Saving Energy				2,827,967	10.10%

REDUCTION IN ENERGY NEEDS FOR PRODUCTS AND SERVICES (G4-EN7)

Reduction in product energy needs in 2015 can be seen from the reduction in the intensity of energy consumption per batch production compared to 2014, as mentioned above, decreased by 3.4% with the following calculation:

Reduction in Energy Needs for Products and Services

YEAR	ENERGY CONSUMPTION (KWH)	BATCH PRODUCTION	INTENSITY (KWH)	REDUCTION
2014	17,305,725.37	1,314	13,170.26	3.4%
2015	17,016,720.76	1,337	12,727.50	

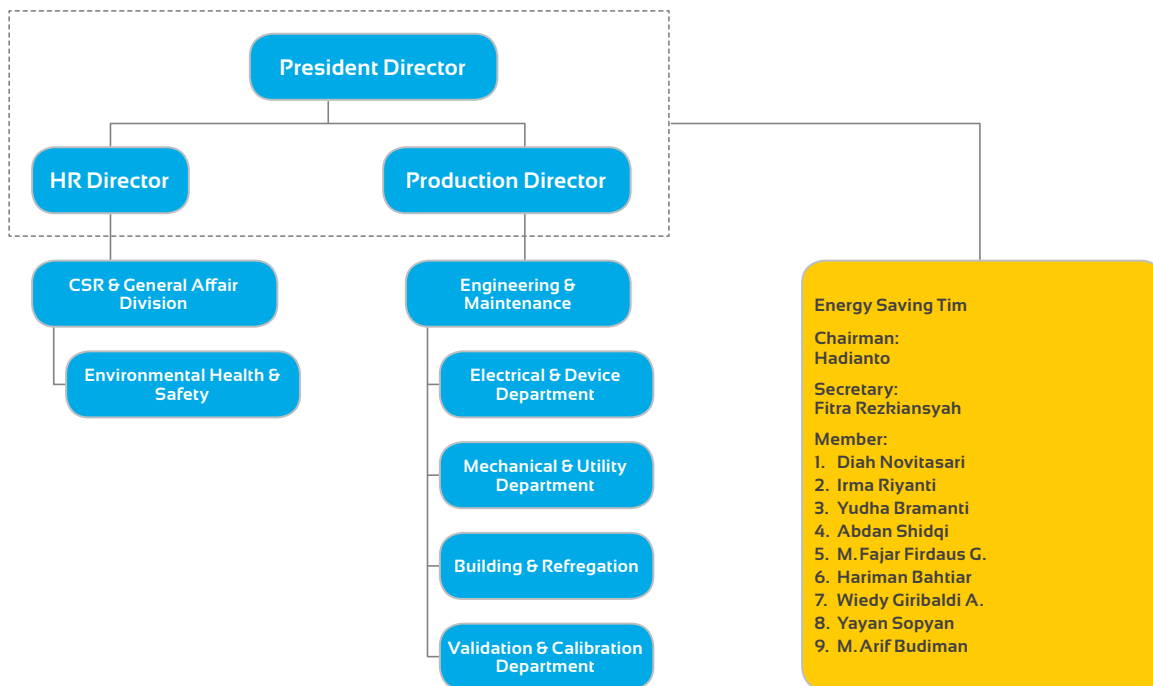
WATER

MANAGEMENT APPROACH (G4-DMA)

Rescue water resources policy outlined in the official documents of Bio Farma, which reads: "Saving Energy and Natural Resources" is defined by the director of Bio Farma. It is a form of commitment of top management of companies that care about saving energy and natural resources, including water resources.

Water savings program carried out by a special task force formed by the board of directors, namely Energy Savings Team in charge of the preparation and implementation of energy and water saving program. The team is supported by part - related part of the EHS Department and departments - departments that are under the auspices of the Engineering and Maintenance Division. The team members are competent personnel in the field of managing and saving water and had received training both internally and externally. The organizational structure of implementing water saving program and a training certificate documentation team members shown in the image below.

Water Conservation Team Organization Structure and Certification of One of The Team Member





TOTAL WATER USED BASED ON SOURCE (G4-EN8)

Bio Farma has two sources of water, the two pipelines from the Regional Drinking Water Company (PDAM) and four artesian wells. Total water taken from the artesian wells and PDAM during 2013 and 2014.

Total usage of water from artesian wells and taps in 2013 and 2014 are as follows

YEAR	MONTH	USAGE 2014 (M ³)					
		WELL I	WELL II	WELL III	WELL IV	PDAM I	PDAM II
2014	January	525	2,899	13	862	8,892	2,971
	February	513	2,646	11	773	9,801	832
	March	555	2,531	14	731	9,226	1,424
	April	528	3,058	715	883	7,860	1,790
	May	491	2,273	1,415	618	6,264	1,899
	June	572	2,968	2,388	937	13,190	2,672
	July	573	2,469	2,294	1,159	21,498	2,252
	August	561	2,340	2,844	2,221	9,268	2,830
	September	648	3,793	3,660	3,579	6,378	669
	October	705	3,498	2,744	3,608	5,743	0
	November	577	2,986	1,815	3,053	4,679	4,300
	December	668	3,605	1,819	3,043	3,859	1,768
Total		213246					
2015	January	560	2,692	921	1,831	3,930	1117
	February	781	2,839	772	1,919	6151	919
	March	2,281	3214	776	2,768	7,848	403
	April	2,042	2,759	767	2,804	7,523	415
	May	1,954	2519	807	2,444	4,553	693
	June	1,999	2,607	999	1,609	7,278	675
	July	2,026	2,255	969	1918	6,980	703
	August	2,296	2,783	1,689	2146	8,890	645
	September	2411	2,760	1,782	2364	9,090	782
	October	2,524	2,923	1,686	2317	1,1038	921
	November	2,414	2,852	881	2,240	9,040	486
	December	2,598	3,048	936	2,375	8191	667
Total		195795					

Standards and methodology used in calculating water use are:

- a. PDAM water source: the calculation of water consumption (m3) based on the magnitude of PDAM bills every month.
- b. Well water: calculation of water consumption (m3) is done by reading directly from the flowmeter tool that comes with every generator. Recording the numbers listed on the flowmeter apparatus in accordance with the amount of water used each month.

EMISSIONS ASPECT

APPROACH MANAGEMENT (G4-DMA)

Bio Farma is committed to controlling greenhouse gases emissions and other air emissions as a form of responsibility for the impact of the company's operations on the environment. We has a high commitment to carrying out the operation to the green industry with efficient and environmentally friendly. This form of green industry has proven not only to compliance with laws and regulations, especially in the field of environment, which is one of the nine points of the company policy and has a step further by implementing compliance standards higher than those required by legislation in environmental management.

The implementation of pollution prevention are among others of air pollution control, reduction of waste generation, reduction of waste generation, energy efficiency and water savings. Planning program is structured for the annual program and a long-term program of 5 years. The results of the identification of important aspects and impacts of each unit is analyzed and then made the classification and program priorities.

We understand that our business is deeply engaged in environmental impacts such as greenhouse gas emissions, but we are constantly trying to suppress these effects.

Below is a table of greenhouse emissions by 2015 and 2014 by operating activities Bio Farma. Sources of direct greenhouse gas emissions (scope 1) coming from the boiler, generator, incinerator. Measurement parameters of greenhouse gases in each source of emissions was conducted by grab sampling at monitoring points each flue boilers, generators and incinerators by accredited laboratory.

Calculation of the emission burden of each parameter is done by multiplying the emission burden of each parameter with a value of global warming potential (GWP) in order to get the value of the burden of emissions that cause global warming potential in tons of CO₂ equivalent. GWP for CO₂ parameter value is 1, for CH₄ was 0.021, and 0.310 for the N₂O is a greenhouse gas source, while indirect (scope 2) derived from the consumption of electricity. The burden of CO₂ emissions generated from the use of the electricity is calculated based on the US EPA 2011 eGRID 2010 Version 1.1 US Annual non-baseload CO₂ emission output rate, where the electricity emission factor is 6.8956 x 10⁻⁴ metric tons CO₂/kWh.

Use calculation formula: Emission = energy consumed x emission factor. and its boundary include data on the number of power PLN (in units of kWh) consumed by Bio Farma for the period 2015. The data is derived from utility usage reports of Bio Farma. according to SK emission factor the Directorate General of Electricity No. 128 1105 / 600.4 / 2012 for the Java-Bali interconnection system is at 0, 741 tons CO₂eq / MWh.

Direct Greenhouse Gas (GHG) Emissions (G4-EN15)

NO.	SOURCE OF EMISSION	PARAMETER	EMISSION LOAD YEAR 2014		EMISSION LOAD YEAR 2015	
			EMISSION LOAD (TONS)	EMISSION LOAD(TON)	EMISSION LOAD (TON)	EMISSION LOAD (TON EQ. CO ₂)
1.	Boiler	CO ₂	4.56258	4.56258	4.01063	4.01063
		CH ₄	0.0002	0.00499	0.00018	0.00439
		N ₂ O	0.00031	0.09348	0.00028	0.08217
2.	Genset	CO ₂	5.31715	5.31715	7.74035	7.74035
		CH ₄	0.00023	0.00582	0.00034	0.00847
		N ₂ O	0.00037	0.10894	0.00053	0.15858
3.	Incinerator	CO ₂	0.26581	0.26581	0.28967	0.28967
		CH ₄	0.00001	0.00029	0.00001	0.00032
		N ₂ O	0.00002	0.00545	0.00002	0.00593



Indirect Greenhouse Gas (GHG) Emissions (G4-EN16)

YEAR	MONTH	CONSUMPTION PLN (KWH)		GREENHOUSE GAS EMISSIONS (TON. EQ CO ₂)	
		ELECTRICITY I	ELECTRICITY II	ELECTRICITY I	ELECTRICITY II
2014	January	1,295,736	637,328	893,4877162	439,4759
	February	1,106,060	590,060	762,6947336	406,88177
	March	1,209,804	660,472	834,2324462	455,43507
	April	1,183,212	641,420	815,8956667	442,29758
	May	1,186,672	707,876	818,2815443	488,12297
	June	1,054,748	648,548	727,3120309	447,21276
	July	977,040	632,848	673,7277024	436,38667
	August	1,002,868	650,532	691,5376581	448,58085
	September	1,011,228	667,676	697,3023797	460,40266
	October	1,046,500	676,720	721,62454	466,63904
	November	887,408	772,052	611,9210605	532,37618
	December	1,085,072	688,312	748,2222483	474,63242
Total		21,020,192		14,495	
2015	January	975,896	67,700	672,9388458	466,83212
	February	859,816	618,800	592,894721	426,69973
	March	937,636	676,708	646,5562802	466,63077
	April	880,388	661,132	607,0803493	455,89018
	May	935,988	669,976	645,4198853	461,98865
	June	858,888	625,140	592,2548093	43107154
	July	789,844	580,776	544,6448286	400,4799
	August	789,844	580,776	544,6448286	400,4799
	September	884,024	606,344	609,5875894	418,11057
	October	946,604	696,680	652,7402542	480,40266
	November	890,160	600,864	613,8187296	414,33178
	December	832,244	474,348	573,8821726	327,09141
Total		17,440,576		12,026	



THE INTENSITY OF GREENHOUSE GAS EMISSIONS (G4-EN18)

Consistent with efforts to reduce energy consumption, as we have expressed at the beginning, in 2015 we managed to mitigate emissions, including emissions of CO₂, CH₄ and N₂O. Standards and methodology used in calculating the intensity of greenhouse gas emissions is based on the amount of greenhouse gas emissions resulting from the activities of production per production batch number for one year. The intensity of greenhouse gas emissions in 2015 can be seen from the table below.

Intensity Emission CO₂

DATA	2014	2015
Total emission CO ₂ (ton CO ₂ eq)	14,505.146	12,038.04
Total batch	1,314	1,337
intensity emission	11.04	9.00

Tabel Intensity Emission CH₄

DATA	2014	2015
Total emission CH ₄ (ton CO ₂ eq)	0.0111	0.01317
Total batch	1,314	1,337
Intensity emission	0.0000084	0.0000098

Tabel Intensity Emission N₂O

DATA	2014	2015
Total emission N ₂ O (ton)	0.20787	0.24668
Total batch	1,314	1,337
intensity emission	0.000158	0.000185

GREENHOUSE GAS EMISSION REDUCTIONS (G4-EN19)

Sources of emissions in Bio Farma consisting of generators / diesel and boiler (related to the production process) and an incinerator to process support. To reduce emissions of conventional pollutants (particles, CO, SO₂ and NO₂), Bio Farma perform preventive maintenance and periodic overhaul for machines that the source of these emissions. As described on the previous page, generally Bio Farma has managed to mitigate greenhouse gas emissions, which can be seen from the decline in the intensity of greenhouse gas emissions in 2015 compared to 2014, which is specialized for CO₂ emissions, from 11.4 tons CO₂eq / batch production 2014 dropped to 9 tons CO₂eq / batch production in 2015. efforts to mitigate greenhouse gas emissions in 2015 conducted through various other activities besides we have uncovered on page 64 (see the intensity of energy consumption) as follows:

ACTIVITIES TO REDUCE AIR POLLUTION	ABSOLUTE EQUIVALENT RESULTS WITH CO ₂ REDUCTION CO ₂ (TON CO ₂ EQ/THN)	
	2014	2015
Tree Planning	609,34	1,461.28
Energy Saving and Renewable Energy Programs:		
Solar cell installation for water pumps	3,97	3.97
Use of LED lighting, movement sensors and solar cell panels to light basement parking and public buildings	51,88	51.88
Energy recovery from exhaust heat from production rooms	144,49	144.49
Solar cell installation for outdoor lighting	5	17.86
Light bulb replacement with LED bulbs (energy saving)	5,8	8.97
Timer controls on drinking water dispensers	9,74	9.74
Environmentally friendly coolers	10,8	10.8
AHU Timer control	1462	1462
Cooling pump inverters	65	65
Inverters and night mode for 25 laminar air flow	60	60
Mematikan alat listrik kantor saat tidak digunakan	81,67	81.67



ACTIVITIES TO REDUCE AIR POLLUTION	ABSOLUTE EQUIVALENT RESULTS WITH CO ₂ REDUCTION CO ₂ (TON CO ₂ EQ/THN)	
	2014	2015
Recycling organic waste	181,5	112,15
Selective Installation Control on the elevators in public 2	-	2,62

Total energy savings as a result of efficiency programs are then multiplied by the emission factor of 6.8956 x 10⁻⁴ metric tons CO₂/kwh to determine the amount of CO₂ reduction based on the US EPA 2011 eGRID 2010 Version 1.1 US Annual non-baseload CO₂ output emission rate.

According to the EPA (2010) Waste Reduction Model (WARM), US EPA: Total emission reductions achieved from recycling inorganic mixed waste, such as paper, metals, plastic (as opposed to sending to a landfill) are 0.76 metric tons carbon equivalent (MTCE) per short ton. This value is then converted into CO₂ equivalent metric tons multiplied by 44/12 (molecular weight ratio CO₂/C), thus:

0.78 MTCE/ton* 44 g CO₂/12 g C = 2.87 metric tons CO₂E/ton of waste recycled instead of landfilled. This value is then multiplied by the amount of inorganic waste recycled.

To determine the amount of CO₂ absorbed as a result of our tree planting program, calculations were made using the Method for Calculating Carbon Sequestration by Trees in Urban and Suburban Settings document, Voluntary Reporting of Green House Gases, US Department of Energy, Energy Information Administration, April 1998. CO₂ absorption is calculated by multiplying the number of trees planted by the number of trees that have survived when recounting takes place multiplied by the average absorption rate per year.

NO_x, SO_x, and Other Air Pollutants (G4-EN21)

The conventional exhaust gas emission sources (GBK) is derived from two types of sources that the source of emission production process consists of generators and boilers, as well as emission sources supporting production process the incinerator.

Total emissions from emission sources of production (tons / year) Genset

PARAMETER	2014	2015
Partikel	93.10	67
SO ₂ is a form of SO _x , measurements are done according to related regulations	14.46	340.63
NO ₂ is a form of NO _x , measurements are done according to related regulations	185.87	530.38
Carbon monoxide, measurements are done according to related regulations	575.79	293.12

Total emissions from emission sources of production (Ton/ Tahun) – Boiler

PARAMETER	2014	2015
Partikel	44.22	34.18
SO ₂	0.34	3.44
NO ₂	108.19	42.87

Total Emisi Dari Sumber Emisi Proses Pendukung – Incinerator

PARAMETER	2014	2015
Partikel	186.84	96.79
SO ₂	372.26	192.81
NO ₂	83.45	44.47
CO	359.03	337.67

The emission value of each parameter is obtained through grab sampling at the monitoring point of each chimney and conducted by an accredited laboratory every six months for the boilers and generators and every three months for the incinerators.





EFFLUENT/ LIQUID WASTE

DISCLOSURE ON MANAGEMENT APPROACH (G4-DMA)

Bio Farma is committed to controlling pollution and saving natural resources as a form of corporate social responsibility to the community and the environment. Along with success in the business of making a profit then the green industry businesses realize an efficient and environmentally friendly. This form of green industry has proven not only to compliance with laws and regulations, especially in the field of environment, which is one of the nine points of the company policy and has a step further by implementing compliance standards higher than those required by legislation in environmental management.

The implementation of pollution prevention undertaken include air pollution control, reduction of waste generation, reduction of waste generation, energy efficiency and water savings. Planning program is structured for the annual program and a long-term program of 5 years. The results of the identification of important aspects and impacts of each unit is analyzed and then made the classification and program priorities.



TOTAL WASTE (G4-EN23)

Waste Water (m³/Month)

YEAR	MONTH	IPAL 1	IPAL 2
2014	January	954	381
	February	813	391
	March	1,334	475
	April	1,402	406
	May	936	373
	June	742	351
	July	597	319
	August	736	450
	September	637	360
	October	219	730
	November	426	823
	December	677	1,236
Total		15,768	
2015	January	1,026	840
	February	1,094	356
	March	1516	989
	April	2,663	542
	May	1,727	757
	June	1,680	721
	July	833	290
	August	1155	813
	September	1,024	607
	October	1,044	849
	November	1115	937
	December	1012	807
Total		24,397	



PRODUCT AND SERVICES ASPECT

MITIGATING THE ENVIRONMENTAL IMPACT OF PRODUCTS AND SERVICES (G4-DMA) (G4-EN27)

The work done by Bio Farma to manage the environmental impact of the products is to make the combination vaccine Pentabio, by uniting 5 vaccines namely Diphtheria, Tetanus, Pertussis, HB and HiB in one package. With this Pentabio vaccine, occurred saving the use of leaflets and carton packaging material compared to the manufacture of vaccines separately

Comparison of generation non B3 waste due to innovation pentabio as follows.

Pentabio Vaccine Production

PENTABIO	5 DOSAGE	1 DOSAGE
Total Production (Vial)	340,000	2,880,000
Total Dosage	1,700,000	2,880,000
Total Dosage 2015	4,580,000	
Package Weight per Box (gram)	19	17
Package Waste	646,000	4,896,000
Total Waste (gram)	5,542,000	

Production of DTP vaccine, Hepatitis B vaccine and the Hib vaccine with the same dose (4.58 million doses)

VACCINE PRODUCTION	DTP	Hep B	Hib
Total Box	458,000	458,000	458,000
Package Waste (gram)	20	17	17
Package Waste	916,000	7,786,000	7,786,000
Waste Total (gram)		16,488,000	

Comparison of waste produced between pentabio package with vaccine DTP + Hep B + Hib package

VACCINE	TOTAL WASTE (TON)
DTP + Hep B + Hib	16.49
Pentabio	5.54
Percentage of waste reduction as a result of innovation	66%

Similarly, B3, pentabio innovation also results in a reduction in waste generation B3 is a weight reduction of packaging the vaccine compared with B3 waste generation resulting from DTP, Hep B vaccine and the Hib vaccine with the same number of doses. The following weight ratio pentabio packaging by packaging DTP + HB + Hib:

(VACCINES)	(WEIGHT OF PACKAGING WASTE) (KG)	TOTAL WEIGHT (KG)	WEIGHT REDUCTION OF PACKAGING WASTE (KG)
Pentabio	33,134.8	33,134.8	
DTP	18,277.6		107,779.6
Hepatitis B	32,428	14,0914.4	Atau
HIB	90,208.8		76.5 %

Pentabio vaccine can also save energy used compared to the total energy for the production of each type of vaccine. Prior to this innovation, the total energy consumption for the production of DTP vaccine reached 1.23 MWh / batch, to HB vaccine production reached 1,221 MWh / batch and for the HiB vaccine production amounted to 1.21 MWh / batch. When totaled overall energy consumption for production of 5 types of vaccines have reached 3.661 MWh / batch. Whereas after this innovation is done, the total energy consumption for equivalent pentabio product menghasilkan 5 types of vaccines amounted to only 0.778 MWh / batch.

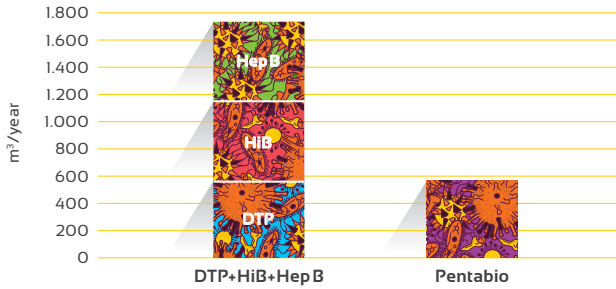
This innovation can be obtained from the amount of energy savings of 2,883 MWh/batch.

YEAR	BATCH	BEFORE INNOVATION		AFTER INNOVATION		SAVING/YEAR
		MWH/BATCH	MWH/YEAR	MWH/BATCH	MWH/YEAR	
2014	40.0	3.661	146.44	0.778	31.12	115,32 MWh
2015	43.5	3.661	159.25	0.778	33.84	125,41 MWh



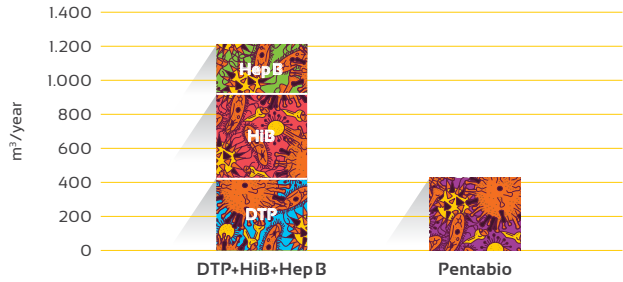
Creating a combination vaccine also resulted in reduced water usage for operations compared to producing separate vaccines. In general, water required for production is approximately 1,740.6 m³/pa, while the combination vaccine only requires approximately 580.2 m³/pa, thus saving approximately 66.67%, or approximately 1,160 m³/year.

Water Consumption



The Pentabio innovation also resulted in reduced water pollution compared to that caused by producing separate vaccines. In one year, water pollution reduced by approximately 914 m³.

Water Pollution



COMPLIANCE ASPECT

APPROACH MANAGEMENT (G4-DMA)

To achieve its target as an environmentally friendly vaccine industry (Green Vaccine Industry), Bio Farma ensures its environmental management strategies are based on ISO 14001 (Environmental Management System) and have been certified by the independent certification agency Lloyd’s Register Quality Assurance (LRQA) since 2005. Environmental management is based on Plan, Do, Check and Act, so as to attain high quality environmental management standards that constantly improve.

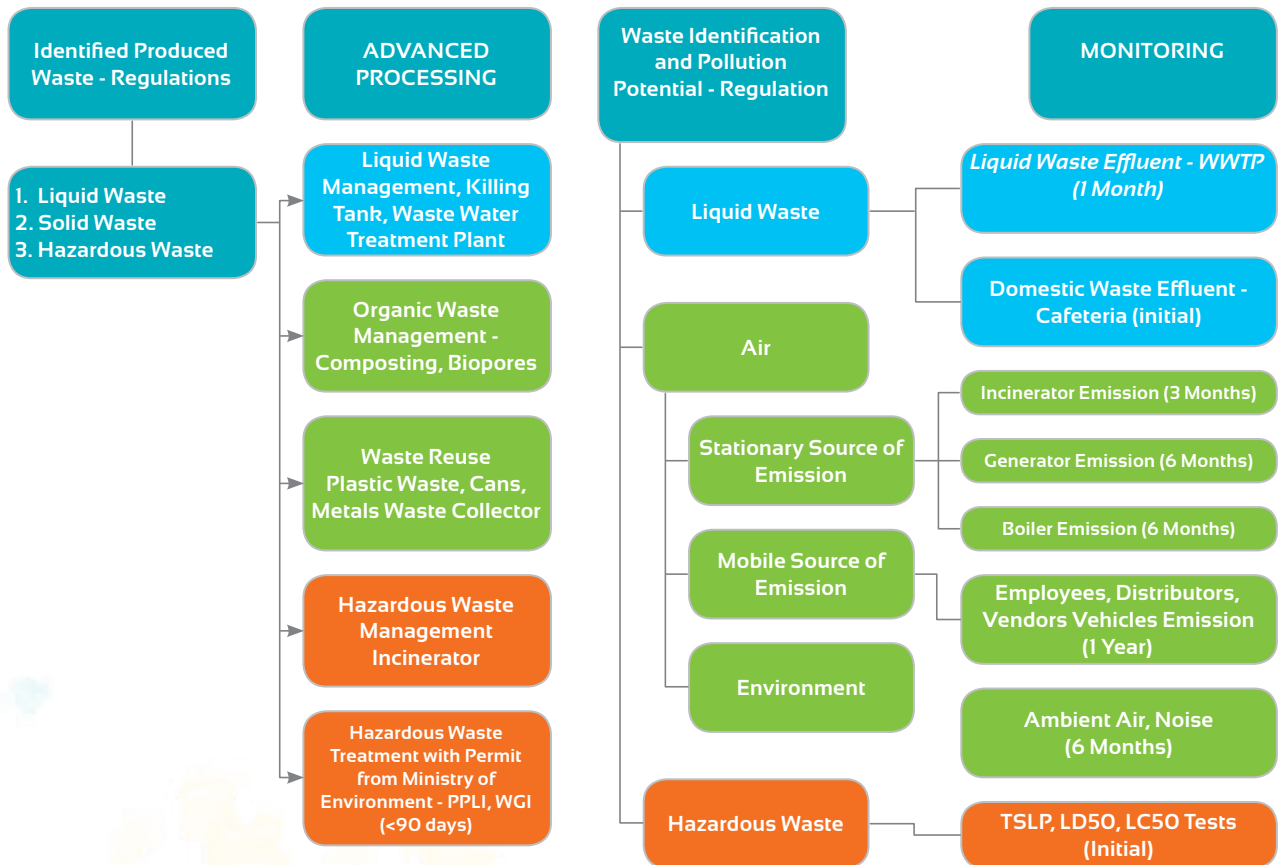
Bio Farma also implement the principles of cleaner production to minimize the amount of waste and the environmental impact of the company’s operations. Beginning in the planning stage is the stage of procurement of raw materials, Bio Farma has made selection of vendors, with select vendors who have implemented environmental management systems and vendors that have environmentally friendly products.

Strategies and policies of Bio Farma reflects the company’s commitment as a green industry that is Pollution Prevention, Saving Energy and Natural Resources and Compliance to Legislation and Other Requirements. Targets to be achieved by Bio Farma in environmental management are:

1. Energy and Natural Resource Efficiency through the implementation of Clean Production, from the planning stage of production, to optimization of production processes, to waste management.
2. Comprehensive environmental management of air, wastewater, solid waste and toxic and hazardous waste that complies and is in accordance with regulations set by the government.
3. Excellent compliance in environmental management to achieve operational efficiency and manifest the Company’s commitment and responsibility to the environment and social issues.
4. Innovations to the environmental management program for continuous, sustainable environmental management that ensures continued high quality environmental management from year to year

FINES AND SANCTIONS FOR NON-COMPLIANCE WITH ENVIRONMENTAL LEGISLATION AND REGULATIONS G4-S08

Control of environmental pollution is implemented by managing liquid waste, solid waste, toxic and hazardous waste and air pollutants. The results are monitored by an independent laboratory in accordance with schedules and regulations (monthly monitoring for waste water, quarterly for incinerator emissions and each semester for generator and boiler emissions). Environmental quality measurement results are then compared to quality standards set in the relevant regulations to evaluate environmental management performance. [G4-DMA]



Monitoring of contamination is done routinely to 100% of parameters prescribed by the regulations and legislation. The results of pollution monitoring entirely meet applicable standards and there is nothing that exceed the applicable provisions Bio Farma is the company adhere to rules and regulations even have set excellence standards in the field of environmental management so as to categories of obedience Bio Farma has been included in the beyond compliance. It is recognized by the predicate of proper green already acquired Bio Farma for 5 times and predicate of proper gold was achieved by Bio Farma for the periods 2013-2014 and 2014-2015.

Bio Farma hopes that it can continue to maintain and even improve on its environmental management performance so it can be an example for industry generally in Indonesia. During the reporting period, Bio Farma received no sanctions or punishments for non-compliance with laws and regulations; in other words Bio Farma complied with all environmental provisions.



IMPLEMENTATION OHS SYSTEM MANAGEMENT

Management of Bio Farma is committed to implementing Occupational Health and Safety (OHS) management system in accordance with the international standards. OHSAS 18001: 2007 obtained in 2009 is still maintained in force until the reporting period after receiving periodic review and pass the re-audit.

Management continues to sharpen the policy of accident prevention and occupational diseases. Prevention is an act that is far more important than curative measures in order to minimize workplace accidents and avoid the risk of occupational disease.

The company has formulated a series of policies in the field of Occupational Health and Safety (OHS), as outlined in the Company's rules MBF- OI rev # 1. In this rule stated that Bio Farma always tried to do the continual improvement of the management system of OHS, quality and environment.

As a company which is engaged in pharmaceutical products, Bio Farma always apply the best practices in the management of Occupational Health and Safety (OHS), both in the production process as well as in other supporting operational activities. To obtain excellent performance of Occupational Health and Safety (OHS), Bio Farma regularly monitor and evaluate the implementation of practices practices. From the results of monitoring and evaluation of the performance of OHS can be improved, including the improvement of policies, systems and procedures.



OHS Goals, Targets and Program

ASPECT	GOALS	TARGET	PROGRAM
Fire	No fires at the company	Prevent small, medium and large fires in accordance with SOP 214K-KTD-O1	<ol style="list-style-type: none"> 1. Routine safety patrols around company. 2. Training fire detection and extinguishing apparatus namely fire extinguisher, wheeled fire extinguisher, hydrant or fire alarm system, etc. regularly and periodically the part of the emergency response team (TTDB), a core emergency response team (TTDI), security personnel, employees K2BF. 3. Maintenance of fire detection equipment and infrastructure and fire protection equipment. 4. Training to understand electrical systems and circuit panel placement for emergency response teams, security personnel, employee cooperative and the canteen. 5. Induction training and hot work permit for project work at Bio Farma. 6. Placement of signs banning smoking, establishment of smoking areas in the company. 7. Training or provision of OHS/emergency response information for all employees, new employees, company guests and project supervisors in print media, video and OHS email forum. 8. Simulation of fire in the corporate environment. 9. Good coordination with the fire department Dissemination and training JSA, IAP to TTD 10. Training in use of the lift and anticipating safety emergencies if trapped in a lift. 11. Manufacture signs regarding diesel transfer methods from the tanker to the Bio Farma storage tank
Earthquake	Evacuate all employees, guests, project workers, etc. to gathering points in accordance with conditions.	Emergency response time in an earthquake for all buildings of less than 6 minutes	<ol style="list-style-type: none"> 1. Training or provision of OHS/emergency response information for all employees, new employees, company guests and project supervisors in print media, video and OHS email forum, etc. 2. Simulation of earthquake evacuation drill in the corporate environment
Acute Respiratory Infection (ARI)	The Reduce number of cases of ARI	Reduction of 10% in ARI cases	ARI vaccinations and promotion of ARI prevention methods
Unsafe actions, unsafe conditions. Biological, chemical, physical, ergonomic and psychosocial risk factors.	Prevent workplace accidents and work related illnesses	<ul style="list-style-type: none"> - No more than 2 workplace accidents / month. - Maintain zero accident award No work-related illnesses - Healthy employees and high productivity to prevent PAK. 	<ol style="list-style-type: none"> 1. Identification of OHS risks in all areas. Control of OHS risks based on hierarchy, including provision and use of PPE in accordance with 100K-SIS-JSA. 2. Work permits for employees (contractors) with high-risk jobs. 3. Routine safety patrols. 4. Regular reporting of internal and external workplace accidents (Disnaker), investigation, workplace accident analysis and corrective & preventive action. 5. Compliance with OHS legislation and regulations. 6. Identification of confined space areas/facilities. 7. Placing signs on confined space areas/facilities. 8. Identifying MSDS for all divisions and making summarized MSDS for signs.
Employee and candidate employee health	Recruit healthy employees, early detection of infectious diseases in employees, provide protection against various types of virus and bacteria in the workplace.	Healthy employees and high productivity to prevent PAK.	<ol style="list-style-type: none"> 1. Conduct health checks on candidate employees 2. Conduct periodic general health checks on employees 3. Specifically check audiometric health of employees at risk 4. Specifically check visual acuity of employees at risk 5. Immunize against (check antibody markers) hepatitis B, TT, rabies, polio, measles, etc. for employees at risk.



The OHS system management performed by the Section of Environmental Health and Safety, which is under the control of the General Division and CSR. In addition, to ensure the OHS management system running well, also formed an organization in the form of ad-hock Team, charged with monitoring the implementation of OHS system management and Environmental.

The team is:

1. Occupational Health and Safety Committee.
2. Emergency Response Team.

Tea P2K3 was formed by decree of Directors No. 03 681 / DIR / IV / 2015. The team is composed of 26 members from the representatives of management and employee representatives. The duty of the Occupational Health & Safety (OHS) Counseling Committee (P2K3) team is to give suggestions and consideration whether requested or not, to the management regarding OHS issues.

Process Implementation OHS Management System, consists of four parts, namely;. The flow process comprises plan, do, check and action.

Below is a chart Process Implementation Management System OHS.



PLAN

The planning process encompasses:

1. Identifying Occupational Health and Safety risks and hazards, both internally and externally
2. Identifying and monitoring legislation, regulations, licensing and other criteria (including internal performance) related to OHS
3. Determining the OHS processes, targets and programs required to reach OHS policy
4. Developing and using OHS performance indicators

DO

Implementing and Operating the OHS management system:

1. Create a management structure, determine satisfactory roles, responsibilities and authority.
2. Provide adequate resources.
3. Train employees and ensure employee awareness and competence in OHS, such as training in the use of fire extinguishers and hydrants, evacuation training and first aid, etc.
4. Develop and maintain documentation.
5. Determine and apply document control.

6. Determine and apply operational control and implement a control hierarchy.
7. Ensure readiness and emergency response with routine emergency response simulation.

CHECK

Check the OHS Management System:

1. Monitor and assess OHS policies, goals, legalities and other conditions.
2. Assess OHS legislation and licensing conformity.
3. Identify non-compliance and take corrective and preventative action.
4. Manage recordings.
5. Conduct periodic (twice a year) internal audits.
6. Conduct routine Safety Patrols in all divisions.

ACTION

1. Review the management of the OHS management system every month (QSHE Meeting).
2. Identify areas for OHS improvement.

IDENTIFICATION OF OHS ASPECTS/DANGERS AND IMPACTS

Risk control in Bio Farma is based on the SM-S20 Guideline: Corporate Risk Management, 100K-SIS-IAP (Identifying Important Aspects) Standards and 100K-SISJSA (Analyzing Workplace Safety) Standards.

In these documents it clarifies the following:

1. The entire Division should identify important OHS/ Environment aspects. Important aspects are dangers that exist physically, chemically, biologically, ergonomically and psychosocially. In addition, consideration should also be made of things that could cause workplace accidents or disease, such as: unsafe actions, unsafe conditions and mismanagement.
2. These important aspects are then grouped and analyzed to see if they can be controlled or not. If they can be controlled, they are summarized in the 100K-SIS-JSA document.

Steps to control risks are:

- a. Elimination (removing the source of danger).
 - b. Substitution (replacing the dangerous material or equipment for something safer).
 - c. Engineering control (making changes to equipment by adding protective measures thus making the condition or equipment safer).
 - d. Administrative (standard procedures, warning signs, employee rotation, limiting time allowed in certain areas, supervision and training).
 - e. Personal Protection Equipment (ear muffs, ear plugs, gloves, masks, safety shoes, etc).
3. If the important aspects / dangers cannot be controlled, then an OHS/Environment program must be created.



PROGRAM AND POLICY IMPLEMENTATION OHS

Bio Farma continue to improve the system and practice of occupational health and safety management that aims to maintain and improve employee productivity. It is also intended for the prevention of occupational accidents and occupational diseases.

PROCUREMENT OF HEALTH FACILITIES

To maintain and improve the health of employees, in accordance with the recommendations of GCU, in 2015, Bio Farma has been providing facilities and activities in the field of health, such as; fitness center in the office, providing food diet, the campaign to go up one floor or down two floors using the stairs in order to cultivate a healthy move, sticking stickers color indicator urine on the toilet as one of health promotion activities.

PREVENTIVE WORKPLACE ACCIDENT

In an effort to prevent the occurrence of the incident or accident, each work unit were asked to compile safety analysis includes safe work procedures based on the identification of risks / dangers in the work unit concerned. This analysis is done every 6 months are arranged in the form of a check list so it can be analyzed the effectiveness of the implementation of safe working predetermined

Hazard control measures can be done through various ways such as; elimination (eliminating the hazards to which a tool / activity), substitution (replacing materials / tools that are harmful to harmless), the engineering processes (modifying a device to be harmless), administrative control (the system settings so that the potential hazard can be controlled), as well as the use of personal protective equipment (PPE). The control measures carried out since the planning, for example, when planning the purchase of goods, it should be noted OHS aspects for workers who will use the goods, so the tool to be used safely.

As the prevention of occupational accidents, Bio Farma in 2015 have conducted training OHS management system that must be followed by all new employees. In addition, also held a variety of specialized training related to the certification of OHS. This training is mandatory for those responsible in the appropriate field of specialization OHS their respective expertise such as; P3K officer training, expert training OHS, Training Contractor Safety Management System, etc. In dealing

with danger, Bio Farma also conduct regular training on handling emergencies.

CONSTRUCTION OF PHYSICAL FACILITIES OHS

In addition to the provision of facilities such as a fitness center mentioned above, Bio Farma also provides various facilities and OHS physical means, such as;

Install an emergency alarm system, fire pump replacement diesel engine, and the installation of multi-gas monitor as complementary tools in emergencies

MAINTAINING EMPLOYEE HEALTH

As a preventive measure, Bio Farma vaccination in accordance with the risk that disease may be exposed to in the workplace. Besides, it has also been conducted periodic medical examinations to ensure the employee is fit for work.

To avoid the risks of occupational diseases specifically, the specific check is done in accordance with the likely impact upon the recommendation of company doctor

To maintain the health of employees, the company provides the company doctor for discussion / consultation related to health care in order to maintain and improve labor productivity. In addition, the company also provides a means Polyclinic for curative and rehabilitation services.

As in controlling common diseases such as influenza, the company has influenza vaccination program for all employees.

INVESTMENT FUND OHS

In 2015 conducted OHS equipment investment, in the form of procurement; diesel engine fire pump, the addition of an emergency alarm system, as well as the multi-gas monitor, all totaled Rp296,265,000.00. These costs are beyond the annual routine needs such as regular health checks, special medical examinations, training, emergency equipment maintenance costs, the cost of testing work environment, as well as the provision of fitness equipment made by General Section.

REPORTING WORKPLACE ACCIDENTS [G4-LA6]

Workplace accidents are clarified in Procedure Standards 100K-KK-01: Handling of Workplace Accidents, which includes guidance on handling accidents / near misses (incidents), accident/near miss reporting internally and externally, accident/near miss investigations and the follow up of corrective actions and reporting procedures.

Bio Farma divides occupational accidents within 5 (five) groups, namely: (1) almost wretched, (2) light accident, (3) work accident being, (4) severe occupational accidents and (5) fatal accidents.

The data is processed by a work accident Occupational Health & Safety (OHS) Counseling Committee (P2K3) team to obtain information Frequency Rate (FR), Severity Rate (SR) and Lost Time Injury (LTI).

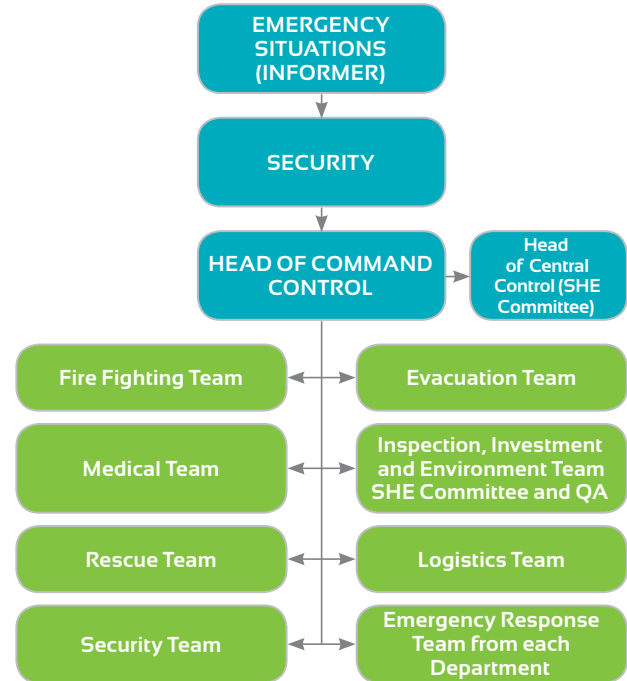
EMERGENCY RESPONSE SYSTEM

To respond to emergencies and minimize the impact of emergencies on employees, assets of the company, society and environment, created a procedure includes control, action anticipation and coping with the emergency within 24 hours (fire, earthquake, riots and threats) and reporting readiness and emergency response systems and their command. In addition, the procedure also prepared the use of fire extinguisher, hydrant and fire alarms to support fire prevention and suppression activities that includes deployment, operation and maintenance of extinguishers and fire detection

Organizational Structure for Emergency Situation Control



Path of Communication for Emergency Situation Control



To check on the effectiveness of the emergency response system, emergency handling procedures are regularly tested so they can be understood and implemented by all employees. Emergency Drills and Simulations are performed once every two years, involving the Company's employees and the surrounding community, and cover all aspects of emergency response, such as:

1. Fire drills, use of fire extinguishers, hydrants and evacuation route trials.
2. Earthquake simulation.
3. Riots.
4. Bomb threats.
5. Emergency situations related to the PT Bio Farma contingency plan.

A review of the emergency response simulation implementation was conducted to ensure the correlation between the simulation and effectiveness of the applicable procedures. If necessary, a repeat simulation will be conducted or the standard procedures revised.



PERFORMANCE HEALTH AND SAFETY

Performance achievements OHS 2015 assessed in accordance with the set targets, however we will continue to implement improvements are necessary in accordance with the dynamically changing environment. Below are descriptions of some of the activities OHS has done during 2015 and achievements

MONITORING WORKPLACE HEALTH

To ensure the health of our employees, we perform health monitoring as a follow up of the enterprise as regulated in the Standard Procedures 100K-SIS-08 on Employee Health Monitoring. This activity aims to eliminate potential sources of contamination from the employee. In addition, the program is also intended to protect employees from things that are harmful for the environment is in the Bio Farma.

MONITORING CATERING

In addition to monitoring the health of employees, we also carry out monitor food catering's provided by the Company. The monitoring procedures are arranged in Standard Procedure 236K-MonC-01.

The company provides lunch for the entire workforce as well as a meal for employees on overtime. Therefore, the company needs to ensure that the food provided is safe and healthy food, therefore we monitor the meal catering organizers both from the legal, hygiene and health aspects.

Workplace Accident Report [G4-LA6]

TYPE OF WORKPLACE ACCIDENTS	2013												WA	
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC		
Incident	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Minor	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Moderate	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Major	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fatal	0	0	0	0	0	0	0	0	0	0	0	0	0	0

TYPE OF WORKPLACE ACCIDENTS (WA)	2014												WA	
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC		
Incident	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Minor	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Moderate	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Major	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fatal	0	0	0	0	0	0	0	0	0	0	0	0	0	0

TYPE OF WORKPLACE ACCIDENTS	2015												WA	
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC		
Incident	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Minor	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Moderate	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Major	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fatal	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Workplace accidents Frequency Rate (FR) and Severity Rate (SR)

TYPE OF WORKPLACE ACCIDENTS (WA)	2013												WA	
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC		
Incident	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Minor	1	0	0	0	0	0	0	0	0	0	0	0	0	1

TYPE OF WORKPLACE ACCIDENTS (WA)	2014												WA	
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC		
Incident	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Minor	1	0	0	0	0	0	0	0	0	0	0	0	0	1

TYPE OF WORKPLACE ACCIDENTS (WA)	2015												WA	
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC		
Incident														
Minor						1			1					

Disease Caused by Accident in Work Place

MONTH	2013												WA	
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC		
DCA	1	0	0	0	0	0	0	0	0	0	0	0	0	1

MONTH	2014												WA	
	JAN	FEB	MAR	APR	MEI	JUN	JUL	AUG	SEP	OCT	NOV	DEC		
DCA	1	0	0	0	0	0	0	0	0	0	0	0	0	1

MONTH	2015												WA	
	JAN	FEB	MAR	APR	MEI	JUN	JUL	AUG	SEP	OCT	NOV	DEC		
DCA	0	0	0	0	0	0	0	0	0	0	0	0	0	1



SAFETY WORKING HOURS

Safe working hours is the number of hours in which there has been no accident.

Performance safe work hours within 3 (three) last year rated good are as follows:

2013 = 2,653,644 hours

2014 = 2,839,393 hours

2015 = 2,922,811 hours

The calculations are based on direct calculations by the Human Capital Division by accumulating the total working hours for each employee in 1 year period.

WORK ENVIRONMENTAL HEALTH

To ensure the health and comfort in the workplace, we also perform a variety of monitoring and measuring other aspects closely correlated to the health of employees. In this case, the variables are monitored and measured is the noise and light intensity. Measurements are made of 100% to the work area. The measurement results within 2 (two) years is as follows:

	STANDARD VALUE	2014	2015
Light Intensity	300 lux	>300 lux	>300 lux
Noise	85dB	<85dB	<85dB

For 2015 the Light Intensity measurements were above standard but they are equipped with controller

OHS AWARDS

Bio Farma has a Collective Labour Agreement (CLA) with the Association of Employees of PT Bio Farma (Persero). Collective Labour Agreement is now in effect was approved by the Department of Manpower and Transmigration of West Java Province on July 31, 2015

In the CLA has been set clause on Occupational Health and Safety (OHS) is described in Chapter X of the Occupational Health and Safety as well as the maintenance and environmental protection

The company also has formed a team of Committee of Occupational Health & Safety (P2K3) in 2015, based on the Decision of the Board of Directors of PT Bio Farma (Persero) No. 03 681 / DIR / VI / 2015 dated June 3, 2015 on the Establishment of Development Committee of Occupational Health & Safety (OHS) PT Bio Farma (Persero).

To always be aware, the awareness of the importance of safety should be regularly communicated to the employee in question, for it routinely Company did Safety Talk To guests who visit mainly to the location of plant, strictly carried Safety induction, in accordance with the Standard Procedures 214K-PT-01 , Safety Induction is shown in a video that explains what should be done by a case of emergencies such as earthquakes and fires, etc.



Bio Farma received Zero Accident Award 2015 from Ministry of Manpower of Republic Indonesia



COMMITMENT TO EQUALITY

Bio Farma is committed to applying the principle of equality in its treatment of all its employees and does not differentiate based on gender, religion, ethnicity or race. This commitment is applied at all stages of human resource management, from recruitment to training and development, performance appraisal, career development and remuneration.

As a company engaged in the field of vaccines and life science industries, in the management of human resources (HR) we focus on planning and recruitment of quality, competent and professional human resources. We provide equal opportunities between genders in employee recruitment, coaching, development and career enhancement programs.

RECRUITING THE BEST TALENT (G4-DMA)

Bio Farma conducts recruitment to find the best talent according to the organization's development and growth needs. Bio Farma provides equal opportunities for all job applicants, both male and female. As of 2014, Bio Farma was also gradually providing work opportunities for disabled job applicants.

The recruitment process is open and free from discrimination for all those who meet the pre-determined criteria. To solicit and provide employment opportunities as widely as possible, job opportunities are announced openly in national and local print media, electronic media (the Company's website, Facebook and Twitter, the SOE website) and on the radio, as well as through job fairs at various universities.

FAIR REMUNERATION (G4-EC5) (G4-LA13)

The remuneration provided to Bio Farma's employees is based on a formula related to the grade and level of specific job. Bio Farma guarantees that the minimum grade (17) will receive higher remuneration than the government set municipal minimum wage. Remuneration is based on education level, length of service and grading. Payments to employees who die working for the Company are assessed at one grade higher, and for employees who have reached the maximum retirement age and have stayed for two years at a certain grade, and meet the conditions specified by the Company, may be awarded a higher grade level. The Company applies a remuneration system that implements a basic salary that is relatively high compared to the minimum wage. In addition, the Company does not differentiate between remuneration for male and female employees at any level. (G4-DMA)

Employee income per month (gross) based on level and grade in 2014

LEVEL	GRADE	GROSS INCOME PER MONTH (RP)	
		MINIMUM	MAXIMUM
Head of Division	6-2	15,845,847	28,081,906
Head of Department	8-3	10,815,727	19,937,323
Head of Section	12-3	5,856,204	16,397,396
Staff	9-5	6,253,860	8,338,027
Junior Staff	13-5	4,407,853	11,246,004
Operational	17-7	3,396,621	9,089,201

While the Gross Employee Income per month based on job level and grade for 2015

LEVEL	GRADE	GROSS INCOME PER MONTH (RP)	
		MINIMUM	MAXIMUM
Head of Division	6-2	23,516,202	30,975,418
Head of Department	8-3	12,393,042	21,653,705
Head of Section	12-3	9,634,826	18,388,485
Staff	9-5	5,777,460	9,471,683
Junior Staff	13-5	5,164,770	13,163,544
Operational	17-7	3,971,733	10,865,530

EMPLOYEE WELFARE (G4-LA2)

Bio Farma provides more than merely a salary to its employees and routine benefits (take home pay) with monetary benefits such as Religious Holiday Allowance, welfare benefit, annual leave allowance, long-service leave allowance, uniform allowance and bonus (production service). In addition, employees are provided with medical facilities (outpatient and inpatient).

The Company also provides a retirement allowance, including a defined contribution pension that provides a monthly income, old age savings, life insurance and healthcare for retirees.

Benefits received by Permanent Employees and Contract

DESCRIPTION	PERMANENT EMPLOYEE	CONTRACT EMPLOYEE
Religious Holiday Benefit	√	√
Welfare Benefit	√	√
Education Benefit	√	
Service and Dedication Awards	√	
Personal Income Tax Benefit	√	√
Housing Benefit	√	
Annual Leave Benefit	√	
Long-Service Leave Benefit	√	
Employee Clothes Benefit	√	
Production Services	√	√



FREEDOM OF ASSOCIATION AND INDUSTRIAL RELATIONS (G4-HR4) (G4-LA4) (G4-LA5)

Harmonizing industrial relations between the employees with the leaders of the Company is conducted through communication and consultation in the Bipartit Cooperation Institution (LKS) whose members are representatives of labor unions and representatives of the Company. Various matters relating to the implementation of the rights/ obligations of the employees and the company, up to the completion of employee disciplinary violations of which the procedures are regulated in the Collective Labour Agreement (CLA). To provide follow up to violations, the Company has a Bipartite Cooperation Institution (LKS) composed of representatives of the Company and employee representatives, whose function is to provide advice and opinions when the Board of Directors is imposing a moderate or severe disciplinary action on employees, and at which employees can file a complaint in accordance with the stipulations.

Bio Farma has formed a Bipartite operation Institution Management comprising representatives from the Company and employee representatives, in accordance with Board of Directors Circular No. 01395/DIR/ III/2013. The bipartite forum was established to develop industrial relations for the sustainability, growth and development of the Company, including employee welfare. The bipartite forum board meets periodically

and communicates Company policies and employee aspirations. The forum is also a medium for employees to submit suggestions, considerations and opinions to the Company to establish and implement company policy.

As of the end of the reporting period, the company has not set in the bipartite collective labour agreement, the minimum time limit notice to employees in the event of a fundamental change in the company such as acquisitions, mergers, downsizing, or restructuring of the company.

Total HIKA and FORWAN membership (G4-II)

HIKA
Employee Association PT Bio Farma (Persero)

91% membership of 1,030 employees from the total workforce of 1,127 employees

FORWAN
Employee Forum PT Bio Farma (Persero)

6% membership of 65 employees from the total workforce of 1,127 employees



HUMAN RESOURCE EDUCATION AND TRAINING PROGRAM

Bio Farma has designed a training and development program for employees that can maintain performance quality and improve competencies on an ongoing basis. Every employee has the same opportunity to improve their competencies in accordance with their potential, abilities and skills.

A range of training programs are available in-house and at outside education/training organized by external parties, offering training in competencies, technical/functional skills and specialist certification as required in specific positions (mandatory training), managerial training and various knowledge sharing sessions. In addition, the Company also provides scholarships to continue formal education at post graduate level (Magister & Doktor).

Training and development activities that took place during 2015 were as follows:

Development Programs and Realization of Programs

	2010	2011	2012	2013	2014	2015
TRAINING OF LEADERS						
Plan	134	150	117	177	109	64
Realization	77	87	49	129	50	49
TRAINING OF NON- LEADERS						
Plan	143	202	64	148	139	432
Realization	114	181	51	117	30	375
FORMAL EDUCATION						
Plan (in million rupiah)	3,118	3,567	4,158	6,444	7,839	2,500
Realization (in million rupiah)	2,967	4,056	3,968	117	3,775	1,437
Number of participant						8
- Domestic	-	20	1	1	1	5
- Overseas	-	-	2	2	1	3
EXPENSES OF EMPLOYEE CAPACITY BUILDING AND NUMBER OF PARTICIPANTS						
Expense						
- Domestic	1,268,371,857	972,764,500	1,593,634,460	5,236,670,299	4,025,550,883	14,000
- Overseas	1,268,371,857	559,227,360	1,049,928,981	1,629,923,768	1,689,115,734	9,700
Number of Training Participants						
- Domestic	-	213	182	196		1,147
- Overseas	-	43	38	40		141



REWARDS FOR BIO FARMA EMPLOYEES

Bio Farma provides awards to employees with high levels of achievement, dedication and professionalism. Each year, Bio Farma makes awards such as religious pilgrimages for exemplary employees, service awards, awards for 20 years of employment and for donating blood. Following are details of the number of employees who received awards in 2015.

TYPES OF AWARDS	NUMBER OF RECIPIENTS 2012	NUMBER OF RECIPIENTS 2013	NUMBER OF RECIPIENTS 2014	NUMBER OF RECIPIENTS 2015
Haji Pilgrimage	3 and partner	3 and partner	3 and partner	3 employees and partner
Umroh Pilgrimage	5	5	11 and partner	3 employees and partner
20 years works Service	28	22	16	6 employees
Blood Donor	54	37	31	39 employees

EMPLOYEE TURNOVER (G4-LA1)

One of several supporting functions of the Company's main vision, mission and strategy is the Human Capital function, in which there are "People, Skills and Roles". Through proper management, Bio Farma employees are the main capital that generates added value for stakeholders.

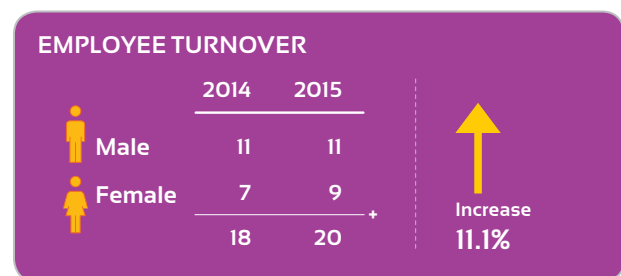
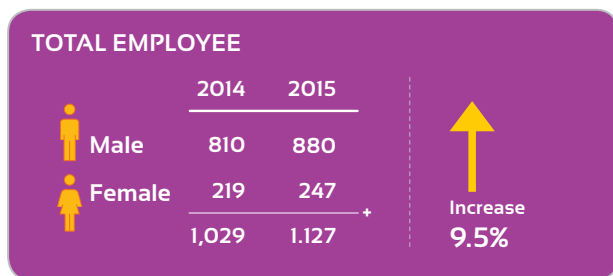
Total turnover employee base on gender

Total Employees

GENDER	2014	2015
Male	810	880
Female	219	247
Total	1,029	1.127

Employee Turnover

Gender	2014	2015
Male	11	11
Female	7	9
Total	18	20



Turnover Pekerja

	20-30 THN		31-40		41-50		51-56	
	Male	Female	Male	Female	Male	Female	Male	Female
Reason of Resignation		5			2			
Voluntary Retirement			1		1		1	
Normal							7	

Turnover rate in 2015 is 0.9%.

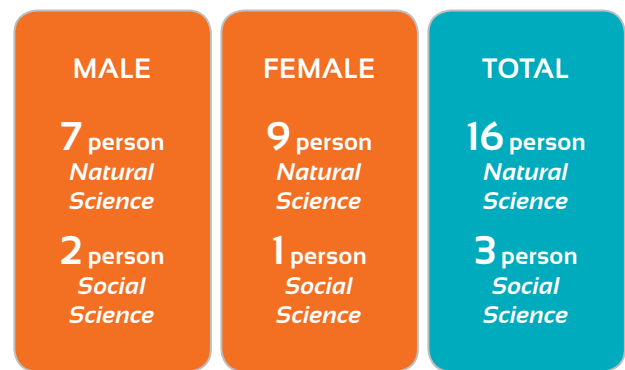
Strengthening human resources based on qualifications and work placement remained a major priority for the Company in 2015. The percentage increase in human resources and the turnover percentage each year are carefully maintained and aligned with the short-term and long-term work plans and the Shareholder's direction.



Human resource management is balanced between the rights and obligations that must be met by each of the parties, namely the employees represented by the Union and the Company represented by the management.

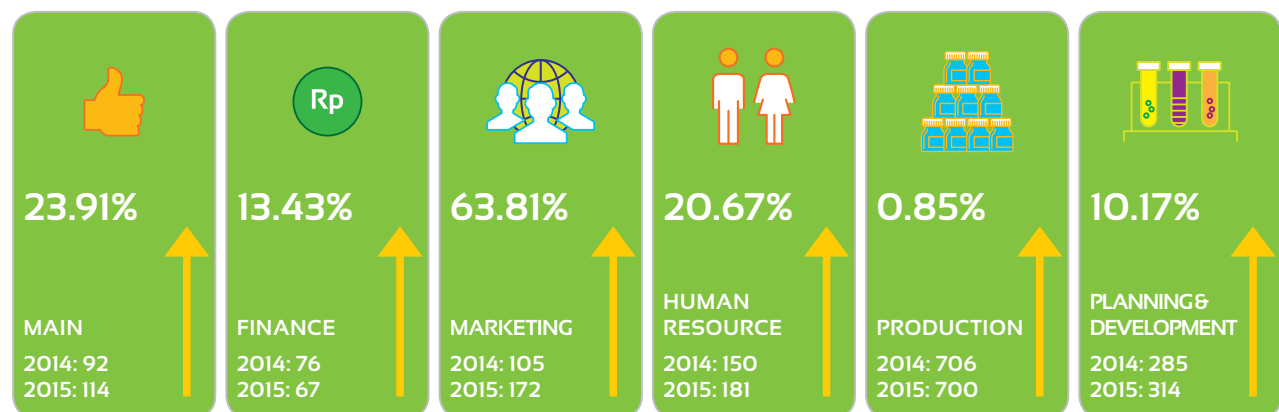
Bio Farma constantly implements an employee development strategy tailored to the needs of each field, mapping of the competence of individuals, working position groups and global business demands. Employee development by age group and educational background has a large impact on program selection and method development so as to achieve effective results, stable career paths and ultimately, a sustainable company.

Employee Development Through Formal Education (Post Graduate and Doctorate)



Employee Capacity and Capability Throughout the Work Area

	MAIN	FINANCE	MARKETING	HUMAN RESOURCE	PRODUCTION	PLANNING AND DEVELOPMENT
2015	114	76	172	181	700	314
2014	92	67	105	150	706	285





EQUALITY IN CAREER DEVELOPMENT

(G4-DMA) (G4-LA12)

Bio Farma is committed to implementing equality when determining employee rank and career development. Performance and competence are considered in the promotion process and determined through assessment by an independent team, so employees at various levels of management are not dominated by one particular age or gender group.

Gender Equality in Career Development

GENDER	2014		2015	
	MANAGERIAL	NON MANAGERIAL	MANAGERIAL	NON MANAGERIAL
Male	349	461	217	999
Female	194	25	115	225
Total	502	451	323	1.224

DISTRIBUTION OF HIERARCHY BASED ON AGE AND GENDER

	2014		2015	
	Managerial	Non-Managerial	Managerial	Non-Managerial
Male	349	461	217	999
Female	194	25	115	225
	502	451	323	1,224

Employee grouping into appropriate levels or rank is conducted through competency mapping, promotion and career transfer. The promotion mechanism at Bio Farma is implemented openly and does not distinguish between the sexes. Each vacancy is announced via the intranet and candidates that pass the verification stage can compete through selection and promotion assessment. The Assessment Team and Board of Directors then select and specify the best participant to fill the vacant position. For some positions with high requirements, Bio Farma has implemented synergies with other state-owned enterprises to employ at Manager and Senior Manager level. (G4-LA11)

Employees of a productive working age dominated the workforce composition at Bio Farma in 2015. We accept 3-year diploma graduates or those over the age of 20, thus the working age of our employees is higher than that required under Law No. 13 of 2003 on Manpower.

EMPLOYEES COMPOSITION BY AGE GROUP (YEARS)

	21-30 Year	31-40 Year	41-50 Year	> 51 Year	Total
 Male	552	342	265	57	1,216
 Female	164	98	63	16	341
					1,557

Employees Composition By Age Group

GENDER	21-30 YEARS		31-40 YEARS		41-50 YEARS		> 51 YEARS	
	Permanent	Contract	Permanent	Contract	Permanent	Contract	Permanent	Contract
Male	243	309	319	23	261	4	57	0
Female	81	83	90	8	61	2	15	1
Total	324	392	409	31	322	6	72	1

OCCUPATIONAL HEALTH AND SAFETY

Bio Farma's commitment to implementing an Occupational Health and Safety Management System is to implement all preventative actions related to workplace accidents and occupational diseases. The basis for implementation refers to several regulations:

- Employment Act No. 13 of 2013 Article 87 Clause (2)
- Government Regulation Republic of Indonesia No. 50 of 2012 about Health and Safety Management System
- Board of Directors Decree No. 01972/DIR/IV/2014 issued on 28 April 2014 about P2K3 Committee Establishment
- Board of Directors Decree No. 00064/DIR/I/2014 issued on 6 January 2014 About ISO & OHSAS 18001 Integration Team

As a company with a global vision, Bio Farma implements Occupational Health and Safety Management System (OHSAS) 18001:2007, an international standard to develop and implement Occupational Health and Safety Management Systems and comply with WHO requirements

Eighty-six employees (6 percent of total employees) are employee representatives on the Formal Committee between Management and Employees to implement Occupational Health and Safety Management. [\(G4-LA5\)](#)



Types and Level of Accident, Occupational Illness, Days Lost, Absenteeism and Death Arising from Work 2015.

(G4-LA6)



THE PARADIGM OF A HEALTHY LIFE THROUGH WORK-LIFE BALANCE

Work-life balance is a way of working that takes into account all life aspects, namely work, personal, family, spiritual and social, thus a person is able to be fully responsible for their work, family, personal life and social life and is thus able to give their best contribution and service. Realizing the importance of employee quality, not just physically but also being internally happy, in 2014-2015, Bio Farma created a special team entitled the Healthy Life Paradigm Team, which has been assigned to preparing the Bio Farma

Employee Healthy Life Paradigm and assessing the successful implementation of this program.

There are five important aspects to this program, encompassing personal life, work, religion, family and community and culture. The Company's philosophy of being Dedicated to Improving Quality of Life is applied to create employees who are BAHAGIA, an acronym for Fit, in Harmony and Active, which also means "happy" in the Indonesian language.

BIO FARMA EMPLOYEE PROFILE (G4-9) (G4-10)

Per 31 December 2015, Bio Farma had 1,127 permanent employees and 430 contract employees.

In 2015, there was a 7% increase in permanent employees, rising 3.5% compared to the 1,029 in 2014, The Bio Farma employee profile for the last six years is as follows:

Employee Composition based on Directorate

DIREKTORAT	2010	2011	2012	2013	2014	2015	
						CONTRACT	PERMANENT
Main	148	150	83	77	97	11	103
Financial	102	102	58	57	61	13	63
Marketing	78	80	76	83	82	87	85
Human Resource	0	0	110	122	126	34	147
Production	348	336	369	405	450	209	491
Planning and Development	218	214	225	209	213	238	238
Total	894	882	921	953	1,029	430	1,127

Employee Composition based on Position Levels

Position	2010	2011	2012	2013	2014	2015	
						CONTRACT	PERMANENT
Head of Division	148	150	83	77	30	25	1
Main Researcher	102	102	58	57		8	-
Head of Department	78	80	76	83	98	66	-
Senior Researcher	0	0	110	122	0	38	-
Head of Section	348	336	369	405	167	139	-
Junior Researcher						40	-
Staff	218	214	225	209	116	117	42
Junior Staff	894	882	921	953	132	145	62
Executor	429	388	419	439	486	517	263
Main Researcher / Project Integration Manager	0	0	2	2	-	2	-
Senior Researcher / Research Coordinator	0	0	2	1	-		-
Researcher	0	0	4	5	-	5	-
Junior Researcher	0	0	21	14	-	13	-
Operasional Staff	0	0	12	12	-	11	-
Area Manager	-	-	-	-	-		3
Supervisor							
Medical Representative	-	-	-	-	-	-	50
Polyclinic Doctor	-	-	-	-	-	-	3
Medical Expert	-	-	-	-	-	-	1
Clinic Primary Person in charge	-	-	-	-	-	-	1
Radiology Person in charge	-	-	-	-	-	-	1
Researcher Matrix							
Portofolio Management team	0	0	4	4	-	11	-
Total	894	882	921	953	1,209	1,127	430



Employee Composition based on works Service

WORK SERVICE	2010	2011	2012	2013	2014	2015
0-5	311	301	326	316	333	443
6-10	172	187	197	194	261	198
11-15	155	160	147	174	162	172
16-20	110	105	108	118	119	150
21-25	60	52	63	68	79	91
26-30	71	63	62	54	48	31
>31	15	14	18	29	27	42
Total	894	882	921	953	1,029	1,127

Employee Composition based on Age Group

Age Group	2010	2011	2012	2013	2014	2015
<20	0	0	0	0	0	0
21-25	67	56	43	27	43	74
26-30	154	160	171	193	221	250
31-35	183	186	201	210	228	221
36-40	207	185	166	172	165	188
41-45	142	159	192	189	201	197
46-50	97	96	102	112	112	125
>51	44	40	46	50	59	78
Total	894	882	921	953	1,029	1,127

Employee Composition based on Education

LEVEL EDUCATION	2010	2011	2012	2013	2014	2015	
						PERMANENT	CONTRACT
Doctorate	2	2	2	2	1	1	1
Master degree	38	41	44	43	44	49	-
Bachelor degree	212	227	231	234	262	282	56
Diploma	149	162	157	170	189	220	106
High School Equivalent	493	450	487	504	533	575	267
Total	894	882	921	953	1,029	1,157	

Employee Composition based on Gender

GENDER	2010	2011	2012	2013	2014	2015	
						PERMANENT	CONTRACT
Male	695	674	716	747	810	247	336
Female	199	208	205	206	219	880	94
Total	894	882	921	953	1,029	1,127	430
						1,157	

Employee Composition Recap Based on Position and Gender

POSITION	2010		2011		2012		2013		2014		2015	
	L	P	L	P	L	P	L	P	L	P	MALE	FEMALE
Head of Division	13	5	15	5	19	9	18	11	14	9	16	9
Main Researcher	0	0	0	0	0	0	2	0	4	1	6	2
Head of Department	32	27	31	28	32	28	32	24	32	26	34	26
Senior Researcher	16	6	14	4	16	2	22	4	30	9	29	2
Head of Section	91	39	94	43	86	43	87	41	85	44		
Junior Researcher	12	5	14	6	16	7	19	13	19	14		
Staff	56	56	64	61	63	60	52	57	57	46		
Junior Staff	73	34	81	34	79	30	89	31	98	34		
Executor	402	27	361	27	405	26	426	25	450	25		
Researcher Matrix												
Portofolio Management team	-	-	-	-	-	-	-	-	0	0		
Project Integration Manager	-	-	-	-	-	-	-	-	-	-		
Research Coordinator	-	-	-	-	-	-	-	-	1	0		
Ahli/Researcher	-	-	-	-	-	-	-	-	4	1		
Junior Researcher	-	-	-	-	-	-	-	-	4	9		
Operasional Staff	-	-	-	-	-	-	-	-	11	0		
Total												

Employee Composition Recap Based on Employment Status

EMPLOYEE STATUS	2010	2011	2012	2013	2014	2015
Full-time employees	894	882	921	953	1,029	1,127
Contract Based Employees	291	326	311	376	421	430

Employee Performance Reviews [G4-LAII]

REVIEW CATEGORY	GENDER		TOTAL	PERCENTAGE	
	MALE	FEMALE		MALE	FEMALE
A (Outstanding)	67	30	97	69%	31%
B (Good)	740	187	927	80%	20%
LDC (More than Adequate)	18	1	19	95%	5%
C (Adequate)	45	17	62	73%	27%
K (Unsatisfactory)	-	-	-	-	-

Description: The performance evaluation is done every 6 (six) months, which is presented on the second semester of 2015 data.



Types and Budget Realization Employee Trainings (in million rupiah)

TYPES OF NO. TRAININGS	TYPE OF PROGRAM	2014			2015		PERCENTAGE [%]
		BUDGET	REALIZATION	PERCENTAGE [%]	BUDGET	REALIZATION	
1. Organization Leadership							
2. English Speaking							
3. Customer Service Training							
4. Character Building Training							
5. Microsoft Office	Company Wide	4,687	4,328	92.33			
6. Retirement Period Preparation Training					6,000	7,051	117.52%
7. Microsoft Project							
8. Public Speaking							
9. Creative Design for Presentation Training							
10. Thematic Public Training	Division Training (Domestic)	2,000	2,084	104.24	6,000	6,904	115.08%
	Division Training (Overseas)	2,000	2,084	104.24	6,000	9,726	121.58%
	Training Support Facility	3,562	5,438	152.65		9,726	121.58%
II. Retirement Period Preparation and Business Training	Career Transition Program	150	134	90			



COMMUNITY DEVELOPMENT

As a State-Owned Enterprise, which also serves as an agent of development, Bio Farma has a significant role in achieving the goals of sustainable development (Sustainable Development Goals / SDG's) that have been agreed upon by the global community, including the Government of Indonesia. This program actually is to improve the quality of life and environmental benefits the company, the community around the area of operation, and society in general.

As part of the community, Bio Farma share with the community through the Social Development Program and the community. The program aims to improve the welfare and quality of life of marginalized communities is carried out through the Community Development Program. Development Programs of the environment itself is part of the Partnership and Community Stewardship (PKBL) which is mandated by the Government to SOEs. *[G4-DMA]*

In addition, the program is also funded with the CSR. Target territory Program PKBL PT. Bio Farma (Persero) is divided into three regions according to the distribution based on the distance to the PT. Bio Farma (Persero): Ring-1 Citizens who live around Bio Farma is: Kecamatan Sukajadi - Bandung and District Cisarua - West Bandung regency. Ring-2 Citizens who live outside the area, or are not in direct contact with Bio Farma (West Java). Ring-3 Citizens in general (National).

As part of its social responsibility toward the community, Bio Farma, among others, provide grants through the Partnership and Community Stewardship (PKBL) Program. In accordance with SOE Minister Regulation No. PER-09/MBU/07/2015, the source of funds for the Partnership and Community Stewardship

Program in 2015 must derive from the Company's budgeted costs and make use of funds from the remaining provision. *[G4-SO]*

Accumulated aid disbursed through the PKBL Program from 2002 to 2015 totaled Rp39,359,675,035, including the BUMN Peduli (SOE Cares) PKBL Program at Rp3,775,013,932. In 2015, the amount of the aid disbursed in the PKBL Program amounted to Rp6,479,182,341 or equal to 80% of the budgeted fund of Rp8,050,000,000; with the details as follows:

	[Billion Rupiah]
Relief to natural disaster victims	141,193,300
Education and/or training assistance	1,342,548,250
Health improvement assistance	2,175,412,412
Support in developing public infrastructure and facilities	250,565,712
Support in worship facilities	1,394,441,000
Support in nature conservation	352,846,750
Social and community support	365,018,667
Assistance Training, Marketing & Promotions Partners	457,156,250
Total	6,479,182,341

In addition to funding from the PKBL budget, Bio Farma CSR activities are also funded from CSR Program costs budgeted by the Company to be disbursed for CSR activities under the pillars of Health, Education, Economy and Environment. Following are details of the aid disbursed through the 2015 CSR program:

	[In Rupiah]
Health Sector Support	1,078,846,865
Education Sector Support	543,710,992
Economic Sector Support	1,144,540,030
Environmental Sector Support	1,004,867,750
Total	3,771,965,637

SMART SCHOLARSHIP PROGRAM



In 2015, Bio Farma cooperated with DKM An-Nuur PT Bio Farma (Persero) to hold the Smart Scholarship Program. This program provides educational aid to school and university students from underprivileged backgrounds with good scholastic achievement. In addition, educational aid is provided to school and university students from the Health Clinics.

CONSERVATION PROGRAM [G4-DMA], [G4-ENI3], [G4-ENI4]

The International Union for Conservation of Nature and Natural Resources (IUCN), states that 25 types of primate in the world are at risk of extinction, several of which are in Indonesia, namely the Sumatran Orangutan (*Pongo abelii*), Siau Island tarsier (*Tarsius tumpara*), Javan slow loris (*Nycticebus javanicus*) and the pig-tailed langur (*Simias cocolor*). The Indonesian government has also categorized primates into national priority species, and those endemic to West Java, based on Forestry Minister Decree No. P57 of 2008, namely the silvery gibbon (*Hylobates moloch*) and the Javan surili (*Presbytis comata*), which are at risk of extinction.

Bio Farma's commitment to nature conservation caused the company to become involved in a conservation and primate rehabilitation program during 2013 – 2014 along with the Cikananga Animal Conservation Center (PPSC) in Sukabumi. This program has successfully released 21 primates, including orangutans, gibbons, macaques, ebony leaf monkeys and grey monkeys. In addition, the Company and PPSC have rehabilitated and released some other primate species into their native habitat. In 2015, the Company has adopted and rehabilitated 41 long tailed monkeys.



The Cikananga Animal Conservation Center has been working with Bio Farma since 2010 to conserve and rehabilitate animals at risk of extinction, in particular primates. Bio Farma has provided aid in the form of food, medicines and rehabilitation, so the animals have finally been able to be returned to their natural habitat.

As PPSC manager, I feel that the aid and support that we have received from Bio Farma, including the process to save animals at risk of extinction, has gone as expected. The impact of the increasing commitment and direct contribution from Bio Farma can be seen in the number of species that have been helped with conservation and rehabilitation.

As PPSC representative, I would like to thank Bio Farma for its great care and genuine contributions in saving and rehabilitating Indonesian primates at risk of extinction so that our grandchildren will still have the opportunity to see animals endemic to Indonesia.



PPSC

KOI BREEDER COMMUNITY DEVELOPMENT PROGRAM TOWARDS EXPORT

Stakeholder development and export scale Koi breeding in Sukabumi

SUSTAINABLE PROGRAM CSR BIO FARMA 2010 – 2015

	2011	2012	2013	2014	2015
<p>2010</p> <p>Purchase of 18 Japanese Koi brood stock</p>   <p>Prospective broodstock selection and breeding mentoring</p>   	<p>Bio secure pond assistance</p>  <p>Tree planting with 200m radius around water spring</p>  <p>Pinailais water spring to the grow-out pond</p> 	<p>Export scale Koi breeding training and business management training</p>  <p>comparative studies, exhibitions and expeditions</p>    	<p>Color blind testing for Koi Breeder group building sanitation facilities and integrated health care service post (posyandu) and free Flubio vaccination in the Sukamulya village</p>    <p>Assistance for Bio Secure pond building Sukamulya</p> 	<p>SOP drafting for farmer production and business</p>  <p>Koi Cooperatives establishment</p>  <p>Sounding the export market by participating in ornamental fish exhibition in Aquarama Singapore</p>   	

The CSR program implemented in the village of Sukamulya is genuine integration of the four priority pillars, namely health, education, economy and environment. Assistance includes koi cultivation infrastructure development, for example, fish sedimentation basins. In the process of developing

this program, the Company not only helped the koi fish farmers but also the local people in the vicinity of this village development partner. Assistance was provided with the construction of sanitary facilities related to a Clean and Healthy Lifestyle and a health clinic for ease of access to health services.

In the education and skill development (capacity building) sector, the koi fish farmers were given training related to bio secure-based koi fish farming management, which adopted a vaccine production process at Bio Farma. Meanwhile, for empowerment, the Company provided group mentoring to the Mizu-mi Koi (KMK) Group, which was given 18 high quality koi as breeding fish. Group development used an core-plasm model so that the current group members would be able to develop a new group using the same methods of cultivation.

KMK currently employs 26 local residents. Prior to joining KMK, their income was only Rp 500,000/month. Nowadays, their income has reached Rp 3,000,000/month with average production having increased to ± 3,500 fish/ Month For the PT Bio Farma (Persero) support group Koi Mizu-mi to the international market and has been included in Aquarama The Ornamental Fish Exhibition 14th

International Ornamental Fish and Accessories Exhibition 2015 in Singapore.

With the start of the entry Mizumi Koi Group to export markets, the development program Koi fish cultivation has managed to achieve the target set at the time of program planning. Bio Farma CSR environmental pillar is also applied in the village Sukamulya, which favor development program Power IOI fish have been conserving and utilizing 3 spring water for the cultivation of koi and community purposes. KMK independently has built one source of water for the preservation and pipelines that have been exploited by the 85 heads of families in getting access to clean water. [\[G4-EC7\]](#)

GARUT SHEEP BREEDING PROGRAM FOR VILLAGE DEVELOPMENT

Garut sheep are the easiest on earth to breed. However, sheep breeding development has become relatively static as the genetic purity has tended to decrease because of the difficulty in controlling breeding with sheep of other breeds, as well as inbreeding. Animal Husbandry and Health Statistics in 2012 showed a sizable sheep population in Indonesia, with as many as 13.4 million head. Approximately 8.2 million sheep were in West Java (61% of the national population) and, in the same year, approximately 367 thousand sheep in West Java were recorded as being slaughtered.

Realizing the importance of efforts to save this biodiversity for the welfare of society and the preservation of a native West Javan livestock, Bio Farma also included the Garut Sheep breeding village development program in its CSR program. The village is located Wanajaya village, Wanaraja District, Garut Regency.

In 2015, was inaugurated Maintenance Facility Kampung Breeding Sheep applying biosecurity rules. From breeders of superior Garut broodstock, 20 male and female sheep brood stock was obtained that

have the morphology of superior Garut sheep. Apart from that, performed DNA analysis on all breeders to determine the superior genetic potential of sheep garut




TARGET

2014	2015	2016	2017	2018
Land acquisition for breeding facility	Building of breeding facility	Identified quality breed Domba Garut resulted from DNA mapping	Creating superior Garut sheep sperm bank	Fostered breeders capable to independently manage Domba Garut Breeding Village
	Acquiring Domba Garut livestock	Form established group of fostered breeders	Create economic value products produced by Domba Garut	Establishment of Fostered Breeder Body that is independent and productive

Moreover, Bio Farma also holds free general medical treatment for the residents of Wanajaya district, Garut regency. [\[G4-EC7\]](#)

GEO-TOURISM RURAL DEVELOPMENT PROGRAM AT CILETUH GEOPARK

A geopark is a geographical area with a geological heritage and is part of an overall protection, education and sustainable development concept. A geopark is also a geodiversity management concept that serves as a tourist attraction and encompasses geological, biological, socio-cultural and tourism interests. Geopark development is based on:

1. Conservation
2. Education
3. Local economic value development through tourism

Ciletuh Geopark is located to the south of Pelabuhan Ratu bay, Sukabumi, West Java. Inside is one of the only areas of the world's oldest rocks (pre-Tertiary) found in West Java. Within this area are mountains, hills, rivers, waterfalls, beaches and stunning view of ancient rocks.

Bio Farma participates in the development of Ciletuh Geopark Area together with the Provincial Government of West Java and Sukabumi Regency Government and involves various community among others are the Pakidulan Sukabumi Nature Society (PAPSI). Based on the data and experience of the Asia Pacific Geoparks Network and the UNESCO Global Geopark, there has

been no corporation that provides active support in the development of geoparks in the Asia region or even for a Global Geopark. Therefore, Bio Farma is the first company in the world who are actively involved in the development of geopark area.

Bio Farma encourage Ciletuh Geopark Region, located in District Ciemas, Sukabumi, West Java, receive special attention from UNESCO Global Geoparks so Geopark Region Ciletuh can be a part of the UNESCO Global Geoparks. To achieve this it Ciletuh Geopark area must meet the requirements contained in guidelines established by UNESCO, including the preparation of the dossier submission. Based on the assessment conducted by the team Revitalization Task Force Museum Kegeologian the Ministry of Energy and Optimizing Development of Geopark, the Geopark Region Ciletuh set to become National Geopark, on December 22, 2015. The process of setting Geopark Ciletuh administratively qualified according to the standards of the National Geopark, UNESCO Geopark is the first time in Indonesia.

“The role of the business sector in the development of a geopark is new and has never existed in the Global Geopark before. Bio Farma can be a model for UNESCO Global Geopark in terms of the involvement of business sector on the development of geoparks.”

*Prof. Guy Martini, 2015
Secretary UNESCO Global Geopark*





"Ciletuh have an incredible potential to be developed as a Geopark. Bio Farma has become a pioneer, as the first company to actively support and involved in Geopark development in Asia." Mr Ibrahim Komoo, President Asia Pacific Global Network (APGN)

The CSR program aims to elevate various values within the local Ciletuh communities that include biodiversity, geology and culture. The Geotourism village will be the site of integrated conservation, education, special interest tours and local economy development, which is in line with Bio Farma CSR priority pillars.

In the health sector, in 2015 in Tamanjaya village, a range of social welfare activities took place, including a Public Health Hall and free influenza vaccines. Kegiatan ini bertujuan untuk mengetahui secara nyata kesehatan masyarakat di Desa Tamanjaya, selain itu di Desa Purwasedar Kecamatan Ciracap Kabupaten Sukabumi juga telah dilakukan Balai Pengobatan gratis.

Bio Farma also hold a clean water pipeline is sourced from springs located in the village to improve access to clean water to the community. In 2015 there were 40 heads of families, two business units homestay, and 21 small businesses that have benefited this activity. Homestay growing number of only 2 units in the village Tamanjaya in 2013, in 2015 to 23 units. Other than that, this activity has added jobs for 18 people a tour guide. The number of visitors who come to the area of Geopark Ciletuh reached 706 people up to mid-year 2015. [G4-EC7]

As part of its commitment to environmental conservation, Bio Farma also entered into cooperation with PAPSU to plant and adopt trees in the vicinity of Kecamatan Ciemas.

ENVIRONMENTALLY FRIENDLY BATIK DEVELOPMENT PROGRAM

One part of the geopark is a component of cultural diversity (cultural diversity), particularly related cultural heritage at several local geological geopark. Region Ciletuh there is the potential of the cultural diversity that is inspired by the beauty of the landscape, the philosophy of society and the biodiversity of the region. That potential is Batik Pakidulan located in the village Purwasedar, District Sukabumi.

As a company committed to environmental preservation, programs carried out by Bio Farma in order to empower artisans Pakidulan Batik is to develop batik production processes that are environmentally friendly. By developing environmentally friendly production process, is expected to reduce the negative impact of batik

production on the environment. Efforts are being made to reduce the negative impact is the use of dyes with nano technology. The use of dye nano technology can reduce waste contamination when compared to conventional synthetic dyes. This is because the dye can more easily absorb into the fabric so that the rest of the dye less wastage compared to conventional synthetic dye batik production facilities. In addition, amenities Batik House Pakidulan equipped with wastewater treatment plant (WWTP Mini), so as to manage the contamination of waste water coming from the waste water treatment batik. Batik Pakidulan group has grown from originally only 2 people to 35 people in 2015, thus becoming a new source of income for the villagers Purwasedar.





PRIORITIZING THE CONSUMER HEALTH

All the organs of Companies in Bio Farma including directors and employees are committed to meet the requirements of consumers by applying the applicable regulations and best practices. Our attention to customer service and satisfaction evident in every activity of the Company that strives to understand the needs of consumers by providing the right solution.

Bio Farma continue to give the best contribution to the health of the nation and the global community.

Consumers are stakeholders who have a relationship of interdependence with Bio Farma. Consumer health will give birth to a healthy generation, intelligent and creative. These values are upheld and made one of our corporate culture.

We place the consumer health care quality improvement both at national and global levels, as a priority in the whole process of products, starting from research and develop products, produce, to the use of the product.

By applying national and international standards, Bio Farma has been recognized by the World Health Organization (WHO) since 1997 for producing high quality, affordable products. To date, Bio Farma has contributed to raising national and international health standards and its products are used in and benefit more than 130 countries. By referring to world health data, we continue to strive to make improvements and developments to create new ideas

and products that can improve the quality of life.

The programs implemented and realized to improve customer satisfaction are described below.

COMMITTED TO MAINTAINING PRODUCT QUALITY IN ACCORDANCE WITH NATIONAL AND INTERNATIONAL STANDARDS

Bio Farma implements an integrated management system based on fulfilling customer needs and conditions/regulations stipulated in Good Manufacturing Processes (CPOB), ASEAN Good Manufacturing Practices (GMP), WHO GMP and production conditions contained within WHO Reference Series, including the Technical Report Series, Good Laboratory Practices (GLP), Good Clinical Practices (GCP), Good Distribution Practices (GDP), ISO 9001 quality management system, ISO 14001 environmental management system, OHSAS 18001 occupational health and safety management system, Good Corporate Governance (GCG), Corporate Risk Management (CRM), Social Responsibility (SR), International Financial Reporting Standards (IFRS), ISO 17205 specifically for test laboratories in the Immunization and Clinic Division, as well as other regulatory systems related to improving Bio Farma's performance.

Guaranteed product quality and assurance starts from the beginning with the selection of raw material suppliers. Suppliers who are directly involved in the final product must apply minimum standards for quality, environment and occupational health and safety (OHS). Bio Farma regularly audits suppliers to ensure the proper implementation of these standards, to ensure the quality of raw materials is in accordance with established specifications. During the product formulation process, we also apply in-process control. Prior to shipping, our final products are tested by the Food and Drug Supervisory Agency (BPOM) so that any products distributed to the public have passed the BPOM tests, fulfill quality standards and are in accordance with national and international specifications. [\[G4-DMA\]](#)

ACCURATE PRODUCT INFORMATION

[G4-PR3]

Our customers are always provided with accurate data related to the product they receive as the related product information provided has been approved by BPOM and WHO. Customers can easily access product information on the Company's website at any time. Other health-related information can be discussed directly on social media, which is managed by employees competent in their field.

PROVIDING CUSTOMERS WITH BEST SERVICE

[G4-PR4]

Bio Farma provides a customer complaint service that is able to answer and follow up on all customer complaints with the Adverse Events Post-Immunization (KIPI) service. Bio Farma continually disseminates information through distributors, doctors and health service personnel to use the KIPI reporting mechanism so that should an event occur, a pre-appointed independent team can move to follow up on the customer complaint and all complaints can be quickly handled. However, in 2014, Bio Farma had received no complaints related to violations of product information or violations of privacy.

Bio Farma providing communication access through the following communication channels:

Company Site	www.biofarma.co.id (menu Customer Care)
Portal BUMN:	www.bumn.go.id/biofarma
Blog Perusahaan:	www.infoimunisasi.com
Tel.:	(62-22) 203-3755 ext. 37608
Fax.:	(62-22) 204-1306
Surel/E-mail:	corcom@biofarma.co.id; mail@biofarma.co.id
Facebook:	Info Imunisasi
Twitter:	@infoimunisasi; @biofarmalD

GATHERING & SHARING INFORMATION WITH CUSTOMER

Bio Farma conduct meetings and share information (sharing) on a regular basis with consumers in various regions. The meeting was organized in cooperation with the Ministry of Health, Immunization Sub Directorate, Public Communication, Ministry of Health, Health Promotion, as well as a variety of health-related organizations, among others Indonesian Pediatric Association (IDAI) and the Indonesian Pharmaceutical Association (GP Pharmacy). It is intended to raise awareness about the importance of prevention of disease through vaccines to improve the quality of life better. This meeting is also useful for the participants were composed of health practitioners, midwives, immunization experts, community leaders, religious leaders, housewives, health and clinic managers and the public as a means of education on the importance of the vaccine as part of disease prevention for the community.

Bio Farma believes that face-to-face events such as these create two-way communication that ranges from criticism and suggestions to sharing information, which provides input for Bio Farma.

Bio Farma also has the opportunity to provide education on the importance of prevention, healthy living, preservation of the environment and establishing a close sense of family so that both sides understand each other and the Company can narrow the gap between the customers' demands and Bio Farma's abilities.

In 2015, Bio Farma has undertaken various activities Meeting Consumers in various cities and counties in 34 provinces of Indonesia. This event is held in the form of customer visits, dissemination and monitoring of vaccine products. Through these activities we get feedback (feedback) include evaluation of services provided, improving the competence of the manager regarding the management of vaccines vaccines as well as increasing public awareness of the importance of vaccination thus indirectly help the government in increasing immunization coverage nationwide.

CUSTOMER SATISFACTION SURVEY

[G4-PR5]

Periodically, Bio Farma conduct information gathering activities with the aim to identify, analyze and provide information on the development needs, desires, expectations, preferences, behavior and customer satisfaction that can be used to define and realize the company's policy, continuous improvement and enhance the performance of the quality system Bio Farma, Consumers have a big role, as well as other sources that can be used to assess customer satisfaction.

In order for customer satisfaction surveys to get accurate data, implementation mechanism is set in the guidelines and standard procedures for companies that are under the responsibility of the Division of Product Development (Product Development Department). »Part of Product Management. For accurate results, and overall, the survey conducted by a third party, ie an independent institution that has been

a professional in carrying out market surveys involving national and international customers. Respondents customer satisfaction survey is divided into several sectors, among others: the Department of Health in 34 provinces, doctors and distributors in the area of Java, Sumatra, Sulawesi and Kalimantan, as well as international customers whether institutional or corporate. Overall, the value of customer satisfaction index Bio Farma for 2015 is 77.37% which is included in either category (> 60%), with details as follows: Health Department with a value of 82.95% customer satisfaction index (very good), a distributor with value 80.53% customer satisfaction index (very good), a doctor with a customer satisfaction index score of 67.37% (good), the export value of the institution with 75.38% customer satisfaction index (good), and export corporation with a customer satisfaction index score of 80, 61% (excellent).

EDUCATING ON THE IMPORTANCE OF VACCINES THROUGH THE MEDIA

Bio Farma also organizes education on the importance of vaccines in the form of workshops for media and journalists. This specific competency program serves as initial briefing for our media colleagues, discussing the A to Z of vaccines, as well as presenting competent sources to answer questions about vaccine and medicine halal issues.

This program has been implemented since 2013 and aims to improve the relationship between Bio Farma

and journalists. With journalist training about the ins and outs of vaccines and biotechnology, we hope that journalists will be able to deliver the correct information to the untutored public, so that people can understand vaccine technology and its developments. From the results of media education through the School of Vaccine for Journalists, a book has been produced entitled "Journalists Talk Vaccines, Safeguarding Civilization through Vaccines".



Ihsan Setiadi, Bio Farma Commissioner, as one of the speakers in School of Vaccine for Journalist. Yogyakarta, 8 May 2015



Healthy Santri Ambassadors held Educational Visit to Bio Farma



STATEMENT GRI G4 CORE IN ACCORDANCE CHECK BY NCSR



Statement GRI G4 Core In Accordance Check

The National Center for Sustainability Reporting (NCSR) has conducted a GRI G4 Core in Accordance Check on the PT Bio Farma (Persero) 2015 ("Report"). The check communicates the extent to which the GRI G4 Core criteria has been applied in the Report. The check does not provide an opinion on the sustainability performance of the reporter or the quality of the information provided in the report.

We conclude that this Report has presented disclosures, either fully or partially, in accordance with GRI G4 Core criteria.

National Center for Sustainability Reporting

Dewi Fitriasaki, Ph.D. CSRS, CMA
Director

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GRI AND THE SUSTAINABLE DEVELOPMENT GOALS

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	1. End poverty in all its forms everywhere	Availability of products and services for those on low incomes	G4-EC8	61
		Earnings, wages and benefits	G4-EC5	88
		Economic development in areas of high poverty	G4-EC8	61
	2. End hunger, achieve food security and improved nutrition and promote sustainable agriculture	Changing the productivity of organizations, sectors, or the whole economy	G4-EC8	61
		Infrastructure investments	G4-EC1	58
			G4-EC7	105, 106, 108
	3. Ensure healthy lives and promote well-being for all at all ages	Access to medicines	G4-EC8	61
		Air quality	G4-EN15, G4-EN16, G4-EN21	69, 70, 72
		Occupational health and safety	G4-LA6	83,84,96
		Waste	G4-EN23	74
	4. Achieve gender equality and empower all women and girls	Equal remuneration for women and men	G4-EC5, G4-LA13	88,
		Gender equality	G4-LA1, G4-LA11, G4-LA12	92, 94, 99
		Infrastructure investments	G4-EC1, G4-EC7	58,105, 106, 108
		Women in leadership	G4-38, G4-LA12	50, 94
	5. Ensure availability and sustainable management of water and sanitation for all	Sustainable water withdrawals	G4-EN8, G4-EN27	68, 75
		Waste	G4-EN23	74
		Water-related ecosystems and biodiversity	G4-EN13, G4-EN14	103,
	6. Ensure access to affordable, reliable, sustainable and modern energy for all	Energy efficiency	G4-EN3, G4-EN5, G4-EN6, G4-EN7	63, 64, 66
		Infrastructure investments	G4-EC1, G4-EC7	58, 105, 106, 108
		Renewable energy	G4-EN3	63



7. Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all	Changing the productivity of organizations, sectors, or the whole economy	G4-EC8	61
	Diversity and equal opportunity	G4-LA12	94
	Earnings, wages and benefits	G4-EC5, G4-LA2	88, 89
	Economic inclusion	G4-DMA-b Guidance for Procurement Practices	102
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8. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation	Infrastructure investments	G4-EC1, G4-EC7	58, 105, 106, 108
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	Economic development in areas of high poverty	G4-EC8	61
	Equal remuneration for women and men	G4-LA13	88
	Foreign direct investment	G4-EC8	61



9. Reduce inequality within and among countries	Economic development in areas of high poverty	G4-EC8	61
	Equal remuneration for women and men	G4-LA13	88
	Foreign direct investment	G4-EC8	61



10. Make cities and human settlements inclusive, safe, resilient and sustainable	Infrastructure investments	G4-EC7	105, 106, 108
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11. Ensure sustainable consumption and production patterns	Air quality	G4-EN15, G4-EN16	69, 70,
	Product and service information and labeling	G4-PR3	111
	Resource efficiency of products and services	G4-EN27	75
	Waste	G4-EN23, G4-EN27	74, 75



12. Take urgent action to combat climate change and its impacts* * Acknowledging that the United Nations Framework Convention on Climate Change is the primary international, intergovernmental forum for negotiating the global response to climate change.	Energy efficiency	G4-EN3, G4-EN5, G4-EN6, G4-EN7	63, 64, 66
	GHG emissions	G4-EN15, G4-EN16, G4-EN18, G4-EN19, G4-EN27	69, 70, 71, 75



13. Conserve and sustainably use the oceans, seas and marine resources for sustainable development	Marine biodiversity	G4-EN13, G4-EN14	103
	Ocean acidification	G4-EN15, G4-EN16, G4-EN18, G4-EN19, G4-EN27	69, 70, 71, 75



14. Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss	Forest degradation	G4-EN15, G4-EN16, G4-EN18, G4-EN19, G4-EN27	69, 70, 71, 75
	Mountain ecosystems	G4-EN13, G4-EN14	103
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	15. Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels	Anti-corruption	G4-SO3, G4-SO4, G4-SO5	51
		Compliance with laws and regulations	G4-SO8, G4-PR4	77, III
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FEEDBACK SHEET

We would like to thank you for taking your valuable time to read this Sustainability Report 2014. In an effort to improve the Sustainability Reporting in the coming years, Bio Farma would like to ask you to kindly fill out this feedback sheet and send it back to us.

1. This Sustainability Report has provided you with any information on activities that have been conducted by Bio Farma in its compliance with corporate social responsibility.

Agree Don't Know Disagree

2. The material in this Sustainability Report, including data and information presented are easy to understand and comprehensible.

Agree Don't Know Disagree

3. The material in this Sustainability Report, including data and information presented are sufficient.

Agree Don't Know Disagree

4. The material in this Sustainability Report, including data and information presented are accountable.

Agree Don't Know Disagree

5. What do you think about the presentation of this Sustainability Report, including content, design and layout, as well as pictures?

Agree Don't Know Disagree

6. Which information that you find useful in this Sustainability Report?

.....

7. Which information that you find less useful in this Sustainability Report?

.....

8. What information that you find insufficient and needs to be improved in the next Sustainability Report?

.....

PROFILE

Name :

Institution/Company :

Email :

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- Education
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