

# BIOTECH INNOVATION FOR SUSTAINABILITY







# BIOTECH INNOVATION FOR SUSTAINABILITY

Throughout 2016, Bio Farma continued to innovate in order to improve the quality of life. For this reason, maintaining Gold rating in the annual PROPER assessment that is organized by the Indonesian Ministry of Environment and Forestry displayed a strong commitment made by Bio Farma to continue innovating for future sustainability.

Organizing “Forum Riset Life Science Nasional (FRLN)” or National Life Science Research Forum, with “Challenges Toward National Research Independence in Life Science” as the theme in 2016 became another form of contribution given by Bio Farma within the biotechnology innovation industry to accelerate the down-streaming and commercialization of Life Science products, which have been acknowledged as national products and proud works of Indonesia’s best young talents. Domestically-produced Life Science products will push the availability of affordable biopharmaceutical products for all Indonesian people. Through biotechnological innovation, the Company contributes to Sustainable Development Goals (SGDs), which is by ensuring a healthy lifestyle and promoting the welfare of people at any age.

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



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## COMPETENCE AND COMMITMENT FOR 126 YEARS

Throughout a long journey of 126 years as a business entity, Bio Farma has always been committed and promoted its corporate values, as well as implemented Good Corporate Governance.



DEDICATION THROUGH ECONOMY



DEDICATION THROUGH ENVIRONMENTAL SUSTAINABILITY



DEDICATION THROUGH THE EMPLOYEES' PERFORMANCE



DEDICATION THROUGH COMMUNITY EMPOWERMENT



DEDICATION THROUGH QUALITY PRODUCTS

# ACCOMPLISHMENTS

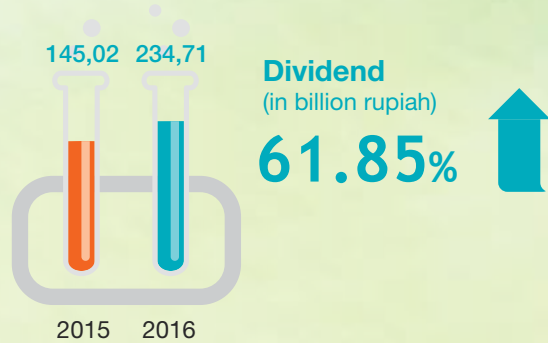
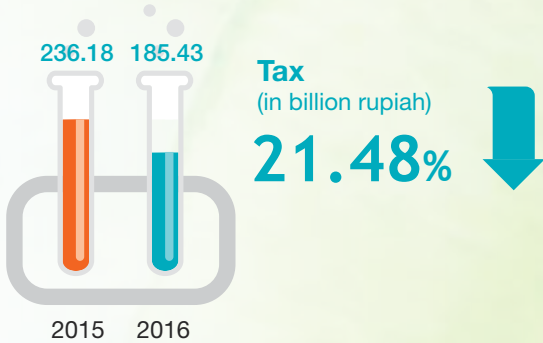
# TOWARDS

# SUSTAINABILITY

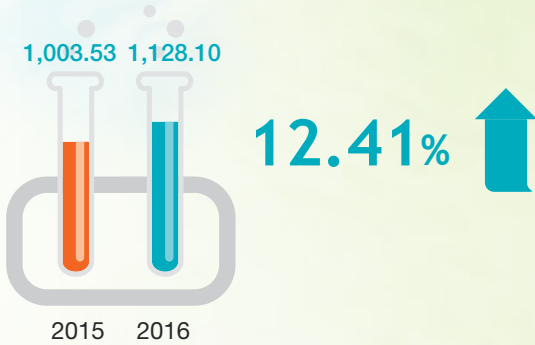


# ECONOMIC IMPACT

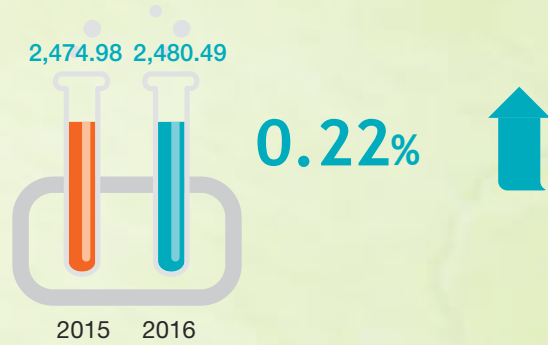
## CONTRIBUTION TO THE NATION



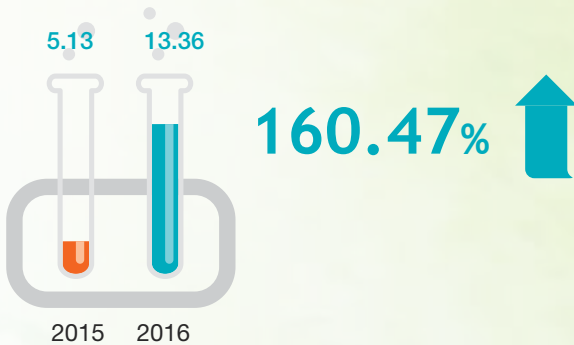
## TOTAL ECONOMIC VALUE DISTRIBUTED (in billion rupiah)



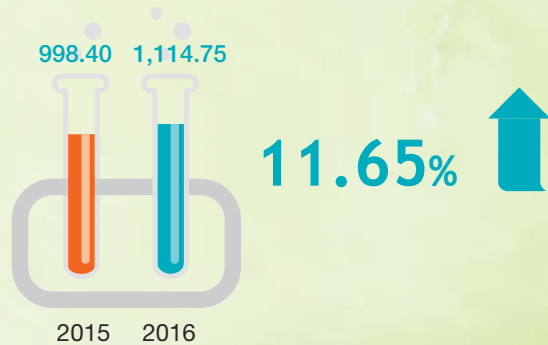
## ECONOMIC VALUE GENERATED (in billion rupiah)



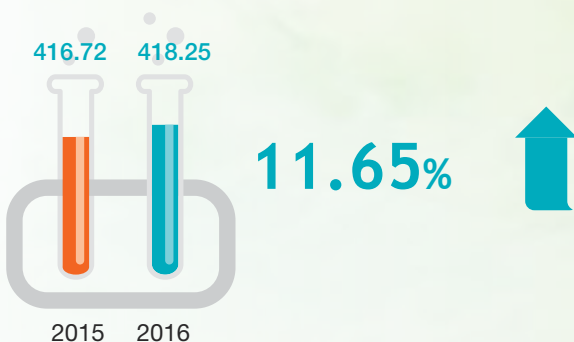
## COMMUNITY DEVELOPMENT FUND AND COMMUNITY SOCIAL CONTRIBUTION



## PAYMENTS TO SUPPLIERS & EMPLOYEES (in billion rupiah)



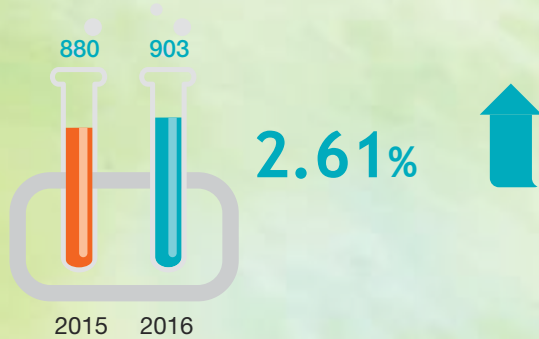
## EMPLOYEE WAGES AND BENEFITS (in billion rupiah)



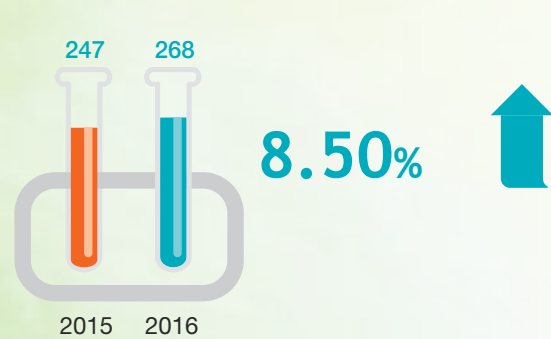


## SOCIAL IMPACT

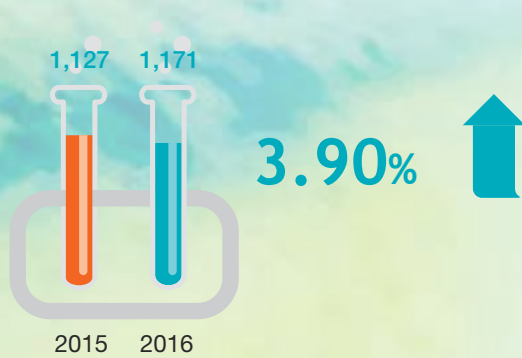
### NUMBER OF MALE WORKERS



### NUMBER OF FEMALE WORKERS



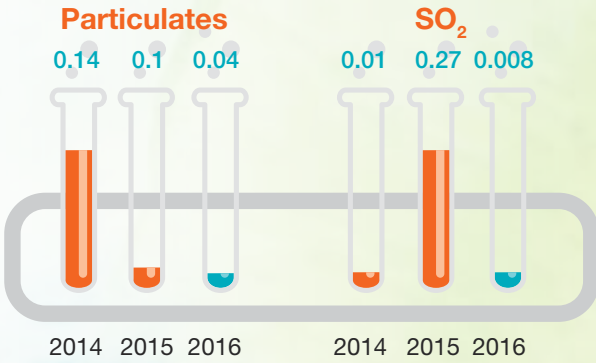
### TOTAL NUMBER OF WORKERS



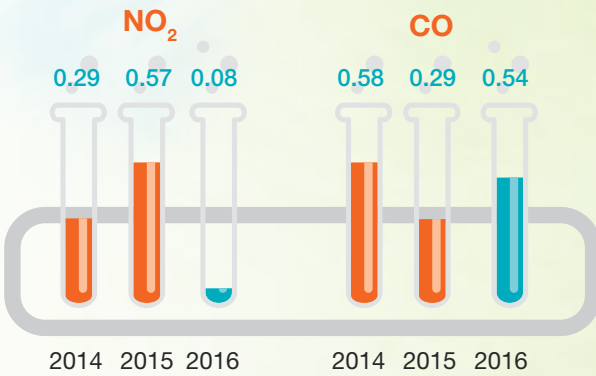
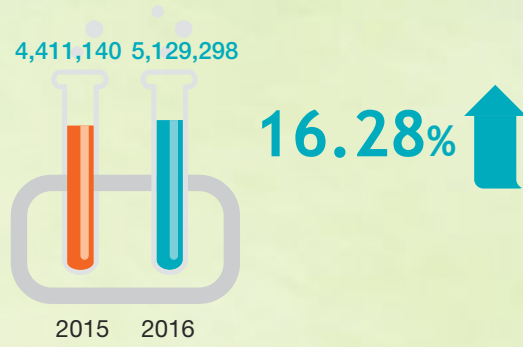
- Employees Receive Annual KPI: 100%
- Labour strike/Labour strike by employees: zero
- Human Rights Violations Case: zero
- Union Membership: 1.149 orang
- Personnel that have to be yet registered as labor union's members are 26 people
- Union Pension Fund : Enough
- Cases of Infringements of Workers Regulations: zero

# ENVIRONMENTAL IMPACT

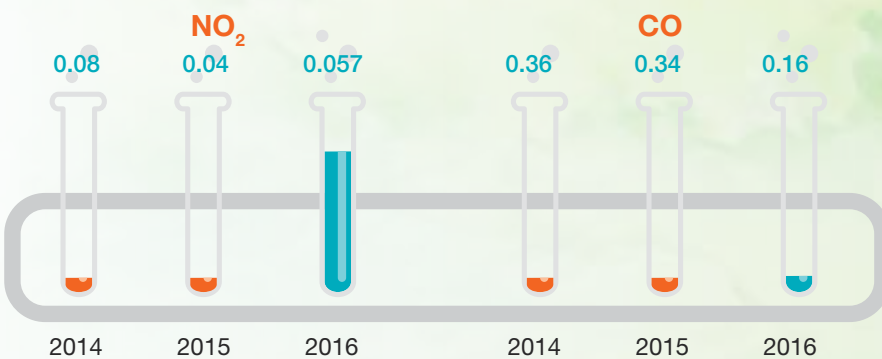
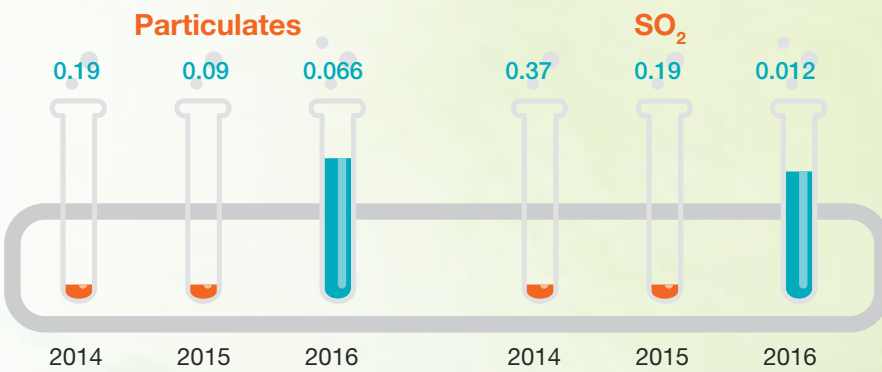
## EMISSIONS



## SOLAR CONSUMPTION (liter)



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



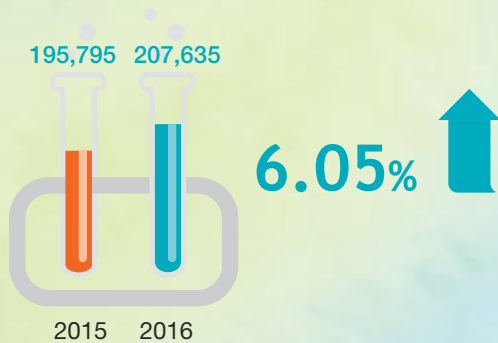


In particular, to reduce greenhouse gas emission, Bio Farma conducts various activities as listed below:

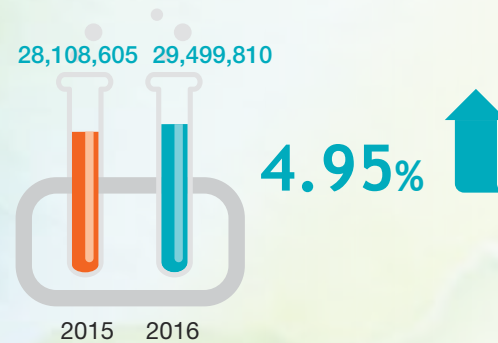
**Absolute Results Equivalent to CO<sub>2</sub> Reduction (Tonnes CO<sub>2</sub> Eq./Year)**

Description	2016	2015	2014	2013
Tree Planting	820.52	1.461.28	609.34	523.07
Electrical and renewable energy saving program				
Installation of solar panel system for water pump	3.97	3.97	3.97	-
Use of LED, movement sensor, and solar panel system for basement parking lighting in public building 2	53.35	51.88	51.88	13.2
Exhaust air energy recovery from production room	178.73	144.49	144.49	178.73
Installation of solar panel system for garden lighting	17.87	17.86	5	1.67
Switching light bulbs to LED lamps	42.87	8.97	5.8	7.86
Dispenser Timer	9.74	9.74	9.74	8.26
Environmentally friendly machine cooler	7.42	10.8	10.8	10.21
AHU Timer Control	1.462	1.462	1.462	1.462
Chiller pump inverter	65.42	65	65	65
Inverter and night mode on 25 laminar airflow cabinets	60.44	60	60	60
Switching off office electric appliances when not in use	81.67	81.67	81.67	81.67
Organic waste recycling	172.31	112.15	181.5	188.24
Installation of Selective Control on elevators at Public 2 and Admin 1 buildings	12.15	2.62	-	-
Exhaust air energy recovery from production room of HIB and Pertussis Vaccine	178.73	-	-	-
Installation of LED lamps and Solar Cell at Administration 2 building	2.07	-	-	-
Installation of Solar Cell at Distribution and Marketing building	1.27	-	-	-
Utilization of condensate water in AHU of building 36	37.17	-	-	-

**WATER USAGE**

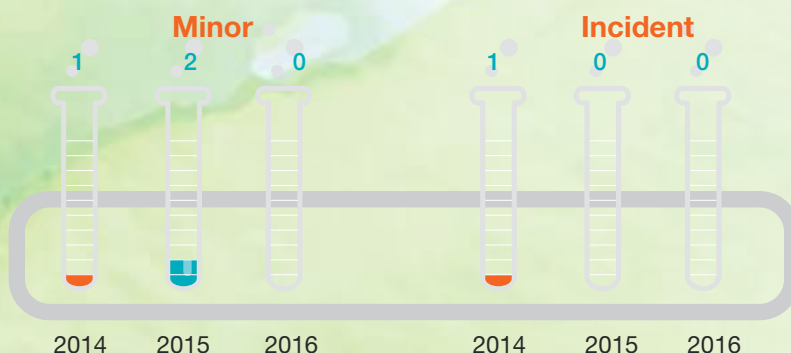


**ELECTRICITY USAGE**

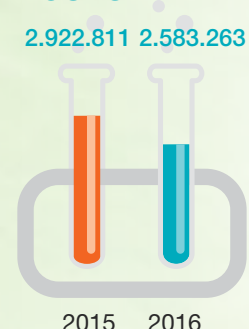


**SAFETY PERFORMANCE**

**WORKING ACCIDENT**



**SAFETY WORKING HOURS**





# AWARDS AND CERTIFICATIONS

## AWARDS



1

2

3

4

5

1

**3 MARCH 2016**

### West Java Development Partner in CSR/PKBL

Bio Farma was honored as partner in West Java's development by the Governor of West Java thanks to its CSR/PKBL Program in 2016. The award was presented by West Java Governor Ahmad Heryawan. The Governor also officially inaugurated the West Java CST/PKBL 2016 projects. The ceremony took place on Tuesday (14/3) at the Intercontinental Hotel Bandung, Resort Dago Pakar.

2

**5 APRIL 2016**

### Taxpayer Recognition

As one of the 24 largest contributing taxpayers, the Minister of Finance recognises Bio Farma as one of the most compliant tax subjects.

3

**20 APRIL 2016**

### Indonesia Most Creative Company Marketers

Bio Farma was awarded "Indonesia Most Creative Company Marketers" by SWA Magazine.

4

**16 MAY 2016**

### Zero Accident

For its achievements in implementing the occupational health and safety programs (OHS), Bio Farma received the Zero Accident Award from the Minister of Manpower and Transmigration.

5

**21 MAY 2016**

### Corporate Social Responsibility (CSR)

Bio Farma receives 7 prestigious awards in Corporate Social Responsibility (CSR) in the Indonesia Green Awards 2016. Bio Farma was awarded for its work in water conservation, integrated waste management development, biodiversity conservation, pollution prevention pioneer, community development, conservation of new and renewable energy, and the Best Indonesia Green Awards 2016. The award was presented on Saturday, May 21, 2016 by La Tofi, chairman of the La Tofi School of CSR in the awards ceremony at Taman Tebet, South Jakarta.



6



7



8

6

**7 JULY 2016  
GOLD PROPER**

Bio Farma was for the third time awarded the highest recognition in the PROPER Emas (Corporate Performance Ranking Program Emas) by the Ministry of Environment and Forestry. The award was presented by Vice President Jusuf Kalla to the Bio Farma Director of Production Juliman at the Vice Presidential Palace. Present at the ceremony was the Minister of Environment and Forestry of the Republic of Indonesia.



7

**PROPER Emas Award from the Government of West Java**

Bio Farma was awarded the PROPER Emas by the Regional Environmental Monitoring Agency of West Java. The award was for Bio Farma's achievements in the Corporate Performance Assessment in Environmental Management initiated by the Ministry of Environment and Forestry in 1995.

8

**18 JULY 2016  
2016 Intellectual Property Award and WIPO Award**

Bio Farma received the 2016 Intellectual Property Award and WIPO Award. The award from the Ministry of Justice and Human Rights Affairs was received by Director of Finance Indrascaryo.



9



10



11

9

**27 JULY 2016****2016 Children Protection Award**

Bio Farma was awarded the 2016 Children Protection Award for its consistency in meeting children's rights to safety by supplying vaccines for infants, school-aged children, and adults.

11

**25 AUGUST 2016****Warta Ekonomi**

Bio Farma was awarded "Indonesia Social Business Innovation Company 2016" in the Pharmacy - Geopark Development category by Warta Ekonomi. The awards ceremony was held at the Pullman Hotel, Jakarta.

10

**8 AUGUST 2016****BPJS**

Bio Farma received the "Corporate Pension Friendly Assurance Program" from the Employees Social Security System (BPJS Ketenagakerjaan).



12



13



14

12

**27 SEPTEMBER 2016**

**Annual Report Award 2015**

Bio Farma won yet another Annual Report Award 2015 (ARA 2015). Bio Farma was the first runner-up in the Non-listed non-financial services SOE category. The award was received by the Director of Finance Pramusti Indrascaryo.

14

**20 DECEMBER 2016**

**KIP 2016**

Bio Farma yet again won the Public Information Transparency Award 2016 from the Public Information Commission. The award was presented by Vice President Jusuf Kalla to Director of Production Juliman.

13

**14 DECEMBER 2016**

**SR 2016 Award**

Bio Farma won the "Best Sustainability Report 2015 Category Manufactures," presented by Chairman of the 2016 SRA Judging Panel Sarwono Kusumaatmadja to the Director of Production Juliman.

# CERTIFICATIONS

## I. Recognition from the World Health Organization (WHO)



### 1. Polio Virus Vaccine

Awarded on April 9, 1997; no expiration date.

### 2. Measles 10 dosages

Awarded on April 9, 1997; no expiration date.

## II. CPOB Certificate from the Food and Drug Monitoring Agency of the Republic of Indonesia (BPOM-RI)



1. February 17, 2016 - ISO 17025 Accreditation - Bio Farma's Microbiology Laboratory receives the ISO 17025 Accreditation for food, beverages, and cosmetics testing.



5. Awarded on September 16, 2013; valid until September 16, 2018.



2. Awarded on April 4, 2011; valid until April 4, 2016.



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



3. Awarded on April 4, 2011; valid until April 4, 2016.



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



4. Awarded on September 16, 2013; valid until September 16, 2018.



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



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



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



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



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



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



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



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



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



17. Awarded on April 29, 2014; valid until March 31, 2019.



18. Awarded on January 14, 2015; valid until January 14, 2020.



19. Awarded on January 14, 2015; valid until January 14, 2020.



20. June 27, 2016 - ISO 9001: 2015 Accreditation - Bio Farma receives the ISO 9001: 2015 on Quality Management Standard by the Lloyd's Register Quality Assurance; valid from June 27, 2016 to June 26, 2019.

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



21. Valid until July 12, 2018.

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



22. Valid until July 12, 2018.

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



23. Valid until June 30, 2016.

## CERTIFICATION

**VI. Laboratory Accreditation from the WHO South-East Asia Regional Office**



**VII. Vaccine Vial Monitor Certification from the World Health Organization (WHO)**



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



**IX. Ciletuh Geopark from the Indonesian National Commission for UNESCO, Ministry of Education and Culture**



24. The Bio Farma-sponsored Ciletuh Geopark was certified as National Geopark according to UNESCO Geopark Standards thanks to the partnership between PT Bio Farma (Persero), the Office of Cultural and Tourism Affairs, and the Government of West Java. Awarded on December 22, 2015; no expiration date.

**X. Consolidation of External Quality in Immunology from the Directorate of Sustainable Supporting Medical Services and Health Facilities**



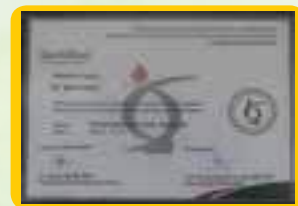
25. Bio Farma received a certificate for participating in the Consolidation of External Quality in Immunology. Awarded on April 21, 2015; no expiration date.

**XI. Consolidation of Extra-laboratory Quality by the Department of Microbiology of the Indonesian Association of Clinical Pathologist and Laboratory Medicine**



26. Bio Farma received a certificate for participating in the Consolidation of Extra-laboratory Quality by the Department of Microbiology of the Indonesian Association of Clinical Pathologist and Laboratory Medicine. Awarded in June 2015; no expiration date.

**XII. Consolidation of Extra-laboratory Quality by the Department of Haematology, Chemical Pathology, and Coagulation of the Indonesian Association of Clinical Pathologist and Laboratory Medicine**



27. Bio Farma received a certificate for participating in the Consolidation of Extra-laboratory Quality by the Department of Department of Haematology, Chemical Pathology, and Coagulation of the Indonesian Association of Clinical Pathologist and Laboratory Medicine. Awarded in August 2015; no expiration date.

## HIGHLIGHTS



22 JANUARY

**Employee Vehicles Emissions  
Testing**

Bio Farma is committed towards conservation efforts and clean emissions in Bandung. Bio reiterates its commitment by conducting emissions testing for its employees' motor vehicles.

In addition to employees' vehicles, the Company also tested its company fleet, vaccine distribution lorries, partners' vehicles, and guests' vehicles.



JANUARY 25 - FEBRUARY 10  
**Healthy Santri**

As an effort to improve a healthy lifestyle in education institutions and the community, Bio Farma and Harian Pikiran Rakyat held the "Santri Sehat" roadshow to pesantrens (Islamic boarding schools) in Tasikmalaya from Monday to Wednesday, January 25-27, 2016. The Roadshow featured introduction to healthy lifestyles and writing workshops.



17-FEBRUARY  
**ISO 17025 Accreditation**

With its expertise in life sciences, Bio Farma provides microorganism tests for food, beverages, pharmaceutical, and cosmetics industries. The tests analyze microorganism contamination in products and their safety.

Bio Farma received its ISO 17025 accreditation on February 17, 2016. The accreditation allows Bio Farma to assist the Food and Drug Monitoring Agency to conduct food and beverage tests for some 500 of its industry players. Bio Farma expects that the certificate

produced by its Microbiology Laboratory to be referenced by the Food and Drug Monitoring Agency in its product distribution permits. The ISO 17025 accreditation is a governmental recognition issued by the National Accreditation Committee (NAC) to state that Bio Farma's Laboratories implements internationally-recognised Laboratory Management Systems.



**13-MARCH**  
**Ambassadorial Visit to Bio Farma**

Bio Farma has the honour of receiving a visit from ambassadors who are members of the Jakarta Ambassadors Golf Association (JAGA). The visit was hosted by Director of Marketing Mahendra Suhardono, Director of Production Juliman, and Bio Farma staff.

The 17 ambassadors are conducting a diplomatic tour to promote regional potential, particularly in trade, tourism, and culture.



**15-MARCH**  
**National Polio Immunisation Week**

Bio Farma participated in the National Immunisation Week (NIW) held today to March 15, 2016 to support programs organised by the Ministry of Health. Bio Farma is appointed to host the West Java NIW. Present in the inauguration ceremony was the Deputy Governor of West Java, Mayor of Bandung, and leadership of the Ministry of Health and Bio Farma.

The Polio NIW is held concurrently across Indonesia for infants aged 0-59 months. The Week is aimed to ensure that the nation's children are satisfactorily immune against polio and reduction of trans-border polio transmission. The 2016 Polio NIW is part of the global campaign to eradicate polio by 2020.



**16-MARCH**  
**Distributor Meeting**

Socialization and coordination of authorized distributors of Bio Farma products to share the latest product knowledge and coordinate Bio Farma's distribution.



05-APRIL

**Bio Farma Receives Taxpayer  
Award**

The Directorate General of Tax awarded the 24 largest taxpayers for their contribution towards the 2015 tax revenue target. The award was bestowed by the Minister of Finance, Bambang Brojonegoro to Director of Finance Pramusti Indrascaryo.

Bio Farma gives considerable attention to its tax compliance and returns. Bio Farma has won the award in the previous year.



10-APRIL

**Bio Farma Holds School of  
Vaccine for Journalists in  
Mataram, Lombok**

Bio Farma held a media gathering and workshop attended by 60 members of the press from Bandung, Jakarta, and Mataram. The event was held in Mataram from April 10-12, 2016 with the theme "National Pharmacy Synergy for Self-sufficiency." Speaking in the event was dr. Piprim B. Yanuarso, Sp.A (K) from the Indonesian Paediatric Society. Arif Budisusilo from Bisnis Indonesia also spoke on the Development of the Pharmaceutical Industry from the Media's Perspective and led the workshop on in-depth journalism in biotechnology. Bio Farma Commissioner Ihsan S. Latief

discussed Bio Farma's CSR while Bio Farma Corporate Secretary Rahman Rustan presented the theme topic. Moderating the event was Sindo Acting Editor Hanna Fahrana. The keynote speaker in the media-gathering event was West Nusa Tenggara Governor Dr. TGH M. Zainul Majdi, who presented on West Nusa Tenggara's preparation of becoming the world's first halal-friendly tourist destination.

## HIGHLIGHTS



**12-MAY**  
**Bio Farma-Universitas Padjadjaran Research Partnership**

Together with 26 other SOEs to realize the Pentahelix Strategy, Bio Farma has established a research partnership with Universitas Padjadjaran to form the BUMN Centre of Excellence. The commitment of partnership between Universitas Padjadjaran and SOE, among which is Bio Farma, was reinforced with the signing of a memorandum of

understanding on Unpad-BCE. The Centre will serve as a hub for SOE to develop their global competitiveness. Present in the signing ceremony was Minister of SOE Rini Soemarno, Minister of Communications and Informatics Muhammad Nasir, Padjadjaran University Rector Tri Hanggono Achmad, and President Directors of SOE.



**24-JUNE**  
**BUMN Hadir Untuk Negeri Flea Market**

Bio Farma participated in the “BUMN Hadir untuk Negeri Synergy” organised by the Ministry of SOE. Among the *BUMN Hadir untuk Negeri* event was the flea market.

The nationwide event was officially opened by Minister of SOE Rini Soemarno in Garut on June 24, 2016. Present at the opening ceremony was Director of Human Resources Andjang

Kusumah, Head of CSR R. Herry, and Directors of SOEs. The flea market, held in conjunction with Ramadhan 1437H, is expected to assist the public in purchasing daily necessities for Eid celebrations. As a West Java-based SOE, Bio Farma participated in the flea market to share joy with the public.



**27-JUNE**

**Bio Farma to Process  
Blood Products from the  
Indonesian Red Cross  
Society**

Global vaccine producer Bio Farma has been approved by the Ministry of Health to process blood plasma into albumin and globulin from the Indonesian Red Cross Society. The trust between Bio Farma and the Indonesian Red Cross Society

is formally established with the signing of the memorandum of understanding at the Indonesian Red Cross Society Headquarters in Jakarta on Monday, June 6, 2016. The memorandum was signed by Indonesian Red Cross Society Chairman Ginanjar Kartasasmita and Bio Farma President Director Iskandar.



**15-JULY**

**Bio Farma Invites National  
Media to Vaccine Production  
Facility**

Bio Farma has invited the national mass media to visit the company's vaccine production, research and development, packaging, and distribution facility in Bandung. The event was held in cooperation the Bureau of Public Communications of the Ministry of Health and Public

Relations of the Food and Drug Monitoring Agency. The event was aimed to share with the media on current issues concerning vaccines and Bio Farma's role in the national vaccine industry.



**18-JULY**

**2016 Intellectual Property  
Award and WIPO Award**

On the Anugerah Kekayaan Intelektual Nasional 2016 and WIPO (World Intellectual Property Organization) Awards 2016, held by the Directorate General of Intellectual Property (DJKI) of the Ministry of Law and Human Rights of the Republic of Indonesia, Bio Farma received an award in the category of Innovation and IP for Enterprises/Corporations. The award was handed by the Vice President Jusuf Kalla at the Vice Presidential Palace to Pramusti Indrascaryo, Finance Director of Bio Farma.

Bio Farma is proud to have received the award after a series of visitation, interview, and strict assessment procedures by the jury when they visited Bio Farma In Bandung. For us, innovation is already an essential part of the Company's culture, and currently we are developing a system for the Implementation and development of Innovations in terms of product, process, and business strategy.

## HIGHLIGHTS



**27-JULY**  
**Bio Farma Receives Children Protection Award from KPAI**

Bio Farma received the “2016 Children Protection” award in the Businesses category from the Indonesia Commission on Protection of Children (ICPC). The award was presented by Secretary General of ICPC Erlinda Iswanto to Director of Marketing Mahendra Suhardono. The award is a recognition for Bio Farma’s 126 years of contribution in supplying internationally recognised vaccines to protect infants and children.

The ICPC saw Bio Farma as an SOE consistently guaranteeing the right to health for children by supplying 5 million vaccines for infants, 27.6 million to school-aged children, and 15 million to women of childbearing age. Bio Farma also provides core vaccines for infants to protect against polio, measles, hepatitis B, BCG, DPT, and Pentabio.



**14-AUGUST**  
**BUMN Hadir Untuk Negeri Fun Walk**

As part of the *BUMN Hadir untuk Negeri* in West Java, five SOEs (PT PN III, Bio Farma, PT PN VIII, Perum Jasa Tirta 2, PT Pupuk Kujang) held a fun walk and check-ups for the public.



**19-AUGUST**  
**Bio Farma Junior Researcher Elected Member of ALMI**

Neni Nurainy, a junior researcher in Bio Farma, was elected as one of the 40 members of the Indonesian Young Scientists Academy (IYSA). Members of the Academy were officially appointed by BJ Habibie in conjunction with launching ceremony of the Sains45 book. The Indonesia Academy of Sciences (IAS), chaired by Prof. Sangkot Marzuki, elects 40 fellows for the Academy. To be eligible, candidates have to hold a Ph.D., working in a scientific career, and are less than 45 years old. The Academy aims

to stimulate the scientific culture in Indonesia so that science and technology can solve the nation’s issues. Following the establishment of ALMI is launching of the book “Sains45 - Agenda Ilmu Pengetahuan Indonesia Menyongsong Satu Abad Kemerdekaan.” The book contains thoughts and proposals by 17 young scientists. The book also discusses 45 crucial questions on science development in the journey towards 100 years’ of independence in 2045.



**24-25 AUGUST  
NLSRF 2016**

The theme of the 2016 National Life Sciences Research Forum (NLSRF) is “Challenges towards Independence in National Life Sciences Researches.” The theme picked up the 2015 National Vaccine Research Forum (NVRF) theme on “Downstreaming of National Researches in Life Sciences towards Improving the Quality of Life of the Nation.”

The expansion of NVRF into NLSRF is aimed to extend the scope of life sciences product development in line with Bio Farma’s mission: to

provide and develop life sciences products meeting international standards for a better quality of life. Life sciences products are products made from living organisms using biotechnological processes.

FRLN aims to enhance collaboration in life sciences research between the government, higher education institutions, and supporting communities to accelerate downstreaming and end goal of commercializing life sciences products. These products will be recognized as the fruits of homegrown Indonesian talents.



**30-AUGUST  
Siswa Mengenal Nusantara  
(SMN)**

Five SOEs - PT Bio Farma, PTPN III, PTPN VIII, Perum Jasa Tirta II (PJT II), and PT Pupuk Kujang - in West Java sponsored 20 high achieving high school students from West Java to Northern Sulawesi. The students are part of the Siswa Mengenal Nusantara

2016 (SMN 2016) student exchange program with Northern Sulawesi. The exchange program was an initiative of the Ministry of State-owned Enterprises. Students participating in the program are jointly selected by the Ministry and the Education Board of West Java.



**30-AUGUST  
Bio Farma Employee  
Awarded for 100 Blood  
Donations**

Bio Farma employee Dede Wanda received the Satyalancana Kebaktian Sosial Donor Darah Sukarela (Satyalancana for Services to Voluntary Blood Donation) from Jusuf Kalla, Vice President of the Republic of Indonesia. Dede Wanda has donated 105 times to contribute to the public health and those in need.

Prior to the ceremony, the “Heroes of Humanity” were sent-off by the West Java Deputy Governor Deddy Mizwar at the West Hall of Gedung Sate, Bandung. Dede Wanda’s achievement is expected to increase the public’s eagerness to participate in blood donations.

## HIGHLIGHTS



**SEPTEMBER - OCTOBER**  
**BUMN Mengajar**

The Directors of Bio Farma inspired high school students from 6 cities and regions in West Java to be proud and contribute in SOEs in the BUMN Mengajar (BUMN Teaches) program.

schools in West Java, particularly schools near its facilities. Bio Farma shared with students its corporate profile, business processes, and professions available in SOEs.

The program, held from May to December 2016, is an initiative by the Ministry of State-owned Enterprises and facilitated by SOEs across Indonesia. In the program, Bio Farma is responsible for



**02-SEPTEMBER**  
**Bio Farma Actively Socialises Tax Amnesty and Asset Repatriation to Employees**

Bio Farma is fully committed in supporting the government's programs by actively socialising its programs, such as tax amnesty, to its employees. The tax amnesty introduction at Bio Farma was presented by officials of the West Java Tax Office.

The socialisation is Bio Farma's gesture and goodwill towards a successful a tax program. Bio Farma also actively participates in asset repatriations (reinvesting assets in Indonesia for at least 3 years).



**10-SEPTEMBER**  
**Opening of Vaccination Park**

The Deputy Mayor of Cimahi officially opened the Vaccination Park to provide healthcare and Immunization services for the public. The park is part of Bio Farma's CSR in environment and health.

providing neighbourhood health and assistance centres (posyandu and posbindu), particularly in RW24. The neighbourhood centre offers monthly health checks for infants, elderly, and pre-elderly.

The Vaccination Park is located in Fadjar Raya Estate, Cibabat, Cimahi Utara. The park supports the government's program of



## HIGHLIGHTS



**02-NOVEMBER**  
**Prime Performance Evaluation Criteria (PPEC)**

Bio Farma's Prime Performance Evaluation Criteria (PPEC) score is 510.25 and rated as Good Performance Company.



**15-NOVEMBER**  
**OIC Vaccine Manufacturers Group Meeting**

Bio Farma is host of the OIC Vaccine Manufacturers Group (VMG) attended by 10 OIC members. The Group aims to be self-reliant and self-sufficient in vaccine production.



**16-18 NOVEMBER**  
**Bio Farma Appointed Host of the OIC Vaccine Manufacturers Group Workshop**

Bio Farma, national vaccine producer, was appointed by the Organization of Islamic Cooperation to host the vaccine production workshop for OIC members. The workshop was held in the Exhibition Room at Bio Farma head office on November 15-18, 2016. Participants of the workshop are OIC members establishing their national vaccine industry for domestic production. Attending

the workshop was representatives from Pakistan, Turkey, Tunisia, Malaysia, Iran, Saudi Arabia, Morocco, Senegal, Bangladesh, and representatives from WHO, UNICEF, Islamic Development Bank (IDB), Statistical, Economic, and Social Research and Training Centre for Islamic Countries (SESRIC), and Global Alliance for Vaccines and Immunisation (GAVI).



**14-DECEMBER**  
**SR 2016 Award**

Bio Farma won the “Best Sustainability Report 2015 Category Manufactures,” presented by Chairman of the 2016 SRA Judging Panel Sarwono Kusumaatmadja to the Director of Production Juliman.

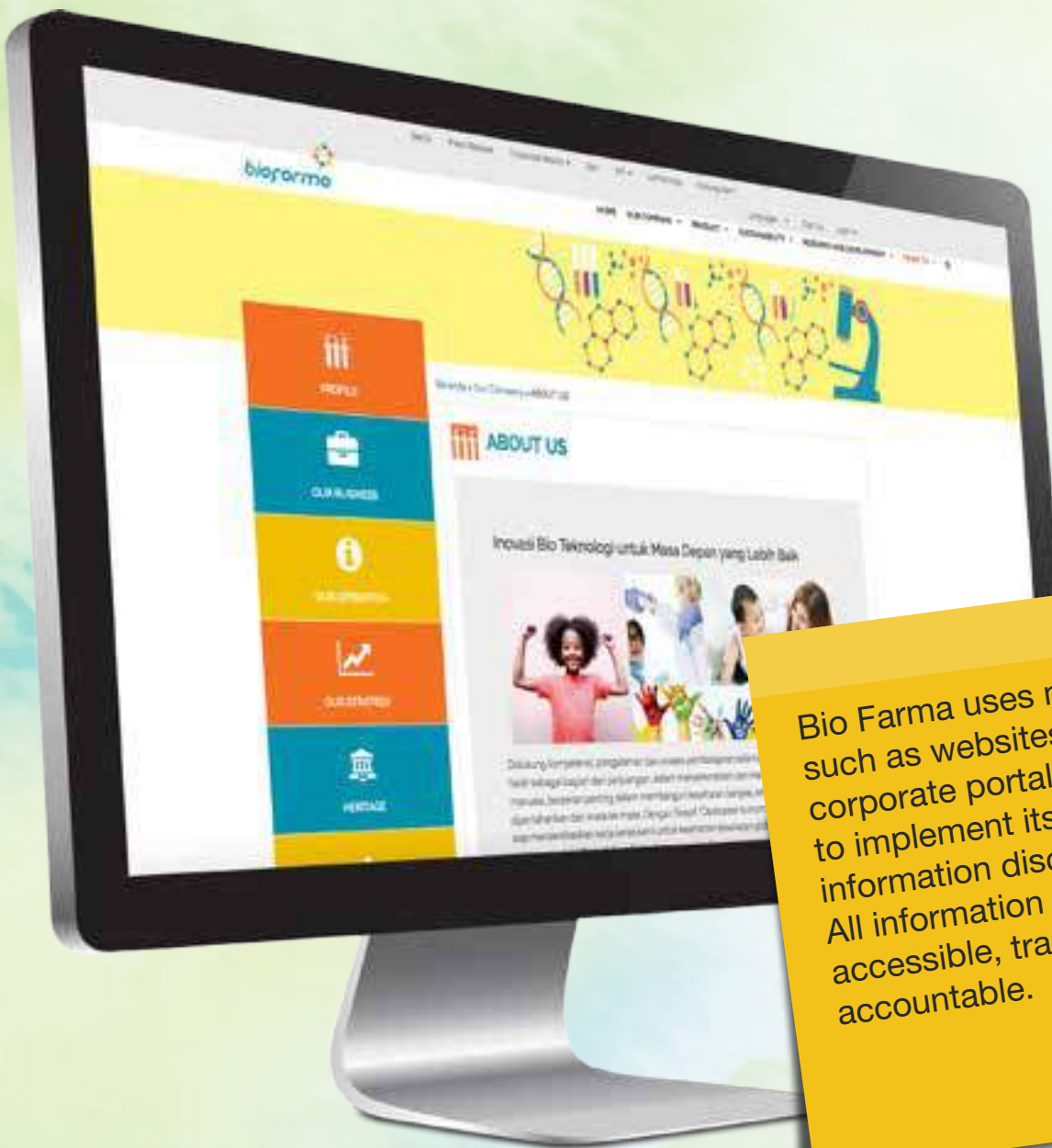


**20-DECEMBER**  
**KIP 2016 Award**

Bio Farma has for the fourth time won the Public Information Transparency Award 2016 from the Public Information Commission. The award was presented by Vice President Jusuf Kalla to Director of Production Juliman. The award is a significant achievement for Bio Farma. The Company ardently believes that public information transparency is a necessity to compete globally.

The strict Public Information Commission-led assessment began in November 2016 with the Self-Assessment Questionnaire (SAQ) to gauge Public Entities' adherence to the Freedom of Information Law. In the last stage of the assessment, the Central Information Commission visits the assessed company to measure indicators of public information, information management, and documentation.

## INFORMATION ON THE CORPORATE WEBSITE



Bio Farma uses mediums such as websites, SOE portal, corporate portal, and microsite to implement its public information disclosure. All information is readily accessible, transparent, and accountable.

## RESEARCH-BASED INITIATIVE

Bio Farma has always had a specific focus on research and development of Life Science products, which is usually done in cooperation with the government, various research institutions and universities, in effort to build national autonomy and fulfill the global needs.



DEDICATION THROUGH ECONOMY



DEDICATION THROUGH ENVIRONMENTAL SUSTAINABILITY



DEDICATION THROUGH THE EMPLOYEES' PERFORMANCE



DEDICATION THROUGH COMMUNITY EMPOWERMENT

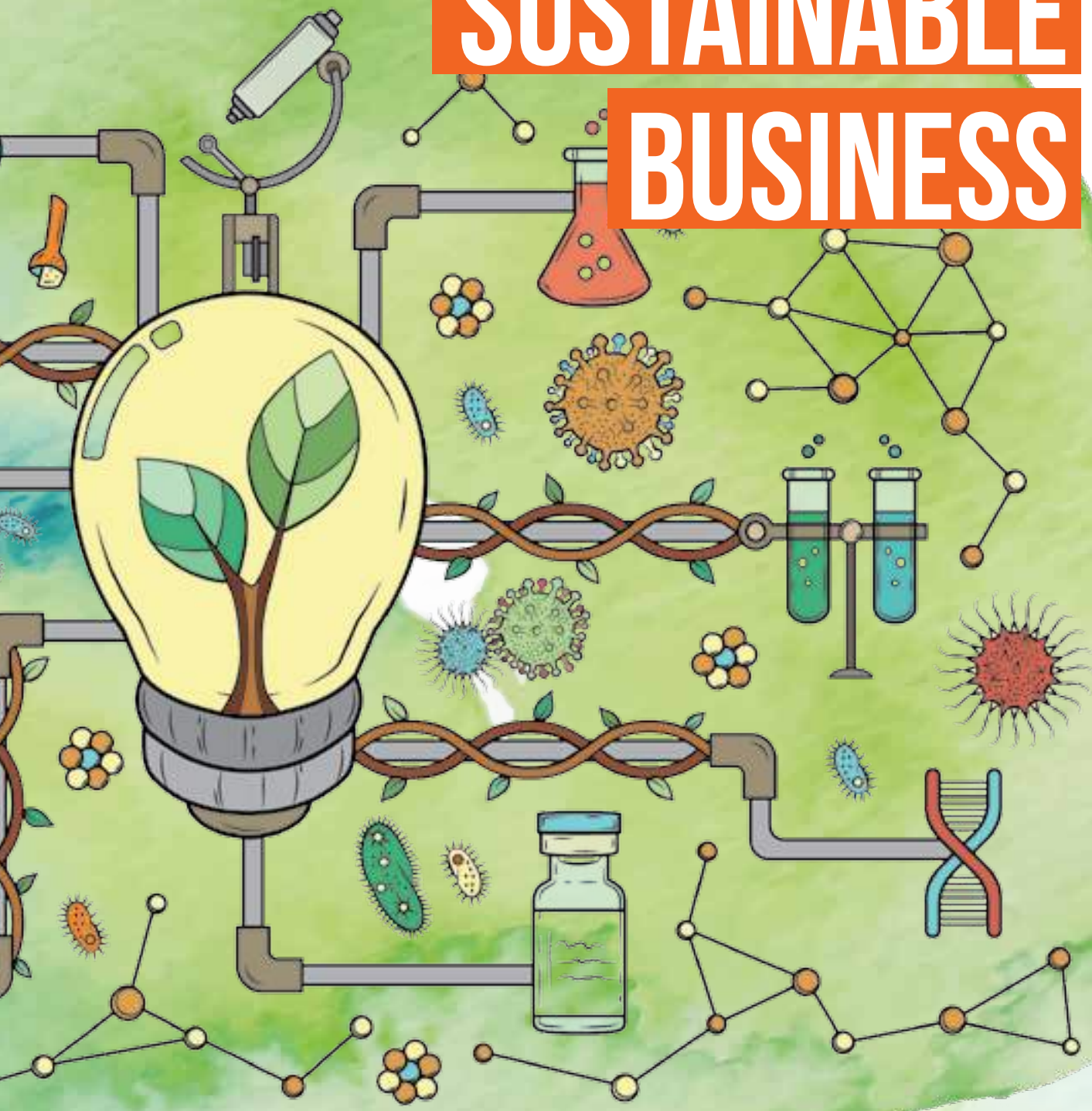


DEDICATION THROUGH QUALITY PRODUCTS

NOTES ON

SUSTAINABLE

BUSINESS



## OPENING REMARKS BY PRESIDENT COMMISSIONER [GRI 102-14]

Transforming into a Life Science company is the most appropriate choice for Bio Farma, as in the life science covers biotechnology, biodiversity, pharmacy, and biomedicine, in which Bio Farma has a very well-experienced in these fields. Their innovations are strongly supported by research and development, technology transfers, and strategic partnerships both. National and international partners.

**AHMAD M. RAMLI**  
President Commissioner

Focusing on “Biotechnology for sustainability” becomes how Bio Farma interprets the spirit and attitude towards sustainability within the Company’s operations. This is done through utilization of our competence in the field of biotechnology that does not only focus on creating new products and maximizing profit, but also giving optimum contribution to a better future of the planet. Effective biotechnology innovation can become one of the means in promoting a better life while providing solution for global prosperity.

In particular for performance in 2016, the Board of Commissioners appreciates the Company for all sustainability/preservation achievements that were made. Receiving Gold rating in PROPER award for the third time is an achievement that we are proud of and must be maintained. Energy consumption efficiency programs had also been consistently implemented that resulted in the reduction on energy consumption intensity by 2.5%, compared to the previous year. This becomes Bio Farma’s contribution to particularly lower greenhouse gas emission. The Board of Commissioners also appreciates the increase that was made on the amount of social investment in 2016, which we believe will help improving public welfare and the quality of the environment. All these efforts show that the Management does not only have profit in mind, but also give attention to social and environmental aspects. This initiative is our main capital in maintaining the unity and the existence of the Company in the long run.

Regarding the direction that Bio Farma is taking to become a sustainable company, the Board of Commissioners has given a mandate to the Board of Directors within the corridors of established philosophy, mission, and vision of the Company, with Being Sustainable interpreted as environment friendly and caring about the people. Further, the Company envisions sustainability in three dimensions, which are economy, environment, and social. The smallest steps that we make within those three dimensions will be very impactful to the sustainability/preservation of the earth and everything on it. This report presents the contribution of Bio Farma in preserving the sustainability of the earth.

Furthermore, the Board of Commissioners also appreciates the steps the Directors have taken in the acceleration of Sustainable Development Goals, especially in the area of health. As a manufacturer of Polio vaccine, Bio Farma plays a significant role in ensuring the domestic availability of Polio vaccine throughout the country. Meanwhile, on the global stage Bio Farma could manage to improve its reputation as a reliable vaccine manufacturer by fulfilling 2/3 of the world’s demand for Polio vaccine.

As the final word, the Board of Commissioners would like to thank the Board of Directors for impressive performances of sustainability/preservation initiatives throughout the year 2016. The accomplishments correspond to the stakeholders' expectation of Bio Farma as a responsible, environmentally friendly, and people-caring pharmaceutical company.

Thank you for the dedication that has been given, and let us work even harder to create a better future.





DEDICATION  
THROUGH  
ECONOMY



DEDICATION THROUGH  
ENVIRONMENTAL  
SUSTAINABILITY



DEDICATION THROUGH  
THE EMPLOYEES'  
PERFORMANCE



DEDICATION THROUGH  
COMMUNITY  
EMPOWERMENT



DEDICATION THROUGH  
QUALITY PRODUCTS



Left → Right:

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

On behalf of the Board of Commissioners

**AHMAD M. RAMLI**

President Commissioner

# OPENING REMARKS BY THE BOARD OF DIRECTORS [GRI 102-14]

Appreciates the Company for all sustainability achievements that were made. Receiving Gold rating in PROPER award for the third time is an achievement that we are proud of and must be maintained.

**ISKANDAR**  
President Director

Respected Stakeholders,

First and foremost, we would like to express our gratitude to Allah SWT, God The Almighty. PT Bio Farma (Persero) has for the fifth time released its Sustainability Report as a form of transparency and accountability of our progress in the field of sustainability. Details on the dedication shown by Bio Farma, starting from establishing company policy up to its implementation within economy, environment, and social fields, become the important points of this report.

Bio Farma has finished year 2016 well amid various challenges that demanded our unyielding effort and consistency in maintaining prime performance towards achieving our target to become an Integrated Life Science company. In addition, the Company considers our sustainability initiative as a form of awareness and attitude in relation with our competence in biotechnology, which shows that we do not merely aim to create globally competitive products and maximize profit. More than that, we want to dedicate our resources and knowledge to support public welfare. For this purpose, we have taken various strategic steps to be able to apply efficient biotechnology innovations that can give optimum contribution in creating a better life for future generations.

As a form of contribution by Bio Farma in tackling global warming, we have been implementing various programs in effort to reduce greenhouse gas emission. Therefore, for the past three years, our energy consumption has successfully been reduced. At the macro level, our environmental policies and programs have also received the government's recognition. Our environmental sustainability efforts through energy efficiency and conservation programs and other programs under people's development and empowerment initiatives had for the third time successfully received Gold rating in the annual PROPER award given by the Indonesian Ministry of Environment and Forestry.

In the aspect of economy, year 2016 marked an increased contribution from Bio Farma to our country through significant increase in dividend payment up to 61,85%, compared to the previous year. Meanwhile, the amount of tax paid by Bio Farma did not increase in 2016, even decreased by 21,39% compared to the previous year. In 2016, Bio Farma was included as one of the 24 taxpayers with great contribution in West Java province. During the year, our Company also increased our social investment for the people by 29,4%, compared to 2015.

Further, Bio Farma continued to carry out our commitment to participate in the efforts to accelerate the achievement of Sustainable Development Goals. At the national level, we played our role through four pillars of corporate social responsibility, which are health, environment, education, and economy. Implementation of initiatives towards achievement of SGDs by Bio Farma can be found in this report (page 135)

The role of Bio Farma as a vaccine manufacturer that strives to achieve SGDs at the global level cannot be separated from the Global Vaccine Action Plan (GVAP), a framework adopted by member countries of the World Health Organization (WHO) to achieve the so-called Decade of Vaccines (DoV) 2011-2020. The report on monitoring, evaluation, and accountability of GVAP in 2016 records that one of the targets achieved in 2016 is the use of Type 2 Oral Polio Vaccine (OPV), as a replacement from trivalent OPV to bivalent OPV, in 155 countries.

Bio Farma played a significant role in this achievement considering that the amount of Polio vaccines manufactured and distributed by Bio Farma have fulfilled 64% of the global demand. Further, while we are focused on providing service to the global market, the domestic demand for vaccines still receives our full attention. In 2016, Bio Farma was the only company in Indonesia given an award from the National Commission for Children Protection, due to our consistency in ensuring the fulfillment of the right to child health through availability of a total of 5 million vaccines for infants, 27.6 million vaccines for school-age children, and 15 million vaccines for women of childbearing age every year.

Tear 2016 also marked the increasing recognition of Geopark Ciletuh complex in South Sukabumi as centre for development of local values, integrating aspects of biodiversity, geology, and culture. Further, over the last 4 years, Bio Farma has been collaborating with multiple stakeholders in developing the region, also known as Jampang Purba, in order to transform the area into a Geologic-Ecologic Recreation Park 2017 becomes as a target year for Geopark Ciletuh to receive acknowledgement from UNESCO as a part of Global Geopark Network. If this target is achieved, Geopark Ciletuh can potentially improve tourism sector in Indonesia, as this region may attract foreign tourists.

As a part of our internal human development, Bio Farma has designed a blueprint for human development concept and system to particularly strengthen our Learning Organization target and build Bio Farma's Learning and Development Center in 2017. Bio Farma's Learning and Development Center will transform into a Corporate University in 2018.

We believe that any challenges can be overcome as long as we receive support and participation from all stakeholders. Our sustainability performance success in 2016 cannot be separated from the guidance and support from the shareholders as well as the other stakeholders.

On behalf of the Board of Directors, I would like to thank all stakeholders for the continuing support and participation in the journey to reach the Company's sustainability performance throughout 2016.



DEDICATION THROUGH ECONOMY



DEDICATION THROUGH ENVIRONMENTAL SUSTAINABILITY



DEDICATION THROUGH THE EMPLOYEES' PERFORMANCE



DEDICATION THROUGH COMMUNITY EMPOWERMENT



DEDICATION THROUGH QUALITY PRODUCTS



Left → Right:

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

Jakarta, May 2017

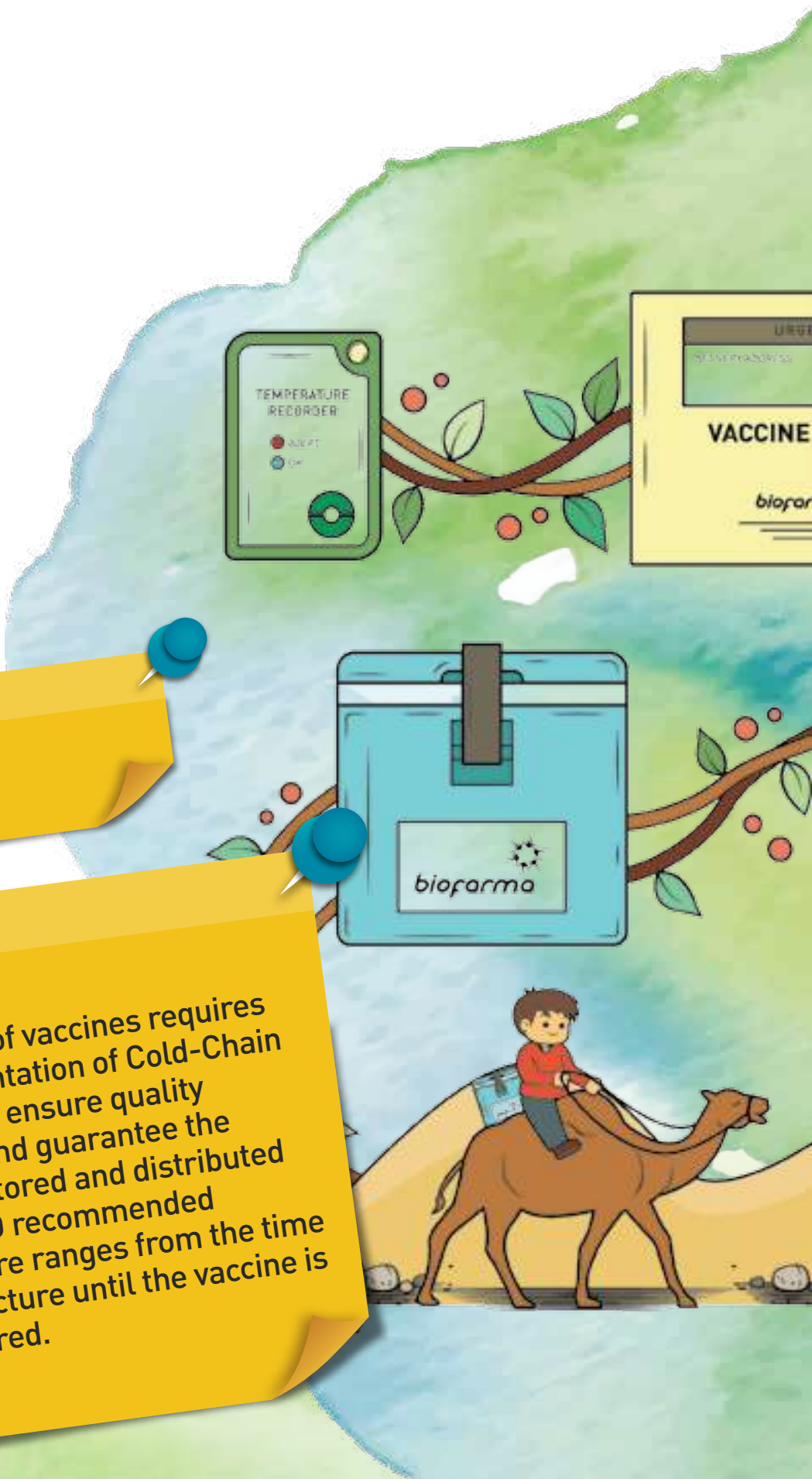
On behalf of the Board of Director,

**ISKANDAR**

President Director

## COLD-CHAIN SYSTEM

Distribution of vaccines requires an implementation of Cold-Chain System to ensure quality of vaccine and guarantee the vaccine is stored and distributed within WHO recommended temperature ranges from the time of manufacture until the vaccine is administered.





DEDICATION THROUGH ECONOMY



DEDICATION THROUGH ENVIRONMENTAL SUSTAINABILITY



DEDICATION THROUGH THE EMPLOYEES' PERFORMANCE



DEDICATION THROUGH COMMUNITY EMPOWERMENT



DEDICATION THROUGH QUALITY PRODUCTS

# ABOUT

# THIS REPORT





Welcome to PT Bio Farma (Persero)'s Sustainability Report 2016.

We present this annually-published report for the fifth time as an integral part of the Company's Annual Report 2016. This report delves on our economic, environmental and social performances, as additional information to the Company's financial reports. Our Sustainability Report 2015, which was published in June 2016, used the theme of "Bio Technology Innovation for a Sustainable Future". In this Sustainability Report, we chose the theme of "Biotech Innovation for Sustainability". [\[GRI 102-51\]](#) [\[GRI 102-52\]](#)

The publication of this sustainability report aims to allow our stakeholders to make assessment on the extent to which Bio Farma has fulfilled its environmental responsibility through economic, social and environmental performances. In addition, this report can also show Bio Farma's role in the achievement of Sustainable Development Goals (SDGs), which aims for improvement of the quality of life and environment that will eventually benefit Bio Farma, the local community and the society in general. Bio Farma does not view company's sustainability as merely maintaining business activities that benefit the generations for more than the last 125 years, but also the future generations who possess rights over the conservation of the earth.

## REPORTING STANDARDS

This report has been prepared in accordance with the GRI Standards: Core option. [\[GRI 102-54\]](#)

As in the previous years, this report is also presented a number of topic specific disclosures on the Company's sustainability initiative, implementation of social responsibility, transformation of the Company, customer service, environmental management, and economic performance, which need to be known by the stakeholders.

Meanwhile, this report can also offer the extent to which Bio Farma has contributed to the achievement of Sustainable Development Goals (SDGs). At the end of the report (page 135), we present a cross-reference of this report with SDGs 2030.

This year we have prepared our report according to the GRI Standards and successfully underwent a Materiality Disclosures service (See page 131).

Further, the National Center for Sustainability Reporting (NCSR) has checked this report and states that it has been prepared in accordance with the GRI Standards: Core option (See page 130).

To assist in finding GRI indicators applied in this report, we have inserted related GRI indicators on every page in red brackets. Meanwhile, the complete GRI index list can be found on page 131. [\[GRI 102-55\]](#)

To date, we have not requested any external independent assurer to provide assurance on Bio Farma's Sustainability Report. [\[GRI 102-56\]](#)

## REPORTING PERIOD AND BOUNDARY

As in financial statements, this report covers the reporting period from 1 January to 31 December 2016. This report focuses on a number of topic specific disclosures which are determined according to materiality principle and their relevance to the Company's sustainability, including type of business and company development, governance, human resource management, economic performance, environmental management and implementation of

social and environmental responsibility programs, as well as empowerment and environmental conservation initiatives. [\[GRI 102-46, GRI 102-50\]](#)

Bio Farma is a single business entity and does not have any subsidiaries; therefore, the boundary of this report only covers Bio Farma and all the internal divisions. [\[GRI 102-45\]](#)

In our business operations, Bio Farma is supported by various parties, such as suppliers and vendors, who offer goods or services. The suppliers who support Bio Farma's business must undergo strict selection phases in order that Bio Farma's superior compliance standard can be maintained. However, related to reporting boundary outside the organization, such as suppliers and vendors, they are not included in this report because they cannot fulfill our request to provide sustainability performance data.

## CHANGES FROM THE PREVIOUS YEAR

In this report, there have been no significant changes in data compared to the previous year's report. Therefore, it is not necessary to restate the previous year's data. [\[GRI 102-10, GRI 102-48, GRI 102-49\]](#)

## REPORT CONTENT DETERMINATION PROCESS AND BOUNDARY ASPECTS

[\[GRI 102-46\]](#)

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

First Step: Identification, which is to identify important relevant aspects in the context of sustainability. In addition to identifying important aspects, the location (boundary) where these aspects occur should also be identified. This identification process is done through a Focus Group Discussion (FGD) that is participated by Bio Farma's Sustainability Reporting Team, which consists of various internal corporate elements. Further, this forum conducts assessment on the materiality of all the important aspects according to GRI Standards, which is done through filling in paper forms by every participant in order to be able to create

a list of identified important aspects, including their boundaries. To prepare this Sustainability Report, FGD was conducted at Bio Farma's Head Office in Bandung on 16 February 2017.

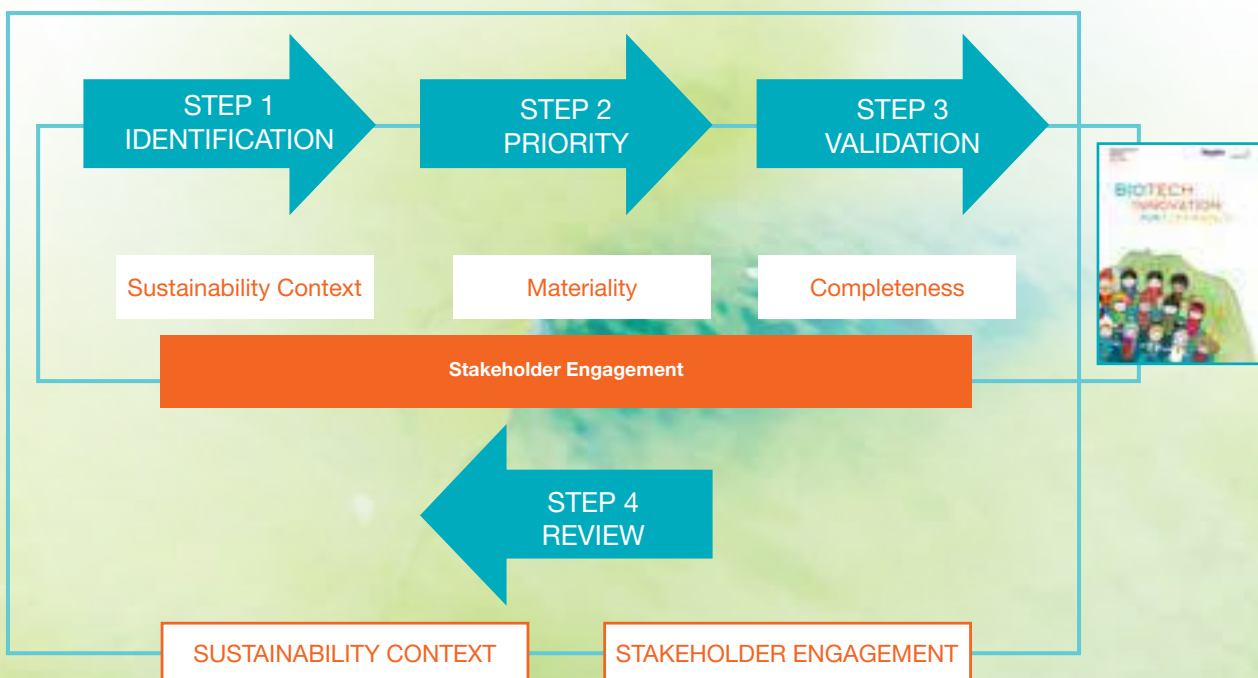
Second Step: Prioritization, which is to assign level of priority on the sustainability aspects or issues identified in the previous step in order to determine level of materiality of all important issues to be reported. In preparing Sustainability Report 2016, this process was done through utilizing the same paper forms filled in the first step and asked various questions related to impacts and influences of these aspects to the stakeholders and the company. These important aspects were then grouped into several issues, whose level of materiality would be determined by sending questionnaires to stakeholders, including internal stakeholders. This process is done following the principles of materiality and stakeholder inclusiveness.

Results from the survey can be found in the information graphic on page 46 (Materiality Level).

Third Step: Validation, which is to validate the material aspects following the principles of completeness and stakeholder inclusiveness. Through this process we were also able to identify topic specific standards and topic specific disclosure of GRI Standards to be reported as well as Management Approach (See page 131).

Fourth Step: Review, which is to take feedback and review on the previous annual report in order to be able to improve our report (See Report Content Determination Process Flowchart).

**Report Content Determination Flow Process**



## PRINCIPLES OF CONTENT REPORT DETERMINATION [GRI 102-46]

Following GRI Standards, we applied 4 (four) main principles to determine reporting the report content, namely:

1. Stakeholders Inclusiveness: this principle requires that stakeholders must be involved in reporting process, starting from determining report contents up to providing feedback/response on published reports.
2. Materiality: this principle requires that the report must contain material topics that are needed by stakeholders in making decisions.
3. Sustainability context: this principle requires the report to include sustainability issues that are relevant to the publisher of the report.
4. Completeness: this principle requires the report to be prepared with a clear scope of reporting period and supported by complete data that are relevant to the scope and reporting period.



## LIST OF MATERIAL TOPICS AND BOUNDARIES [GRI 102-47] [GRI 103-1]

From the process of determining the report contents, we have identified several material topics, boundaries and indicators according to GRI Standards, as follows:

### LIST OF MATERIAL TOPIC AND ITS BOUNDARY [102-47]

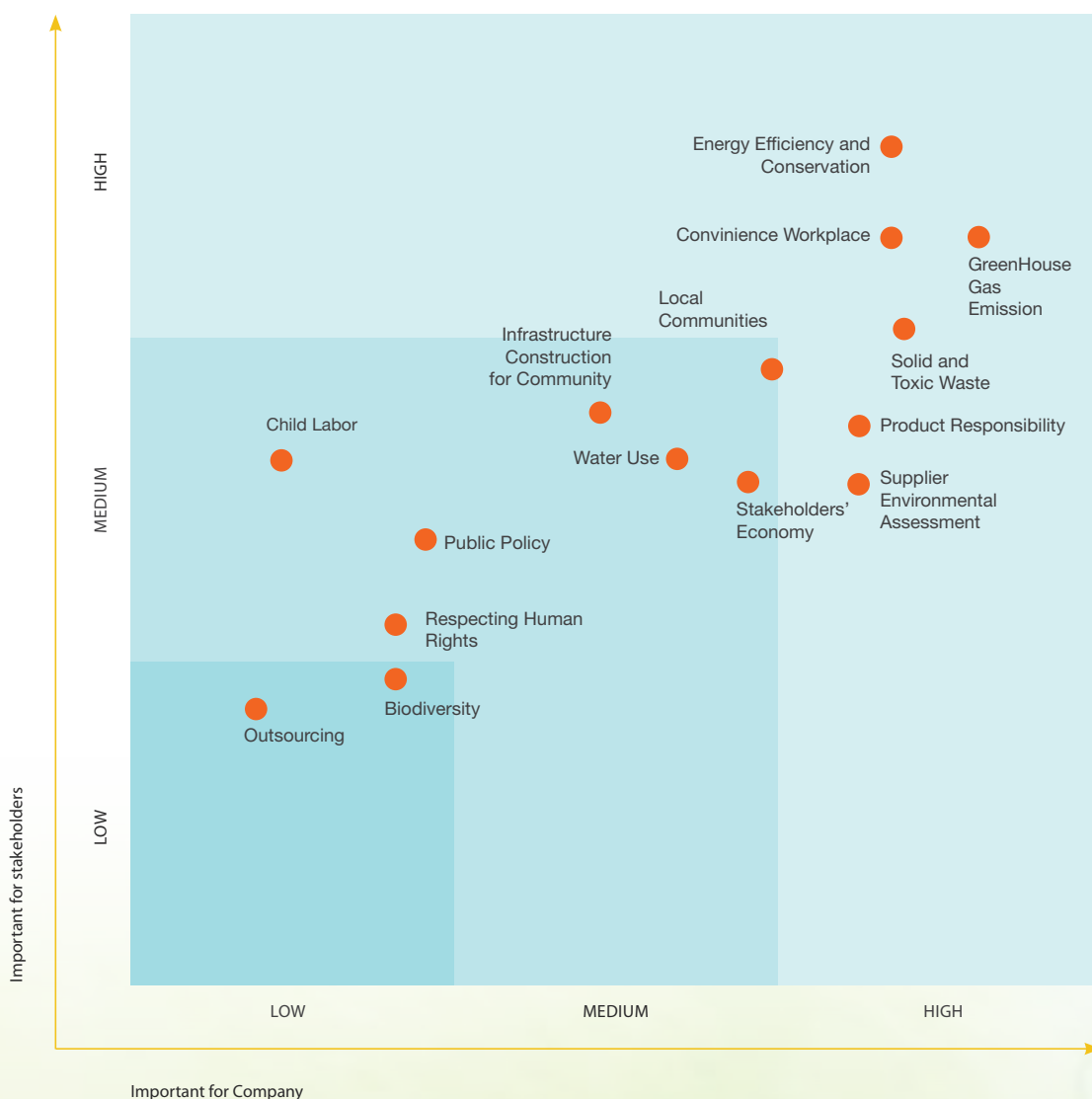
Material Topic	Why Material [GRI 103-1]	Number GRI Standards Disclosure	Boundary	
			Within Bio Farma	Outside Bio Farma
Economic Performances and Impacts	Poses significant affects towards stakeholders	201-1   203-1   203-2	√	
Energy	Poses significant affects towards sustainability	302-1   302-3   302-4 302-5	√	√
Water	Poses significant affects towards sustainability	303-1	√	
Emission	Poses significant affects towards sustainability	305-1   305-2   305-4 305-5   305-7	√	√
Effluent and waste	Poses significant affects towards sustainability	306-2	√	
Supplier and Environmental Compliance	Poses significant affects towards sustainability	307-1	√	√
Employment and Labor/Management	Compliance towards law and regulations	205-1   205-2   401-1 401-2   401-3	√	
Convenience Workplace	Poses significant affects towards employees	202-1   403-1   403-2 403-4   404-2   405-1 405-2	√	
Local Communities	Poses significant affects towards stakeholders	413-1	√	
Product Responsibility	Poses significant affects towards consumers	416-1   416-2   417-1 417-2   417-3	√	





## LEVELS OF MATERIALITY

The following description illustrates materiality levels of each topic discussed in this report, which were obtained as a result from stakeholder involvement process in workshop and discussions in form of Focus Group Discussion (FGD)



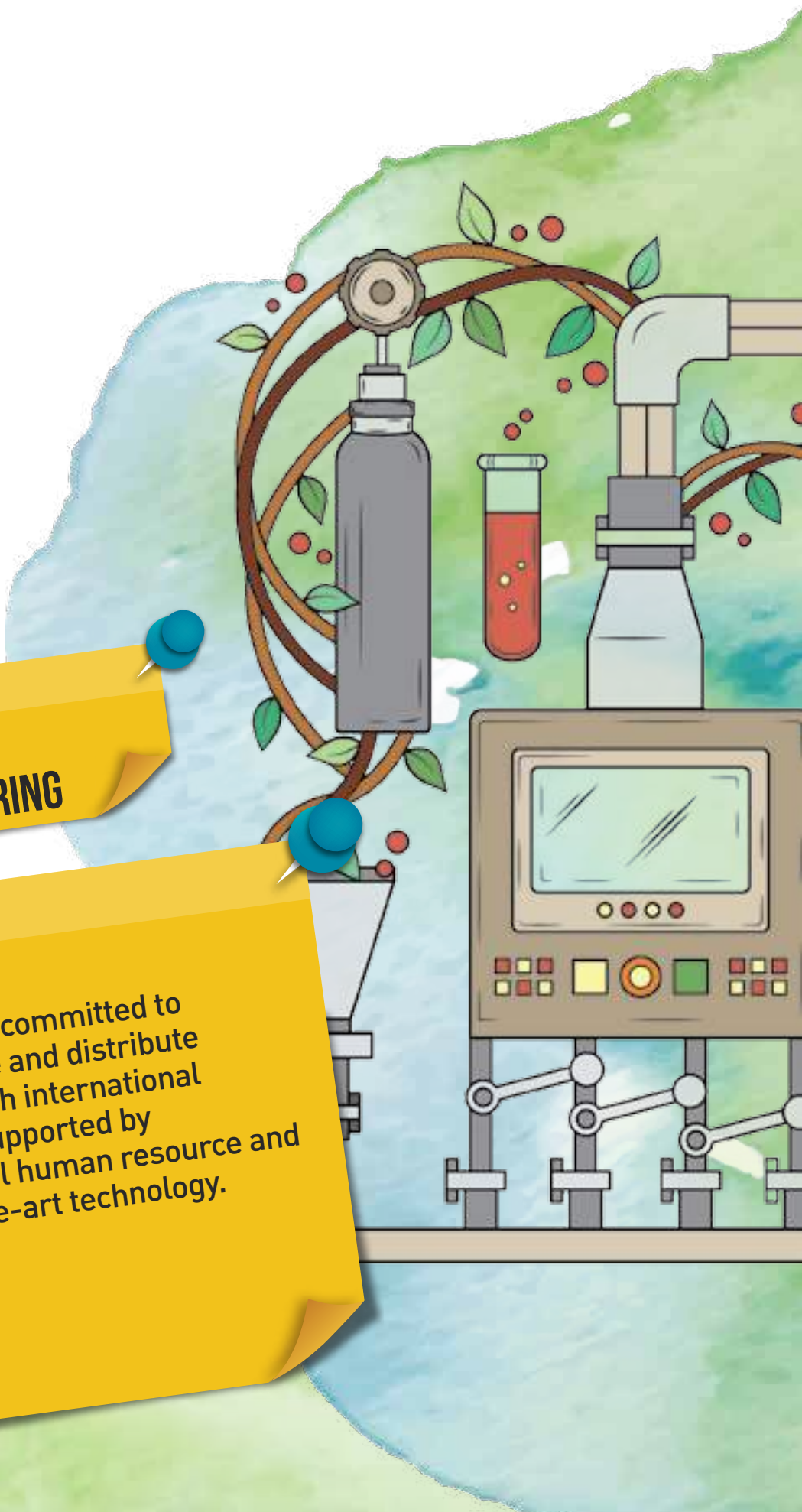
### CONTACT US [GRI 102-53]

For questions or to deliver feedback about this report, please contact:

Head of Corporate Communication  
 PT Bio Farma (Persero)  
 Jl. Pasteur No. 28, Bandung 40161  
 Tel.: (62-22) 203-3755  
 Fax.: (62-22) 204-1306  
 E-mail: mail@biofarma.co.id

# HIGH-TECH MANUFACTURING

Bio Farma is committed to manufacture and distribute products with international standard, supported by professional human resource and state-of-the-art technology.





DEDICATION THROUGH ECONOMY



DEDICATION THROUGH ENVIRONMENTAL SUSTAINABILITY



DEDICATION THROUGH THE EMPLOYEES' PERFORMANCE



DEDICATION THROUGH COMMUNITY EMPOWERMENT

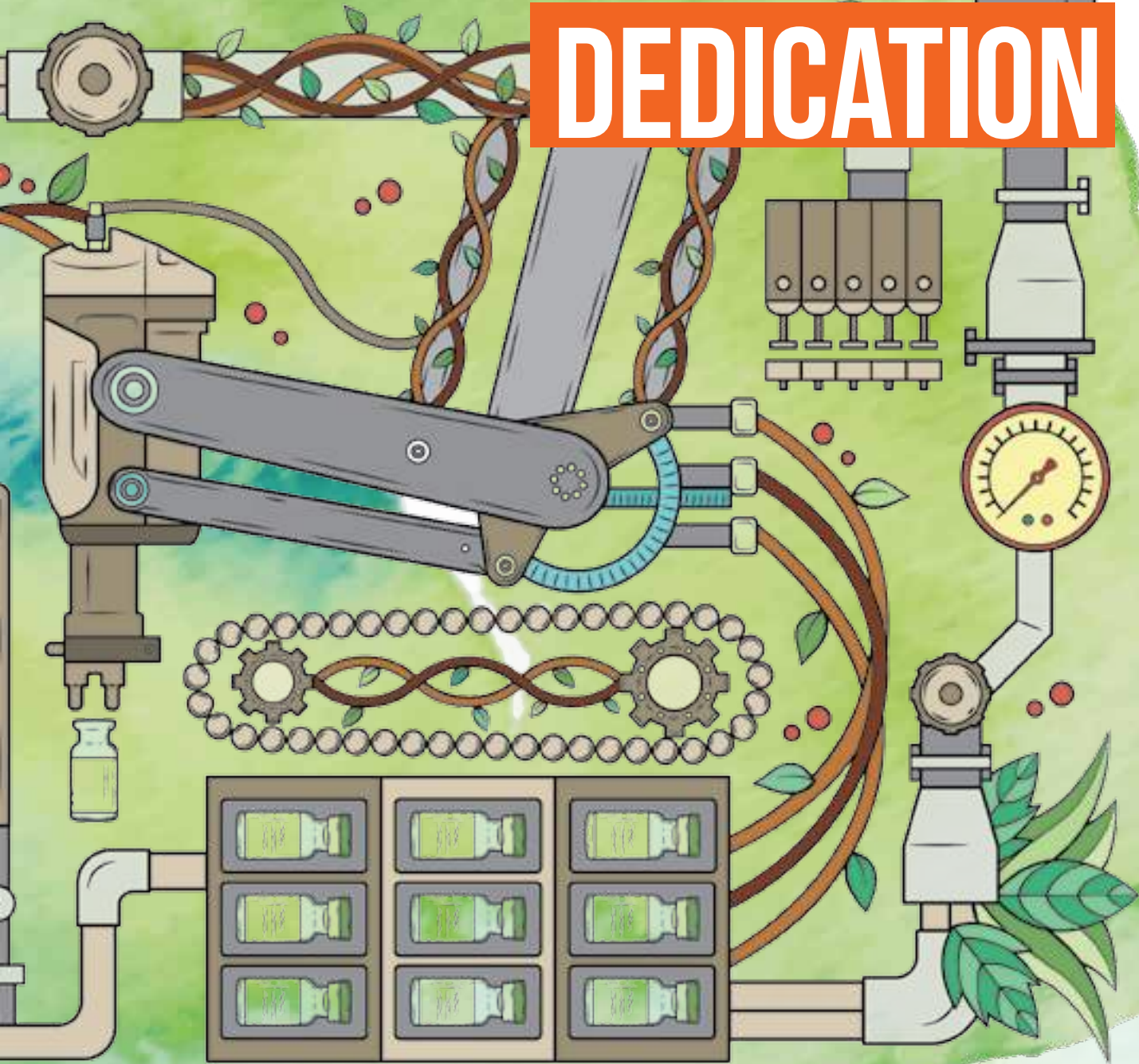


DEDICATION THROUGH QUALITY PRODUCTS

# JOURNEY OF

# BIO FARMA'S

# DEDICATION



## COMPANY PROFILE

### Company Name [GRI 102-1]

PT Bio Farma (Persero)

### Area Served [GRI 102-4]

Plant Location: Bandung

Production Facilities Location: Bandung

Production Support Facilities Location: West Bandung  
District

Representative Office: Jakarta

Area Served: National and International

### Legal Entity and Ownership [GRI 102-5]

- Legal Basis of Establishment
- Official Gazette of the Republic of Indonesia Number 57 dated July 16, 2002, supplement Number 6884, and latest amendment of the deed of establishment Deed Number 34 dated December 14, 2016.
- Articles of Association of the Company: the latest change approved by the Approval of the Minister of Justice of the Republic of Indonesia Number C2-1423HI.01.01. 1998 dated March 5, 1998.
- Ownership:
- 100% by The Government of the Republic of Indonesia.

### Business Sector & Product [GRI 102-2]

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

### Scale Of Organization [GRI 102-7]

- Total Employee 2016: 1,171 person.
- Total Operation 2016: 1 (one) location factory in Bandung.
- Net Sales: Rp2.32 trillion.
- Equity per 31 December 2016 Rp5.30 trillion
- Liabilities per 31 Desember 2016 Rp620.30 billion

### Head Office [GRI 102-3]

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

Telp +62 22-2033755

Fax : +62 22 - 2041306

email : mail@biofarma.co.id

www.biofarma.co.id

### Representative Office:

Gedung Pakarti Centre

Jl. Tanah Abang III No 23-27

Jakarta - Indonesia

### Date of Establishment

August 6, 1890

### Legal Basis of Establishment

- Approval of the Minister of Justice of the Republic of Indonesia
- Dated March 5, 1998.
- Number C2-1423HI.01.01.tahun 1998

### Authorized Capital

- Authorized Capital  
Rp8,000,000,000,000 (eight trillion Rupiah) consisting of 8,000,000 (eight million) shares with a nominal value of Rp1,000,000 (one million Rupiah) per share.
- Issued Capital  
Rp2,000,000,000,000 (two trillion Rupiah) consisting of 2,000,000 (two million) shares with a nominal value of Rp1,000,000 (one million Rupiah) per share.



### Shareholders Composition

The Government of the Republic of Indonesia 100%.

No subsidiaries.

Non-listed

### Lines of Business

The primary business lines of PT Bio Farma (Persero) are:

- a. Research and development of life sciences products - independently or in partnership with external parties;
- b. Production of life sciences products - independently or in partnership with external parties;
- c. Marketing, trade, and distribution of life sciences products and medical devices, including general goods, in domestic and international markets;
- d. Health screening service and clinics; Services pertaining to the above.

### Information Service

Tel.	: (62-22) 203-3755
Fax.	: (62-22) 204-1306
E-mail	: mail@biofarma.co.id
Website	: www.biofarma.co.id
Facebook	: Info Imunisasi, biofarmalD
Facebook	: biofarmalD
Instagram	: biofarmalD
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# CORPORATE PHILOSOPHY, VISION, MISSION, POLICY, CULTURE, AND CORE COMPETENCE [GRI 102-16]

## 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.

### BASED ON THE COMPANY'S VISION AND MISSION,

Our Corporate Policy is:

1. High-quality products
2. Environmentally-friendly products
3. Global competitiveness
4. Customer satisfaction
5. Improved sustainability
6. Pollution control
7. Prevention of occupational accidents and incidents
8. Conservation of energy and natural resources
9. Compliance to rules and regulations

### EACH COMPANY ORGAN SHARES A COMMON BELIEF OF THE CORPORATE CULTURE:

Each company organ behaves and thinks professionally, possesses high Integrity, functions as a team, highly innovative, and oriented towards customer satisfaction.

- **Professional**  
Committed to carry out their duties responsibly, efficiently, effectively, future-oriented, and procedure-compliant.
- **Integrity**  
Honest, transparent, and trustworthy to meet the Company's goals.
- **Teamwork**  
Working together by appreciating the role and opinion of others.
- **Innovation**  
Making continuous improvements and developments in creating new ideas.
- **Customer Oriented**  
Understanding the needs of customers and providing appropriate solutions.

### Core Corporate Competences:

1. Affordable Life Science (Biopharmaceutical)
2. Innovation
3. Employee Engagement
4. Green Product/Green Process
5. Global Marketing

### LEGAL BASIS OF THE CORPORATE PHILOSOPHY, VISION, MISSION, POLICY, CULTURE

Based on their review, on March 6, 2014 the Board of Commissioners and Directors of Bio Farma have approved amendments to the Corporate Philosophy, Vision, Mission, and Culture by virtue of the Joint Decree of the Board of Commissioners and Directors of PT Bio Farma (Persero) No. KEP-07/DK/BF/III/2014 and No. 01103/DIR/III/2014 on Amendments on the Joint Decree of the Board of Commissioners and Directors of PT Bio Farma (Persero) No. 01024/DIR/II/2013 on the Code of Conduct of PT Bio Farma (Persero) Article 1, subsections 1.5 and 1.6.



**The philosophy, vision, mission, policy, culture, and core competences of the Company have been disseminated to our employees in:**

- Trainings conducted from 21-25 April 2014 at GH Universal Bandung with the theme “Internalization of Corporate Vision, Mission, and Values.”
- Director’s briefing on May 26, 2014 at the Bio Farma Multipurpose Hall.
- Internal media on June 30, 2014.
- On Bio Farma’s intranet and website.
- Training for new recruits.

**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.



## BRIEF COMPANY HISTORY

### 6 AUGUST 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 "Landskoepoek 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 "Landskoepoek 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 of Republic 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.

**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.

**1961-1978**

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

**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.

**2014**

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

**2015**

Inauguration of the new Heritage Building and Bio Farma Museum.

**2016**

Expansion of the National Vaccine Research Forum (NVRF) into the National Life Sciences Research Forum (NLSRF).

## OUR PRODUCTS [GRI 102-2]

Our products consist of vaccines and antisera for human, classified as follows:

### VIRAL VACCINES



- 1. Oral Polio Vaccine**  
Active Immunization against of Poliomyelitis type 1, type 2, and type 3.
- 2. Bivalent Oral Poliomyelitis Vaccine (bOPV)**  
Active Immunization against of Poliomyelitis type 1 and type 3.
- 3. Monovalent Oral Poliomyelitis Vaccine**  
Active Immunization against of Poliomyelitis type 1.
- 4. Measles Vaccine (Freeze-drying)**  
Active Immunization against of measles.
- 5. Recombinant Hepatitis B Vaccine**  
Active Immunization against of Hepatitis B.
- 6. Flubiotic Vaccine**  
Active Immunization against of seasonal influenza.

### BACTERIAL VACCINES



- 1. TT Vaccine**  
Active Immunization against of tetanus and neonatal tetanus.
- 2. DT Vaccine**  
Used for simultaneous prevention of Diphtheria and Tetanus in children.
- 3. DTP Vaccine**  
Used for simultaneous prevention of Diphtheria, Tetanus dan Pertussis (whooping cough) in infants and children.
- 4. BCG Vaccine (Freeze-drying)**  
Active Immunization against of Tuberculosis.
- 5. Td Vaccine**  
Active Immunization against of Tetanus and Diphtheria in children aged 7 years and older.

### COMBINATION VACCINES



- 1. Pentabio (DTP-HB-Hib)**  
Active Immunization against of Diphtheria, Tetanus, Pertussis, Hepatitis B and Haemophilus Influenza type B.



## MARKET SHARE

[GRI 102-6]

### ANTISERA



#### 1. Anti-Tetanus Serum

Active Immunization against tetanus treatment.

#### 2. Anti-Diphtheria Serum

Active Immunization against diphtheria treatment

#### 3. Anti-snake Venom Serum

Active Immunization against of poisonous snake bites containing neurotoxic effects (Naja sputratix/ cobra and Bungarus fasciatus/banded krait) and hemotoxic effects (Agkistrodon rhodostoma /pit viper).

### DIAGNOSTICS



#### PPD RT 23 (Purified Protein Derivative)

Active Immunization against a person's sensitivity to tuberculosis infection.

Our customers are the most important aspect of our business. Bio Farma is committed to develop and maintain excellent customer relations and be socially responsible to our stakeholders. Although we do not directly operate in certain countries, our vaccine products are used in more than 130 countries worldwide.

Since 1997, 12 of Bio Farma's vaccine products have received prequalification designation from the WHO. Only few manufacturers have the capacity to supply vaccines against infectious diseases to meet worldwide demand at such level of trust.

### GOVERNMENT SECTOR

Bio Farma provides vaccines to the Ministry of Health for the National Immunization Program. The Ministry is responsible for its distribution to the public via the local health service, community health centers, and other healthcare service centers.

### PRIVATE SECTOR

Bio Farma meets demand for vaccines in the private sector via appointed distributors for distribution to hospitals, doctors, clinics, and pharmacies.

### INTERNATIONAL/EXPORT MARKET

Bio Farma meets the global vaccine demand by suppling international organizations, such as United Nations Children's Fund (UNICEF), Global Alliance of Vaccines and Immunization (GAVI), and Pan American Health Organization (PAHO), for distribution to countries that requested assistance for their domestic immunization programs. To meet general export demands, Bio Farma supplies vaccines directly via bilateral partnerships with selected third-party intermediaries.

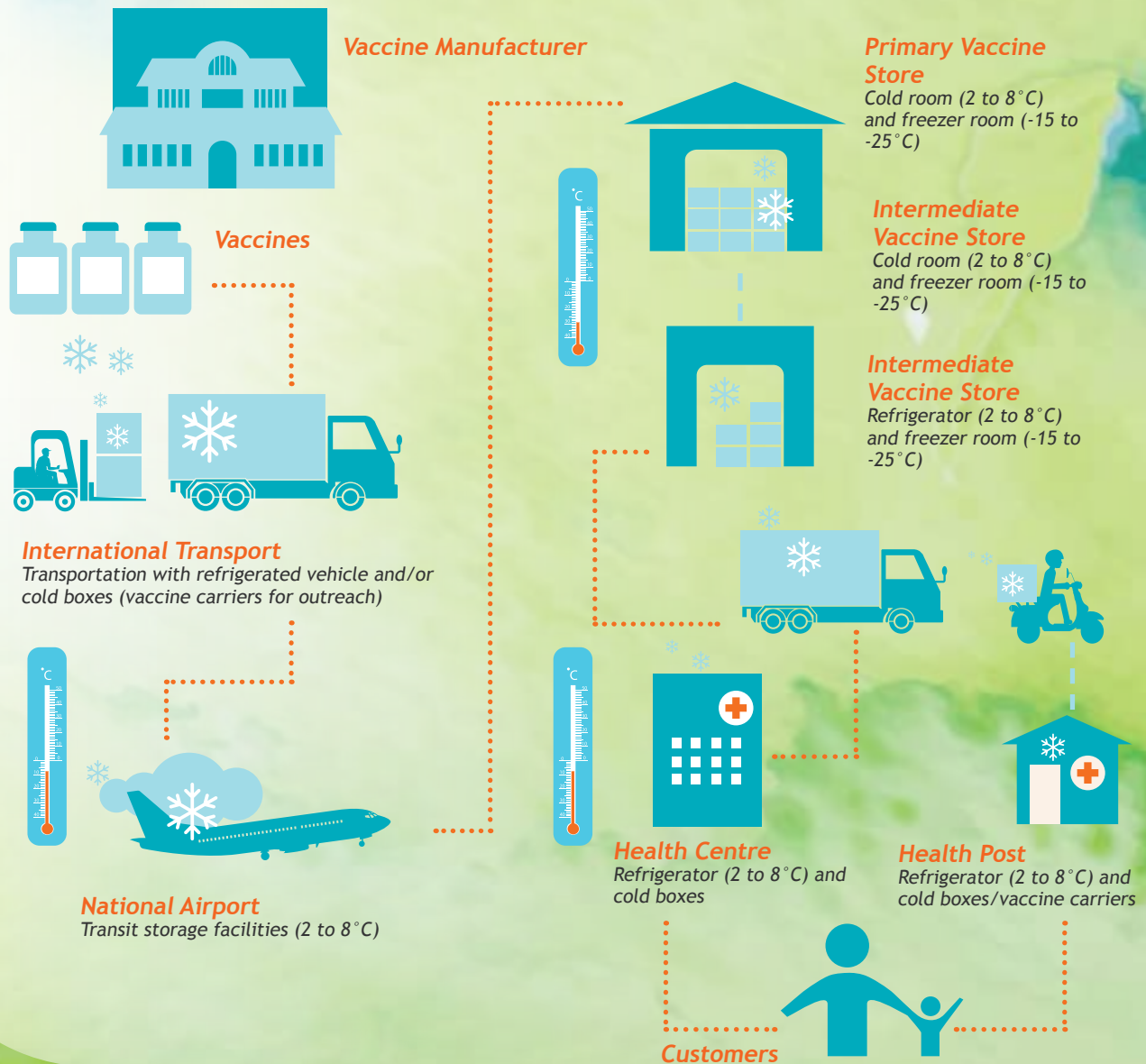
# COMMITMENT ON VACCINE QUALITY [GRI 102-9]

Vaccine is a biotechnological product requiring careful handling in its distribution. The cold-chain system is system of distribution where vaccines are temperature-controlled since its dispatch from the plant, during distribution, in storage at destination, and before use.

Vaccines against BCG, DTP, TT, DT, Td, DTP-HB-Hib, measles, Hepatitis B, and influenza are temperature-controlled between 2 - 8°C while polio vaccines are temperature-controlled at -20°C.

The cold-chain system is a necessity to maintain vaccine temperature stability - ensuring its effectiveness, safety, efficacy, and quality, which in turn provides its recipients with satisfactory protection against various infectious diseases.

WHO guidelines stipulate that vaccine deliveries are not to exceed 48 hours - to which our cold-chain system meets.



## MEDIA EDUCATION

Bio Farma carries out routine workshop, education, and socialization for members of the media - for journalists, editors, and chief editors - in partnership with the Ministry of Health, Food and Drug Monitoring Agency, Indonesian Paediatric Society, and media outlets.

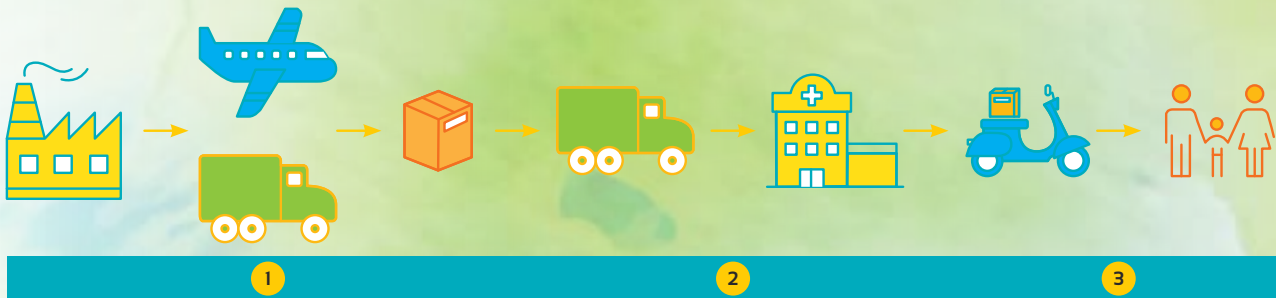
The education is necessary due to discovery of the fake vaccine manufacturing syndicate in 2016.

Forensic examination has shown that the allegations of fake Bio Farma vaccines are proven not true. Only vaccines produced abroad were counterfeited.



# THE JOURNEY OF A VACCINE

## DISTRIBUTION OF VACCINES IN THE GOVERNMENTAL SECTOR

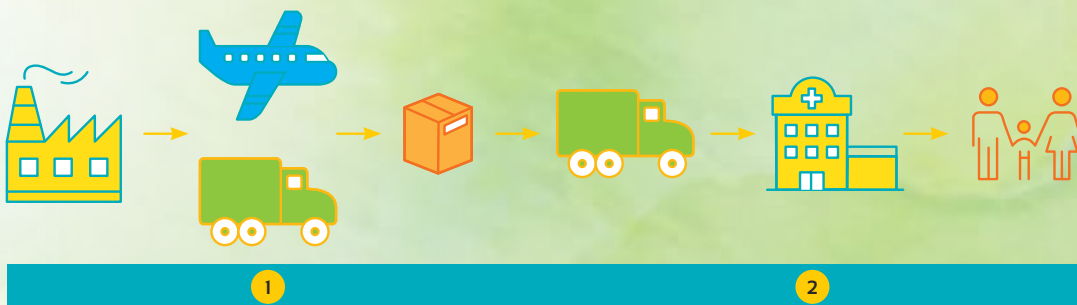


From Bio Farma's warehouse, vaccines are transported using refrigeration vehicles to the Provincial Health Office warehouses.

From these Provincial Health Office warehouses, the vaccines are subsequently distributed to storage facilities owned by the Municipality and District Health Offices.

From the warehouses of the Municipality and District Health Offices, the vaccines will then be distributed to Community Health Centers, where they will then reach the customers.

## DISTRIBUTION OF VACCINES IN THE PRIVATE SECTOR



From buyers' warehouses, the vaccines are transported using refrigeration vehicles to their final destinations, where they will then reach the customers.

From the distributors' warehouses, the vaccines are transported using refrigeration vehicles to their final destination (hospitals, clinics, doctors' practices), where they will then reach the customers.



# ENVIRONMENTALLY FRIENDLY BUSINESS PROCESSES



# VACCINE DEVELOPMENT LIFECYCLE

Research is the basis for the development of a product. Research begins with an exploratory stage, where the pattern of a disease that becomes the subject of the research is studied in order to be understood. Identification of a molecule or antigen that will be used as a precursor for a product, as well as the method to produce or to purify such antigen, are two critical things in the development of a product. Also important is the information regarding the seed's history and the documentation of the material. The output of this research is the proof of concept.

## RESEARCH AND DEVELOPMENT

### 1 Find Potential Disease

Determining diseases that can be prevented by vaccination.

### 2 Exploratory

Conducting preliminary research to determine the type of virus or bacteria that can provide immunity to the human body. At this stage, vaccine candidates are determined (3-5):

- Understand the disease.
- Epid Data.
- Identify antigen

### 3 Vaccine Candidate Design

- Seed history.
- Presentation.
- Route of administration.

### 4 Vaccine Characterization

To understand the immunogenicity in animals and its safety (6 Months).

### 5 Preclinical Studies

- Safety.
- Toxicology.
- Teratology.
- Etc.

### 6 Pilot Scale Manufacturing

Manufacturing of vaccines at the pilot scale, taking into account these aspects:

- Clinical lots.
- Current Good Manufacturing Practise (cGMP).
- Quality Control (QC).
- Quality Service (QS).

## 7 CLINICAL DEVELOPMENT

### Phase I | Phase II | Phase III

Clinical Trial I: Understanding the safety of product and side effects that may arise. In this stage, the product is administered to 10 to 100 people.

Clinical Trial II: understanding and evaluating the immunity response by increasing the number of respondents to 100-300 people.

Clinical Trial III: Understanding the efficacy level of the vaccine by statistical calculation of subjects.

### 8 Regulatory Approval

Register and compile data on safety level, efficacy, and immunity level, to the authorities (Food & Drugs Supervision Agency or BPOM). Time frame required is around 100 to 300 working days.

### 9 Commercial Manufacturing

- Regulatory Compliance.
- Current Good Manufacturing Practise (cGMP).
- Quality Control (QC).
- Quality Management System (QMS).
- Post Marketing Surveillance (PMS).

A colorful illustration of a community scene. In the foreground, a yellow banner is pinned to a green vine with leaves and red berries. The background shows a dirt path where three children are holding hands. To the left is a large green tree, and to the right are several grey buildings. The sky is light blue with a few white clouds. The entire scene is set against a light green background.

## DEDICATED TO IMPROVE QUALITY OF LIFE

As a form of dedication, Bio Farma strives to improve the community's quality of life by providing protection against various preventable diseases through vaccination.



DEDICATION THROUGH ECONOMY



DEDICATION THROUGH ENVIRONMENTAL SUSTAINABILITY



DEDICATION THROUGH THE EMPLOYEES' PERFORMANCE



DEDICATION THROUGH COMMUNITY EMPOWERMENT



DEDICATION THROUGH QUALITY PRODUCTS

# SUSTAINABILITY

# GOVERNANCE



In Bio Farma, assigning matrix of authority and role of responsibilities between Commissioners, Directors, and Executives is not measured solely by financial aspects. In relation with sustainability governance, the Company's management also puts emphasizes on environmental and social aspects.

Sustainability governance requires that Good Corporate Governance (GCG) is not merely implemented to comply with applicable rules and regulations, but also in relation with applying relevant standards, principles, initiatives, and customs at the international level (best practices). Therefore, sustainability governance is considered more comprehensive than the regular governance. However, upon implementation TARIF principles are still used, namely (1) Transparency; (2) Accountability; (3) Responsibility; (4) Independence; and (5) Fairness. These principles become the foundation for the Company's long-term planning that is oriented toward sustainability for economic, social and environmental aspects.

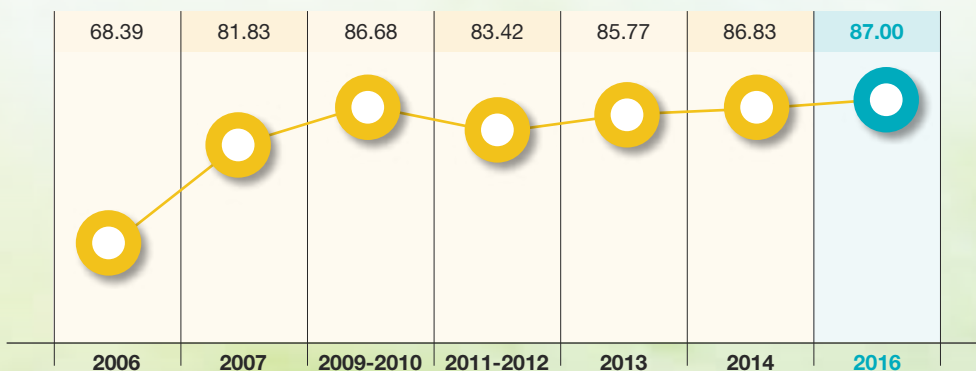
To improve the quality of GCG implementation, we regularly assign an independent and competent third-party, to assess the implementation of GCG. Improvement in GCG implementation can be seen in the assessment scores since 2006.

Further, results from assessments conducted from 2006 to 2016 shows that Bio Farma's GCG implementation reached its best performance in 2016, with score of 87 that is considered "Excellent". In conducting these assessments, Bio Farma received assistance from a governmental service agency that is competent in GCG sector, namely Finance and Development Supervisory Agency (BPKP) of West Java province, which conducted GCG assessment of the Company over 5 periods. Particularly in 2016, Bio Farma conducted a GCG self-assessment and did not receive assistance from BPKP of West Java province, as it was required to do self-assessment on GCG implementation in 2015. The self-assessment was conducted from 28 April 2016 up to 30 June 2016.

**GOVERNANCE STRUCTURE [GRI 102-18]**

In accordance with Law No. 40 of 2007 on Limited Liability Companies, a company's governance bodies consist of the General Meeting of Shareholders (GMS), Board of Commissioners and Board of Directors, who have authority and responsibilities as defined in Company's Articles of Association and Laws and Regulations results in best practices. The structure can be seen in the picture below.

GCG Assessment Score 2006 -2016



As the highest corporate organ in Bio Farma's governance structure, GMS has the role 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 and to establish the structures as well as to assess their performance in achieving targets of Company's Work Plan and Budget. Their performance is measured through Key Performance Indicators (KPI) to further be evaluated and accounted in GMS.

The Board of Commissioners performs supervisory functions on overall implementation of strategic decisions by the Board of Directors over the management of the Company. The Board of Commissioners also advises and oversees the implementation of the Company's Long Term Plan, Work Plan and Budget, stipulations in the Article of Association and GMS Decisions, and applicable rules and regulations. The Board of Commissioners' Oversight Report is presented to the GMS.

The establishment of the Board of Commissioners' composition must be stated to have fulfilled the minimal requirements stipulated in the Company's Articles of Association. Bio Farma prohibits member of the Board

of Commissioners from holding concurrent positions and having family or financial relationships with members of the Board Directors. Currently, Bio Farma's Board of Commissioners consists of 6 members, and led by a President Commissioner.

The Board of Directors has the duty to perform all actions related to the Company's management, in the interest of the Company, and in line with the Company's purpose and objectives, as well as to represent the Company inside or outside of court on all matters and occurrences with limitations as specified in the rules and regulations, the Company's Articles of Association and/or GMS Decisions. In 2016, Bio Farma's Board of Directors comprised of 6 members and led by a President Director as coordinator of the Board of Directors' activities. Each Director assumed responsibilities in accordance with their competence and specific duties and level of authority determined in GMS, which include economic, environmental and social aspects. In accordance with the Company's Articles of Association, Bio Farma prohibits members of the Board of Directors of holding concurrent positions and having family or financial relationships with members of the Board Commissioners and other Directors.

## COMPOSITION OF BOARD OF COMMISSIONERS AND DIRECTORS

During the reporting period, the composition of Bio Farma's highest Governance Body, which consists of the Board of Commissioners and Board of Directors, is as follows:

### Composition of the Board of Commissioners & the Board of Directors

Name	Gender	Commissioner/Director	Term of Office
Prof. Dr. Ahmad Ramli, SH., MH.	Male	President Commissioner	Since 23 January 2014
Drs. Paruli Lubis, MBA.	Male	Independent Commissioner	Since 5 November 2012
dr. Nizar Yamani, Sp.S (K)	Male	Commissioner	Since 28 Mei 2012
Dr. Ihsan Setiadi Latief, M.Si.	Male	Commissioner	Since 1 May 2013
dr. Heridadi, M.Sc.	Male	Independent Commissioner	Since 23 January 2014
dr. H. Mohamad Subuh, MPPM	Male	Commissioner	Since 22 June 2015
Drs. Iskandar, Apt, MM	Male	President Director	Since 12 April 2013
Pramusti Indrascaryo	Male	Finance Director	Since 12 April 2012
Drs. Mahendra Suhardono, MM	Male	Marketing Director	Since 12 April 2013
Drs. Andjang Kusumah, MM	Male	Human Resource Director	Since 4 February 2013
Drs. Juliman, Apt., MM	Male	Production Director	Since 12 April 2013
Drh. Sugeng Raharso, MM	Male	Planning and Development Director	Since 12 April 2013

The Board of Commissioners represents the Government as shareholders. Further, the Board of Commissioners appointed two (2) Independent Commissioners. Appointment of members of the Board of Commissioners and the Board Directors is proposed by the shareholders, which is the Minister of State Owned Enterprise (BUMN), after undergoing the process of due diligence, which include understanding of economic issues and environmental and social impacts.

### COMMITTEES UNDER THE BOARD OF COMMISSIONERS [GRI 102-22]

The Board of Commissioners has established two committees to support them in performing supervisory duties. These committees are including: Audit Committee and Risk, Development and GCG Committee.

Audit Committee was established in 2004 to assist the Board of Commissioners in carrying out supervisory functions over the management of the company in accordance with GCG principles.

Audit Committee members are appointed and terminated by the Board of Commissioners. Their appointment and termination are reported to the GMS. The committee members who also serve in the Board of Commissioners will resign automatically when his/her term as member of the Board of Commissioners ends.

#### Composition of Audit Committee during Reporting Period

Name	Position	Appointment Basis
Drs. Paruli Lubis, MBA	Chairman	Decree of the Board of Commissioners No. : KEP-02/DK/BF/VII/2015 dated 9 July 2015
Dr. Ihsan Setiadi Latief, M.Si.	Vice Chairman/Member	Decree of the Board of Commissioners No. : KEP-02/DK/BF/VII/2015 dated 9 July 2015
Drs. Abu Bakar, Ak,CA	Member (external)	Decree of the Board of Commissioners No. : KEP-01/DK/BF/I/2014 dated 16 January 2014
Drs. M. Asawir Harahap, Ak,CA	Member (external)	Decree of the Board of Commissioners No. : KEP-15/DK/BF/I/2014 dated 1 July 2014

The Board of Commissioners also oversees the Risk, Development and GCG committee. This committee is in charge and responsible to provide recommendations to the Board of Commissioners.

#### Composition of Risk, Development and GCG Committee during Reporting Period

Name	Position	Appointment Basis
dr. Heridadi, M.Sc.	Chairman	Decree of the Board of Commissioners No. : KEP-02/DK/BF/VII/2015 dated 9 July 2015
dr. Nizar Yamanie, Sp.S (K)	Vice Chairman I	Decree of the Board of Commissioners No. : KEP-02/DK/BF/VII/2015 dated 9 July 2015
dr. H. Mohamad Subuh, MPPM	Vice Chairman II	Decree of the Board of Commissioners No. : KEP-02/DK/BF/VII/2015 dated 9 July 2015
Afrizal, SE.Msi.Ak	Member (external)	Decree of the Board of Commissioners No. : KEP-02/DK/BF/I/201 dated 15 January 2014
dr. Judi Januadi Endjun, Sp.OG	Member (external)	Decree of the Board of Commissioners No. : KEP-02/DK/BF/02/2016 dated 02 February 2016
Dadang Epi Sukarsa	Member (external)	End of term accordance with Decree of the Board of Commissioners No. : KEP-01/DK/BF/01/2016 dated 15 January 2016

Please refer to Bio Farma's Annual Report 2016 for descriptions of each function and task.



## CORRUPTION RISK ASSESSMENT

Operations, in relation with corruption risk. The assessment is a part of the work plan of Internal Audit Unit (IAU) division in 2016, to implement monitoring and evaluation of the effectiveness and efficiency of management and compliance with established procedures, including on corruption risk. Internal Audit Unit (IAU) is a working-unit assigned to perform internal oversight and control according to the Financial Accounting Standards, General Guidelines for Inspection Implementation, and Internal Audit Charter of PT Bio Farma (Persero). We prioritize inspection on units that are susceptible to to fraud and corruption, as a part of risk-based audit implementation. In 2016, IAU conducted Operational Inspection on 10 working-units and prepared 8 Audit Reports. **[GRI 205-1]**

Corruption prevention efforts were also carried out on our suppliers and other partners by establishing various policies in order to create a clean business and working relationship. Example on the implementation of such policy is the obligation for suppliers to sign an Integrity Pact that contains various prohibitions related to corruption.

## COMMUNICATION AND TRAINING OF ANTI CORRUPTION **[GRI 205-2]**

We have established various strategic steps to prevent corruption and communicated them to all employees (100%), including Commissioners and Directors, through various communication media such as public discourse, fraud prevention training and conference. Whistleblowing system that has been established by the Company is also intended to prevent corruption. In addition, to improve IAU staffs' competence, we require every IAU staff to have professional internal auditor certification, which is Qualified Internal Auditor (QIA), issued by credible institution. IAU staffs have also mandatory participation in various educational programs and trainings on preventive anti-corruption effort, including frauds in procurement contracts of goods and services.

One of the Company's ongoing efforts in anti-corruption prevention is by implementing a whistleblowing system following Decree of the Board of Directors No. 01026/DIR/II/2013. The system is implemented to allow both internal and external parties to report any corruption, fraud, theft, bribery, gratuity, conflicts of interest or violations of laws and of the Company's policies /procedures. There are various ways to report any potential violations, including through e-mail to [pelaporan.wbs@biofarma.co.id](mailto:pelaporan.wbs@biofarma.co.id) or <http://aplikasi.biofarma.co.id/gcg>, official letter addressed to the Violation Reporting Team at Jalan Pasteur No.28 Bandung 40161, or via the Company's drop box. Bio Farma has also developed a GCG portal system as one medium for internal or external parties to report potential violations.

Preventive actions taken by the Company against the types of violation mentioned above can also be seen in the formulation of Integrity Pact that requires commitment from Bio Farma's employees to carry out their duties and responsibilities according to GCG principles, to be willing to do their best in implementing GCG guidelines and Code of Conduct, commit to report any violations, and be willing to be given any sanction according to applicable regulations. Integrity Pact is signed by all Directors and employees of Bio Farma every year as a consistent of the implementation of all points of commitment specified in the Pact. To promote the spirit of anti-corruption and to share proper knowledge on anti-corruption and fraud prevention, we also intensively disseminate information through meetings, which are attended by Directors, Division Heads, Department Heads, Staff and Supervisors, both permanent and contract employees. In 2016, 86% of total employees participated in the meetings.

Our commitment to prevent corruption does not stop within internal operations. We communicate anti-corruption policies and procedures to the external parties, such as suppliers and business partners. All contracts or working agreements with the Company must include the Integrity Pact, signed by the suppliers or business partners, stating that they commit to maintain the integrity by not attempting to bribe employees or officials of the Company.

## MECHANISM TO SUBMIT OPINIONS TO THE BOARD OF DIRECTORS

Internal communication is very important for Bio Farma to improve the Company's performance in achieving our vision and missions. Internal communication can build a more conducive relationship between the Company with employees. Therefore, there are several formal mechanisms to submit opinions to the Board of Directors, such as: Labor Union meetings with the Management, work meetings, morning coffee, executive meetings, work visits by the Board of Directors, and through correspondence medium, such as letters or emails.

## RISK MANAGEMENT

Bio Farma realizes that there might be potential risks in Company's operations, either risk that is within the Company's control or beyond its control. Therefore, risks must be managed comprehensively, optimally and sustainably, as an inseparable part of the Good Corporate Governance practice. Risk management becomes everyone's responsibility, thus every employee must recognize every risk related to their works and must manage these risks proactively.

Since 2009, implementation of Risk Management System in Bio Farma has been based on COSO Enterprise Risk Management-Integrated Framework. Following the design of Bio Farma's Integrated Management System, Risk Management System has been updated by including ISO 31000 (2009) and COSO Enterprise Risk Management-Integrated Framework.

In 2016, Bio Farma encountered six corporate risks, four of which due to routine activities and the remaining two project risks. After identifying corporate related risks and determining strategic steps to manage these risks, Corporate Risk Management (CRM) Division, which is responsible for corporate risks, will evaluate and oversee risk management in each unit.

Each Department Head/risk unit is responsible for every risk and its management, which will become a measure of the effectiveness of risk management in Bio Farma. Details of the corporate risks are as follows:

## PRECAUTIONARY APPROACH [GRI 102-11]

The Company applies precautionary approach in our environmental management, including by adhering to the International Standard ISO 14001 and other certifications, including from Indonesian National Agency of Drug and Food Control. In addition, the Company also takes preventive actions to protect the environment, continues our innovation in green and environmental sector, as well as commits to do energy efficiency.

## EXTERNAL INITIATIVES [GRI 102-12]

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).

## COMPANY ETHICS AND CULTURE [GRI 102-16]

Ethical standards and work culture applied in interaction with the Company's stakeholders are regulated in Joint Decree of the Board of Commissioners and Directors No. Kep 07/DK/BF/III/2014 and No. 01103/DIR/III/2014 on Bio Farma's Code of Conduct. Each of Bio Farma employees does not only have to comply with applicable legislation and regulations, but also must follow business norms at the international level.

Bio Farma establishes five core behavior values, namely Professional, Integrity, Teamwork, Innovation and Customer Oriented (PITIC). Internalization of these culture and core behaviors covers economic, environmental and social aspects. Further, these values are also communicated by the Board of Directors in face-to-face meetings with employees, specific guidance during employees' induction, and issuing of a handbook containing these behaviors. A strong work and organizational culture will create a professional working attitude and reduce impacts from negative work environment.



## MEMBERSHIP IN INDUSTRY ASSOCIATIONS [GRI 102-13]

To expand the Company's professional knowledge and network, throughout 2016, Bio Farma had active participation in various organizations, including:

Organization Name	Status
National Vaccine Research Forum or Forum Riset Vaksin Nasional (FRVN)	Founder
Developing Countries Vaccine Manufacturer Network (DCVMN)	President
Islamic Conference on Health Ministers (ICHM)	Vice Chairman
National Forum on Public Relations for State-Owned Enterprises or Forum Humas BUMN	Member
Indonesian Pharmaceutical Association or Gabungan Perusahaan Farmasi Indonesia (GP Farmasi)	Steering Committee
Vaccine Advocacy Team or Tim Advokasi Imunisasi	Chairman

## STAKEHOLDERS INVOLVEMENT

We realize that stakeholders play a strategic role in maintaining the Company's long-term growth. On the other side, the Company's performance also makes impacts in business, financial, operational, environmental and social aspects of the stakeholders. Therefore, we continue to strive to improve harmonious relationships with stakeholders through various direct meetings.

### Relationship and Interactions with Stakeholders during 2016:

Stakeholders [GRI 102-40]	Basis for Determining Stakeholders [GRI 102-42]	Frequency of Meetings with Stakeholders [GRI 102-43]	Topic Discussed [GRI 102-44]
Employees/Union	Representation	Bipartite Cooperation once a month	Welfare, Human Resource Development, Occupational Health and Safety, Work Discipline
Shareholders	Influence and Responsibility	GMS - Technical / Special / Expose Meetings	Financial reports ratification, management performance accountability, appointment and termination of Commissioners and Directors, remuneration for Commissioners and Directors
Consumers	Influence	<ul style="list-style-type: none"> <li>- Clinical meeting once a year</li> <li>- Distributor meetings held quarterly</li> <li>- National Immunization Meeting held annually</li> </ul>	<ul style="list-style-type: none"> <li>- Product knowledge, new vaccine research to build loyalty</li> <li>- Evaluation on product absorption in the market, product distribution</li> </ul>
Vendors	Dependency	Presentations about bidding and activities conducted for each procurement	Service training
Regulator and Overseer	Pengaruh ( <i>influence</i> ) dan keterwakilan ( <i>presentation</i> )	Sesuai kebutuhan	Keamanan produk, kepatuhan pada aturan, registrasi produk
Community	Proximity	As required	Training with community, needs assessment, oversight and evaluation, social mapping.



## LIFE SCIENCE FOR SOCIETY

Bio Farma has expertise in water, environment, air and breeding quality management, which is translated into applicable solutions for the communities both mentored village and SME through CSR and PKBL (partnerships and community development) programs.



# DEDICATION THROUGH ECONOMY



## DEDICATION THROUGH ECONOMIC ASPECT

Economic sustainability focuses on economic type and impacts that result from the Company's operation. Bio Farma operates in Indonesia as one of generators of economic value that is distributed across many stakeholders in different forms and impacts. The Company distributes economic value to consumers in form of product sales, salary and other benefits to employees, dividend to government, loan interest to financiers, and community development funds.

### ECONOMIC VALUES GENERATED AND DISTRIBUTED [GRI 201-1]

The table below can be used to assess economic benefits that Bio Farma has created for our stakeholders, including direct economic impacts to the Indonesian economy. The flow of capital across the stakeholders seems varied according to Bio Farma's operational impacts on the people's economy. The table presents sources of economic values, as well as their distribution target. All data presented below originates from the financial reports, which have been prepared in accordance with the Statement of Financial Accounting Standards.

#### Economic Values Generated and Distributed 2013-2016

Economic Value Generated	2016 (Rp)	2015 (Rp)
Income	2,315,759,014,122.41	2,345,918,269,951.53
Interest Income	6,820,215,333.93	34,944,155,303.75
Foreign Exchange Differential Income	98,339,421,776.18	78,787,808,690.91
Other Income	59,568,077,672.48	15,332,041,355.38
<b>Total</b>	<b>2,480,486,728,905.00</b>	<b>2,474,982,275,301.57</b>

Distributed Economic Value	2016 (Rp)	2015 (Rp)
Company Cost (Supplier)	696,499,579,342,027	581,686,568,665.88
<b>Employee Wage</b>		
Service Department	1,944,241,479.92	1,602,027,460.89
Production Department	176,057,198,068.74	156,483,416,763.36
General Affairs & Administration Department	216,052,192,703.76	237,135,552,984.24
Research and Development Department	24,192,134,306.10	21,495,163,734.18
<b>Total of Employee Wages</b>	<b>418,245,766,558.52</b>	<b>416,716,160,942.67</b>

Payment to Government	2016 (Rp)	2015 (Rp)
Dividend	234,707,000,000.00	145,015,000,000.00

Community Investments	2016 (Rp)	2015 (Rp)
Environmental Development	10,686,678,646	1,288,442,345.00
Social Contribution to Community	2,671,570,512	3,839,965,637.00
<b>Total Economic Value Distributed to Community</b>	<b>13,358,249,158.00</b>	<b>5,128,407,982</b>
<b>Total Distributed Economic Value</b>	<b>1,128,103,595,058.55</b>	<b>1,003,531,137,590.55</b>
Retained Economic Value Before Dividend	1,352,383,133,846.45	1,471,451,137,711.02
Retained Economic Value After Dividend	1,117,676,133,846.45	1,326,436,137,711.02

<b>Economic Value Generated</b>	<b>2014 (Rp)</b>	<b>2013 (Rp)</b>
Income	2,044,080,451,981.35	1,853,681,642,504,00
Interest Income	34,078,135,784,95	14,163,439,166,9
Foreign Exchange Differential Income	70,215,332,574,45	127,501,194,468,28
Other Income	2,162,710,819,395,52	2,006,519,471,455,59
<b>Total</b>	<b>2,162,710,819,395.52</b>	<b>2,006,519,471,455.59</b>

<b>Distributed Economic Value</b>	<b>2014 (Rp)</b>	<b>2013 (Rp)</b>
Company Cost (Supplier)	384,040,580,209,73	314,678,070,443,31
<b>Employee Wages and Other Benefits</b>		
Service Department	914,469,820,57	1,361,206,594,59
Production Department	135,683,819,864,20	112,335,894,655,17
General Affairs & Administration Department	204,508,523,918,98	173,050,921,211,93
Research and Development Department	17,255,650,062,79	15,243,912,172,36
<b>Total of Employee Wages</b>	<b>358,362,463,666,54</b>	<b>301,991,934,634,05</b>

<b>Payment to Government</b>	<b>2014 (Rp)</b>	<b>2013 (Rp)</b>
Dividend	228,987,287,000,00	77,178,377,000,00

<b>Community Investment</b>	<b>2014 (Rp)</b>	<b>2013 (Rp)</b>
Environmental Development	4,061,787,035,00	5,489,909,000,00
Social Contribution to Community	1,650,420,366,00	1,367,928,971,00
<b>Total Community Investment</b>	<b>5,712,207,401,00</b>	<b>1,367,928,971,00</b>
<b>Total Distributed Economic Value</b>	<b>893,130,251,277,27</b>	<b>847,025,221,048,36</b>
Retained Economic Value Before Dividend	1,414,595,568,118,25	1,388,481,537,407,23
Retained Economic Value After Dividend	1,269,580,568,118,25	1,159,494,250,407,23

### TABLE OF ECONOMIC VALUES GENERATED AND DISTRIBUTED 2013-2016

The table shows that for the last 4 (four) years, consumers have given a significant contribution to the economic growth of Bio Farma. The economic value generated from consumers in form of income (net sales income) has grown by 24,93% from Rp1,85 trillion 2013 to Rp2,32 trillion in 2016. Bio Farma has also given a significant economic impact for its stakeholders in the last 4 (four) years, with the details as follows:

### SUPPLIER

Economic value distributed by PT Bio Farma (Persero) to the suppliers increased significantly to 121,27%, from Rp135 billion in 2013 to Rp 697 billion in 2016.

### EMPLOYEES

Salary and other benefits received by employees have been constantly increasing for the last four years. This trend will bring positive impact to employees' economic condition and by that, creating a chain effect on the regional economy. The higher the salary, the better welfare the employees have. The percentage of Company's expenditure on salary and other benefits has been increasing for the last 4 years by 38,41%, from Rp 302 billion in 2013 to Rp 418 billion in 2016.

## GOVERNMENT

As a state-owned enterprise, the government receives a part of company profits in form of dividend, with amount determined during GMS and in tax payment. Not all of the Company's profit is decided as dividend. Some of the profits are retained for company development. Despite the policy to retain profit for company expansion, Bio Farma strives to bring positive impact to the country. The trend for the last four years shows increasing dividend payments to the government except in 2015, when payment of dividend decreased by 36,7% compared to the previous year. However, Bio Farma's dividend payment rose again in 2016 up to 61,85% to Rp 234,707,000,000.00 from Rp 145,015,000,000.00 in 2015.

Regarding tax revenue for the government, Bio Farma's commitment to comply with tax responsibility can be seen through appreciation by the government as Bio Farma is selected as one of 24 taxpayers who contributes greatly to the total government tax revenue in 2016. [\[GRI 203-2\]](#)

## COMMUNITY

As a state-owned enterprise, Bio Farma is required by the Government through the Ministry of SOEs to implement Partnership and Community Development Program or Program Kemitraan dan Bina Lingkungan (PKBL). This program consists of two parts, namely the Partnership Program and Community Development Program. In this section, we outline Partnership Programs aimed at improving the people's economy, while our Community Development Program is described in Bio Farma Berbagi chapter.

Through Partnership Program, Bio Farma has provided soft loans with a 6% flat interest rate per year to the community to boost economic growth. Partnership Programme loan funds distributed for 2016 amounts to Rp 5,726,500.00,00 to a total 240 Mentored Partners. [\[GRI 203-2\]](#)

Assessment on the effectiveness of Partnership Program Fund Distribution and Loan Collectability Rate in accordance with the Decree of the Minister of State Owned Enterprises Number: Kep-MBU/2002 dated June 4, 2002 regarding the Assessment of Financial Health of State-Owned Enterprises is as follows:

### A. CHANNELING EFFECTIVITY

Description	2016 Audited (Rp)	2015 Audited (Rp)	2014 Audited (Rp)	2013 Audited (Rp)
Distribution Effectiveness	32.86%	86.44%	90.07%	15.87%
Score	0	2	3	3

### B. COLLECTIBILITY RATE

Description	2016 Audited (Rp)	2015 Audited (Rp)	2014 Audited (Rp)	2013 Audited (Rp)
Distribution Effectiveness	59.95%	76.30%	75.72%	71.03%
Score	2	3	3	3

## SOCIAL COMMUNITY INVESTMENT THROUGH CSR AND PKBL [\[GRI 203-2\]](#)

### EXPENDITURES FOR PKBL AND CSR

As a State-Owned Enterprise, the Government through the Ministry of SOEs obliges Bio Farma to implement the Partnership and Community Development Programme (PKBL). This programme consists of two parts, namely the Partnership Programme, and Community Development Program. Besides that, as a form of commitment to corporate social responsibility towards the people and environment.

Bio Farma also implements CSR programme. In this section we outline Partnership Programmes aimed at improving the people's economy. While our CSR and Community Development Programme are described in the Community Development Chapter.

## PARTNERSHIP PROGRAMME (REVOLVING FUND)

Through Partnership Programme, Bio Farma provides soft loans to the community to boost economic growth with a 6% flat interest rate per year. The channeling of the Partnership Programme loan funds for the year 2016 amounts to Rp 5,726,500.00,00 which is distributed to 240 Partners, consisting of 238 small enterprises and 2 cooperation.

### IMPACT OF PARTNERSHIP PROGRAM

Partnership Programme creates indirect economic impacts on local communities. Through this program, jobs are created; therefore, decreasing unemployment rate. Bio Farma provides assistance in enhancing capacity building and empowerment through various educational programs, including on administration, book

keeping, marketing, human resource management, human character and behavior, and effective and efficient business development for potential partners.

Educational programs and trainings implemented in 2016 was participated by 240 business units that became potential partners. The partners that have successfully run their business are engaged by the company in exhibitions in order to promote, encourage and increase their sales volume in both local and international market. In order to facilitate the partners during loan repayment process, Bio Farma cooperates with several banking institutions, namely Bank BRI and Bank Bukopin.

The following table explains the distribution of Partnership Program funds until 2016 according to Business Sector and Region:

Region	Industry		Service		Craft		Trade		Farming		Animal Husbandry		Grand Total	
	Unit	Rp (million)	Unit	Rp (million)	Unit	Rp (million)	Unit	Rp (million)	Unit	Rp (million)	Unit	Rp (million)	Unit	Rp (million)
DKI Jakarta	-	-	1	60	-	-	-	-	-	-	-	-	1	60
Bandung Regency	24	810	6	100	-	-	24	583	-	-	1	15	55	1.508
Bandung Barat Regency	3	90	4	110	-	-	17	348	3	130	3	80	30	758
Ciamis Regency	1	40	-	-	-	-	1	8	-	-	-	-	2	48
Cianjur Regency	1	35	3	110	-	-	3	80	-	-	-	-	7	225
Cirebon Regency	-	-	-	-	-	-	1	20	-	-	-	-	1	20
Garut Regency	1	15	-	-	-	-	3	55	-	-	-	-	4	70
Kuningan Regency	2	30	-	-	-	-	1	15	-	-	-	-	3	45
Majalengka Regency	1	5	-	-	-	-	-	-	-	-	-	-	1	5
Subang Regency	1	20	-	-	-	-	4	54	-	-	1	35	6	109
Sukabumi Regency	-	-	1	15	-	-	6	105	-	-	-	-	7	120
Sumedang Regency	1	10	-	-	-	-	1	20	-	-	-	-	2	30
Tasikmalaya Regency	3	55	-	-	-	-	1	15	-	-	1	15	5	85
Bandung City	21	480	8	318	2	45	73	1.508	-	-	-	-	104	2.350
Cimahi City	-	-	2	23	-	-	8	248	-	-	-	-	10	270
Tasikmalaya City	2	25	-	-	-	-	-	-	-	-	-	-	2	25
<b>Grand Total</b>	<b>61</b>	<b>1.615</b>	<b>25</b>	<b>735</b>	<b>2</b>	<b>45</b>	<b>143</b>	<b>3.057</b>	<b>3</b>	<b>130</b>	<b>6</b>	<b>145</b>	<b>240</b>	<b>5.727</b>

# CONTINUOUS ACHIEVEMENT

Various awards received by Bio Farma have proven our competence, experience, dedication and commitment for the past 126 years.





DEDICATION THROUGH ECONOMY



DEDICATION THROUGH ENVIRONMENTAL SUSTAINABILITY



DEDICATION THROUGH THE EMPLOYEES' PERFORMANCE



DEDICATION THROUGH COMMUNITY EMPOWERMENT



DEDICATION THROUGH QUALITY PRODUCTS

# DEDICATION THROUGH ENVIRONMENTAL SUSTAINABILITY



## DEDICATION THROUGH ENVIRONMENTAL SUSTAINABILITY

As a green company, Bio Farma's consistent implementation of pro-environmental operational activities has become the underlying principle in making every corporate decision. The commitment to maintain environmental sustainability through establishing policies and implementing them within Company's operations has been proven through receiving Gold rating in the annually-held PROPER award from the Indonesian Ministry of Environment and Forestry in 2014, 2015, and again in 2016.

Bio Farma's commitment in ensuring environmental sustainability does not only implemented where the Company operates, the neighboring communities, other communities throughout Indonesia, but also at the global scale. Mitigation of the Greenhouse Gas (GHG) emissions as a global program has become a part of our concerns and contributions. Bio Farma fully supports the Government of Indonesia's policy after Paris Agreement 2015 to commit in mitigating the GHG emission by 26% by year 2030. Various strategic steps in a form of GHG emission mitigation effort within Company's operational activities had been done through efficiency and innovation during production process, in addition to also conducting energy saving programs which will be described below.

As a green company, Bio Farma has formulated an environmental sustainability policy that focuses in five main areas, namely:

**First:** Green Process, implementing green principle on all business process, starting from raw material selection through selecting vendors that care about the environment, up to the process of production, formulation, filling, packaging, until finished good handling.

**Second:** efficiency in energy use.

Third: water efficiency and conservation by implementing 4R principle (reduce, reuse, recycle, recovery)

**Fourth:** waste management and waste sorting into five categories.

**Fifth:** inviting participation from employees in order that they can have pro-environmental work culture and attitude, including in their family culture.

Bio Farma strives to achieve energy efficiency in all the Company's operational activities through establishing various policies, such as utilization of renewable energy, improving the quality of our equipment, redesigning production process and setting up operational production cycle. In addition, Bio Farma creates various policies to reduce vehicle emission, to reduce electricity consumption at supporting facilities, as well as to improve the management of operational vehicles.

Bio Farma continues to implement various strategies on pollution control and prevention, an implementation that is in line with Law No. 32 of 2009 on Environmental Protection and Management. Bio Farma also has a strict policy that specifies that the use of energy and natural resources must be done efficiently and effectively, and results from Bio Farma's operational activities must generate optimum benefits to the people, both Bio Farma's employees and the society.

Overall, environmental management targets of Bio Farma are:

1. Energy and Natural Resource Efficiency through the implementation of Cleaner Production Process, starting from production planning, optimization of production process, up to waste management.
2. Comprehensive environmental management of air, liquid waste, solid waste, 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 to display the Company's commitment and responsibility to the environmental and social issues.
4. Environmental management innovative programs as a form of continuous improvement in environmental management to ensure that the quality of our environmental management improves from year to year.



## ENERGY ASPECT

Since 2008, Bio Farma has implemented a program on the use of new and renewable energy, as well as on energy savings. Bio Farma's top management has fully committed to implement energy savings and environmental management, which can be seen in Bio Farma's 9 policies, particularly in the Conservation of Energy and Natural Resources point. In addition, Bio Farma has also established Energy Saving Team which functions in overseeing and executing energy and natural resources saving activities at each Company's operation.

## ENERGY CONSUMPTION WITHIN THE ORGANIZATION

There are three electrical power sources used by Bio Farma (Persero):

1. The first is PLN-1 (State Electricity Company) with 20 kV voltage, three-phase, 50 Hz frequency, and a capacity of 3465 kVA.
2. The second is PLN-2 (State Electricity Company) with 20 kV voltage, three-phase, 50 Hz frequency, and a capacity of 3465 kVA.
3. The third is 5 generator sets, three supply power of 1,000 kVa, 3.3 kV, 50 Hz, while the other two supply 2,000 kVa, 3.3 kV, 50 Hz. These five generators operate inter-connectedly with PLN-1, while the other two generators operate inter-connectedly with PLN-2. [GRI 302-1]

Although Bio Farma's production and administration buildings are separated from one another, electricity power can be supplied both from PLN or the generators. Bio Farma uses electricity from PLN-1 and two generators simultaneously at the Polio/ Measles Vaccine Production Building and Filling Line-2 Production Building. In both buildings there are production machines or tools which are susceptible to electrical interference that might cause significant losses.

Meanwhile, for other buildings that are not susceptible to electrical interference, such as Bacterial Vaccine Production Building, Pilot Scale Building, and Administration Building, they use power sources from PLN-1 and PLN-2. Nevertheless, the distribution network system is designed in order that in case of electrical interference on any of the two power sources, the other one can serve as a backup to supply electricity needed in Bio Farma.

The following tables list the amount of electrical energy consumption in Bio Farma throughout 2016, and during the past two years. All power is generated from non-renewable energy in a form of electrical energy whose amount is calculated according the bills from PLN. Meanwhile, the amount of electricity from generators is calculated from direct reading on kWh meter of each generator. Recording of kWh used from the generators is conducted every month by Bio Farma's electricity distribution section.

### Electrical Energy Consumption (kWh) [GRI 302-1]

2016	2015	2014
29,499,810	28,108,605	28,039,312

### Electrical Energy Consumption in 2016 (kWh)

Month	PLN I	PLN II	Genset
January	894,870	562,356	907,748
February	894,400	569,720	864,040
March	1,000,300	666,492	920,792
April	915,330	641,280	920,452
May	972,980	642,488	918,420
June	856,890	635,844	894,864
July	837,900	616,996	832,368
August	978,600	832,368	905,000
September	850,100	637,828	907,392
October	984,100	595,748	899,280
November	1,280,200	310,000	855,776
December	1,079,500	609,676	807,712
<b>Total</b>	<b>29,499,810</b>		

### Electrical Energy Consumption 2015 (kWh)

Month	PLN I	PLN II	Genset
January	975,896	667,700	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	482,948	1,004,000
<b>Total</b>		<b>28,108,605</b>	

### Electrical Energy Consumption in 2014 (kWh)

Month	PLN I	PLN II	Genset
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
<b>Total</b>		<b>28,039,312</b>	

### ENERGY INTENSITY [GRI 302-3]

Energy intensity at Bio Farma is the ratio between electrical energy consumption for the production process and the amount of production batch for a year.

Energy consumption data only uses electrical energy consumed in production, while the rest is electrical energy consumed at supporting facilities. Energy intensity per production is calculated using the formula: Total energy consumption (kWh) at production divided by the amount of production batch.

### Overview of Energy Consumption in Production and Supporting Facilities (kWh)

Type of Energy Consumption	2016	2015	2014
Total Consumption	29,499,810	28,108,605	28,039,312
Consumption in Production	16,348,165,21	17,016,720,76	17,305,725,37
Consumption in Supporting Facilities	13,151,644,8	11,084,284,24	10,733,586,63

As a result, energy intensity related to production at Bio Farma in 2016 and 2015 was as follows:

### Energy Intensity related to Production (kWh)

Description	2016	2015	2014
Energy Consumption	16,348,165.21	17,016,720.76	17,305,725.37
Amount of Production Batch	1,317	1,337	12,727.5
Energy Intensity	12,413.19	12,727.5	13,170.26

These calculations concluded that Bio Farma has succeed in maintaining the consistency of energy consumption reduction in production. In 2016, there has been a decrease by 2.5%, from 12,727.5 kWh/production batch in 2015 to 12,413.2 kWh/production batch in 2016. While in 2015, there has been a decrease in energy consumption by 3.4% from 13,170.26 kWh/production batch in 2014 to 12,727.5 kWh/production batch in 2015.

### REDUCTION IN ENERGY CONSUMPTION [GRI 302-4]

Since 2008, Bio Farma has been implementing various electrical energy saving programs. Implementation of the programs has been able to reduce the use of electricity by approximately 9-12%.



Energy consumption reduction in 2016 was successfully achieved through implementation of various policies and programs, as follows.

### Energy Saving Programs in 2016

Program	Result of Efficiency Policy
Timer Control installation on 32 cooling system AHU to set the cooling system off at night.	Electrical energy saving: 176,640 kWh/month
Inverter installation on Chiller pumps at Polio-Measles Building and Packaging Building and 5,947.2 kWh/month (Polio-Measles Building), Total saving: 7,905.6 kWh/month	Electrical energy savings: 1,958,4 kWh/month (Packaging Building)
Inverter and night-mode installation on 25 Laminar Airflows Cabinets	Electrical energy saving: 7,303.68 kWh/month
Promoting employees awareness to switch off unused office equipment	Electrical energy saving: 9,870 kWh/month
The use of more environmental-friendly coolers and energy saving on 2 Cold Rooms and AC Split, from R22 to Musicool Hydrocarbon Electrical energy saving: 1,305.15 kWh/month	Reducing the use of ozone-depleting chemicals
Replacement of TL light bulbs with energy-saving LED bulbs	Electrical energy saving: 1,085.28 kWh/month
Seminar of CO <sub>2</sub> emission reduction by experts on energy and CO <sub>2</sub> emission reduction	Increased employee awareness on energy-saving behavior and its relation to CO <sub>2</sub> emission reduction.
Campaigns on electricity, water and diesel efficiency by Bio Farma management and through various internal media	Increased employee awareness and behavior in energy and natural resource saving effort.
Replacement of courtyard lamps (garden) by using solar cell and LED lamps which are equipped with Photocells	Electrical energy saving: 2,160 kWh/month
Timer control installation on 70 drinking water dispensers	Electrical energy savings: 1,177.05 kWh/month
Exhaust Air Energy Recovery from HIB and Pertussis Vaccine Production Room.	Electrical energy saving: 21,600 kWh/month
Solar cell Pump installation from Raw Water into the tank	Energy saving from solar cell: 480 kWh/month
LED lamps, motion sensor, and solar cell installation in Public Building 2, basement 1, 2 and 3	Energy saving from LED & Motion Sensor: 4,880.9 kWh/month Electrical energy saving from Solar Cell: 1,265.80 kWh Total energy saving on December 2015: 6,146.7 kWh
Selective Control installation on elevators in Public Building 2	Electrical energy saving: 316.8 kWh/month

The following table shows efforts and achievements related to energy use saving programs conducted in the last two years by making a comparison if there were no such programs. Result of electricity consumption (kWh) if energy-efficiency programs were not conducted is 32,410,292 kWh, calculated by totaling the overall energy consumption from existing PLN and generator sources and then adding the amount of electricity saved due to energy-efficiency programs.

### Electricity Savings in 2016-2015

Month	Total Electricity Consumption (kWh) If There is No Efficiency Program	Total Electricity Consumption (kWh) from the Implementation of Efficiency Program	Total Electricity Savings (Kwh) from the Implementation of Efficiency Program	% Electricity Savings
<b>2015</b>				
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	9.8%
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%
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	2,319,192	235,990	10.18%
<b>2016</b>				
January	2,622,094	2,384,974	237,120	9.94%
February	2,565,198	23,28,160	237,038	10.18%
March	2,824,398	2,587,284	237,114	9.16%
April	271,4126	2477062	237064	9.57%
May	2,773,703	2533888	239815	9.46%
June	2,627,310	2387598	239712	10.04%
July	2,527,102	2287264	239838	10.49%
August	2,956,479	2715968	240511	8.86%
September	2,956,479	2715968	240511	8.86%
October	2,723,947	2479128	244819	10.14%
November	2693986	2445976	248010	9.95%
December	2745223	29519510	2890782	9.79%
<b>Total</b>	<b>32410292</b>	<b>29519510</b>	<b>2890782</b>	<b>9.79%</b>
<b>Total Saving</b>			<b>2890782</b>	<b>9.79%</b>



## REDUCTION IN ENERGY NEEDED FOR PRODUCTS AND SERVICES [GRI 302-5]

Efforts to reduce the amount of energy needed throughout 2016 can be seen from the decrease in the energy intensity per production batch compared to 2015, as mentioned above. The number decreased by 3.9% according to the following calculation:

### Reduction in Energy Need for Products and Services

Description of Energy Needs	2016	2015	2014
Energy Consumption (kWh)	16,348,165.21	17,016,720.76	17,305,725.37
Amount of Production Batch	1,317	1,337	1,314
Intensity (joules)	12,413.19	12,727.5	13,170.26
Reduction (joules)	1,131,516,000	1,593,936,000	

## WATER

Water is the basic resource that is needed for human life. As human population continues to grow along with the increase of the urbanization and industrialization, this phenomenon will increase the need for water resource. Further, water crisis will become a real threat for the future generation if current water consumers do not manage wisely between the level of needs and the availability of the water resources.

As in the use of energy, Bio Farma considers water resource management as important. Thus, the Company puts this concern in our official policy document. Specific statement of "Energy and Natural Resource Saving", which was established by the President Director of Bio Farma, is included in the document. It shows a commitment from the Company's top management to show concerns on natural resource saving. Other form of commitment is done by establishing a water saving program, which is carried out by special unit formed by the Board of Directors.

The Energy Saving Team is in charge to prepare and implement energy and water saving programs. This team is supported by the related functions within Environmental Health and Safety (EHS) Department and all departments under Engineering and Maintenance Division.

The team members are competent personnel in water management and efficiency and have received both internal and external trainings. The organizational structure of water saving program team and certification of team members are shown in below.

## TOTAL WATER USED BASED ON SOURCE [GRI 303-1]

Bio Farma uses two water sources: two pipelines that carry water from the Regional Drinking Water Company (PDAM) and 4 artesian wells. Total amount of water retrieved from the wells and PDAM in 2016, 2015 and 2014 are as follows:

Year	2016	2015	2014
Usage (m <sup>3</sup> )	207,635 6.1%	195,795 (8.1%)	213,246

The table shows that the water consumption was increasing by 6.1% from 195,795 m<sup>3</sup> in 2015 to 207,635 m<sup>3</sup> in 2016. However, the increase in the amount of water consumption in 2016 is not as large as in the previous two years. Water consumption in Bio Farma was decreasing by 8.1% in 2015 with 195,795 m<sup>3</sup>, compared to total water consumption of 213,246 m<sup>3</sup> in 2014.

Standards and methodologies used in calculating the water consumption are:

1. PDAM water source: calculation of water consumption (m<sup>3</sup>) is based on monthly PDAM bills.
2. Artesian well source: calculation of water consumption (m<sup>3</sup>) is conducted by direct reading on flow meter tools set in every generator. Recording the number at the flow meter tools is consistent with the amount of water used every month.

### Structure of Water Saving Team as of 2016

#### Total of Water Use from Artesian Wells and PDAM in 2014-2016

Year	Month	Water Use in m <sup>3</sup>					
		Well I	Well II	Well III	Well IV	PDAM I	PDAM I
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	-
	November	577	2,986	1,815	3,053	4,679	4,300
	December	668	3,605	1,819	3,043	3,859	1,768
	<b>Total</b>			<b>213,246</b>			
2015	January	560	2692	921	1831	3,930	1117
	February	781	2,839	772	1,919	6,151	919
	March	2,281	3,214	776	2,768	7,848	403
	April	2,042	2,759	767	2,804	7,523	415
	May	1,954	2,519	807	2,444	4,553	693
	June	1,999	2,607	999	1,609	7,278	675
	July	2,026	2,255	969	1,918	6,980	703
	August	2,296	2,783	1,689	2,146	8,890	645
	September	2,411	2,760	1,782	2,364	9,090	782
	October	2,524	2,923	1,686	2,317	11,038	921
	November	2,414	2,852	881	2,240	9,040	486
	December	2,598	3,048	936	2,375	8,191	667
	<b>Total</b>			<b>195,795</b>			
2016	January	2,172	2,526	784	2,165	8,632	379
	February	2,339	2,788	898	2,313	10,796	370
	March	2,563	2,950	962	2,492	11,354	347
	April	2,169	2,859	886	2,407	10,416	213
	May	2,081	2,746	927	2,282	10,711	107
	June	2,210	2,912	978	2,475	10,927	264
	July	1,326	1,723	894	1,394	6,817	119
	August	2,254	2,967	1,231	2,986	11,445	224
	September	2,080	2,787	1,079	3,023	9,765	246
	October	2,110	2,767	1,014	2,779	6,913	588
	November	2,255	2,939	1,144	2,992	2,340	646
	December	2,089	2,684	898	2,841	3,300	576
	<b>Total</b>			<b>207,635</b>			



## EMISSION

Bio Farma takes Greenhouse Gas (GHG) mitigation seriously as it becomes a part of our efforts to suppress the increasing temperature of the Earth, often called Global Warming. Bio Farma's concern on Global Warming is in line with government's regulation which aims to achieve 26% reduction in GHG emissions by 2030 for the welfare of Indonesian people and the Global society. Therefore, Bio Farma commits to participate in controlling GHG emissions and other air emissions as a form of responsibility related to the Company's operational impacts on the environment. We have a high commitment to carry out operational activities that support an efficient and environmentally-friendly green industry. This green industry commitment is shown not only through compliance with laws and regulations on environmental sector, which becomes one point of the nine policies of our Company. Further, Bio Farma implements higher standards (beyond compliance) than what is required by the laws and regulations on environmental management.

Pollution prevention efforts implemented in internal operations are including air pollution control, reducing the liquid and solid waste, energy efficiency and water efficiency. This program is implemented all year long and normally spans for 5 years. Results from important aspect and impact identification from each work unit will be analyzed and classified according to program priorities.

The amount of emission load of each parameter is calculated by multiplying the emission load of each parameter with the Global Warming Potential value, in order that we can get the value of emission load which has potential causing Global Warming in tonne equivalent CO<sub>2</sub>. In particular, GWP value for CO<sub>2</sub> parameter is 1, for CH<sub>4</sub> is 0.021, and for N<sub>2</sub>O is 0.310.

The table below describes our GHG emission in 2016 and 2015 that were resulted from Bio Farma's operational activities. The sources of direct GHG emissions (Scope 1) were boiler, generators and incinerator. Measuring GHG parameter in each emission source was done by accredited laboratory, using grab sampling method on each exhaust stack of boiler, generator and incinerator as observation point.

Meanwhile, source of indirect GHG emissions (Scope 2) was electricity consumption from PLN. CO<sub>2</sub> Emission Load generated by activities that used PLN electricity was calculated based on US EPA 2011 eGRID 2010 Version 1.1 US Annual nonbaseload CO<sub>2</sub> output emission rate, whose electricity emission factor is 8956 x 10<sup>-4</sup> metric tonnes CO<sub>2</sub>/kWh. Formula used for calculations is Emission = Energy Consumption x Emission Factor, and the boundary includes amount of power from PLN (in kWh) used by Bio Farma during 2016. The data was retrieved from Bio Farm's utility usage report. According to the Decree of Indonesian Directorate General of Electricity no. 128 1105/600.4/2012, emission factor for Java-Bali interconnection system is at 0.741 tonnes CO<sub>2</sub> eq/MWh.

**Bio Farma is committed to participate in the management of greenhouse gas emissions and other air emissions as a form of responsibility over the impact of the company's operations on the environment.**

### Direct GHG Emissions in 2016 [GRI 305-1]

Name  Source of Emission	Parameter	Emission Load in 2016		Emission Load in 2015		Beban Emisi Tahun 2014	
		Emission Load (Tonne/Year)	Emission Load (Tonnes CO <sub>2</sub> Eq./Year)	Emission Load (Tonne/Year)	Emission Load (Tonnes CO <sub>2</sub> Eq./Year)	Emission Load (Tonne/Year)	Emission Load (Tonnes CO <sub>2</sub> Eq./Year)
		(Tonne)	(Tonne)	(Tonne)	(Tonne)	(Tonne)	(Tonne)
Boiler	CO <sub>2</sub>	4.94148	4.94148	4.01063	4.01063	4.56258	4.56258
	CH <sub>4</sub>	0.00022	0.00540	0.00018	0.00439	0.0002	0.00499
	N <sub>2</sub> O	0.00034	0.10124	0.00028	0.08217	0.00031	0.09348
Genset	CO <sub>2</sub>	8.75407	8.75407	7.74035	7.74035	5.31715	5.31715
	CH <sub>4</sub>	0.00038	0.00957	0.00034	0.00847	0.00023	0.00582
	N <sub>2</sub> O	0.00060	0.17935	0.00053	0.15858	0.00037	0.10894
Incinerator	CO <sub>2</sub>	0.30539	0.30539	0.28967	0.28967	0.26581	0.26581
	CH <sub>4</sub>	0.00001	0.00033	0.00001	0.00032	0.00001	0.26581
	N <sub>2</sub> O	0.00002	0.00626	0.00002	0.00593	0.00002	0.00545

### Indirect GHG Emissions [GRI 305-2]

Year	Mont	PLN Consumption (kWh)		Green House Emission (Ton eq, CO <sub>2</sub> )	
		PLN I	PLN II	PLN I	PLN II
2014	January	1,295,736	637,328	893,49	439,48
	February	1,106,060	590,060	762,69	406,88
	March	1,209,804	660,472	834,23	455,44
	April	1,183,212	641,420	815,90	442,30
	May	1,186,672	707,876	818,28	488,12
	June	1,054,748	648,548	727,31	447,21
	July	977,040	632,848	673,73	436,39
	August	1,002,868	650,532	691,54	448,58
	September	1,011,228	667,676	697,30	460,40
	October	1,046,500	676,720	721,62	466,64
	November	887,408	772,052	611,92	532,38
	December	1,085,072	688,312	748,22	474,63
	<b>Total</b>		<b>21,020,192</b>		<b>14,494,68</b>



Year	Mont	PLN Consumption (kWh)		Green House Emission (Ton eq, CO <sub>2</sub> )	
		PLN I	PLN II	PLN I	PLN II
2015	January	975,896	67,700	672,94	46,68
	February	859,816	618,800	592,89	426,70
	March	937,636	676,708	646,56	466,63
	April	880,388	661,132	607,08	455,89
	May	935,988	669,976	645,42	461,99
	June	858,888	625,140	592,25	431,07
	July	789,844	580,776	544,64	400,48
	August	789,844	580,776	544,64	400,48
	September	884,024	606,344	609,59	418,11
	October	946,604	696,680	652,74	480,40
	November	890,160	600,864	613,82	414,33
	December	832,244	474,348	573,88	327,09
	<b>Total</b>	<b>17,440,576</b>		<b>12,026,32</b>	
2016	January	894,870	562,356	617,07	387,78
	February	894,400	569,720	616,74	392,86
	March	1,000,300	666,492	689,77	459,59
	April	915,330	641,280	631,17	442,20
	May	972,980	642,488	670,93	443,03
	June	856,890	635,844	590,88	438,45
	July	837,900	616,996	577,78	425,46
	August	978,600	832,368	674,80	573,97
	September	850,100	637,828	586,19	439,82
	October	984,100	595,748	678,60	410,80
	November	1,280,200	310,000	882,77	213,76
	December	1,079,500	609,676	744,38	420,41
	<b>Total</b>	<b>18,865,966</b>		<b>13,009,22</b>	

## GHG EMISSION INTENSITY [GRI 305-4]

In line with energy consumption reduction effort that we have disclosed earlier, in 2016 we succeeded in mitigating emissions of gas and pollutants, including CO<sub>2</sub>, CH<sub>4</sub> and N<sub>2</sub>O. Intensity of GHG emissions was calculated from the amount of GHG emissions generated from production activities per amount of production batch for a year. Bio Farma's GHG emission intensity in 2016 is shown in table below.

### Emission Intensity of CO<sub>2</sub>

Data	2016	2015	2014
Total emission of CO <sub>2</sub> (Tonnes CO <sub>2</sub> Eq.)	13,023.22	12,038.04	14,505.146
Total production batch	1,317	1,337	1,314
Emission Intensity	9.89	9.00	11.04

### Emission Intensity of CH<sub>4</sub>

Data	2016	2015	2014
Total emission of CH <sub>4</sub> (Tonnes CO <sub>2</sub> Eq.)	0.0153	0.01317	0.0111
Total production batch	1,317	1,337	1,314
Emission Intensity	0.0000116	0.0000098	0.0000084

### Emission Intensity of N<sub>2</sub>O

Data	2016	2015	2014
Total emission of N <sub>2</sub> O (Tonnes CO <sub>2</sub> Eq.)	0.28684	0.24668	0.20787
Total production batch	1,317	1,337	1,314
Emission Intensity	0.000218	0.000185	0.000158



## GREENHOUSE GAS EMISSION REDUCTIONS [GRI 305-5]

Sources of emission in Bio Farma are generator set/ diesel generator, boiler (related to production process) and incinerator to support process. To reduce emission of conventional contaminants such as particulates, CO, SO<sub>2</sub> and NO<sub>2</sub>, Bio Farma conducts preventive maintenance and overhaul periodically for machines that become source of emissions.

However, effort to mitigate emission mitigation was still fluctuating, with an increase less than one point in 2016. Particularly for CO<sub>2</sub> emissions, the amount increased from 9 tonnes CO<sub>2</sub> Eq./production batch in 2015 to 9,9 tonnes CO<sub>2</sub> Eq./production batch in 2016.

## NOX, SOX, AND OTHER AIR POLLUTANTS [GRI 305-7]

There are two sources of conventional exhaust gas (Gas Buang Konvensional or GBK), namely from production processes that use generators and the boiler, and production support processes that use incinerator.



**BIO FARMA IS COMMITTED TO MANAGE POLLUTION AND CONSERVATION OF NATURAL RESOURCES AS A FORM OF CORPORATE SOCIAL RESPONSIBILITY TOWARDS THE COMMUNITY AS WELL AS THE ENVIRONMENT.**

**Total Emission from Production (Tonnes/Year) - Generators**

Parameter	2016	2015	2014
Particulates	32.57	67	93.10
SO <sub>2</sub> is a part of SO <sub>x</sub> , measurements were conducted in accordance with regulations.	7.78	340.63	14.46
NO <sub>2</sub> is a part of NO <sub>x</sub> , measurements were conducted in accordance with regulations.	76,51	530.38	185.87
CO (Carbon monoxide, measurements were conducted in accordance with regulations)	539.22	293.12	575.79

**Total Emission from Production (Tonnes/Year)-Boiler**

Parameter	2016	2015	2014
Particulates	4.92	34.18	44.22
SO <sub>2</sub>	0.55	3.44	0.34
NO <sub>2</sub>	0.55	42.87	108.19

**Total Emission from Support Process - Incinerator**

Parameter	2016	2015	2014
Particulate	66.23	96.79	186.84
SO <sub>2</sub>	11.93	192.81	372.26
NO <sub>2</sub>	57.30	44.47	83.45
CO <sub>2</sub>	157.49	337.67	359.03

Emission values of each parameter were obtained by using grab sampling on each exhaust stack of boiler, generator and incinerator as an observation point, conducted by accredited laboratories.

**LIQUID WASTE AND EFFLUENT [GRI 306-2]**

Bio Farma commits to implement pollution control and natural resource efficiency as a form of corporate social responsibility to the community and the environment. Along with success as a profitable business, the Company also pursues efficient and environmentally-friendly green industry. The pursuit of green industry has been proven not only by compliance with laws and regulations on environmental sector, which is one of the nine policies of the Company, but Bio Farma has stepped further by implementing higher compliant standards than required by environmental management regulations.

Pollution prevention efforts implemented in internal operations are including air pollution control, reducing the liquid and solid waste, energy efficiency and water efficiency. This program is implemented all year long and normally spans for 5 years. Results from important aspect and impact identification from each work unit will be analyzed and classified according to program priorities.

THE APPLICATION OF POLLUTION PREVENTION, INCLUDES AIR POLLUTION CONTROL, REDUCTION OF LIQUID WASTE GENERATION, WASTE REDUCTION, ENERGY EFFICIENCY AND WATER SAVING.



## TOTAL WASTE

### Liquid Waste (m3/Month)

Month	IPAL 1	IPAL 2
<b>2016</b>		
January	744	445
February	576	956
March	768	1,053
April	1,186	1,018
May	1,680	1,069
June	1,505	805
July	482	228
August	1,767	950
September	1,274	791
October	1,811	874
November	2,415	712
December	2,084	595
<b>Total</b>	<b>25,788</b>	
<b>2015</b>		
January	1,026	840
February	1,094	356
March	1,516	989
April	2,663	542
May	1,727	757
June	1,680	721

Month	IPAL 1	IPAL 2
July	833	290
August	1,155	813
September	1,024	607
October	1,044	849
November	1,115	937
December	1,012	807
<b>Total</b>		<b>24,397</b>

<b>2014</b>		
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
<b>Total</b>		<b>15,768</b>

## PRODUCT AND SERVICE

### MITIGATING ENVIRONMENTAL IMPACTS OF PRODUCTS AND SERVICES

Bio Farma's efforts to manage environmental impacts of our products are done by offering Pentabio vaccine, a combination of 5-vaccines (Diphtheria, Tetanus, Pertussis, Hepatitis B, and Hib) in one packaging. With Pentabio vaccine, we achieve reduction on the use of leaflet and carton packaging, compared to separate vaccine manufacturing.



Comparison of non-hazardous waste generated from Pentabio innovation is as follows:

**Production of Pentabio Vaccine**

Pentabio	5 Dosages	1 Dosage
Total Production (vial)	340,000	2,880,000
Total Dosages	1,700,000	2,880,000
Total Dosages in 2016	4,580,000	
Packaging Weight per Box (gram)	19	17
Packaging Waste	646,000	896,000
<b>Total Waste (gram)</b>	<b>5,542,000</b>	

**Production of Diphtheria (DTP), Hepatitis B (Hep B) and Hib Vaccines with same dosage**

Production of DTP, Hep B, Hib Vaccines	DTP	Hep B	Hib
Total Boxes	458,000	458,000	458,000
Packaging Weight (gram)	20	17	17
Packaging Waste	916,000	7,786,000	7,786,000
<b>Total Waste (gram)</b>	<b>16,488,000</b>		

**Comparison of Pentabio Vaccine and DTP + Hep B + Hib vaccines Packaging Waste**

Vaksin	Jumlah Sampah (Ton)
Vaccine	Total Waste (Tonnes)
DTP + Hep B + Hib	16.49
<b>Pentabio</b>	<b>5.54</b>
<b>Percentage of Reduction due to Innovation</b>	<b>66%</b>

Pentabio innovation also allows for hazardous waste reduction, due to reduction in the weight of packaging compared to hazardous waste from production of DTP, Hep B and Hib vaccines with same dosage. Following is comparison of Pentabio vaccine packaging's weight with DTP + Hep B + Hib:

Pentabio vaccine can also save energy, if compared to total energy used in production of each other type of vaccines. Prior to this innovation, total energy use in DTP vaccine production was 1.23 MWh/batch, 1.221 MWh/batch in Hep B vaccine production, and 1.21 MWh/batch in Hib vaccine production. After we have Pentabio innovation, total energy consumed to produce Pentabio vaccine, which equal to the 5-vaccines, is only 0.778 MWh/batch.

This innovation can save up to 2.883 MWh/batch.

Year	Total Batch	Before Innovation		After Innovation		Saving/Year
		MWh/Batch	MWh/Year	MWh/Batch	MWh/Year	MWh/Batch
2016	22.0	3.661	80.54	0.778	17.12	63.43
2015	43.5	3.661	159.25	0.778	33.84	125.41
2014	40.0	3.661	146.44	0.778	31.12	115.32

Manufacturing of combined vaccines can also save water uses for production, if compared to separate production of vaccines. Generally, water needed for production is approximately 1,740.6 m<sup>3</sup>/year, while combined vaccine production only needs 580.2 m<sup>3</sup>/year. With combined vaccine, we can save water use by 66.67% or 1,160 m<sup>3</sup>/year.

#### Water Consumption in Production

	DTP+Hep B+Hib	Pentabio	Reduction
Water Consumption in Production (m <sup>3</sup> /year)	1,740.6	212.74	1,527.86
Water Pollution Load (m <sup>3</sup> /year)	1,217.28	167.55	1,049.73

## COMPLIANCE

In order to pursue Green Vaccine Industry, Bio Farma ensures that our environmental management strategies are based on ISO 14001, which provides guidance on Environmental Management System. In particular, we have received ISO 14001 certification from an independent certification agency, Lloyd's Register Quality Assurance (LRQA), since 2005. Further, our environmental management is based on PDCA (Plan, Do, Check and Act) cycle, in order to have environmental management with good quality

standards that can be constantly improved. Bio Farma also implements clean production principles to minimize waste and environmental impacts due to the Company's operational activities. The initiative has been implemented starting from planning stage during raw material procurement. Moreover, Bio Farma selects vendors 100% that have also implemented their own environmental management and those that offer environmentally-friendly products. [GRI 308-1]

## FINES AND SANCTIONS FOR NON-COMPLIANCE WITH ENVIRONMENTAL LEGISLATION AND REGULATIONS

Environmental pollution control is conducted through management on liquid waste, solid waste, hazardous waste, and air pollutants. Results from these environmental management efforts are then monitored by an independent laboratory, which conducts environmental monitoring activity in accordance with established schedule and regulation (monthly monitoring for water waste, quarterly monitoring for emission from incinerator, and per semester for emission from generators and boiler). Results from environmental quality assessment will then be compared to standards of quality specified in applicable regulations, in order to be able to evaluate performance quality of the environmental management.

Pollution monitoring is conducted regularly over 100% parameter specified by rules and regulations. Results from the pollution monitoring process has fulfilled applicable quality standards, and none of them exceeds the specified parameters, proving that Bio Farma is a company that complies to the applicable rules and regulations, even establishing excellent standard in environmental management. Thus, compliance practice of Bio Farma is considered beyond compliance. This effort has in particular resulted in Green PROPER rating for six times and Gold PROPER rating for period of 2013-2014, 2014-2015 and 2015-2016.

Bio Farma expects to continue maintaining and even improving our performance in environmental management, in order that it can set an example for the national industry. During reporting period, Bio Farma has never received any sanctions or punishments for non-compliance on rules and regulations; in other words, Bio Farma has complied with all environmental requirements. **[GRI 307-1]**





## MAKE THE WORLD A HEALTHIER PLACE

Bio Farma always provide and develop Life Science products with international standard to improve the quality of life.



DEDICATION THROUGH ECONOMY



DEDICATION THROUGH ENVIRONMENTAL SUSTAINABILITY



DEDICATION THROUGH THE EMPLOYEES' PERFORMANCE



DEDICATION THROUGH COMMUNITY EMPOWERMENT



DEDICATION THROUGH QUALITY PRODUCTS

# DEDICATION THROUGH THE EMPLOYEES' PERFORMANCE



## BIO FARMA EMPLOYEES' PROFILE

[GRI 102-7, GRI 102-8]

Bio Farma believes that every achievement produced by the company will not be separated from the synergy of individual quality and high performance of our work team. As a company that has dedicated its operational activities to improve the quality of life, the welfare of the employees in Bio Farma become one of the stabilized impacts that the company continues to improve. For that reason, the company is committed to create and implement policies that are in harmony with the labor law and human rights including workers' safety and health standards.

## NUMBER OF BIO FARMA EMPLOYEES

### Bio Farma Employees by Total

Year	Number of Employee
2016	1,171
2015	1,557
2014	1,450
2013	1,329
2012	1,232
2011	1,208
2010	1,185

Bio Farma's total workforces in 2016 was increased as much as 15.09% compared to the previous year and represent the largest total number of workforce of company for the last seven years.

### Bio Farma Employees Distribution Profile

Distribution Indicator	2016		2015		2014		2013	
	Total	%	Total	%	Total	%	Total	%
<b>Gender</b>								
Male	903	77.11	880	78.08	810	78.72	747	78.38
Female	268	22.89	247	21.92	219	21.28	206	21.62
<b>Total</b>	<b>1.171</b>	<b>100</b>	<b>1.127</b>	<b>100</b>	<b>1.029</b>	<b>100</b>	<b>953</b>	<b>100%</b>

### Employment Status

	2016		2015		2014		2013	
	Total	%	Total	%	Total	%	Total	%
Karyawan Tetap	1,171	89.05	1,127	72.38	1,029	70.97	953	71.71
Karyawan Kontrak	144	10.95	430	27.62	421	29.03	376	28.29
<b>Jumlah</b>	<b>1,315</b>	<b>100</b>	<b>1,557</b>	<b>100</b>	<b>1,450</b>	<b>100</b>	<b>1,329</b>	<b>100</b>

### Working Time

	2016		2015		2014		2013	
	Total	%	Total	%	Total	%	Total	%
0-5	443	37.83	443	39.31	333	32.36	316	33.16
6-10	220	18.79	198	17.57	261	25.36	194	20.36
11-15	189	16.14	172	15.26	162	15.74	174	18.26
16-20	148	12.64	150	13.31	119	11.56	118	12.38
21-25	89	7.60	91	8.07	79	7.68	68	7.14
26-30	43	3.67	31	2.75	48	4.66	54	5.67
> 31	39	3.33	42	3.73	27	2.62	29	3.04
<b>Total</b>	<b>1,171</b>	<b>100</b>	<b>1,127</b>	<b>100</b>	<b>1,029</b>	<b>100</b>	<b>953</b>	<b>100</b>

### Age Group

	2016		2015		2014		2013	
	Total	%	Total	%	Total	%	Total	%
<20	0	0.00	0	0.00	0	0.00	0	0.00
21_25	75	6.40	74	6.53	43	4.18	27	2.83
26_30	253	21.61	250	22.07	221	21.48	193	20.25
31_35	237	20.24	221	19.51	228	22.16	210	22.04
36_40	194	16.57	188	16.59	165	16.03	172	18.05
41_45	174	14.86	197	17.39	201	19.53	189	19.83
46_50	147	12.55	125	11.03	112	10.88	112	11.75
>51	91	7.77	78	6.88	59	5.73	50	5.25
<b>Total</b>	<b>1,171</b>	<b>100</b>	<b>1,127</b>	<b>100</b>	<b>1,029</b>	<b>100</b>	<b>953</b>	<b>100</b>

### Educational Level

	2016				2015		2014	
	Permanent		Contract		Total	%	Total	%
	Total	%	Total	%				
S3	3	0.26	1	0.69	1	0.09	1	0.10
S2	127	10.85	1	0.69	49	4.35	44	4.28
S1	361	30.83	49	34.03	282	25.02	262	25.46
D3	210	17.93	92	63.89	220	19.52	189	18.37
High School	470	40.14	1	0.69	575	51.02	533	51.80
<b>Total</b>	<b>1,171</b>	<b>100</b>	<b>144</b>	<b>100</b>	<b>1,127</b>	<b>100</b>	<b>1,029</b>	<b>100</b>

BESIDE PERMANENT REMUNERATION AND BENEFITS (TAKE HOME PAY), BIO FARMA PROVIDED ADDITIONAL CONTRIBUTION FOR OUR WORKERS' WELFARE IN FORM OF VARIOUS ADDITIONAL REMUNERATION BENEFITS.

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.

#### Employee Turnover based on Gender [GRI 401-1]

	2016	2015	2014
Male	12	11	11
Female	2	9	7
Total	14	20	18

#### Employee Turnover

Reason	2016		2015		2014	
	Male	Female	Male	Female	Male	Female
Resign	-	1	3	4	-	2
Voluntary Retirement	7	-	4	-	4	1
Normal Retirement	5	1	5	-	5	3
Early Retirement	-	-	1	-	-	-
MD	-	-	1	-	2	-
<b>Total</b>	<b>12</b>	<b>2</b>	<b>14</b>	<b>4</b>	<b>11</b>	<b>7</b>

The employee turnover figure of 2016 decreased by 42.86% compared to 2015.

## COMPREHENSIVE EMPLOYEE WELFARE

### FAIR REMUNERATION [GRI 405-2, GRI 202-1]

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.



**Employee Income per month (gross) Based on Level and Grade**

Level	Grade	2016		2015	
		Minimum	Maximum	Minimum	Maximum
Head of Division	6-2	24,860,040	32,586,257	23,516,202	30,975,418
Head of Department	8-3	14,484,534	23,989,161	12,393,042	21,653,705
Head of Section	12-2	9,439,720	19,548,659	9,634,826	18,388,485
Staff	9-5	4,552,991	11,046,718	5,777,460	9,471,683
Junior Staff	13-5	3,789,471	13,801,195	5,164,770	13,163,544
Operational	17-7	5,184,660	11,962,839	3,971,733	10,865,530

Level	Grade	2014	
		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	12-2	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

Beside permanent remuneration and benefits (Take Home Pay), Bio Farma provided additional contribution for our workers' welfare in form of various additional remuneration benefits. On top of that, we also provide workers with other facilities, including out-patient and in-patient health insurance.

**Benefits Received by Permanent Employees and Contract [GRI 401-2]**

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	√	√

## WORKER COMPETENCIES DEVELOPMENT THROUGH FORMAL EDUCATION PROGRAM (MASTER & DOCTORAL DEGREE)

### NATURAL SCIENCE 2016

**4** Male      **2** Female

2015: 7 Male & 9 Female

### SOCIAL SCIENCE 2016

**1** Male      **0** Female

2015: 2 Male & 1 Female

### FREEDOM OF ASSOCIATION AND INDUSTRIAL RELATION [GRI 102-41]

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).

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 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. [GRI 402-1]

### EQUALITY IN WORK PERFORMANCE [GRI 405-1]

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.

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. 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	2016				2015				2014			
	Managerial		Non Managerial		Managerial		Non Managerial		Managerial		Non Managerial	
	Jumlah	%	Jumlah	%	Jumlah	%	Jumlah	%	Jumlah	%	Jumlah	%
Pria	232	64.09	671	82.94	211	65.12	669	83.31	349	64.27	461	94.86
Wanita	130	35.91	138	17.06	113	34.88	134	16.69	194	35.73	25	5.14
<b>Total</b>	<b>362</b>	<b>100</b>	<b>809</b>	<b>100</b>	<b>324</b>	<b>100</b>	<b>803</b>	<b>100</b>	<b>543</b>	<b>100</b>	<b>486</b>	<b>100</b>

### Workers' Composition Based on Age Group 2016

Gender	21-30 Years				31-40 Years				41-50 Years				> 51 Years			
	Permanent		Contract		Permanent		Contract		Permanent		Contract		Permanent		Contract	
	Total	%	Total	%	Total	%	Total	%	Total	%	Total	%	Total	%	Total	%
Pria	239	72.87	55	51.40	333	77.26	20	68.97	260	81.00	4	66.67	71	78.02	0	0
Wanita	89	27.13	52	48.60	98	22.74	9	31.03	61	19.00	2	33.33	20	21.98	2	100
<b>Total</b>	<b>328</b>	<b>100</b>	<b>107</b>	<b>100</b>	<b>431</b>	<b>100</b>	<b>29</b>	<b>100</b>	<b>321</b>	<b>100</b>	<b>6</b>	<b>100</b>	<b>91</b>	<b>100</b>	<b>2</b>	<b>100</b>



**Neni Nuraini** is one of Bio Farma's young bright researchers. She was entitled by former president BJ Habibie as one of the members of Indonesia's 40 Young Scientist Academy. Neni's achievement is one of the embodiment of Bio Farma's contribution in fostering equality in the profession of scientist in Indonesia.

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.

Employees of a productive working age dominated the workforce composition at Bio Farma in 2016. 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.

## 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 2015-2016, 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.

## RECRUITING AND MAINTAINING THE BEST TALENT

### RECRUITING THE BEST TALENT

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 2015, 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 predetermined 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.

### EMPLOYEE CAPACITY DEVELOPMENT PROGRAM [GRI 404-2]

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 & Doctor).

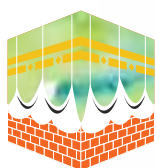
### Development program and the Realization of Programs in 2016

Start Date	End Date	Training Subject	No. Of Participants	Operator	Venue	Jenis Pelatihan
02-Jun-16	03-Jun-16	Accounting combination & consolidation and aspects of taxation	29	IAI	Hotel Aston Primera Pasteur	Inhouse
25-Apr-16	01-May-16	Character building training (CBT) batch 15& 16	28	Bio Farma	Pusdikajen Lembang	Inhouse
11-Aug-16	12-Aug-16	Competency Based Leadership	38	Kubik	Hotel Mercure Setiabudhi	Inhouse
05-Mar-16	05-Mar-16	Customer satisfaction	43	CV. Prima Berlian Lestari	Hotel Aston Primera Pasteur	Inhouse
13-Jul-16	14-Jul-16	Effective communication skill for CSO	73	WIBI	Hotel Grand Tjokro Cihampelas	Inhouse
04-Mar-16	04-Mar-16	PROPER Strategy & Evaluation	25	MUVI	Hotel Harris Tebet-Jakarta	Inhouse
01-Aug-16	01-Aug-16	Financial Planning	268	Widya Bhakti Inti	Hotel Harper Pasteur	Inhouse
05-Apr-16	05-Apr-16	Interpretation of ISO 27001 Clause	11	IT Bio Farma	Meeting Room TI	Inhouse
15-Aug-16	16-Aug-16	Environment OHSbehaviour safety	76	WIBI	Hotel Regata & Ged.Adm Lt. 1	Inhouse
05-Sep-16	06-Sep-16	Leadership strategic thinking for leading corporate action	56	Kubik	Hotel InterContinental Dago Pakar	Inhouse
18-May-16	19-May-16	Microsoft Access	100	HCSS	Hotel Grand Tjokro	Inhouse
25-Apr-16	25-Apr-16	Microsoft Power Point	96	HCSS	Hotel Grand Tjokro	Inhouse
24-May-16	25-May-16	Microsoft Word	86	Innov	Hotel Patra Jasa	Inhouse
18-Jul-16	19-Jul-16	Ms. Visio & Ms. Project	109	HCSS	Hotel Regata Setiabudhi	Inhouse
09-May-16	10-May-16	Basic Ms. Office "Ms. Excel & Ms. Word"	73	Inov Training	Hotel Sensa Ciwalk	Inhouse
09-Feb-16	10-Feb-16	Mapping of Interest & Talent of Productive Activities in the Framework of Empowerment & Discussion on the Period of Retirement Preparation	100	MUVI	Hotel Grand Tjokro	Inhouse
02-Aug-16	02-Aug-16	Career System Management	36	Dunamis	Hotel Aston Tropicana Cihampelas	Inhouse
28-Jul-16	29-Jul-16	Leadership Development	40	Kubik	InterContinental Hotel	Inhouse
20-Jun-16	20-Jun-16	Preparation & trial of halal product certification	21	LPPOM MUI	Heritage Building Meeting Room	Inhouse
15-Feb-16	16-Feb-16	Public speaking	36	Farhan Public Speaking Training	Hotel Serela Cihampelas	Inhouse
02-Sep-16	02-Sep-16	Tax Amnesty	111	Direktorat Jendral Pajak (DJP)	GSG PT. Bio Farma (Persero)	Inhouse
30-Mar-16	4, 6, 11 -Apr-16	TOEFL Preparation	28	Ghania Berkah Utama, CV	HR Meeting Room	Inhouse
04-Aug-16	04-Aug-16	Vision and Portfolio	36	PWC	Hotel Mandarin Oriental-Jakarta	Inhouse
		238 Thematic Divisional Training	582	Various PProviders	Domestic and Foreign	Public Training

## BIO FARMA EMPLOYEE APPRECIATION

Bio Farma provides awards to employees with high levels of achievement, dedication and professionalism.

Following are details of the number of employees who received awards in 2016.



### HAJJ PILGRIMAGE

3 employees and partner

### UMROH PILGRIMAGE

<b>2016</b>	<b>3 employees</b>
2015	3 employees and partner
2014	11 employees and partner
2013	3 employees
2012	5 employees



### BLOOD DONOR

<b>2016</b>	<b>37 employees</b>
2015	39 employees
2014	31 employees
2013	37 employees
2012	54 employees



### 20 YEARS WORK SERVICE

<b>2016</b>	<b>37 employees</b>
2015	6 employees and partner
2014	16 employees
2013	22 employees
2012	28 employees

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.

The human resource management pattern is balanced between the obligations and the rights that must be fulfilled by each party, which are employees who are covered by Employee Association and by Management as the Company.

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.



DEDICATION  
THROUGH  
ECONOMY



DEDICATION THROUGH  
ENVIRONMENTAL  
SUSTAINABILITY



DEDICATION  
THROUGH THE  
EMPLOYEES'  
PERFORMANCE



DEDICATION THROUGH  
COMMUNITY  
EMPOWERMENT



DEDICATION THROUGH  
QUALITY PRODUCTS



## PRIORITIZING OCCUPATIONAL HEALTH AND SAFETY [GRI 403-4]

**THROUGHOUT THE YEAR 2016 THERE WERE NO WORKPLACE ACCIDENTS RANGING FROM INCIDENT TO FATAL INCIDENT OCCURRED IN BIO FARMA. THE ACHIEVEMENT OF THIS OHS PROGRAM HAS DELIVERED BIO FARMA A ZERO ACCIDENT AWARD FROM THE MINISTRY OF MANPOWER AND TRANSMIGRATION FOR THE SUCCESS OF PREVENTING WORK ACCIDENTS FOR MORE THAN 2.5 MILLION HOURS.**



Bio Farma is committed to implement the best practices of OHS by creating a safe, healthy, pollution-free environment as well as minimal, even free from accidents therefore workers could improve work systems and productivity. Policy and implementation of Bio Farma OHS is applied both in production process and other supporting operational activities.

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.

Bio Farma has a Collective Labour Agreement (CLA) with the Association of Employees of PT Bio Farma (Persero). Collective Labour Agreement which is now in effect was approved by the Department of Manpower and Transmigration of West Java Province on July 31, 2015. In the CLA, the clause has been set regarding Occupational Health and Safety (OHS) and is described in Chapter X of the Occupational Health and Safety as well as the Environmental Maintenance and Conservation. To obtain excellent performance of Occupational Health and Safety (OHS), Bio Farma regularly monitor and

evaluate the implementation of practices. From the results of monitoring and evaluation of the performance of OHS can be improved, including the improvement of policies, systems and procedures.

[GRI 403-1, GRI 403-4]

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:

1. Occupational Health and Safety Committee.  
Tea P2K3 was formed by decree of Directors No. 03 681 / DIR / IV / 2015 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.
2. Emergency Response Team.

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.



## 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.

### 1. 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.

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

### 2. Preventive Workplace 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 2016 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.

### 3. Provision Of Consultation & Vaccination Services

As a preventive measure, Bio Farma vaccination in accordance with the risk that disease may be exposed to in the workplace. As in controlling common diseases such as influenza, the company has influenza vaccination program for all employees.

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. 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.

#### 4. Investment Fund OHS

In 2016 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 Rp373.635.000. 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

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, accident/near miss investigations and the follow up of corrective actions and reporting procedures.

### 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.

[GRI 103-3]

### PERFORMANCE HEALTH AND SAFETY

Performance achievements OHS 2016 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 2016 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

The company provides lunch for the entire workforce as well as a meal for employees on overtime The company needs to ensure that the food provided is safe and healthy. Therefore we monitor the meal catering

organizers both from the legal, hygiene and health aspects. The monitoring procedures are arranged in Standard Procedure 236K-MonC-01.

### SAFETY WORKING HOURS [GRI 403-2]

Safe working hours is the number of hours in which there has been no accident. Performance safe work hours within 4 (four) last year rated good are as follows:

2016	2015	2014	2013
2.583.263 hours	2.922.811 hours	2.839.393 hours	2.653.644 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.

Bio Farma divides occupational accidents within 5 (five) groups, namely: (1) incident, (2) minor accident, (3) moderate accident, (4) major accident and (5) fatal accident.

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).

### Workplace Accident Report

Type of Workplace Accident	2016	2015	2014	2013
Incident	0	1	1	1
Minor	0	3	1	1
Moderate	0	0	0	0
Major	0	0	0	0
Fatal	0	0	0	0

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

Type of Workplace Accidents (WA)	2016	2015	2014	2013
FR	0	1,07	0	0

### Disease Caused by Accident in Work Place

Type of Workplace Accidents (WA)	2016	2015	2014	2013
DCA	0	0	0	0

### MAINTAINING OCCUPATIONAL HEALTH STANDARDS

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 3 (three) years is as follows:

	Standard Value	2016	2015	2014
Light Intensity	300 lux	>300 lux	>300 lux	>300 lux
Noise	85 dB	< 85 dB	< 85 dB	< 85 dB

The light intensity in 2016 is successfully pressed to reach the limit of threshold. This can not be separated from the company's efforts to reduce the intensity through a number of control measures. The intensity of light in 2015 and 2014 was once reached above the limit.

## ENVIRONMENT-FRIENDLY PROCESS

Bio Farma is committed to be a green company that engages in eco- friendly activities, starting from the selection of raw materials, production process and innovation in accordance with ISO 14001.





DEDICATION THROUGH ECONOMY



DEDICATION THROUGH ENVIRONMENTAL SUSTAINABILITY



DEDICATION THROUGH THE EMPLOYEES' PERFORMANCE

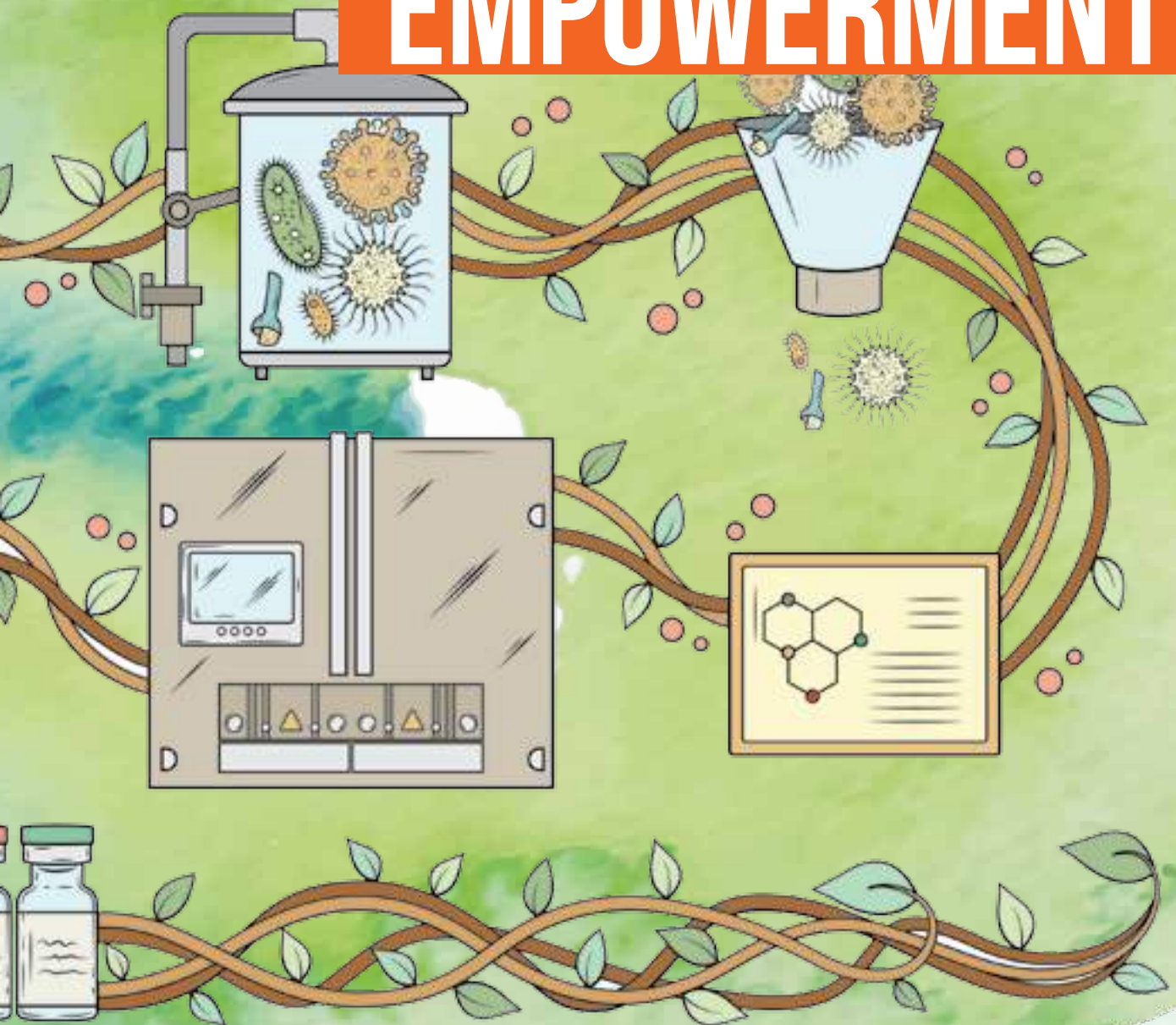


DEDICATION THROUGH COMMUNITY EMPOWERMENT



DEDICATION THROUGH QUALITY PRODUCTS

# DEDICATION THROUGH COMMUNITY EMPOWERMENT



## TOGETHER TOWARDS SDG'S ACHIEVEMENTS

As a State-Owned Enterprise, which also functions as a development agent, Bio Farma has a significant role in participating in accelerating the achievement of Sustainable Development Goals (SDG's) in Indonesia. SDG's is an agenda contained in a document entitled Transforming Our World: The 2030 Agenda for Sustainable Development was agreed upon at the United Nations (UN) summit on 25-27 November 2015.

A total of 193 UN member states, including Indonesia, have signed agreements that encourage changes towards sustainable development based on human rights and equality to promote social, economic and environmental development. The implementation of 17 SDG's in 169 targets and 240 indicators has been started since January 1, 2016.



Integration of 20 priorities of the National Medium Term Development Plan (RPJMN) 2015-2019 into 169 targets of SDGs:

1. Human Development
2. Economic Growth
3. Population & Family Planning
4. Education
5. Health
6. Gender
7. Child Protection
8. Food & Nutrition
9. Energy

10. Maritime
11. Infrastructure
12. Water & Sanitation
13. Environment
14. Inequality
15. Urban & Rural Development
16. Governance
17. Politics & Democracy
18. Security & Defense
19. Poverty
20. Global Partnership

Source : <http://sdgsindonesia.or.id>

**250.9%** **▲** GEOPARK CILETUH VISITORS

Geopark Ciletuh visitors were increased by 250.9% from 912 people in 2014 to **3,200** in 2016.

**RP52.79** BILLION

The accumulation of the distribution of environmental assistance program from 2012 to 2016 was 52.79 billion rupiah

Bio Farma supports the Government's efforts to continually strive to realize the commitment to achieve SDG's for the welfare of the community. We view the community as one of the stakeholders who must grow with the company in an effort to improve the quality of life. This objective is aligned with SDG's where Bio Farma through the Human Resource Division moves with the community in the form of Corporate Social Responsibility (CSR) and Environmental Development Partnerships. The entire program (100%) covers the areas of economics, environment, education and health as set forth in SDG's. **[GRI 413-1]**

The program is designed with the aim of improving the welfare and quality of life of the people, especially marginalized ones. The Community Development Program is part of the Partnership and Community Development Program mandated by the Government to SOEs and financed by Corporate Social Responsibility (CSR) funds.

**Natural dyes batik craftsmen was significantly improving from 2 persons in 2013 to 35 in 2016.**

**Planting 30,709 mangroves from 2012 to 2016 and using used tires donated by workers as a wave breaker of 860 meters long was proven to successfully reduce abrasions in north coast of west java.**

### ACHIEVEMENT OF COMMUNITY EMPOWERMENT DEDICATION

#### Realization of CSR funds in 2016

Fields	Amount (Rp)	%
Health	248,329,502	9.15%
Education	1,842,073,398	67.9%
Economy	119,234,000	4.40%
Environment	503,170,430	18.55%
<b>Total</b>	<b>2,712,807,330</b>	<b>100%</b>

The activities of Partnership and Community Development Program in Bio Farma refer to Regulation of the Minister of State-Owned Enterprises No.Per-03 / MBU / 12/2016 dated December 16, 2016, regarding Amendment to Regulation of the Minister of State-Owned Enterprise Number Per-09 / MBU / 07/2015 concerning Partnership Program and Community Development Program of State-Owned Enterprises. As for the program area PKBL divided into three parts based on distance with Bio Farma: **[GRI 413-1]**

Ring-1: Citizens living nearby

Bio Farma namely: District Sukajadi-Bandung City and District Cisarua-West Bandung regency

Ring-2: Citizens living outside the area or who are not in direct contact with Bio Farma (West Java)

Ring-3: Citizens in general (National)



## GEPARK CILETUH TO GEPARK UNESCO



Of the dozens of geoparks in the world, Ciletuh is the only one that is fully supported by State-owned Enterprises namely Bio Farma which is also supported by a very strong team.

**(Prof. Guy Martin-Pakar Geopark UNESCO)**

### REALITY OF IMPACT [GRI 203-2]:

1. The number of visitors increase from 912 people in 2014 reached 3,200 people in 2016
2. The number of homestays increased from 2 units in 2013 to 33 in 2016
3. Job opening for 140 people as a tour guide
4. Citizens who switched professions from active gold miners: 22 people
5. Citizens who switched professions from forest encroachers and lobster fry hunters to rebon and eel suppliers: 8 persons

Continuing the commitment to improve the quality of life of the community with CSR programs that prioritize local content, Bio Farma has continued to work on making Geopark Ciletuh area, in the district. Ciemas, Kab. Sukabumi, West Java, gain recognition from the United Nations specialized agency for education, science and culture (UNESCO) as Global Geoparks since 2013. Geopark Ciletuh has the advantages of biodiversity phenomenon (bio-diversity), geology (geo-diversity) and culture (cultural-diversity). One example of Geopark Ciletuh's superiority is that there is only one of the oldest (pre tertiary) rock complexes in West Java with areas covering mountains, hills, rivers, waterfalls, beaches and ancient rock landscapes. Beginning with national recognition on December 22, 2015, Geopark Ciletuh is in the process of preparing a targeted document completed to gain recognition as part of UNESCO Global Geoparks by the end of 2017.

Data from Asia Pacific Geoparks Network and UNESCO Global Geopark noted that no corporation has actively supported the development of geopark areas in Asia and even for a Global Geopark. Bio Farma became the first company in the world to be actively involved in developing geopark area. Therefore, representing the Industry, Bio Farma is involved in the Coordination Team of Geopark Ciletuh Development according to West Java Governor Decree which states that development members of Ciletuh consists of Bio Farma and other stakeholders from the local government of Sukabumi Regency, academician, and local community through Paguyuban Alam Pakidulan Sukabumi (PAPSI).

**[GRI 413-1]**

The development of Geopark Ciletuh was developed by considering three aspects, namely the conservation of geological heritage, biological and cultural safety,

building the capacity of local communities and making Ciletuh as an innovative tourism product to improve the economy of the community. The three aspects of Geopark Ciletuh development are integrated in Bio Farma CSR activities in Ciletuh which has brought some positive impacts to the socio-economic community.

### CULINARY BUSINESS DEVELOPMENT PROGRAM IN GEOPARK CILETUH

In addition to having a natural beauty, National Geopark Ciletuh has the potential of mangoes as a commodity trading. The abundance of mangoes during the harvest season is actually an economic value contribution to the community or mango farmers in the region. But the abundance of crops makes the price of the mangoes

machine operating skills. Production group of chips has been producing chips several times in a small scale and the marketing is still simple and local. To improve the skills and knowledge of the group, Bio Farma conducts creative packaging and branding training as a briefing of ways of making products that sell, have a strong brand to be known by many people. While group marketing training introduces the ways to do product marketing through cyberspace by using social media and create a blog which is free but it is efficient to maximize the marketing. Mango chips have now become one of the typical souvenir alternatives of the National Geopark Ciletuh region.

In addition to the production of chips, mango processing group is also encouraged to develop a special culinary of



### BIO FARMA BEING THE FIRST COMPANY IN THE WORLD WHO ACTIVELY INVOLVED IN DEVELOPING GEOPARK AREA

very low. Due to the price drop, people and mango farmers often choose to let the crops rot in vain. That condition has become the reason why Bio Farma held a CSR program development of processed products from mango. The abundance of mango during the harvest season is processed into a certain time-resistant food so it can be still economically valuable for the community or the mango farmers. In addition to mentoring the processing of mango fruit, the community is also given training, facilities and infrastructure supporting the processing of mango chips. Providing chips machine is also supplied with the provision of

National Geopark Ciletuh region through Local Culinary Business Development Program. The program is a form and one of the ways to make traditional culinary of National Geopark Ciletuh lifted its existence, of course with a touch of creativity and innovation that match with the concept of typical food of geoparkciletuh. This will certainly be an interesting acculturation, because the development of local culinary business will coincide with the type of culinary in the present. This activity will involve the experts as a companion to produce culinary works that are more interesting, innovative and selling without releasing the traditional value of typical food of National Geopark Ciletuh. Local culinary business development programs will be synergized with homestay development so there is collaboration and coordination in integrated lodging services.

## BATIK PAKIDULAN: ECO-FRIENDLY LOCAL CULTURE



INNOVATION THROUGH THIS BATIK IMPLEMENTED THROUGH ECO- FRIENDLY PROCESS (GREEN PROCESS) ARE THE ENVIRONMENTAL FRIENDLY DYES WHO HAVE USED NANOTECHNOLOGY

### REALITY IMPACT

1. Members of Batik Pakidulan group have grown from 2 persons in 2013 to 35 in 2016
2. Batik Pakidulan has become a new source of income for the community of Purwasedar Village with the consistency of support of empowerment program Bio Farma. The standard of living of the people increases through the increase of turnover from Rp 48,550,000 at the beginning of coaching to Rp 162,000,000 now.

LIVING STANDARD OF THE COMMUNITY IS INCREASING THROUGH INCOME FROM RP48.550.000 IN EARLY LEARNING TO RP162,000,000 NOW



In the Ciletuh area, there is a potential for cultural diversity that reflects the beauty of the landscape, community philosophy and the biodiversity of the region. The potential is in the form of Batik Pakidulan craft located in Purwasedar Village, Ciracap District, Sukabumi Regency. As a company that is committed to environmental conservation, Bio Farma empowered Batik Pakidulan craftsmen by developing environmentally friendly batik production process through the use of dye materials with nano technology and wastewater treatment plant (Mini IPAL).

The patterns written on Batik Pakidulan depict the natural beauty of sukabumi which belongs to the National Geopark Ciletuh area. Innovation through this batik is applied through a process of environmentally

friendly (green process) that is environmentally friendly dyes that have been using nanotechnology. Forms of application of the technology for example, red coloring is made from mahogany tree bark processed, processed turmeric to produce yellow, brown from processed coconut shell, suji leaf for green coloring, and black is produced from banana lining preparation. The colors are natural dye-tested accuracy so as to have good quality and color durability. Batik Pakidulan products are environmentally friendly and have no less quality to compete with other batik products.

## GARUT SHEEP: GLORY FOR WELFARE

THE FARMERS CONSIDERS THE LAMBS WITH THESE HIGH PRODUCTIVITY ARE THE RESULTS OF A CROSSING OF THREE SHEEP; THE MERINO WHICH MOTARIES THE LARGE POSTURE, KAAPSTAD FROM AFRICA FOR AGGRESSIVE PROPERTIES AND TENDERNESS MEAT OF LOCAL SHEEP, GARUT (WEST JAVA)



pure race of garut sheep increasingly difficult to find. The pattern of crosses as a determinant of cultivation pattern becomes less controlled through cross breeding of garut sheep with other types of sheep. Qualified garutsheep with the characteristics of large weights and horns are even more vigorous outside the Garut region.

Garut sheep is one of the wealth of ancestral heritage in West Java. The breeders believe this high productivity sheep is the result of a crossing of three sheep, Merino sheep inheriting a large posture, African Kaapstad sheep for the aggressive nature, and the tenderness of the local lamb meat of Garut (West Java). Crosses are estimated to occur in the 19th century with the Regent of GarutLimbangan (1833-1870) touted as a pioneer figure.

Problem mapping from the results of the analysis of the benefits and potential areas that can be added value for the community by Bio Farma shows population and genetic quality of sheep arrowroot continues to decline. The economic needs of local people make

Bio Farma CSR party pioneered efforts to utilize appropriate technology for garut sheep breeding in Wanajaya Village in 2012. It was started with a focus group discussion with farmers in Wanajaya Village. Discussions was related to natural and human resources in Wanajaya Village, SOP management of garut sheep keeping to cage employees, and knowledge transfer to farmers about sheep breeding. From this activity, problems were revealed in the core and plasma groups in the form of increasing the desire of breeders to do nursery business. This is because previously most farmers claimed only to fatten on the grounds to generate profits faster than the nursery, and the availability of good market for the sale of superior lambs and for the main products of sheep (meat and skin).



From the effort of genetic characterization, as the center of Garut sheep obtained 20 male breeds of male and female garut sheep that has the morphology of superior garut sheep. DNA analysis on all centers to determine the genetic potential of garut sheep showed all the rams and females in the village of Garut Sheep in the genetic superior category. So it is known that the sheep are phenotypically superior and genotype. With consistent and continuous effort, accompanied by the support of various parties, pure chickens of garut pups can continue to be cultivated, so that Garut sheep can always be maintained genetic purity.

**BIO FARMA TOGETHER WITH ACADEMICY, BPPT, West Java Provincial Government, District Government, and related village Governments ollaborate through Development Program to Build the Village of Garut Sheep breeding include: [GRI 203-1]**

1. Genetic Characterization using DNA Microsatellite Markers
2. The formation of a group of women farmers who produce compost
3. Development of plasma groups

## MANGROVE CONSERVATION AND BIODIVERSITY PROTECTION [GRI 413-1]

Prior to the desire to save the coastal area and its ecosystem from abrasion attacks, Bio Farma moved to rehabilitate mangrove forests on the coast of Karangsang, Indramayu, and Bulaksetra, Kab. Pangandaran, West Java. This effort began with the planting of 6,000 mangrove tree seedlings in November 2012 by the CSR Team and the company's partners. Various types of mangroves such as *Avicennia* sp., *Rhizophora* sp., *Bruguiera* sp. And *Sonneratia* sp. in the area of Karangsang has reached 30,709 trees in the forest area of  $\pm$  9.5 Ha until today. To protect the newly planted mangrove plant, Bio Farma took the initiative to collect the bamboo and used tires functioned as a breakwater tool (APO) and abrasion prevention by the donation of Bio Farma worker.

The program is implemented by Bio Farma in cooperation with NGO Cycle, Karangsang village community, Fisheries and Marine Affairs Department. Indramayu, Forestry and Plantation Service of Kab.Indramayu, Environment Agency Kab. Indramayu and Walhi Jabar. Monitoring and evaluation activities indicate that the program has succeeded in reducing abrasion in the North Coast of West Java region as a result of APO usage that has reached 860 m long to withstand the rate and reduce the flow of sea waves.

Mangrove plants grown in river estuaries, tidal or coastal areas (coastal) are unique because it is a combination of plant characteristics that live on land and at sea. Mangroves have a prominent root structure as a way of adapting to poor oxygen



### 17,600+ MANGROVE PLANTING

Bio Farma provides mangrove conservation training, development assistance for mangrove forest ecotourism area and mangrove planting as many as  $\pm$  17,600 mangrove covered with  $\pm$  6.5 Ha.

(anaerobic) soil conditions. Mangrove has many functions, namely physical, biological, and economic functions whose benefits can be felt by coastal communities. Physically, mangroves can protect the coast from erosion and abrasion, protecting human settlements from storms and winds from the ocean, and can neutralize heavy metals from industrial waste. While the function of biology is as a source of food, where live marine life, and where various animals live, such as birds that have the potential for education and tourism that can be utilized by the community.

Based on the latest monitoring results in 2016 by PPSDAL-UNPAD, the Zooplankton and Benthos Diversity Indexes in this region are respectively 2,243 and 1,654. This shows that mangrove re-vegetation conducted by Bio Farma, have positive impacts both



**WITHIN 5 YEARS, THIS PROGRAM IS SUCCESSFULLY ADOPTING AND REHABILITATING 304 EXECTS FROM 15 SPECIES OF FAUNA. OTHER THAN THAT, COMPANIES HAVE BEEN SUCCESSFULLY RETURNING 18 FROM 6 PRIMATA SPECIES TO BE RETURN TO THEIR ORIGIN HABITAT. [GRI 203-1]**

in initiating the formation of marine waters ecosystem (brackish) ecologically and improve the cultivation of community ponds economically.

In 2016, the company increased the area of Mangrove Conservation in South Coast Coastal Area of West Java in Bulaksetra, Kab. Pangandaran. This area is developed not only to be a mangrove conservation area but also to ecotourism area of ecosystem approach of mangrove forest. For the implementation of this program, the company cooperates with HPA Ilalang and communities around Bulaksetra area. Through cooperation, Bio Farma provides mangrove conservation training, mangrove forest area development assistance and mangrove planting of  $\pm$  17,600 thousand mangroves with an area of  $\pm$  6,5 Ha.

Based on the status of vulnerability issued by the IUCN Red List, there are 73 native animals in Indonesia who are in the highest status of vulnerability that is Critically Endangered status. With the highest

status of vulnerability and entry into an endangered position make this animal rare in Indonesia. Under these conditions, the company participated in the conservation and rehabilitation program of fauna in cooperation with PPSC Cikananga, Kab. Sukabumi. Within 5 years, the program has successfully adopted and rehabilitated 304 animals from 15 species of fauna. In addition, the company has successfully returned as many as 18 of six species of primates to be returned to their home habitat. There are 2 primate species that have been successfully adopted, rehabilitated and then released with Critically Endangered (Critical) status and 2 species of primates are typical Indonesian endemic fauna.



## THE IMPORTANT OF VACCINE

Vaccinations can protect people from infectious diseases, thus protecting anyone in their environment, not just those who have received vaccinations (herd immunity).





DEDICATION THROUGH ECONOMY



DEDICATION THROUGH ENVIRONMENTAL SUSTAINABILITY



DEDICATION THROUGH THE EMPLOYEES' PERFORMANCE



DEDICATION THROUGH COMMUNITY EMPOWERMENT



DEDICATION THROUGH QUALITY PRODUCTS

# DEDICATION THROUGH QUALITY PRODUCTS



## THE PROTECTION OF INDONESIAN CHILD 2016 AWARDS FROM THE INDONESIAN CHILD COMMISSION (KPAI).

The Bio Farma Company's category of Bio Farma consistency in ensuring the fulfillment of children's health rights by fulfilling 5 million vaccine needs for infants, 27.6 million school-age vaccines and 15 million women's vaccines of child-bearing age annually.



Bio Farma continues to provide 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. Healthy consumers will give birth to healthy, intelligent and creative generations. These values are upheld and made one of the corporate cultures by applying the National and International standards. Bio Farma has received recognition from the World Health Organization (WHO) since 1997 that we produce quality products at affordable prices. To date, Bio Farma has contributed to the progress of National and International health levels, where its products have been used and utilized by more than 130 countries.

Referring to the world health data, we continuously make improvements and developments to generate ideas and new products that are useful in order to improve the quality of life. Programs implemented and realized to improve customer satisfaction are described in the following description.

### CONSUMER HEALTH IS OUR MAIN OBJECTIVE & PRIORITY

Bio Farma is a vaccine manufacturer company with expertise in the application of biotechnology through world-class quality products to improve the quality of life. For over 125 years in the process of strengthening competence, we have taken an important role in building global health and global health security. Consumer health is our top priority considering that Bio Farma is here to provide and develop Life Science products of international standard in an effort to improve the quality of life. The Company's entire organs in Bio Farma include directors and employees committed to meeting consumer requirements by implementing applicable regulations and best practices. Our attention to customer service and satisfaction is evident in every Company's activity that always seeks to understand consumer needs by providing the right solutions.

### THE QUALITY OF THE PRODUCT IS MAINTAINED TO THE NATIONAL AND INTERNATIONAL STANDARDS

Bio Farma implements an integrated management system based on compliance with consumer requirements and requirements / regulations contained in Good Medicine Manufacturing Practices (CPOB), Good Manufacturing Practices (GMP) of ASEAN, WHO GMP and product requirements contained in the Series References from the WHO include Technical Report Series, Good Laboratory Practices (GLP), Good Clinical Practices (GCP), Good Distribution Practices (GDP), management systems ISO 9001 quality management system, OHSAS 18001 management system, Good Corporate Governance (GCG), Corporate Risk Management (CRM), Social Responsibility (CSR) Social Responsibility-SR), International Financial Reporting Standards (IFRS), ISO 17205 specifically for testing laboratories in the Immunization Division and Clinic, as well as other systems and regulations related to Bio Farma performance improvement.



Our customers will always obtain accurate data about product information in each type of product. Such information is data that has been approved by BPOM and WHO.

Product quality assurance is done from the beginning, starting from the selection of raw material suppliers. Suppliers directly involved in the final product must apply a minimum standard of quality, environment and occupational health and safety (OSH). Bio Farma regularly conducts supplier audits to ensure that the implementation of the standard implementation is properly implemented. So we can ensure the quality of raw materials in accordance with the specified specifications. In the stages of product formulation process, we also apply in-process control. Before marketed, our final product is tested by the Food and Drug Supervisory Agency (BPOM), so that the existing products in the community are products that have passed the BPOM test, meet the quality standards and in accordance with National and International specification. [GRI 103-2]

### THE ACCURACY OF PRODUCT INFORMATION

[GRI 417-1]

Our customers will always obtain accurate data about product information in each product type. Such information is data that has been approved by BPOM and WHO. Consumers can easily obtain product information on the Company website pages that can be accessed at any time. Other health-related information can be discussed directly through social media managed by competent employees in their field.

### THE BEST SERVICE FOR CONSUMERS

[GRI 417-2]

Bio Farma provides consumer complaints services that are able to answer and follow up any complaints or complaints of consumers, with the mechanism of anticipation of Post-Immunization Events (KIPI).

We continue to disseminate through distributors, doctors and health workers to utilize the KIPI reporting mechanism so that if it happens, the appointed independent team will move to follow up on the complaint, so that any complaints can be resolved immediately. However, in 2016 Bio Farma never received a complaint regarding violations in providing product information or privacy violations.

Bio Farma provides communication access through the following communication channels:

**Company Website:** [www.biofarma.co.id](http://www.biofarma.co.id)  
(Customer Care menu)

**Portal SOE:** [www.bumn.go.id/biofarma](http://www.bumn.go.id/biofarma)

**Company Blog:** [www.infoimunisasi.com](http://www.infoimunisasi.com)

**Tel .:** (62-22) 203-3755 ext. 37608

**Fax .:** (62-22) 204-1306

**Email / E-mail:** [corcom@biofarma.co.id](mailto:corcom@biofarma.co.id);

[Mail@biofarma.co.id](mailto:Mail@biofarma.co.id)

**Facebook:** Immunization Info

**Twitter:** @infoimunisasi; @biofarmalD

### FACE-TO-FACE ROUTINES AND SHARING INFORMATION WITH CONSUMERS

Bio Farma conduct meetings and share information regularly with consumers in various regions. The meeting is held in collaboration with the Ministry of Health, Immunization Sub-Directorate, Public Communication Ministry of Health, Health Promotion, and various health related organizations such as the Indonesian Doctors Association (IDAI) and Indonesian Pharmaceutical

Companies Association (GP Farmasi). This is aimed at raising public awareness about the importance of disease prevention through vaccines to improve the quality of better life.

This meeting is also useful for the attendees consisting of health practitioners, midwives, immunization interpreters, community leaders, religious leaders, housewives, posyandu activators and the general public as a means of education on the importance of vaccines as part of prevention of disease for the community.

Bio Farma believes that face-to-face events like this will create two-way communication ranging from criticism and advice to sharing information, so it can be an input for Bio Farma. Bio Farma also gets the opportunity to educate them about the importance of prevention, healthy living, and environmental maintenance and establish a closer sense of kinship so that both parties will understand each other and narrow the gap between consumer desires and the ability of Bio Farma.

In 2016 Bio Farma had conducted various Consumer Gathering Activities in various regions of cities and districts in 34 provinces of Indonesia. This activity was carried out in the form of customer visits, product socialization and vaccine monitoring. Through those various activities, we got feedback in the form of evaluation of services that had been given, increased competence of vaccine managers regarding the management of vaccines and the improvement of public awareness of the importance of vaccination so that it could indirectly assist the government in increasing the coverage of national immunization.

### **MEDIA AS PARTNERS OF INFORMATION VACCINES DISSEMINATION**

Since 2013, Bio Farma has organized education on the importance of vaccines in the form of workshops to media and journalists. This special competence program is an early briefing for media colleagues, discussing A-Z on vaccines, and presenting competent resource persons to answer doubts about vaccines and drugs such as the issue of halal drug content and

vaccines. In addition to improving the togetherness between Bio Farma and the journalists, debriefing about the ins and outs of the world of vaccines and biotechnology is expected to equip journalists with adequate capacity in conveying appropriate information to the general public. So the news they generate can make people understand the benefits of vaccine technology and its development for better quality of life.

The results of educational Media School of Vaccine for Journalist, a book titled "Journalists Speak Vaccine, Keeping Civilization with Vaccines" has been produced.

### **REGULER SURVEY OF CONSUMER SATISFACTION [GRI 417-3]**

Bio Farma conducts information gathering activities periodically with the aim of identifying, analyzing and providing information on the development of needs, wants, expectations, preferences, behavior and customer satisfaction in order to be used to establish and realize company policy, continuous improvement and improve the performance of quality system of Bio Farma. Consumers have a big role, as do other sources that can be utilized to assess consumer satisfaction.

In order for the consumer satisfaction survey to obtain accurate data, the implementation mechanisms are regulated in a standard company guidelines and procedures that are under the responsibility of the Product Development Department of the Product Management Department. The survey is conducted by a third party that is an independent institution that has been professional in conducting market survey involving national and international customers. The customer satisfaction survey respondents are divided into several sectors, among others: Health Office in 34 provinces, doctors and distributors in Java, Sumatera, Sulawesi and Kalimantan areas, as well as international customers both institutions and corporations.



## CUSTOMER SATISFACTION SURVEY 2016

Performance indicators	Governmental Sector	Private Sector		Export Sector		UBKI sector	
	Public Health Office (%)	Distributor (%)	End User (dokters) (%)	Institutions (%)	Corporations (%)	Individual (%)	Corporations (%)
CSI: Customer Satisfaction index	98.73	74.27	67.52	85.19	76.74	85.14	64.50
CDI: Customer Dissatisfaction index	0.00	5.62	14.13	0.00	1.07	3.36	5.91
CLI: Loyalty Index	94.60	74.41	48.33	-	-	77.30	71.63
NPS: Net Promoter Score	73.50	100	70.00	-	25.00	51.75	46.01
Brand Strength	96.05	89.63	66.82	22.22	85.42	80.38	79.54

Overall, the value of Bio Farma customer satisfaction index for the year 2016 was 78.87% or increased 1.5% compared to the year of 2015 of 77.37%. The value of customer satisfaction index in the last two years was in good category (> 60%). Details of customer satisfaction survey results as of 2016 were as follows:

1. Governmental sector, institution exports, and UBKI individual respondents are in very good category (> 80%). Health Department with a value of 98,73% (very good) customer satisfaction index, distributor with a value of 74,27% (very good) customer satisfaction index, doctor with a value of 67,52% (good) customer satisfaction index, institution export with a value of 85.19% (very good) Customer satisfaction, and corporate exports with a value of 76.74% (good) customer satisfaction index.
2. The index of customer dissatisfaction did not change significantly for the health service sector (no measurable indices of dissatisfaction). The private sector sales of distributors, private doctors, and corporate exports have increased for the value of the dissatisfaction index. The customer of the institutional export sector for three consecutive years has no dissatisfaction with Bio Farma services.
3. Overall, Loyalty Index for the surveyed sectors were at good range (> 70%), except for private sector physicians and distributors. There was no measured loyalty index for the export sector of institutions and exports.
4. The Net Promoter Score of 2016 has increased compared to 2015. The health service sector, private distributors, and private physicians had NPS improvement. The value of NPS for the export sector of corporation exports decreased. There was no measurable NPS value for the institution's export sales sector. A positive NPS score was an indication of positive business growth as well and vice versa.
5. Health sector, private sector of distributors, and corporate export sales increased in overall brand strength value from the previous year. While for the private sector of doctors and export sales institutions decreased.
6. Although overall Bio Farma customer satisfaction was in good condition, but some things should be of concern for priority of improvement in the future.

## STATEMENT GRI STANDARDS IN ACCORDANCE CHECK BY NCSR



NATIONAL  
CENTER FOR  
SUSTAINABILITY  
REPORTING

### Statement GRI Standards in Accordance Check

The National Center for Sustainability Reporting (NCSR) has conducted a GRI Standards in Accordance Check on the PT Bio Farma (Persero) 2016 Sustainability Report 2016 ("Report"). The check communicates the extent to which the GRI Standards 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 been prepared in accordance with the GRI Standards: Core Option.

Jakarta, 20 May 2017

**National Center for Sustainability Reporting**

**Dewi Fitriasaki, Ph.D., CSRA, CMA**  
Director

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		 <p>5 GENDER EQUALITY</p>	Achieve gender equality and empower all women and girls	Equal remuneration for women and men
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Goals	Business Theme	GRI Standards	Page	
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10 REDUCED INEQUALITIES	Reduce inequality within and among countries	Economic development in areas of high poverty	203-2	76, 116
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	Goals	Business Theme	GRI Standards	Page
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	Conserve and sustainably use the oceans, seas and marine resources for sustainable development			
	Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss	Biodiversity Conservation	203-2	76, 116
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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?

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

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

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## PROFILE

Name : \_\_\_\_\_

Institution/Company : \_\_\_\_\_

Email : \_\_\_\_\_

Type of Institution/Company :

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 Other, please state

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SUSTAINABILITY  
REPORT

2016

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