

DUA BAHASA

PERTAMINA

energia

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EDISI MEI 2019

BELAJAR ENERGI



STRUCTURE

3 KEHEBATAN PERTAMAX BANTU MERAWAT KENDARAANMU



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EDITORIAL **energia**

Memberikan pemahaman tentang industri migas secara komprehensif kepada seluruh lapisan masyarakat Indonesia memang memerlukan kesinambungan upaya. Karena sejatinya, hal tersebut merupakan bagian dari edukasi akan menentukan masa depan Pertamina dan masa depan bangsa. Hal tersebut sangat disadari BUMN yang ditugaskan mengelola energi nasional ini.

Melalui kontinuitas edukasi, Pertamina menyadari akan terbentuk generasi penerus bangsa yang memiliki wawasan luas tentang dunia migas sehingga mereka bisa lebih memahami rumitnya proses mendapatkan energi bagi negeri ini.

Karena itu, di edisi Mei yang bertepatan dengan dua hari besar nasional, yaitu Hari Pendidikan Nasional pada 2 Mei dan Hari Kebangkitan Nasional pada 20 Mei, kami mengulas tentang upaya Pertamina mengedukasi masyarakat sehingga menjadi lebih paham tentang dunia migas. Ulasan tersebut kami sajikan pada bahasan utama.

Selain itu, karena bulan ini bertepatan dengan bulan suci Ramadan, kami juga mengulas tentang *safety driving* dan objek wisata alami yang bisa menjadi acuan bagi calon pemudik yang akan membawa kendaraan pribadi.

Selamat membaca, semoga informasi yang kami berikan juga dapat menambah wawasan Anda semua. 

Continuity is needed in the effort to give a comprehensive understanding of the oil and gas industry. Because the truth is that the effort is part of the education that will determine the future of Pertamina and this country. We as the state-owned enterprise, which has a role to manage the country's energy, do understand the significance of the effort.

By learning through continuous education, Pertamina believes the country will have a future generation that has a broad knowledge about the world of oil and gas, which with it they could then understand how complicated the process to obtain energy for this country.

Hence, in this May's edition, which the publication month is concurrent with the celebration of two national days: the National Education Day on May 2nd and the National Awakening Day on May 20th, we covered what Pertamina has been doing to educate the people about the world of oil and gas. We present the coverage in the Main Topic section.

Besides that, as this month also coincided with the holy month of Ramadan, we also covered about the importance of safety-driving and a number of natural tourism destinations that could become a guide for the mudik travelers, which will use a private vehicle for the trip.

We hope this edition will enrich your knowledge.

Warm Regards,
Energia
Pertamina 



Cover Story

BELAJAR ENERGI

Seorang pekerja Pertamina melihat maket yang disediakan di booth Pertamina Drilling Services Indonesia pada ajang tahunan APO Awards 2019 yang diselenggarakan di Lantai Ground, Kantor Pusat Pertamina, Jakarta pada Selasa (19/3).

Foto : Priyo Widiyanto

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Vice President Corporate Communication

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PENYUNTING NASKAH
Rianti Octavia

TIM REDAKSI
Hari Maulana, Septian Tri Kusuma, Indah Nurbaeti,
Indah Dwi Kartika

TATA LETAK
Dwi Jafrihanti, Riska Ayu Suryani & Yogi Ageng Saputro

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PENERBIT
Corporate Communication | Sekretaris Perseroan |
PT PERTAMINA (PERSERO)

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Desember 1966 | Peperlra No. Kep. 21/P/VI/1966
tanggal 14 Desember 1966

PERCETAKAN
PT. Solomurni

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DI DESTINASI WISATA BINAAN PERTAMINA
*FINDING SERENITY IN PERTAMINA'S TOURISM
DEVELOPMENT PROJECTS*



> Main Issue

As a state owned energy company, Pertamina need to share knowledge with about the oil and gas business from the upstream to downstream sides. Therefore, people could clearly understand what Pertamina has been doing in providing fuels and liquefied petroleum gas (LPG) that have been sold in gas stations (SPBUs) and LPG distributors, respectively.



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Reinhard Damopolli



Energia Inside edisi MEI 2019



Indah Nurbaeti
Writer
Main Issue, Figure
Jakarta, Indonesia



Septian Tri Kusuma
Writer
Go to Health
Jakarta, Indonesia



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Sah, Perjanjian Kerja Bersama Pertamina - FSPPB Periode 2019-2021

TEKS : INDAH DWI KARTIKA FOTO : KUNTORO


JAKARTA - PT Pertamina (Persero) menyelenggarakan penandatanganan Perjanjian Kerja Bersama (PKB) dengan Federasi Serikat Pekerja Pertamina Bersatu (FSPPB) periode 2019-2021 dengan tema pesan strategis pekerja menjaga kelangsungan bisnis perusahaan. Penandatanganan dilakukan oleh Presiden FSPPB Arie Gumilar dan Direktur Utama Pertamina Nicke Widyawati di Ballroom Lantai Mezzanine Kantor Pusat Pertamina, Jakarta, pada Senin (15/4/2019).

Direktur Jenderal PHI & Jamsostek Haiyani Rumondang mengapresiasi penandatanganan PKB ini. Menurutnya, berdasarkan penelitian, 96% pekerja yang melakukan PKB dengan perusahaan akan bekerja lebih maksimal dengan kesepakatan yang telah dibuat bersama.

Hal senada disampaikan Direktur SDM Pertamina Koeshartanto. "Jasa pekerja tidak perlu diragukan lagi bagi perusahaan dan

negara. Penandatanganan PKB ini dapat dimaknai sebagai bentuk sinergitas pekerja dan perusahaan dalam menjalankan peran sebagai pengelola energi nasional sehingga dapat melayani sebesar-besarnya bagi rakyat Indonesia," ujarnya.

Presiden FSPPB Arie Gumilar pun sepakat dengan Koeshartanto. "Ini merupakan PKB yang lebih baik dari sebelumnya. Para pekerja juga mendapatkan *benefit* yang sesuai. Tentunya dengan diimbangi pelaksanaan kewajiban sebaik-baiknya. Jangan sampai pekerja melanggar apa yang sudah tertuang dalam PKB ke VII ini," pungkasnya.

Turut hadir dalam acara tersebut, Deputi Bidang Usaha Konstruksi dan Sarana dan Prasarana Perhubungan (KSPP) Kementerian BUMN sekaligus Komisaris Pertamina Ahmad Bambang, Direksi Pertamina, serta perwakilan pengurus FSPPB seluruh Indonesia. 



Partnership Agreement Between Pertamina - FSPPB (2019-2021)

JAKARTA - PT Pertamina (Persero) signed a partnership agreement (PKB) with the new structure of the United Pertamina Workers' Union (FSPPB) for the 2019-2021 period with a theme of "strategic messages from the workers to maintain the company's business". The agreement was signed by FSPPB President Arie Gumilar and Pertamina President Director Nicke Widyawati in the mezzanine floor's ballroom located inside Pertamina's head office in Jakarta on Monday (15/4/2019).

Haiyani Rumondang, the Director General for PHI & Jamsostek, appreciated the signing of PKB, quoting research that said, 96 percent of workers who have a partnership with the company will work in a more optimum way as in accordance with the signed agreement.

Pertamina Human Resources Director Koeshartanto shared the same idea. "The workers'

service to this company and this country can't be doubted. The PKB signing could be interpreted as a form of synergy between the workers and the company in implementing their role as the country's energy organizers, which then they could serve the people in the best possible way," he said.

Arie agreed with Koeshartanto. "The current PKB is much better than the previous one. The workers will get a suitable benefit. However, the benefit must be balanced with the fulfillment of their obligation, which has to be done with their best efforts. Don't let the workers break what has been agreed in this 4th PKB," he said.

The signing event was also attended by the Deputy for Constructions, Facilities and Infrastructures Business in Transportation sector Ahmad Bambang, who is also one of the Pertamina's commissioners, Pertamina's managerial board and all of the FSPPB's regional representatives. ■



Pertamina Bangun Empat Terminal LPG di Wilayah Timur Indonesia

TEKS : PERTAMINA FOTO : TRISNO ARDI

KUPANG - Sebagai upaya meningkatkan ketahanan energi nasional sekaligus mendukung program konversi BBM ke LPG yang dicanangkan pemerintah, PT Pertamina (Persero) memulai proses pembangunan empat Terminal LPG untuk wilayah Timur Indonesia yakni Kupang (NTT), Bima (NTB), Ambon (Maluku) dan Jayapura (Papua).

Groundbreaking pembangunan keempat infrastruktur tersebut dilakukan oleh Direktur Logistik, Supply Chain dan Infrastruktur Pertamina, Gandhi Sriwidodo, di Kupang, Nusa Tenggara Timur, pada Senin (1/4/2019).

Pertamina mengalokasikan anggaran lebih

dari Rp 1,2 triliun untuk pembangunan keempat Terminal LPG tersebut. Proyek pembangunan terminal LPG ini sepenuhnya menggunakan anggaran biaya investasi dari internal Pertamina yang telah dianggarkan sebelumnya.

Fasilitas utama yang akan dibangun di masing-masing lokasi Terminal LPG baru yang terdapat dalam area Terminal BBM eksisting ini antara lain tangki *spherical* sebagai fasilitas penyimpanan utama, fasilitas pengisian LPG ke mobil tangki, dan dermaga untuk penerimaan LPG dari kapal tanker. Nantinya jalur distribusi LPG akan mengandalkan aspek laut sehingga lebih efisien dalam pengangkutannya. ▀

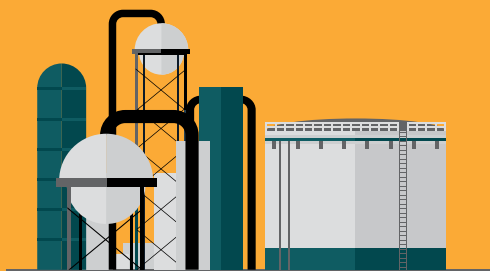
Pertamina Builds Four LPG Terminal in Eastern Indonesia

KUPANG - In a bid to improve national energy security and also to support the program to convert BBM to LPG, PT Pertamina (Persero) has kicked off the process to construct four LPG terminals in Eastern part of Indonesia, namely in Kupang (NTT), Bima (NTB), Ambon (Maluku) and Jayapura (Papua).

The groundbreaking event, which was held in Kupang, Nusa Tenggara Timur on Monday (1/4/2019), for those four infrastructures was inaugurated by Pertamina Logistic, Supply Chain and Infrastructure Director Gandhi Sriwododo.

Pertamina has allocated more than Rp 1.2 trillion for the constructions of those four LPG terminals. The project is fully funded from Pertamina's internal budget, which has been allocated previously.

The main facilities, which will be built in each of the new LPG terminals located inside the existing BBM terminals, are a spherical tank as the main storage and a facility to store LPG into the tanker and a dock to receive LPG from the tanker ships. The future will focus on sea-based transportation as the main LPG distribution routes, which will reduce the transportation cost. ▀



KAPASITAS TANGKI LPG

- Terminal LPG Kupang (NTT)
2 x 500 MT
- Terminal LPG Bima (NTB)
1 x 1.000 MT
- Terminal LPG Ambon (Maluku)
2 x 1.000 MT
- Terminal LPG Jayapura (Papua)
2 x 1.000 MT

*MT : Metric Ton



Pertamina Raih Platinum Award di Ajang PR Indonesia Awards 2019

TEKS : PERTAMINA FOTO : KUNTORO

BANDUNG - PT Pertamina (Persero) menorehkan prestasi gemilang di ajang kompetisi Public Relations Indonesia Awards (PRIA) 2019, pada Kamis (28/3/2019). Pada malam penganugerahan yang diselenggarakan di Bandung oleh PR Indonesia, BUMN ini mendapatkan apresiasi tertinggi Platinum Award karena menghimpun penghargaan terbanyak di hampir semua lini kategori PRIA 2019.

Selain penghargaan tersebut Pertamina berhasil meraih sembilan penghargaan dari lima kategori, yaitu kategori *owned media*, kanal digital, program Corporate PR, Program CSR, dan perusahaan terpopuler di media.

Sembilan penghargaan tersebut, adalah Energia edisi Januari 2018 meraih penghargaan untuk kategori *owned media* sub kategori media cetak dengan predikat gold, media sosial dengan predikat gold dan *website* dengan predikat silver untuk kategori kanal digital, serta Satgas RAFI 2018 untuk kategori program Corporate PR dengan predikat gold.

Sedangkan kategori program CSR *Community Based Development* diberikan kepada RU III Plaju - Cahaya di Kaki Langit Saruan dengan predikat gold, Pertamina TBBM Bandung - Ojek Makanan Balita (OMABA) dengan predikat silver, Pertamina Terminal BBM Cikampek - Pusat Pelayanan Desa Terpadu dan Digitalisasi Kampung dengan predikat silver, serta Pertamina TBBM Rewulu - Desa Wisata dan Budaya Gamol.

Khusus kategori terpopuler di media, PR Indonesia bekerja sama dengan iSentia, melakukan monitoring pemberitaan ratusan korporasi/lembaga/kementerian/pemerintah daerah di 20 koran nasional, 40 koran daerah dan 110 majalah mainstream di Indonesia sepanjang tahun 2018. Dan Pertamina dinobatkan sebagai BUMN terpopuler di media.

Anak perusahaan dan afiliasi Pertamina juga berjaya pada satu-satunya ajang kompetisi praktisi PR paling komprehensif di Indonesia ini. Pertamina EP, Pertamina Drilling Services Indonesia, Tugu Pratama Indonesia Tbk, dan Badak LNG juga meraih penghargaan dalam berbagai kategori. ▀

Platinum PR Indonesia Awards 2019 for Pertamina

BANDUNG - PT Pertamina (Persero) recently carved a brilliant achievement after becoming the participant with the most achievements, which then to be given the highest appreciation of Platinum Award, during the Public Relations Indonesia Awards (PRIA) competition on Thursday (28/3/2019) in Bandung.

Besides the award, Pertamina also grabbed nine other awards of five categories, namely owned-media, digital channel, Corporate PR program, CSR Program and the most popular company in media.

The nine awards are the gold award from the January 2018 edition of *Energia* for the printed-media sub-category under the parent category of owned-media, second gold award in the social media category, third gold award for Pertamina's Satgas RAFI 2018 in the Corporate PR program and a one silver award for Pertamina's website in the digital-channel category.

Meanwhile in the category of CSR Community Based Development program, the gold award was won by RU III Plaju - Cahaya in Kaki Langit Saruan, a silver award for Pertamina's BBM Terminal in Cikampek - Integrated Village Service Center, another silver award for the Digitalization of Village program and lastly an award for Pertamina's TBBM Rewulu - Tourism Village and Gamol Tradition.

Specifically, for the most popular company in the media category, PRIA teamed up with iSentia to do a news-monitoring of hundreds of companies/

institutions/ministries/regional administrations, which were reported in 20 national newspapers, 40 regional newspapers and 110 mainstream magazines throughout last year. And Pertamina won that award.

Pertamina's subsidiaries and its affiliated companies also strived in the sole and most competitive competition for PR's practitioners in this country. The award-winning companies are Pertamina EP, Pertamina Drilling Services Indonesia, Tugu Pratama Indonesia Tbk, and Badak LNG, which each of them won in several categories. ▀







INI CARA BARU BELAJAR TENTANG ENERGI DAN BISNIS PERTAMINA

***THE NEW WAY TO LEARN
ABOUT ENERGY AND
BUSINESS OF PERTAMINA***

Ada banyak hal yang bergeser seiring dengan perkembangan zaman. Salah satunya pergeseran sistem pengajaran yang dilakukan oleh sekolah, kampus, bahkan perusahaan. Jika dulu pembelajaran didapatkan dengan cara konvensional, seperti di dalam kelas dengan komunikasi satu arah dan banyak mencatat, sekarang cara belajar berubah drastis. Para pemberi ilmu dituntut dapat menghadirkan cara baru dalam menyampaikan pengetahuannya. Paradigma proses pembelajaran di dalam kelas atau di dalam ruangan harus mampu dikemas menjadi suatu proses *sharing knowledge* yang penuh dengan pengalaman menyenangkan.



Kunjungan mahasiswa ke depot LPG dan ke kantor pusat Pertamina.

Pembelajaran kreatif merupakan salah satu metode yang dapat dikembangkan dalam mewujudkan tuntutan era digital pendidikan saat ini di antara banyak pilihan lainnya. Seperti dilansir dari www.okezone.com, ide metode pembelajaran kreatif memiliki dua makna, pembelajaran kreatif dan membelajarkan kreatif.

Perbedaan kedua hal ini adalah, pembelajaran kreatif lebih melibatkan peranan guru/mentor dalam membuat proses pembelajaran di dalam kelas menjadi menarik bagi peserta didik, lebih efektif dan menggunakan pendekatan imajinatif. Sebaliknya kalau membelajarkan kreatif lebih menekankan kemampuan guru/mentor dalam mengidentifikasi kekuatan kreativitas peserta didiknya, memperkuat daya kreatifnya dan memberikan kesempatan kepada mereka untuk mewujudkannya.

Apakah pembelajaran hanya dapat diberikan oleh institusi pendidikan formal saja? Tentu tidak. Perusahaan sebagai entitas bisnis pun harus berperan aktif mencerdaskan generasi muda bangsa, khususnya memberikan tambahan wawasan tentang kegiatan operasionalnya.

Seperti yang dilakukan Pertamina. Sebagai BUMN energi yang berperan sebagai pengelola energi nasional, Pertamina merasa terpanggil untuk memberikan pengetahuan tentang bisnis migas dari hulu ke hilir agar seluruh lapisan masyarakat

Indonesia mengetahui dengan jelas apa yang dilakukan BUMN ini agar bisa menghasilkan Bahan Bakar Minyak (BBM) yang dijual di SPBU-SPBU atau LPG di berbagai agen.

Contohnya, sejak dulu, dengan tangan terbuka Pertamina menerima siswa SLTA atau mahasiswa yang melakukan kunjungan industri. Bisa ke Kantor Pusat Pertamina atau ke unit operasi di berbagai daerah. Biasanya, kunjungan tersebut diinisiasi oleh sekolah atau kampus agar peserta didik dapat memahami lebih jelas perbandingan antara ilmu yang diperoleh di dalam kelas dengan berkunjung langsung ke lapangan.

Seperti yang dirasakan oleh Pippo Ammar Sanjaya, salah satu mahasiswa Elektronika Instrumentasi Universitas Gadjah Mada sangat antusias bisa mendapatkan kesempatan mengunjungi Pertamina pada akhir tahun lalu. "Saya sangat senang bisa melakukan kunjungan industri ke Pertamina. Selain mendapatkan ilmu tentang pentingnya teknologi komunikasi dan informasi bagi sebuah perusahaan, di sini saya juga mendapatkan ilmu baru mengenai proses mendapatkan energi dari hulu hingga hilir. Ternyata tidak mudah. Setelah paham, rasanya saya malu jika tidak bisa hemat energi," ujarnya.

Hal senada juga disampaikan Mutia Fatmawati, mahasiswa Jurusan Teknik Elektro Universitas Al-Azhar Indonesia. Ia bersama 20 rekannya melakukan



Of course not. A company as a business entity should also have an active role to educate the country's young generation, especially to provide additional knowledge about the company's operational activities.

As a state-owned energy company, Pertamina needs to share knowledge about the oil and gas business from the upstream to the downstream sides. Therefore, people could clearly understand what Pertamina has been doing in providing fuels and liquefied petroleum gas (LPG) that have been sold in gas stations (SPBUs) and LPG distributors, respectively.

Many things have been changed along the progress of time, including our educational system that implemented in school, university and even in a company. Previously, we used a conventional way of learning, such as using a direct communication or to write down the materials in our notes. However, those things have changed drastically as the teacher is now demanded to come up with new ways of disseminating knowledge. The new paradigm of learning process in a class or a room should be presented in a knowledge sharing way that will be remembered as a good experience for the students.

Nowadays, creative learning is one of the education methods that could be developed among other possible options that could fulfill the demand of education in the digital era. As quoted from www.okezone.com, the creative learning method has two meanings, namely creative learning and creative teaching.

The difference between those two meanings is that creative learning is focusing on the teacher or tutor's role in creating an effective and imaginative learning process in class, which will make the process of learning more exciting for the students.

Meanwhile, creative teaching is focusing on the teacher or tutor's ability to identify their student's creative ability, to find ways to improve their creativity and to pave the way for the student to prove it.

Is education could only be taught by formal institution?

For example, Pertamina has been receiving high school or college students for industrial visits. They can visit Pertamina Headquarters or other Pertamina operation units in various regions. Usually, it is initiated by the school or campus so that students can understand clearly the comparison between knowledge obtained in the classroom and by visiting directly to the field.

Pippo Ammar Sanjaya, an instrumentation electronics student from Gadjah Mada University, was one of the selected visitors to Pertamina last year. "I was very delighted to have the chance to visit Pertamina. Because, not only that I got the knowledge on the importance of information and communication technology for a company, but also the company's process to obtain energy from upstream to downstream. It's not easy. And after I understand that, I will feel ashamed if I can't save the energy," he said.

Mutia Fatmawati, an electrical engineering student from the University of Al-Azhar Indonesia, felt the same way after she visited Pertamina's LPG Tanjung Sekong depot in Cilegon, Banten along with 20 of her colleagues. During the visitation, Mutia was introduced with the downstream business process in the gas sector, which is operated solely by the state-owned energy company since April 2019.

"I've gained a lot of knowledge [from the visitation], such as the supply chain of LPG and how Pertamina really committed in enforcing safety measures. For

kunjungan industri ke Depot LPG Tanjung Sekong Pertamina yang berlokasi di Cilegon, Banten dan dikenalkan dengan proses bisnis hilir gas yang dijalankan oleh satu-satunya BUMN energi di Indonesia ini pada awal April 2019 lalu.

“Banyak ilmu baru yang saya dapat mengenai pola suplai LPG dan bagaimana Pertamina benar-benar berkomitmen dalam segi keselamatan. Misalnya, kami wajib mengenakan Alat Pelindung Diri lengkap seperti *safety vest*, *safety shoes*, dan *safety helmet*. Kami juga dilarang membawa telepon genggam maupun benda berbahaya saat berada di lapangan. Pokoknya, saya dan teman-teman berterima kasih sekali banyak mendapat tambahan ilmu,” ujar Mutia yang saat ini sedang duduk di semester 6.

Jangan salah, Pertamina tidak cuma bersikap pasif. Menyadari semakin dinamisnya kondisi saat ini dan perlunya generasi penerus bangsa memahami lebih detil mengenai bisnis energi secara komprehensif, BUMN ini pun jempot bola untuk hadir ke tengah-tengah mereka dengan berbagai program.

PERTAMINA ENERGY FORUM (PEF)

Forum diskusi PEF ini menjadi wadah para pemangku kepentingan dan masyarakat untuk mendapatkan informasi terkini dan akurat mengenai upaya Pemerintah dan Pertamina dalam memenuhi kebutuhan energi nasional. Melalui forum ini, Pertamina sebagai BUMN yang berperan sebagai penyedia energi nasional menyampaikan berbagai informasi yang telah dan akan dilakukan Pertamina dalam mendukung kedaulatan, ketahanan dan kemandirian energi nasional. PEF juga menghadirkan narasumber yang akan memaparkan kajian pemenuhan energi di negara lain yang akan menjadi referensi bagi pengembangan energi di Indonesia, termasuk pemanfaatan teknologi, kebijakan, dan investasi.

PEF biasanya diadakan dalam rangkaian kegiatan HUT Pertamina yang jatuh setiap tanggal 10 Desember. Tahun lalu, untuk kelima kalinya, dengan mengusung tema *Unleashing Domestic Resources for Energy Security*, PEF dihadiri sekitar 1.000 orang, baik dari pengambil kebijakan di bidang energi, perwakilan pejabat pemerintahan, maupun pengamat serta ahli energi.

“Kami berharap, PEF dapat menggali permasalahan yang menghambat pencapaian dan menghadirkan solusi bagi pengembangan energi dan energi terbarukan di Indonesia. Sehingga hasilnya dapat memberikan masukan bagi pengambil kebijakan, pelaku bisnis, akademisi dan pemegang saham untuk mendorong perkembangan energi nasional,” tukas Direktur Utama Pertamina Nicke Widyawati saat pembukaan PEF 2018 pada akhir November lalu.





example, we were obligated to wear various body protection equipment, starting from safety vest, safety shoes and safety helmet. We were not allowed to bring cell phone or other dangerous stuffs while on the field. The important thing is that me and my friends are really grateful [to Pertamina] as we gain a lot of knowledge," Mutia, who currently in her 6th semester, said.

Do not get this wrong, as Pertamina is also working actively to reached out as we understood how important for the next generation to get a hold of comprehensive information on oil and gas business, especially after looking at how dynamic the condition nowadays. Hence, the company has been actively presented itself among the younger generation with various programs.

PERTAMINA ENERGY FORUM (PEF)

This kind of forum has become a platform for stakeholders and society to get the current and accurate information about the efforts from government and Pertamina on securing the national energy supply. In this forum, Pertamina as the state-owned energy company has been delivering information about what we have done and will be done in supporting the national energy sovereignty, security and independence. PEF also has been inviting notable speakers that will presents a study of energy supply in other country that could become a reference for Indonesia's energy development, including the use of technology, policy and investment.

The forum usually held as part of the events to celebrate Pertamina's anniversary on December 10th. Last year, for the fifth time, with a theme of "Unleashing Domestic Resources for Energy Security" PEF was attended by around 1,000 participants, starting from energy policy makers, government's representatives and energy experts.

"We hope that PEF could identify all of the problems that have been hampering our targets and the process to present renewable energy development solutions in Indonesia. And we hope that the result from PEF could become an insight for policymakers, business players, academics and shareholders to support national energy development," Pertamina President Director Nicke Widyawati said in her opening speech of 2018's PEF in last November.



PERTAMINA 'GOES TO CAMPUS'

Salah satu cara Pertamina mendekati diri kepada masyarakat, khususnya generasi milenial, adalah dengan mengadakan kegiatan Pertamina *Goes to Campus*. Program yang digulirkan sejak tahun 2007 ini dimaksudkan untuk mengenalkan seluk beluk energi dan industri migas kepada generasi milenial yang sedang menunaikan pendidikan di perguruan tinggi. Dengan mendatangi berbagai universitas di Indonesia, BUMN ini membahas berbagai topik, tak terbatas pada bidang energi saja.

Seperti yang dilakukan pada Pertamina bersama Kementerian BUMN pada 20 Maret 2019 lalu. Dalam kesempatan itu, Direktur Utama Pertamina Nicke Widyawati hadir menyapa ribuan mahasiswa dari Perguruan Tinggi Negeri dan Perguruan Tinggi Swasta di Universitas Siliwangi, Kahuripan Kota Tasikmalaya.

Direktur Utama Pertamina, Nicke Widyawati sebagai narasumber utama menyampaikan visi, misi dan program Pertamina sebagai perusahaan migas nasional kelas dunia yang berperan mengelola energi berdasarkan 5 (lima) prinsip utama yaitu : *availability, accessibility, affordability, acceptability, dan sustainability*.

"Pertamina mengemban amanah dari Undang-Undang untuk menyediakan energi di seluruh pelosok tanah

air yang cukup, mudah diperoleh, harga terjangkau, ramah lingkungan dan berkelanjutan. Ini memerlukan dukungan masyarakat luas, termasuk kalangan milenial kampus,"kata Nicke.

Dalam kesempatan itu, Nicke sebagai salah satu putera daerah Tasikmalaya berbagi pengalaman mulai dari menempuh pendidikan tinggi, menapaki karier hingga menjadi Direktur Utama di Pertamina.

Tidak hanya *sharing knowledge*, ketika Pertamina hadir di kampus, biasanya juga memberikan bantuan pendidikan, baik berupa sarana penunjang pendidikan maupun beasiswa.

MELALUI KOMPETISI

Cara Pertamina untuk mengedukasi generasi muda ialah dengan mengadakan kompetisi. Cara ini dinilai tidak hanya unik, tapi juga memacu semangat generasi muda untuk lebih proaktif mengetahui lebih dalam tentang dunia energi dan bisnis Pertamina. Kompetisi yang pernah diadakan Pertamina, di antaranya Pertamina Olimpiade Sains Nasional, *Pertamina Ide Gila Energy Competition, Pertamina Energy Hackathon, Paper Competition, dan Pertamina Blogger Competition*.

Pertamina Olimpiade Sains Nasional merupakan ajang kompetisi ilmiah bagi para mahasiswa dari PTN/



PERTAMINA GOES TO CAMPUS

One of Pertamina’s ways to get closer to the community, especially the millennial generation, is to hold Pertamina Goes to Campus. The program, which has been rolled out since 2007, is intended to introduce the ins and outs of energy and the oil and gas industry to millennial generations who are in college. By visiting various universities in Indonesia, Pertamina discuss various topics, not limited to the energy sector.

For example, Pertamina together with SOE Ministry held an event on March 20th 2019. During the occasion, Pertamina President Director Nicke Widyawati greeted thousands of college students, which came from both public and private university at Siliwangi University in Kahuripan, Tasikmalaya City.

Pertamina President Director Nicke Widyawati as the main speaker talked about Pertamina’s vision, mission and programs as a world class national oil and gas company that has a role to manage energy with five main principals, namely availability, accessibility, affordability, acceptability and sustainability.

“Pertamina carries a mandate originated from this country’s constitution to ensure the energy availability, accessibility, affordability, acceptability and sustainability across Indonesia. To make it happen, we

need the support from all of the people, including the millennials in college,” Nicke said.

In the same event, Nicke also shared her story starting from attending university to her career journey afterward that led her now to become the President Director of Pertamina.

Not only sharing knowledge, Pertamina also often provided an education assistance to the universities, such as in form of scholarship program.

HELD COMPETITION

Pertamina’s way to educate young people is through a competition. It is not only considered as a unique method, but also it could ignite the younger generation’s spirit to become proactive in knowing more about the world of energy and Pertamina’s business. The competitions that Pertamina has held before among others were Pertamina National Science Olympic, Pertamina Energy Crazy Idea Competition, Pertamina Energy Hackathon, Paper Competition and Pertamina Blogger Competition.

Pertamina National Science Olympic is a platform for scientific competition that aims college students from both private and public universities in all across Indonesia. It also becomes a platform from younger generation to express themselves, to show their work

7. SOLAR - FISH FARMS



PTS di seluruh Indonesia dan menjadi wadah generasi muda mengekspresikan diri, menampilkan karya cipta, serta mengukir prestasi. Kompetisi ini berlangsung setiap tahun dan diselenggarakan berturut-turut sejak tahun 2008 hingga 2017.

Pertamina Olimpiade Sains Nasional terdiri dari dua kategori yaitu Kategori Teori yang bersifat nasional dan kategori Proyek Sains yang bersifat regional. Kategori Teori mengompertisikan empat bidang pelajaran yaitu bidang Matematika, Fisika, Kimia, dan Biologi. Kategori Proyek Sains mengompertisikan karya cipta yang dapat berupa Aplikasi Perangkat Lunak (APL), Rancang Bangun (RB), dan Produk Unggulan (PU) dengan tema Energi Baru Terbarukan.

Pertamina Ide Gila *Energy Competition* 2017 merupakan kompetisi seputar ide bisnis inovatif, terobosan produk dan teknologi seputar energi baru dan terbarukan, yang akan memberikan dampak positif terhadap sosial dan ekonomi bangsa. Kompetisi terbuka bagi pelajar, profesional seperti akademisi, peneliti, praktisi, dan pekerja perusahaan yang bisa membuat konsep tentang energi baru dan terbarukan.

Pertamina *Energy Hackathon* 2018 adalah acara *hackathon* yang diadakan bagi para *developer* berbakat yang tertarik untuk memecahkan

permasalahan dalam industri energi melalui teknologi. Melalui acara ini, para peserta akan didedukasi mengenai kasus-kasus aktual yang dihadapi industri energi, serta ditantang untuk menciptakan aplikasi mobile sebagai bentuk solusi dari permasalahan dalam industri energi. Waktu yang diberikan kepada para peserta adalah 24 jam untuk menciptakan inovasi-inovasi terbaik dan menuangkannya ke dalam bentuk sebuah aplikasi *mobile*.

Akhir tahun 2018, Pertamina mengadakan *paper competition* bertema tema: "*Hydrocarbon Refrigerant for Long Term Solution in Cooling System*" untuk meningkatkan kesadaran para mahasiswa dan civitas akademika mengenai penggunaan refrigeran hidrokarbon. Kompetisi Karya Tulis ditujukan untuk kalangan mahasiswa dari fakultas atau jurusan yang relevan di bidang Teknik baik Tata Udara maupun Mesin Pendingin, untuk yang mengelaborasi potensi pengembangan aplikasi penggunaan Musicool.

Pertamina juga merangkul blogger untuk mengikuti kompetisi bertema Pertamina solusi bahan bakar berkualitas dan ramah lingkungan. Peserta diwajibkan membuat artikel dengan menggunakan bahasa Indonesia yang baik dan benar dengan minimal 500 kata. Artikel harus membahas tentang "Pertamina Solusi Bahan Bakar Berkualitas dan Ramah



Furthermore, Pertamina Energy Crazy Idea Competition 2017 was a competition that circled on innovative business ideas, breakthrough products and technology on new and renewable energy sector, which will have a positive impact to the country's social and economy. The competition was opened to student and professionals, such as academic, researcher, practitioner and employee that could produce a concept about new and renewable energy.

and to engrave their accomplishment. This competition is held annually and has been regularly taking place since 2008 until 2017.

Pertamina National Science Olympic has two categories in the competition, namely the Theory Category that competes in national scale and Science Project that only competes in regional scale. The first category competes four subjects, namely Mathematics, Physics, Chemistry and Biology. Meanwhile the second category competes a work with a theme of new and renewable energy, which could be in form of Software Application (APL), design (RB) and Featured Product (PU).

Furthermore, Pertamina Energy Crazy Idea Competition 2017 was a competition that circled on innovative business ideas, breakthrough products and technology on new and renewable energy sector, which will have a positive impact to the country's social and economy. The competition was opened to student and professionals, such as academic, researcher, practitioner and employee that could produce a concept about new and renewable energy.

Pertamina Energy Hackathon 2018 was a hackathon event that was held for talented developers that have interest to resolve the problems in energy

industry through technology. During the event, the participants were educated about the actual cases that have been occurred in energy industry. They were also challenged to create mobile application as a solution for those problems. The participants only got 24 hours to produce the best innovations and to transform it to a mobile application.

At the end of 2018, Pertamina also held a paper competition with a theme of "Hydrocarbon Refrigerant for Long Term Solution in Cooling System" to improve the awareness of college students and academic community about the use hydrocarbon refrigerant.

The writing competition was intended for university student from a faculty or major that is related to engineering of air conditioning or cooler. It was meant for anyone who wanted to elaborate the potential of developing the application for Musicool usage.

Pertamina also invites bloggers to join the writing competition with a theme of "Pertamina: the solution of high-quality and sustainable fuels". The participants are required to write a minimum 500-words article that is written in a good and right Indonesian language. The article should highlight the theme of "Pertamina: the solution of high-quality



Lingkungan” dan review produk “LPG Pertamina” atau “Bright Gas Hemat”.

Bahkan untuk meningkatkan *engagement* dengan insan pers, Pertamina juga menggelar kompetisi Anugerah Jurnalistik Pertamina (AJP) yang diberikan kepada insan pers yang mengedukasi masyarakat dengan informasi terkini kiprah Pertamina, melalui media massa nasional, baik cetak, *online*, radio, maupun televisi. Kompetisi ini sudah diadakan sejak 17 tahun yang lalu dan sampai saat ini masih terus diadakan setiap menjelang HUT Pertamina di akhir tahun.

PERTAMINA ENERGI NEGERI (PEN)

Program ini digagas pada tahun 2016 oleh milenial Pertamina yang ingin berkontribusi terhadap perkembangan pendidikan penerus bangsa di berbagai pelosok tanah air. Semangat berbagi ini yang menginspirasi mereka untuk menyelenggarakan sebuah program bertajuk Pertamina Energi Negeri (PEN). PEN sendiri adalah kegiatan mengajar dengan melibatkan para pekerja Pertamina sebagai relawan pengajar dan digelar secara serentak di seluruh Indonesia.

Banyak yang diajarkan kepada anak-anak melalui program ini. Mulai dari ilmu pengetahuan, menari, bernyanyi hingga dikenalkan tentang produk-produk Pertamina. Para peserta juga dibekali ilmu pengetahuan tentang bagaimana cara menjaga dan melestarikan lingkungan hidup guna menjaga keseimbangan alam.

Tak hanya itu, program ini juga dimanfaatkan untuk menyosialisasikan Tata Nilai 6C kepada masyarakat, meliputi Tata Nilai *Clean* (kejujuran), *Competitive* (prestasi), *Confident* (percaya diri), *Customer Focus* (berbagi), *Commercial* (kreativitas), dan *Capable* (berpengetahuan), pengenalan terhadap profesi-profesi yang ada di Pertamina, serta penanaman budaya *safety* di dalam maupun di luar lingkungan kerja.

Tidak hanya menarik dari sisi kegiatannya, acara yang sudah terjalin untuk ketiga kalinya ini juga menampilkan relawan pengajar yang berisikan perpaduan antara generasi X dan generasi Y atau generasi milenial Pertamina. Sinergi dua generasi membuat PEN sukses terselenggara walaupun relawan PEN mayoritas adalah milenial Pertamina.



and sustainable fuels” and to review Pertamina’s products of “LPG Pertamina” or “Efficient Bright Gas”.

Moreover, to improve Pertamina’s engagement to the press, the company also has been holding a journalism competition called Pertamina Journalism Award (AJP), which is awarded to a journalist that is considered able to educate the public about Pertamina’s progress through national mass media whether it is online, radio or television. The competition has been regularly held since 17 years ago and will continue to be held near to Pertamina’s anniversary day at year-end.

PERTAMINA ENERGI NEGERI (PEN)

This program was initiated in 2016 by Pertamina’s millennials who wanted to contribute to the development of the nation’s future education in various parts of the country. It has inspired them to hold a program called Pertamina Energi Negeri (PEN). PEN itself is a teaching activity involving Pertamina employees as teaching volunteers and held simultaneously throughout Indonesia.

Many things were taught to the children during the program, starting from science, dancing, singing, and also about Pertamina’s products. The participants also received a provision about how to maintain and preserve the environment in order to control the balance of nature.

Not only that, this program provided a chance to socialize the 6C Value System to the society, which is comprised of Clean (honesty), Competitive (accomplishment), Confident, Customer Focus (giving), Commercial (creativity) and Capable (knowledgeable). We also introduced to the society about what kind of professions in Pertamina’s community and to embed the culture of safety in and outside of the working environment.

The uniqueness of this program, which have been held for three times, not only lies in the activities, but also in how it presented the teaching volunteers that comprised from the combination of generation X and Y, which is the Pertamina’s millennials. The synergy of both generations made PEN has been successfully held even though most of the PEN’s volunteers were Pertamina’s millennials.



UNIVERSITAS PERTAMINA

Tak hanya *sharing knowledge* bersifat informal, Pertamina juga mendirikan universitas untuk menjawab tantangan dinamika bisnis energi di masa depan. 11 Februari 2017 menjadi sejarah bagi Pertamina dengan diresmikannya Universitas Pertamina (UP). Kehadiran UP yang fokus pada keilmuan seputar energi ini mewarnai dunia pendidikan Indonesia khususnya kampus- kampus yang berafiliasi oleh korporasi.

Rektor Universitas Pertamina Prof. Akhmaloka menjelaskan, pembeda universitas ini dengan yang lainnya adalah fokus keilmuan yang diterapkan, yaitu bidang energi. Hal ini sejalan dengan tujuan utama Pertamina mendirikan universitas yaitu menyiapkan sumber daya manusia yang kompeten serta mengembangkan keilmuan di bidang energi. Apalagi dengan dukungan penuh Pertamina, maka UP menawarkan kesempatan untuk melakukan penelitian bersama pelaku utama bisnis energi di Indonesia.

"Kami berkomitmen untuk menjadi perguruan tinggi yang mampu meningkatkan sumber daya manusia yang kompetitif. Selain itu, mengembangkan *science* dan *technology* serta inovasi-inovasi di bidang energi khususnya untuk Indonesia," jelasnya.

Didirikan di lahan seluas 6,5 hektar di daerah Simprug, UP memiliki 6 fakultas dan 15 program studi yang semuanya mengarah pada penyiapan SDM di bidang energi, baik technical maupun non technical. ▀

PERTAMINA UNIVERSITY

Not only to hold an informal sharing knowledge event, Pertamina has also set up its own university to answer the challenge of energy business dynamic in the future. February 11th 2017 was a historical day for Pertamina as the company inaugurated Pertamina University (UP). UP existence, which focuses on the science of energy, has colored Indonesia's education, especially among the corporate-affiliated campuses.

Pertamina University rector Prof. Akhmaloka explained that the difference between UP with other universities is that UP only focuses on the applied science, which is energy sector. This decision is in line with the main purpose of Pertamina to have a university that could prepare a human resource, which is competent and able to develop energy science. Especially, with the full support from Pertamina, UP could offer an opportunity to conduct a joint-research with the main business players in Indonesia's energy sector.

"We are committed to become a university that able to level up our human resources' competitiveness. Besides that, to also committed in developing the science, technology and innovations in energy sector, especially for the benefit of Indonesia," he explained.

Built on a 6.5-hectare land in Simprug area, UP now has 6 faculties and 15 study programs that all of them are directed to become the capable human resources in energy sector, either for technical or non-technical jobs. ▀

HIGH-GRADE FUEL FOR PERFECTION IN PERFORMANCE



OKTAN 98

Pertamax Turbo dengan oktan 98 disesuaikan untuk kendaraan berteknologi supercharger atau turbocharger.



AKSELERASI SEMPURNA

Pembakaran yang sempurna membuat torsi kendaraan lebih tinggi.



KECEPATAN MAKSIMAL

Teknologi IBF (Ignition Boost Formula) membuat bahan bakar lebih responsif terhadap proses pembakaran.



DRIVEABILITY

Kendaraan menjadi lebih responsif sehingga lincah bermanuver.




PERTAMINA

PERTAMINA, BUMN MULTI PERAN

***PERTAMINA,
MULTI-ROLE STATE OWNED
ENTERPRISE***

Kehadiran Pertamina di tanah air memiliki cerita panjang dari sebuah sumber daya alam yang terkandung dalam bumi pertiwi bernama minyak. Berdasarkan Undang-Undang Dasar 1945 memang jelas dinyatakan pada pasal 33 ayat 2 bahwa bumi, air dan kekayaan alam yang terkandung di dalamnya dikuasai oleh negara dan dipergunakan untuk sebesar-besar kemakmuran rakyat.

Atas dasar itulah, maka sejak awal pemerintah sudah menugaskan Pertamina yang merupakan Badan Usaha Milik Negara (BUMN) berperan sebagai pengelola energi nasional. Bahkan peran tersebut dipertegas dalam UU No.19 tahun 2003 tentang Badan Usaha Milik Negara. Pada pasal 2 dijelaskan maksud dan tujuan pendirian BUMN.

Pertama, memberikan sumbangan bagi perkembangan perekonomian nasional pada umumnya dan penerimaan negara pada khususnya. Kedua, mengejar keuntungan. Ketiga, menyelenggarakan kemanfaatan umum berupa penyediaan barang dan/ atau jasa yang bermutu tinggi dan memadai bagi pemenuhan hajat hidup orang banyak. Keempat, menjadi perintis kegiatan-kegiatan usaha yang belum dapat dilaksanakan oleh sektor swasta dan koperasi. Terakhir, turut aktif memberikan bimbingan dan bantuan kepada pengusaha golongan ekonomi lemah, koperasi, dan masyarakat.

“Karena itulah, sesuai dengan amanat peraturan perundang-undangan tersebut, Pertamina sebagai satu-satunya Badan Usaha Milik Negara (BUMN) yang mengelola energi nasional secara terintegrasi dari hulu ke hilir, tidak hanya berperan sebagai sebuah entitas bisnis, tapi lebih diutamakan menjadi driver pembangunan nasional,” ujar Direktur Utama Pertamina Nicke Widyawati.

Nicke menegaskan, dalam kaitannya dengan tugasnya sebagai pengelola energi nasional, Pertamina mengacu pada tujuan pengelolaan energi yang termaktub dalam pasal 3 UU No. 30 tahun 2007 tentang Energi.

“Dalam UU tersebut, jelas disebutkan tujuan pengelolaan energi yang didasarkan pada lima aspek. Yaitu, *availability*, *accessibility*, *affordability*, *acceptability*, dan *sustainability*. Kelima aspek yang bisa kita singkat menjadi 4A 1S ini harus dilaksanakan untuk mendukung pembangunan nasional secara berkelanjutan dan meningkatkan ketahanan energi nasional,” ujar Nicke.

Dari sisi *availability*, Nicke menjabarkan, Pertamina harus dapat menjamin ketersediaan energi dalam negeri, baik dari sumber di dalam maupun luar negeri.

Dari aspek *accessibility*, Pertamina harus membangun infrastruktur energi untuk seluruh wilayah di Indonesia sehingga mengurangi disparitas antar daerah.

“Dalam aspek *affordability*, kami juga harus meningkatkan akses masyarakat yang tinggal di pelosok untuk mendapatkan energi agar mereka dapat merasakan energi berkeadilan. Selain itu, kami juga tidak boleh mengabaikan pelestarian fungsi lingkungan hidup melalui aspek *acceptability*. Jika keempat aspek tersebut dapat kami laksanakan dengan baik, maka akan terjami pengelolaan sumber daya energi secara optimal, terpadu, dan berkelanjutan (*sustainability*),” ungkapnya.

Karena itu, di tahun 2019 ini, Pertamina terus berupaya memaksimalkan kinerja dengan berbagai program kerja lanjutan yang telah dilakukan pada tahun sebelumnya. Seperti memaksimalkan kinerja blok-blok terminasi yang sudah mulai dikelola Pertamina pada tahun lalu, melanjutkan revitalisasi kilang Pertamina melalui program RDMP dan NGRR, serta memperbanyak SPBU di berbagai lokasi agar masyarakat di seluruh Indonesia semakin mudah mendapatkan BBM.

“Kami juga akan terus berupaya meningkatkan kinerja dengan melakukan kemitraan strategis mulai dari hulu hingga hilir. Seperti pada program Pertashop yang bekerja sama dengan Kementerian Desa, Pembangunan Daerah Tertinggal dan Transmigrasi serta BUMN lainnya,” imbuhnya.



Dalam UU tersebut, jelas disebutkan tujuan pengelolaan energi yang didasarkan pada lima aspek. Yaitu, *availability*, *accessibility*, *affordability*, *acceptability*, dan *sustainability*. Kelima aspek yang bisa kita singkat menjadi 4A 1S ini harus dilaksanakan untuk mendukung pembangunan nasional secara berkelanjutan dan meningkatkan ketahanan energi nasional.

Pertamina's presence in this country has a long story that started with Indonesia's natural resources, which is crude oil. Based on the 1945 Constitution (UUD 1945), it is clearly stated in the article 33 paragraph 2 that earth, water and all natural wealth contained in this country is owned by the state and should be used for the people's prosperity.

Therefore, the government assigned Pertamina since the beginning to become the state-owned enterprise (SOE) which has to carry the role of managing the country's energy sector. Pertamina's role has even strengthened in the Law of SOE No. 19/2003, especially in article two, which stipulates the purpose and the goal of SOE's establishment.

First, is to contribute to the development of the national economy and also to the state revenue. Second, to gain profit. Third, to organize a common utilization in the form of high-quality procurement for products and services that could fulfill the people's needs. Fourth, to become the pioneer on the development of business activities that could not yet run by the private sector and cooperative. Lastly, to actively gives guidance and assistance to a small business player, cooperative and society.

"Because of that, in accordance with the Constitution's mandate, Pertamina as the sole energy SOE, who organized national energy from upstream to downstream sector, is prioritized to become an agent of development, rather than only focusing itself as a business entity," Pertamina President Director Nicke Widyawati said.

Nicke stressed that in the relation of Pertamina's duty related to the national energy, the company is working with a legal basis of article three in the Law of Energy No. 30/2007 about the purpose of energy management.

"The constitution clearly said the main purpose of energy management must be based on five aspects,

namely: availability, accessibility, affordability, acceptability, and sustainability. The aspects, which we could shorten as 4A +1S, have to be implemented in order to support the sustainable national development and to improve the national energy security," Nicke said.

In terms of availability, Nicke further explained that Pertamina has to ensure the domestic energy supply, either from local sources or from outside the country.

Meanwhile, on the accessibility aspect, Pertamina has to build energy infrastructures across Indonesia that could overcome the disparity issues between one region to another.

"In affordability aspect, we also have a role to ensure the access to energy for the people who live in a remote area, so that they could also feel the spirit of fair energy. Moreover, we also never forget the duty to preserve our nature through the acceptability aspect. And if

we could implement those four aspects successfully, then subsequently we could ensure an optimum, compact and sustainable (sustainability) energy resources," she said.

Hence, in 2019, Pertamina will continue to further push the efforts that have been implemented in the firm's previous work programs. For example to maximize the performance of Pertamina's termination blocks that were only under the firm's operation last year, to continue the revitalization of Pertamina's refineries through the RDMP and NGRR programs and to add more gas stations (SPBU) in various locations, so that it could ease the process for people to refuel.

"We will also try to improve our performance by doing a strategic partnership, starting from upstream to downstream. For example is our Pertashop program that we previously teamed up with the Ministry of Villages, Development of Disadvantaged Regions and Transmigration Ministry and other state-owned enterprises," she said.



If all of Pertamina's employees have committed to work in this oil and gas company, then we should harden our mentality and our motive that we work for the people and also for the nation. We must have a spirit of serving other people, there's no other reason and other purposes.

la menggarisbawahi, yang terpenting saat ini adalah, selain tetap berupaya maksimal mendapatkan profit setinggi-tingginya, fokus utama BUMN ini adalah memberikan hak rakyat Indonesia sesuai dengan porsinya.

MEMAHAMI PERAN PERTAMINA MELALUI 4A + 1S

Sejak 2003, Pertamina memasuki era baru ketika badan hukum BUMN ini beralih menjadi Perseroan Terbatas (PT) berdasarkan PP No.31 Tahun 2003 tanggal 18 Juni 2003 tentang “tentang pengalihan bentuk Perusahaan Pertambangan Minyak dan Gas Bumi Negara (Pertamina) menjadi Perusahaan Perseroan (Persero)”. Perubahan badan hukum BUMN tersebut mengacu dari pasal 60 UU No. 22 tahun 2001 tentang Migas yang menyebutkan, dalam jangka waktu paling lama dua tahun, Pertamina dialihkan bentuknya menjadi Perusahaan Perseroan (Persero) dengan Peraturan Pemerintah.

Pemberlakuan UU No. 22 tahun 2001 memang mengubah pola bisnis migas Indonesia. Bagi Pertamina, UU Migas ini telah men-*challenge* BUMN ini untuk berubah, seperti yang bisa dilihat sekarang ini. Seperti perubahan pola bisnis pemasaran retail migas yang memberikan kesempatan pada kompetitor asing untuk membuka SPBU di dalam negeri.

Selain itu, dalam kerangka *good governance*, Pertamina juga dituntut untuk melaksanakan bisnis yang transparan dan bersih.

Karena itu, insan Pertamina sebagai pejuang energi harus memahami secara mendalam peran Pertamina melalui tujuan pengelolaan energi yang didasarkan pada lima aspek. Yaitu, *availability*, *accessibility*, *affordability*, *acceptability*, dan *sustainability* (4A + 1S).

Dalam *townhall meeting* yang diadakan pada Februari 2019 lalu, Direktur Utama Pertamina Nicke Widyawati mengungkapkan, Pertamina ada karena amanah dari negara berdasarkan peraturan perundang-undangan UUD 1945 Pasal 33 ayat 2. Pertamina merupakan agen yang menjalankan amanah tersebut dalam pengelolaan energi di negeri ini. Pertamina adalah representasi dari negara dan menjalankan tugas serta kewajiban negara dalam penyediaan energi untuk masyarakat.

“Jika para insan Pertamina sudah berkomitmen



bekerja di perusahaan Migas ini, kita harus menguatkan mental dan niat bahwa kita bekerja untuk masyarakat dan negara. Kita harus punya jiwa melayani, tidak ada alasan lain dan tujuan lain,” tegasnya.

Menurut Nicke, pemahaman yang benar tentang peran Pertamina melalui aspek 4A + 1S akan membawa insan Pertamina memiliki *mindset* yang sama dalam menjalankan roda bisnis perusahaan. Secara rinci ia memaparkan hal tersebut.

Availability. Pertamina berperan sebagai pengelola energi nasional dalam menjamin *availability* energi nasional baik dari sumber di dalam negeri maupun di luar negeri.

“*Availability* atau ketersediaan energi harus menjadi aspek pertama yang harus dipahami. Dalam memenuhi kebutuhan energi nasional tersebut Pertamina melakukan Optimalisasi Produksi Hulu agar tersedianya energi nasional, Pertamina juga berhasil menjadi operator untuk blok migas terbesar di Indonesia salah satunya adalah blok Mahakam yang sudah dikelola sejak Januari 2018, blok Rokan yang akan dikelola mulai tahun 2021, serta blok-blok migas lainnya seperti blok Sanga-Sanga, blok Pendopo



The president director stressed that besides focusing on the goal to gain a maximum profit, the company's other main focus is also to ensure that Indonesian citizens will get their rights in a just proportion.

UNDERSTANDING PERTAMINA'S ROLE THROUGH 4A + 1S

Since 2003, Pertamina entered a new era of status transformation, which changed its status from a legal entity of SOE to a limited liability company (PT) It is in accordance with the Government Regulation (PP) No. 31/2003 that was enacted on June 18th, 2003 about the transformation of the state mining, oil and gas company (Pertamina) to PT. The shift of legal entity was referring to article 60 of the Oil and Gas Law No. 22/2001, which stipulates that Pertamina must shift its status to PT no later than two years with the help of government regulation.

The enactment of Oil and Gas Law No. 22/2001 did change the pattern of Indonesia's oil and gas business. For Pertamina, the law challenged the company to transform, which the after-effects could be seen right now. The example is in the oil and gas retail business, which is open to any foreign competitors to start a gas station business in this country.

Besides that, in terms of the good governance framework, Pertamina also demanded to conduct a transparent and clean business process.

Hence, Pertamina's employees should internalize the company's role by understanding the main purpose of energy management, which based on five aspects, namely availability, accessibility, affordability, acceptability, and sustainability (4A + 1S).

In February's townhall meeting, Pertamina President Director Nicke Widyawati explained that the existence of Pertamina could not be separated with the existence of a state-mandate, which originated from article 33 paragraph 2 of this country's constitution (UUD 1945). Pertamina is the mandate's executor, which is responsible for the country's energy management. Pertamina is a state-representation in the energy sector and the one who has to shoulder the obligation of ensuring the energy supply for the people.

"If all of Pertamina's employees have committed to work in this oil and gas company, then we should harden our mentality and our motive that we work for the people and also for the nation. We must have a spirit of serving other people, there's no other reason and other purposes," she emphasized.

Nicke believes that having the right understanding of Pertamina's role through the four aspects of 4A + 1S will subsequently generate a single mindset of how to do business among the employees of Pertamina. In more detail, she explained in the following paragraphs:

Availability. Pertamina has an important role in managing the national energy. Pertamina needs to ensure the availability of its resources, whether it is coming from local resources or from overseas.

"Availability or energy security should become the first aspect to be understood. In securing the country's energy supply, Pertamina has to optimize the Upstream Production. Pertamina also recently managed to become the operator for the two of Indonesia's largest oil and gas blocks, which are Mahakam since January 2018 and Rokan that will be officially transferred to Pertamina in 2021. And also other blocks, namely Sanga-sanga, Pendopo and Raja, Jambi Merang, South East Sumatra (SES), East



• PERTASHOP

Accessibility

dan Raja, Jambi Merang, Blok South East Sumatera (SES), East Kalimantan, dan blok Attaka,” ujar Nicke.

Peningkatan kapasitas kilang dengan RDMP (*Refinery Development Masterplan Program*) untuk merevitalisasi kilang lama nantinya akan dapat menambah kapasitas produksi minyak menjadi dua juta barel minyak per hari. “Ada empat kilang yang rencananya akan dijadikan megaprojek RDMP yaitu kilang di Balikpapan, Dumai, Cilacap dan Balongan. Nantinya dari RDMP akan memenuhi kebutuhan minyak nasional sebesar 1,6 juta MBPD. Pertamina juga melakukan eksplorasi tidak hanya di dalam negeri namun juga di luar negeri yang telah menghasilkan, yaitu Malaysia dan Algeria. Lapangan migas di gurun sahara ini dioperasikan oleh Pertamina Algeria Exploration Production. Dengan upaya yang telah dilakukan tersebut Pertamina telah berusaha mencapai tujuan dalam ketersediaan energi nasional,” tambahnya.

Accessibility. Nicke menegaskan, dalam pemasaran produknya produk Pertamina harus bisa menjangkau seluruh lapisan masyarakat agar mereka mendapatkan produk-produk seperti BBM dan LPG. “Ada 77 ribu desa, SPBU (mini) Pertamina harus ada

Pembangunan Pertashop di desa-desa adalah salah satu upaya Pertamina untuk menjangkau seluruh lapisan masyarakat dalam mendapatkan produk-produk Pertamina seperti BBM dan LPG.

di sana. Titik terluar adalah desa ada 77.000 desa yang ada di Indonesia, 7.500 Kabupaten. Caranya, Pertamina harus membangun minimal 1 SPBU yang menjual BBM dan LPG di setiap desa”, ujarnya. Karena itu, saat ini sedang dirintis pembangunan Pertashop di desa-desa.

Affordability. Nicke menjelaskan, *affordability* merupakan tercapainya peningkatan akses masyarakat yang tidak mampu dan/atau yang tinggal di daerah terpencil terhadap energi untuk mewujudkan kesejahteraan dan kemakmuran rakyat secara adil dan merata. “Kerja sama kita dengan Pelindo dan perusahaan lain supaya kita bisa memberikan *Affordability Price* kepada masyarakat, percuma kita punya produk yang cukup tapi kalau harganya mahal tidak bisa menjangkau masyarakat,” jelasnya.

Kalimantan and Attaka Blocks,” Nicke said.

Pertamina, by conducting Refinery Development Masterplan Program (RDMP), will increase its oil processing capacity up to 2 million barrels oil per day. “Four refineries are expected to become the megaprojects in RDMP. The refineries are located in Balikpapan, Dumai, Cilacap, and Balongan. RDMP is aimed to fulfill the national energy demand, which stands at 1.6 million barrels of oil per day (bopd). Pertamina also has been active in exploration activities, not only domestically but also in foreign countries, which have been successful such as in Malaysia and Algeria. The oil and gas field in Sahara Dessert that is operated by Pertamina Algeria Exploration Production. With

The affordability aspect is achieved when Pertamina able to improve the access to energy for the poor or the people who live in a remote area. Because only by doing so the company will succeed in ensuring the people’s welfare and prosperity fairly and evenly.

the efforts above, it means Pertamina has tried to achieve the goal in fulfilling the national energy security,” she added.

Accessibility. Nicke stressed that the company’s marketing campaigns should be able to reach all layers of this society so that they could have access to get products like BBM and LPG. “There are currently 77,000 villages and our SPBU (mini) should have existed in all of the villages. The outermost point is a village, and now there are 77,000 villages in this country, which spreads in 7,500 districts. The solution for that problem is Pertamina should build at least 1 SPBU, which sold BBM and LPG, in each of those villages,” she said adding that it is why now Pertamina has been developing Pertashop in villages.

Affordability. Nicke explained that the fulfillment of the affordability aspect is achieved when Pertamina able to improve the access to energy for the poor or the people who live in a remote area. Because only by doing so the company will succeed in ensuring the people’s welfare and prosperity fairly and evenly. “Our partnerships with Pelindo and other companies have a single aim to ensure price affordability for the people. It’s useless if we’ve enough products, but the price is unreachable to the people,” she said.

Affordability



• PEMBANGUNAN JETTY



Acceptability

Pertamina bertransformasi agar senantiasa diterima dengan berbagai perkembangan yang terus terjadi. Salah satu cara adalah membuat Biorefinery untuk membuat energi ramah lingkungan.

Acceptability. Yakni, bertransformasi agar senantiasa diterima dengan berbagai perkembangan yang terus terjadi dan bergulir dengan cepat. Misalnya pemanfaatan energi ramah lingkungan. Penerapan energi ramah lingkungan yang sudah menjadi tren masyarakat sekarang harusnya juga bisa diikuti perusahaan.

“Oleh karena itu kita harus *move on* dari energi fosil ke energi baru terbarukan. Pertamina harus dukung penciptaan lingkungan lebih bersih, penggunaan energi harus di-shifting ke energi ramah lingkungan. Kita harus menuju ke sana. Mulai Januari 2020, International Maritime Organization akan melarang seluruh kapal dalam menggunakan dan mengangkut

BBM dengan kadar sulfur di atas 0.5%. Hal ini akan menjadi tantangan bagi Pertamina. Kalau Pertamina ingin menerapkan ini, kita harus menunggu kilang kita berubah menjadi Euro 4 dan Euro 5,” tukas Nicke.

Sustainability. Dalam menjalankan bisnisnya, Pertamina memiliki tanggung jawab menjaga kelestarian fungsi lingkungan hidup. Dalam hal ini Pertamina berupaya maksimal dalam mendorong pengembangan sumber-sumber energi baru terbarukan agar keberlanjutan dalam berbisnis dapat terwujud.

Sejatinya, penjelasan Nicke secara detail mengenai peran Pertamina melalui aspek 4A + 1S tersebut dapat secara masif dikomunikasikan secara menyeluruh agar insan Pertamina memahami dengan jelas tugas dan peran BUMN ini dalam mengelola energi nasional.

Seperti ungkapan seorang sastrawan Amerika Serikat Maya Angelou, *when you know better, you do better*. Jadi, jika internalisasi tentang peran Pertamina sebagai pengelola energi nasional dilakukan secara masif, diharapkan dapat berdampak signifikan pada *mindset* insan Pertamina dalam menjalankan operasional perusahaan sebagai pejuang energi. ▀

Acceptability. The aspect is fulfilled by continuing the process of transformation so that the company could adapt well to any new developments, which has been coming quickly. For example in how the company has been utilizing environmentally friendly energy. The implementation of environmentally friendly energy has become the current trend, in society, so it must be followed by Pertamina.

"That's why we need to move on from fossil-based energy to renewable energy. Pertamina must support the efforts to have a cleaner environment by shifting the use of energy to environmentally friendly energy. We need to move in the right direction. Starting from January 2020, the International Maritime Organization will prohibit any ships to use

Pertamina has a responsibility to preserve the functions of the environment. In this matter, Pertamina has been trying in its maximum effort to push for the development of renewable energy, so that sustainable development in doing business could exist.

and to transport fuel with a sulfur level beyond 0.5 percent. This prohibition will become a challenge for Pertamina. If Pertamina wanted to follow the prohibition, we need to wait for our refineries to be able produced fuels with a standard of Euro 4 and Euro 5." Nicke said.

Sustainability. In running its business, Pertamina has a responsibility to preserve the functions of the environment. In this matter, Pertamina has been trying in its maximum effort to push for the development of renewable energy, so that business sustainability could exist.

For the truth, Nicke's detail explanation about Pertamina's role through the 4A+1S could be communicated in a massive and comprehensive way, so that Pertamina's employees could clearly understand the duty and the role of a state-owned enterprise in managing the national energy sector.

There is an expression from US writer Maya Angelou that "when you know better, you do better". Hence, if a massive internalization of Pertamina's role as the manager of national energy succeeds, then hopefully it would be able to have a significant impact to the mindset of Pertamina's employees as the energy warriors. ▀

Sustainability

• LITHIUM ION BATTERY

PERAN **PERTAMINA** DI MATA MEREKA

THE ROLE OF PERTAMINA THROUGH THEIR EYES



Setiap insan Pertamina pasti sudah memahami proses bisnis BUMN ini dalam menjalankan tugasnya sebagai pengelola energi nasional dari hulu ke hilir. Tapi apakah mereka juga sudah memahami tujuan pengelolaan energi tersebut berdasarkan UU Energi No. 30 tahun 2007? Apakah edukasi energi yang disosialisasikan Pertamina sudah dipahami oleh generasi muda bangsa? Berikut pendapat beberapa insan Pertamina yang berhasil diwawancara tim energia.

Pertamina's employees must have understood how the company runs its business from upstream to downstream sector. However, do they also understand the purpose of energy management that is based on the Law of Energy No.30/2007? Did Pertamina's socializations about energy were enough to make the young generation to understand? Here are some of the answers from Pertamina's employees.

4A + 1 S KUNCI MEMENANGKAN PERSAINGAN DI BISNIS ENERGI 4A+1S IS THE KEY TO WIN THE BUSINESS COMPETITION IN ENERGY SECTOR



Dofa Purnomo
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Menurut saya, pengelolaan energi berlandaskan 4A & 1S (*Availability, Accessibility, Acceptability & Sustainability*) merupakan hal kunci bagi Pertamina agar dapat menjalankan perannya dengan baik sebagai BUMN di sektor energi.

Lebih jauh lagi, 4A & 1S juga menjadi kunci bagi Pertamina untuk dapat memenangkan persaingan di bisnis energi yang saat ini sedang mengalami *disruption*. Arena pertempuran tidak hanya tentang *price war*, tetapi jauh lebih kompleks menjadi *supply chain war*. Siapa yang menguasai *supply chain*, maka besar kemungkinan dia yang akan menjadi pemenang.

Pendekatan 4A & 1S mendukung penguatan *supply chain* Pertamina di bisnis energi, apalagi bila implementasinya didukung dengan pemanfaatan teknologi secara tepat dan optimal agar Pertamina dapat lebih proaktif dalam memenuhi kebutuhan pelanggan, meningkatkan kualitas hubungan dengan pelanggan, dan tentunya meningkatkan kinerja bisnis Pertamina.

Hal ini sebagaimana disampaikan oleh Siggelkow & Terwiesch dalam artikel berjudul "*The Age of Continuous Connection*" (*Harvard Business Review*, May-June 2019), bahwa "*Instead of waiting for customers to come to them, firms are addressing customers' needs the moment they arise-and sometimes even earlier. It's a win-win: Through what we call connected strategies, customers get a dramatically improved experience, and companies boost operational efficiencies and lower cost.*"

Terkait upaya Pertamina dalam memberikan edukasi tentang energi kepada generasi muda/milenial, perlu memperhatikan beberapa aspek. Di antaranya, channel komunikasi apa yang digunakan, dan bagaimana pesan dikomunikasikan. Dalam hal channel komunikasi, edukasi telah dilakukan baik secara *online* (melalui akun resmi media sosial Pertamina), maupun secara *offline* (di antaranya melalui penyelenggaraan "*Pertamina Goes To Campus*"). Dalam hal bagaimana pesan dikomunikasikan, penggunaan infografis sangat mendukung untuk dapat menyampaikan pesan secara menarik dan komunikatif. Input di masa depan untuk *continuous improvement* adalah agar intensitas komunikasi dapat lebih ditingkatkan, misalnya pelaksanaan "*Pertamina Goes To Campus*" dapat dilaksanakan di lebih banyak kampus. •

For me, energy management based on the 4A & 1S (Availability, Accessibility, Affordability, Acceptability & Sustainability) guide is a key for Pertamina in the fulfillment of its role as the sole state-owned company in the energy sector.

Moreover, the guide of 4A & 1S also become the key for Pertamina in their effort to win the competition in the energy business, which currently hit by disruption issue. The battle now is not only on price, but it is more complex to the war on the supply chain. The one who controls the supply chain, the bigger the chance for he or she to become the winner.

The approach of 4A & 1S supports the effort to strengthen Pertamina's supply chain in the business sector, especially if the implementation is supported by the right and optimum technology, helping Pertamina to be proactive in providing its customers demand, improving the relationship quality between the customers and also to jack up Pertamina's business performance.

It is in accordance with what Siggelkow & Terwiesch have written in their article, which the title is "The Age of Continuous Connection" (Harvard Business Review, May-June 2019); that "Instead of waiting for customers to come to them, firms are addressing customers' needs the moment they arise-and sometimes even earlier. It's a win-win: Through what we call connected strategies, customers get a dramatically improved experience, and companies boost operational efficiencies and lower cost."

Regarding Pertamina's efforts to educate the young generation or millennials about energy, we need to pay attention to several aspects. Among other things is what communication channel that should be used and the way to communicate the message. In terms of a communication channel, education has been conducted well by online platforms (through Pertamina's official social media) and also through offline platforms (such as through the event of "Pertamina Goes to Campus").

In terms of how the message is communicated, it is crucial to use an infographic, which could support the process to communicate the message in an interesting and communicative way. However, I suggested that Pertamina could communicate to us more frequently, for example by holding the event of "Pertamina Goes To Campus" more often. •

OPTIMALKAN PENGELOLAN ENERGI UNTUK BANGSA DOING THE BEST POSSIBLE WAY IN ENERGY MANAGEMENT

Menurut saya, Pertamina sebagai powerhouse energi milik negara sudah mengoptimalkan pengelolaan energi bagi bangsa Indonesia. Mulai dari hulu, mengoptimalkan upaya pencarian cadangan migas baru, pengelolaan sumur yang efektif dan efisien, hingga di hilirnya mengolah dan menyalurkan energi yang dibutuhkan masyarakat hingga di pelosok negeri. Menjamin ketersediaan BBM/BBK maupun LPG agar dapat dinikmati seluruh masyarakat Indonesia.

Pertamina juga telah mengedukasi generasi milenial dengan gaya kekinian. Sebut saja web series tepian kelana yang sudah ditonton ratusan ribu viewers, edukasi melalui media sosial hingga berbagai talkshow langsung ke lokasi, melalui berbagai komunitas ataupun universitas misalnya. Program Pertamina Goes to Campus juga efektif mengedukasi dengan interaksi langsung dengan para milenial. •

Personally, I think that Pertamina as the country's energy powerhouse has done its best efforts to manage the energy sector for the best interest of Indonesia's people. Starting from the upstream sector by finding new oil and gas resources and managing the wells effectively and efficiently, whilst downstream by processing and distributing the energy to the people across the country. And then to also ensuring the fuel and LPG supply, so that the products could be enjoyed by all of Indonesian.

Pertamina also has been educating millennials in a contemporary way, For example, the web-series called Tepian Kelana, which have been clicked by hundreds of thousand viewers, active to educate in social media platforms, holding a number of on-site talk shows and to have sharing sessions with communities and universities. The program of Pertamina Goes to Campus is also an effective tool to educate and to have direct interaction with millennials. •



Irto Ginting
Corporate Secretary
PDSI



Putry Sutriani
Media Analyst
PT Pertamina Hulu Energi

MELAKUKAN YANG TERBAIK DO THE BEST

Menurut pandangan saya, Pertamina dalam mengelola energi sudah melakukan yang terbaik. Terbukti dengan ketersediaan energi sampai Papua. Walaupun masih ada pemberitaan tentang kelangkaan tabung gas di beberapa daerah, namun infrastruktur energi di Indonesia sudah dibangun secara merata serta sudah tersedianya akses masyarakat pedalaman dalam mendapatkan sumber energi. Selain itu, tanggung jawab sosial perusahaan terhadap pelestarian fungsi lingkungan juga sudah dijalankan melalui program-program CSR yang menunjukkan bahwa pengelolaan sumber daya energi berkelanjutan sudah dikelola dengan baik secara terintegrasi dari hulu ke hilir.

Menurut saya, Pertamina juga sudah inovatif dalam mengedukasi generasi milenial melalui beberapa cara, seperti melalui film edukasi yang dikeluarkan Pertamina maupun melalui kunjungan beberapa kampus ke Pertamina maupun anak perusahaan serta turut menjadi bagian dari Program BUMN Goes To Campus. Semoga usaha tersebut bisa efektif mengedukasi generasi milenial agar dapat memahami peran Pertamina sebagai pengelola energi nasional. •

In my point of view, Pertamina has done the best in the energy management issue. It is proven with the availability of energy across the country, including Papua. Even though there is still news about the scarcity of gas in several regions, but the country's energy infrastructures have been well and fairly developed, including the accessibility of energy for rural communities. Furthermore, the company's corporate social responsibility (CSR) efforts for natural preservation also has been in place through various programs, which able to show that sustainable energy development has been managed well and integrated from upstream to downstream sides

For me, Pertamina has also implemented an innovative way to educate millennials, such as in form of an educational film, which Pertamina has been showing during a campus visit to the company or to Pertamina's subsidiaries. The company also has been participating in the program of BUMN Goes to Campus. I hope that the efforts could effectively help to educate the millennials in understanding the role of Pertamina as the manager of this country's energy. •

MAKIN BAIK, MAKIN BIJAK TO BE BETTER, TO BE WISER

Menurut saya, makin ke sini Pertamina makin baik, makin bijak mengelola energi. Ketersediaan produk sudah diperbanyak. Varian produk BBM tidak lagi bergantung pada Premium karena Pertamina sudah memberikan alternatif pilihan produk.

Aksesibilitas juga semakin baik dimana Pertamina sudah berupaya untuk meningkatkan ketersediaan BBM maupun menambah SPBU di seluruh wilayah NKRI. Dari segi harga, juga sudah lumayan terjangkau. Pertamina berani bersaing dan menyesuaikan harga dengan status ekonomi konsumen (Premium, Peralite, Pertamina, Pertamina Turbo, Solar, Dexlite, Pertamina Dex). Apalagi dengan tagline yang lagi ng-hype #BBMSatuHarga.

Acceptability dalam pengelolaan energi Pertamina sudah semakin ramah dan bersinergi dengan warga sekitar sumber minyak dan memberikan efek positif dalam segala aspek (lingkungan, fasilitas, pembinaan edukasi, UMKM warga sekitar, dan lain-lain). Sustainability juga sudah baik, dimana peran Pertamina dalam menjaga keberlangsungan alam dan lingkungan semakin ditingkatkan. Terkait upaya yang sudah dilakukan oleh Pertamina dalam mengedukasi generasi milenial, terutama di social media, dalam hal ini yang saya monitor adalah instagram, sudah cukup baik. Pesannya "nyampe". Pendekatan yang perlu ditingkatkan bisa melalui media yang paling mudah diakses oleh masyarakat. Misalnya, televisi. Sedikit saran, sebaiknya Pertamina membuat event edukasi yang sangat milenial dan terbuka untuk umum. •

I think that Pertamina has been growing so well until today, they become wiser in handling the energy sector. The availability of products has been multiplied. The variance of fuel products does not only depend on Premium, because Pertamina has given the alternatives.

The accessibility has also become better as Pertamina has been trying to increase the supply of fuel by setting up more gas stations (SPBU) all across the country. In terms of price, it has been adequately affordable. Pertamina is brave to compete and to adjust the price with the people's economy status (Premium, Peralite, Pertamina, Pertamina Turbo, Solar, Dexlite and Pertamina Dex). Especially with the famous tagline of #BBMSatuHarga.

Acceptability aspect of Pertamina's energy management has become more friendly and involving the surrounding citizens, who live near oil resources. Pertamina also has been showering positive effects in every aspect (environment, facility, education guidance, local small and medium enterprises, and et cetera). Sustainability aspect has also better now as Pertamina's role in keeping the environment and nature sustainability continues to be improved. Regarding Pertamina's past efforts on educating millennials, especially on social media has become better also, which I have monitored so far in Instagram. The messages were able to be understood by us. In terms of suggestion, I believe that the approach could be improved by using television, which is the easiest channel to be accessed by society. A piece of advice, it is better for Pertamina to hold an educational and public event that truly can represent the millennials. •



Iimichela
Spv. Shipping Agency &
Tanker Programmer

ANDIL BESAR PERTAMINA BAGI KETAHANAN ENERGI NASIONAL PERTAMINA'S CRUCIAL ROLE IN SECURING ENERGY SUPPLY



Irna Nuradlina
Officer Transport Planning
Asset Operation Head Office

Pertamina sebagai perusahaan energi nasional tentunya mempunyai andil yang besar bagi ketahanan energi Indonesia. Oleh karenanya aspek 4A & 1S menjadi landasan Pertamina dalam menjalankan proses bisnisnya. Beberapa program kerja, seperti penerapan BBM Satu Harga, pengembangan berbagai sumber energi baru terbarukan dan Biofuel, dan pembangunan infrastruktur pastinya dapat dilihat dan dirasakan langsung dampaknya bagi masyarakat di pelosok tanah air.

Menurut saya, Pertamina juga sudah melakukan langkah-langkah yang cukup efektif memberikan edukasi tentang energi. Karena saat ini social media adalah wadah utama bagi milenial bertukar informasi dan berinteraksi, sudah ada official Instagram Pertamina dan youtube channel Pertamina yang berisi content-content yang update dan edukatif. Selain itu juga terdapat program lainnya seperti iklan-iklan singkat di media cetak & elektronik, berpartisipasi dalam BUMN goes to campus baru-baru ini, dan pastinya masih banyak lagi. •

Having a role as the state energy company, Pertamina should have a big part in Indonesia's energy security. Because of that, the four aspects of 4A & 1S has become the main pillars for Pertamina in doing business. Several work programs, such as the implementation of "One Fuel Price Policy", the development of renewable energy including biofuel and infrastructure developments, surely could be seen and felt directly by the people all across this country.

For me, Pertamina has also done a quite effective step to give education about energy, because right now social media is the main channel for millennials to share information to interact. Pertamina has created its own Instagram and Youtube Channel, which filled with up-to-date and educative contents. Besides that, Pertamina also has been rolling out short advertorials in print or electronic media, participated in BUMN goes to Campus recently and et cetera. •

GASTECH VPL-17: LEBIH MURAH HASIL TAK KALAH

GASTECH VPL-17: CHEAPER AND COMPETITIVE

Bagaimana cara mendeteksi keberadaan sumber energi panas bumi di suatu wilayah? Biasanya, sumber energi tersebut biasanya dapat terlihat secara kasat mata, di antaranya melalui danau kawah asam, fumarol (uap panas yang keluar dari celah batuan dan berubah menjadi uap air), solfatara (rekahan dalam batuan yang menyemburkan uap air yang bercampur dengan CO₂ dan H₂S, kadang terdapat SO₂), *steaming ground*, *warm ground*, *neutral hot spring*, *cud hot spring*, dan batu ubahan. Tapi jangan salah, jika tidak terlihat bukan berarti daerah itu tidak memiliki potensi energi geothermal.

Menurut M. Yustin Kamah, Senior Advisor New Energy & Green Technology (NEGT) Upstream Technical Center (UTC), pada dasarnya keberadaan energi panas bumi dicirikan oleh hadirnya sejumlah gas, terutama Hg, As, dan H₂S. Gas-gas tersebut dapat dideteksi menggunakan peralatan yang disebut *Gold Trap*, berupa jarum terbuat dari emas berfungsi sebagai adsorben, dan *vacuum pump* gas CO₂ dari udara tanah.

“Namun peralatan ini mahal dan gampang hilang di lapangan. Untuk itu, kami berupaya mencari alternatif pengganti yang murah, ramah

lingkungan, dan bisa dibuat sendiri,” ujar Yustin.

Karena itu, UTC melakukan kajian pustaka dan membongkar berbagai arsip penelitian dasar terkait yang pernah dilakukan Lembaga Minyak dan Gas Bumi (Lemigas). Dari sinilah, Senior Specialist Geology di UTC Gathuk Widiyanto melakukan rancang bangun peralatan adsorben karbon aktif dibungkus membrane, yang dapat mendeteksi keberadaan gas Hg, As, dan H₂S.

“Jadi tujuannya adalah mendapatkan model dan prototipe alat survei geologi, geokimia dan geofisika (GGnG) berbasis teknologi membrane dan adsorben untuk mendukung kegiatan survei dan *monitoring* geokimia di lapangan geothermal,” jelas Gathuk.

Tujuannya adalah mendapatkan model dan prototipe alat survei geologi, geokimia dan geofisika (GGnG) berbasis teknologi membrane dan adsorben untuk mendukung kegiatan survei dan *monitoring* geokimia di lapangan geothermal.



STAGE 1
MELINE
BETAMAH



Sejumlah proses dijalankan, termasuk dengan impregnasi atau pengayaan terhadap karbon. Gathuk juga melakukan destruksi dan analisis terhadap gas-gas yang berhasil diserap oleh adsorben. Akhirnya, ia berhasil membuat Gastech VPL-17.

Agar dapat digunakan sesuai peruntukannya, Gastech VPL-17 harus melalui uji metode secara laboratorium dan uji coba lapangan. Selain itu, alat tersebut harus melalui uji validasi di beberapa lapangan untuk menguji validitas metode dan teknik sampling serta verifikasi dengan peta geokimia lapangan.

Uji validasi pada 2018 dilakukan oleh Research Technology Center (RTC) bekerja sama dengan UTC di Area Pertamina Geothermal Energy (PGE), Ulubelu Lampung. Pengujian dilakukan di 300 titik dan sukses mengidentifikasi zona struktur,

zona *upflow* dan *outflow* serta zona produksi dan injeksi. Untuk lebih meyakinkan, validasi selanjutnya dilakukan pada Maret 2019 di Area Karaha, Garut-Tasikmalaya. Pengujian dilakukan pada 250 titik.

Tahun ini juga akan dilakukan kegiatan replikasi di WK Seulawah Agam, Aceh sebanyak 100 titik dengan luar area survei 26 km persegi. Kegiatan replikasi ini bertujuan menambah data eksplorasi geokimia, setelah sebelumnya dilakukan survei geologi dan geofisika. "Replikasi ini dilakukan sebelum pengeboran sumur eksplorasi," ujar Gathuk.

Validasi adalah menguji alat tersebut di lapangan yang memang sudah terbukti kandungan geotermal, sedangkan replikasi adalah mencoba alat itu di lapangan yang belum terbukti kandungan panas buminya.



How do you detect the existence of geothermal energy sources in a region? Usually, the source of energy could be visually detected through the presence of acidic crater lake, fumarol (fractures in rocks that emit water vapor mixed with CO₂ and H₂S and sometimes there are also SO₂), steaming ground, warm ground, neutral hot spring, cud hot spring, and change-stones. But make no mistake, if there are none of those signs it does not mean that the area has a zero geothermal energy potential.

According to M. Yustin Kamah, the Senior Advisor for New Energy & Green Technology (NEGT) Upstream Technical Center (UTC), the presence of geothermal energy source is basically defined by the existence of gas, especially Hg, As and H₂S. Those types of gas could be detected by a tool called Gold Trap, which looks like a needle and made from gold that functions like an adsorbent and a vacuum-pump for CO₂ gas made from the ground air.

"However, this equipment is expensive and easily lost on the field. For that, we're trying to find the alternatives, which has to be cheaper, environmentally-friendly and could be made with our own hands," Yustin said.

Hence, UTC did a literature study and unpacked basic-research archives related to something that has been done by the Oil and Gas Institution (Lemigas). It was from this point that UTC Senior Specialist Geology Gathuk Widiyanto designed the active-carbon adsorbent equipment, which was covered with a membrane that could detect the presence of Hg, As and H₂S gases.

"The goal is to get a model and prototype of geological, geochemical and geophysical [GGnG] survey equipment, which has membrane and adsorbent technologies that could support the geochemical survey activities on a geothermal field," Gathuk explained.

All processes must be executed, including the impregnation or enrichment of carbon. Gathuk also did the destruction and analysis of the gases that are able to be absorbed by the adsorbent. Finally, he was able to create the Gastech VPL-17.

However, in order for the technology can be used according to its design, Gastech VPL-17 needs to pass lab and field tests first. Besides that, the tool needs to go to a validation test on several fields, which will examine the methods' validity, sampling techniques and verification with a field-geochemical map.

The validation test then runs in 2018 and was done by the Research Technology Center (RTC) in partnership with UTC at the Pertamina Geothermal Energy (PGE) area in Ulubelu, Lampung. The test was completed in 300 spots and managed to identify the structure, upflow, outflow, production, and injection zones. To double check the result, a further validation test was done in March 2019 at Karaha Area, Garut-Tasikmalaya with 250 spots.

This year a similar test is also expected to be kicked off in Aceh's WK Seulawah Agam with 100 spots, which the survey area spans 26 square kilometers (km²). The replication test has a goal to enrich geochemical exploration data after the previous completed geological and geophysical surveys. "The replication will be done before we drill the exploration

The proven design now could be used in the mapping of potential exploration areas outside the existing working areas that still have a big potential, especially in the geothermal hidden areas. The measure could then boosted the confidence level of geothermal exploration activities and to reduce subsurface uncertainty.

The tool has been listed to get an Intellectual Property Rights (HAKI) since January. Furthermore, the Gastech VPL-17 also grabbed the Platinum Award and the Best Innovation award in the Upstream Improvement & Innovation Award 2018 event in Yogyakarta. In other events of the Annual Pertamina Quality Award 2019 that was held in March, the tool also managed to win a platinum award.



Dari serangkaian uji laboratorium dan lapangan akhirnya diperoleh kesimpulan, Gastech VPL-17 terbukti *user friendly*, *low cost* dan mudah dalam pengoperasian di lapangan (*own operation*). "Biaya operasional Gastech hanya sekitar seperlima *Gold Trap*, dengan hasil yang lebih baik," ucap Gathuk.

Hasil rancang bangun ini dapat digunakan dalam pemetaan eksplorasi area-area prospek di luar WK *existing* yang potensinya masih sangat besar, khususnya hidden area geothermal. Sehingga dapat meningkatkan *confident* level

eksplorasi geothermal dan menurunkan *uncertainty subsurface*.

Alat ini telah didaftarkan untuk mendapatkan Hak Kekayaan Intelektual pada Januari 2019 lalu. Tak hanya itu, Gastech VPL-17 juga berhasil menyabet penghargaan Platinum sekaligus sebagai *the Best Innovation* pada Upstream Improvement & Innovation Award 2018 di Yogyakarta, serta Platinum pada Annual Pertamina Quality Award 2019 yang berlangsung Maret 2019. ▀



wells," Gathuk said.

Validation is a step to test the tool on the field, which has a proven geothermal composition. Meanwhile, the replication test is only done to a field with no proven geothermal composition yet.

Series of tests in the lab and on the field has ended with a conclusion that Gastech VPL-17 is user-friendly, low cost and easy to be operated on the field. "The operational cost of Gastech is only a fifth from the total cost of using Gold Trap and produces a better result," Gathuk said.

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potential exploration areas outside the existing working areas that still have a big potential, especially in the geothermal hidden areas. The measure could then boosted the confidence level of geothermal exploration activities and to reduce subsurface uncertainty.

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MUDIK BAWA KENDARAAN PRIBADI, PAHAMI ATURAN SAFETY DRIVING DULU YUK....





**DRIVING YOUR OWN
VEHICLES FOR MUDIK?
DO THIS SAFETY-DRIVING
PRACTICES FIRST**

Sudah dua pekan bulan suci Ramadan bergulir, pasti sudah banyak keluarga yang merencanakan untuk mudik Lebaran. Ada yang memilih menggunakan alat transportasi umum, ada juga yang menggunakan kendaraan pribadi. Semua ada plus minusnya.

Mudik dengan menggunakan kendaraan pribadi, harus dipersiapkan dengan matang. Selain kondisi fisik pengendara, fisik kendaraan juga sangat penting untuk dicek. Karena menurut Direktur Jenderal Perhubungan Darat Pudji Hartanto, manusia merupakan salah satu penyebab terjadinya kecelakaan lalu lintas. Sekitar 61% kecelakaan disebabkan oleh faktor manusia yaitu yang terkait dengan kemampuan serta karakter pengemudi. 9% disebabkan karena faktor kendaraan (terkait dengan pemenuhan persyaratan teknik laik jalan). Sementara sisanya, yakni sebesar 30 % disebabkan oleh faktor prasarana dan lingkungan.

“Faktor manusia yang terkait dengan kemampuan serta karakter pengemudi ternyata menjadi faktor yang sangat berpengaruh dalam keselamatan berkendara di jalan raya,” kata Pudji seperti dikutip dari laman resmi Kementerian Komunikasi dan Informasi, www.kominfo.go.id.

Agar terhindar dari kejadian yang tidak diharapkan selama dalam perjalanan mudik, pengendara harus memahami aturan *safety driving/riding*.

Menurut pembalap nasional yang juga pegiat keselamatan berkendara, Rifat Sungkar, kemampuan *safety driving* mutlak dimiliki oleh setiap pengendara. “Modal semua orang berkendara adalah *safety driving*,” tegasnya seperti dikutip dari laman www.mobil123.com.

Rifat menegaskan, *safety driving* tidak hanya sekadar bisa mengemudi kendaraan, namun banyak hal lain yang perlu untuk dikuasai, seperti memahami rambu lalu lintas termasuk teknik ketika melakukan pengereman yang aman.

Berikut beberapa hal yang wajib dipersiapkan sebelum berkendara.

1. Perhatikan kondisi kendaraan

Sebelum bepergian, cek terlebih dahulu kondisi mobil ataupun motor di bengkel terdekat



Pengecekan kendaraan bermotor sebelum berpergian minimal 1 minggu.

kepercayaan anda paling tidak 1 minggu sebelum waktu pergi Anda. Hal ini bertujuan guna mencegah potensi terjadinya hal-hal yang tidak diinginkan.

Jika belum sempat ke bengkel, Anda juga bisa mengecek kendaraan sendiri secara visual. Seperti memeriksa bagian mesin untuk mengetahui adanya kebocoran, tes sistem pengereman dan cek minyak rem.

Cek level oli mesin, pastikan memenuhi syarat kualitas maupun kuantitas serta ketegangan *van belt*. Cek air radiator pastikan masih berada diatas garis minimum. Cek juga air *wipper* pastikan masih mencukupi.

Tes juga kondisi lampu kendaraan Anda. Karena ini merupakan salah satu fitur yang Anda butuhkan selama perjalanan, terlebih saat perjalanan malam hari. Pastikan lampu *sign*, lampu rem serta lampu utama baik jarak dekat maupun jauh pastikan berfungsi dengan baik.



Two weeks have passed in this holy month of Ramadhan and a lot of families must have the plan to going back to the original home or usually called annual exodus (*mudik*). Some will opt for public transportation and some will use private vehicles. Both of them have their own good and bad sides.

Driving your own vehicle for Mudik trip will require a well-prepared plan. Besides preparing the driver's physical fitness, the vehicle's health needs to be checked also. Because, according to the Transportation Ministry's Director General for Land Transportation Pudji Hartanto, human-factor is one of the causes of a road accident. About 61 percent of the accidents on the road were caused by humans, which related to its capability to drive and the driver's character. And then 9 percent of the total accidents were caused by vehicles (it is related to how the vehicle able to meet the requirements to be on the road). The remaining, which is 30 percent were caused by infrastructure and environment factors.

"Human-related factors like the way of driving and the driver's character have turned out to become two of the most influential factors in the safety-

driving issue," Pudji said as quoted from the official website of the Ministry of Communication and Information, www.kominfo.go.id.

In order to avoid incidents during the Mudik trip, the drivers should understand fully the rule of safety-driving or safety-riding.

Rifat Sungkar, a well-known national racer who also an activist of safety riding, said that the safety driving competence is a must-have ability for any drivers. "The main competence for anyone who wants to drive is safety-driving ability," he said as quoted from www.mobil123.com.

Rifat further explained that safety-driving is not only lying on the ability to drive vehicles but also in other crucial matters to be mastered, such as understanding the traffic signs and also the technique to hit the brake in the safest way.

Here are several things that must be prepared before you drive

1. Check vehicle's condition

Before going on a road trip, please check your car or motorbike condition in the closest workshop that you trust at least one week before the trip started. The measure has a purpose to mitigate unwanted incidents from happening.

If you haven't had the time to visit the workshop, you could try to check your own vehicle by evaluating it visually, such as checking the machinery part to find any leaks, to test the brake system and to check the brake oil.

Check your brake fluid, please make sure that the oil has met the requirements of quality and quantity. And then to also check the tension of the fan belt. Moreover, to check the radiator water and ensuring that it is still above the minimum standard. Do not forget also to check the water supply in the wiper system.

Don't forget to check the vehicle's lamp condition, because it is one of the crucial features that you will need during the trip, especially during the night. Please make sure the function of your vehicle's signal lights, brake lights, either the low or high beam are in good condition.

Jangan lupa juga untuk mengecek kondisi dan angin ban kendaraan Anda termasuk ban cadangan pada mobil. Periksa juga kondisi permukaan ban Anda pastikan masih laik jalan.

Langkah berikutnya, nyalakan dan start mobil atau motor Anda. Dengarkan dengan seksama, jika terdapat suara ganjil atau tidak normal, segeralah bawa ke bengkel.

Setelah serangkaian tes tersebut sudah dilakukan dan kondisi kendaraan Anda layak jalan, maka Anda sudah bisa memulai perjalanan. Jangan mulai mengemudi jika salah satu syarat di atas tidak terpenuhi. Jangan lupa pasang sabuk pengaman dan pastinya berdoa sebelum memulai perjalanan.

2. Pastikan tubuh dalam kondisi fit

Salah satu faktor penyebab terjadinya kecelakaan lalu lintas adalah pengendara/pengendara dalam kondisi tidak fit atau mengantuk. Kelelahan yang hebat maupun mengantuk karena menempuh perjalanan yang panjang membuat pengemudi tidak fokus dalam berkendara. Oleh sebab itu, pastikan diri Anda tidak mengalami kelelahan ataupun mengantuk. Jika hal itu terjadi, segeralah menepi atau mencari tempat peristirahatan seperti rest area di SPBU.

Untuk mencegah terjadinya hal yang tidak diinginkan, seseorang harus menyiasatinya dengan beragam cara. Misalnya dengan memaksimalkan waktu istirahat dan tidur 6-8 jam saat malam sebelum melakukan perjalanan. Tak lupa, perhatikan pula asupan makanan dalam tubuh Anda. Contohnya dengan mengonsumsi makanan yang mengandung protein serta karbohidrat. Jika dirasa perlu, tambahkan suplemen yang sesuai dengan kebutuhan diri anda.

Agar perjalanan lebih efektif dan efisien, baiknya terlebih dahulu rencanakan perjalanan Anda. Seperti waktu keberangkatan, rute utama ataupun jalur alternatif untuk menghindari jika terjadi kemacetan. Cek juga muatan di mobil atau motor Anda. Pastikan barang bawaan tidak melebihi daya angkut kendaraan.



Taat terhadap segala peraturan lalu lintas serta empati terhadap sesama pengendara lainnya.

3. Perilaku berkendara

Pengendara yang baik adalah dia yang taat terhadap segala peraturan lalu lintas serta empati terhadap sesama pengendara lainnya. Tidak tergesa-gesa, sebab pada prinsipnya setiap orang memiliki hak dan kewajiban yang sama ketika berkendara.

Salah satu contohnya ialah jangan mengemudi dalam kondisi marah ataupun di bawah pengaruh obat-obatan terlarang ataupun alkohol. Jika hal ini dilakukan, bukan tidak mungkin dampaknya tidak hanya merugikan diri sendiri tapi juga orang lain sekitar Anda. Oleh sebab itu, ketenangan dan saling menghargai di antara sesama merupakan salah satu kunci utama dalam berkendara.



Furthermore, it is also important to check the condition and the pressure of your tires, including the condition of your spare tire.

The next step is to start your car or bike engine and then listen carefully if there is an odd or abnormal sound. If you hear it then immediately take it to the workshop.

After completing those tests and your vehicle is good to go, then you could start your trip. However, please do not start your trip if one of the requirements is not met. And then do not forget to wear a seatbelt and also to pray before you begin the trip.

2. Make sure that you are in good condition

One of the factors that could cause traffic accidents is an unfit or sleepy driver. Fatigue or drowsiness, which caused by a long trip, will only make the driver lose its driving focus. Hence, please make sure that you are not tired or sleepy. However, if one of those two things happened, please immediately move

aside from the road or find a rest area, such as a gas station.

To avoid undesired outcomes, any traveler must mitigate the risks in various ways. For example, by having enough sleeping hours from 6 to 8 hours before embarking on the Mudik trip. Don't forget to maintain a good diet by consuming protein-rich food that also contained enough carbohydrates. If possible, do add some supplement that suit your needs.

It is better to prepare well your travel itinerary, so it will run in an effective and most efficient way. Starting from your departure time and the option of routes, which will be useful when traffic jams occurred. Please also check a load of your belongings in your vehicles and asses if the load is over the capacity or not.

3. Ways of driving

A good driver is one who obeys all traffic rules and empathy for other fellow riders. He or she is not in a hurry, because he or she believes that everyone has the same rights and obligations when driving.

One example is not to drive in anger or under the influence of illegal drugs or alcohol. If it happens, it is not impossible that the impact will not only harm yourself but also others around you. Therefore, calm and mutual respect among others is one of the main point in driving.



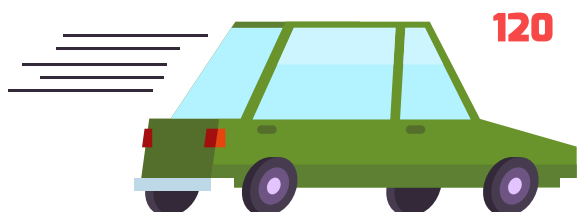
4. Cara berkendara aman

Mengemudi yang aman tidak hanya memberi keuntungan bagi diri sendiri, tetapi juga orang-orang yang berada di sekitar Anda. Berikut beberapa hal cara berkendara aman yang patut Anda ketahui. Antara lain, jaga pandangan pastikan tidak terhalang oleh benda lainnya.

Jika mendahului kendaraan lain, jangan terlalu lama berada di sampingnya, segeralah berpindah ke jalur yang lebih aman. Jaga jarak aman dengan kendaraan di depan Anda dan pastikan tetap berada di dalam jalur. Jangan melakukan perpindahan jalur secara tiba-tiba karena akan sangat mengganggu pengemudi lainnya. Jika ingin berpindah jalur, terlebih dahulu nyalakan lampu *sign* dan lihat situasi sekeliling Anda melalui kaca spion.

Kurangi kecepatan kendaraan Anda pada saat terjadi hujan atau menjelang persimpangan. Jangan menyalakan lampu *hazard* pada saat hujan, karena hal tersebut akan membingungkan pengemudi lainnya. Lampu *hazard* hanya digunakan pada saat tertentu ataupun ketika berhenti darurat. Waspadai penyeberang jalan, lampu lalu lintas ataupun pengemudi lainnya.

Hindari cara berkendara zig-zag, lantaran hal ini sangat mengganggu para pengemudi lainnya. Pastikan pengemudi lain memahami posisi Anda dan apa yang akan lakukan. Berikan juga kesempatan bagi kendaraan lain yang hendak mendahului Anda. Jika Anda hendak berhenti, pastikan situasi sekeliling aman melalui kaca spion dan mulai melakukan pengereman secara perlahan. Terakhir, patuhi rambu-rambu lalu lintas dan batas kecepatan kendaraan Anda. ▀



4. Ways of safety driving

Safe driving not only benefits yourself, but also the people around you. Here are some things you should know how to drive safely. Among other things, you must have a clear view and not to be obstructed by other objects.

If you overtake another vehicle, don't stay too long next to it, immediately move to a safer lane. Keep a safe distance from the vehicle in front of you and make sure it stays on track. Do not make a sudden change of lane because it will greatly disturb other drivers. If you want to change lanes, first turn on the sign lights and see the situation around you through the rearview mirror.

Please lower your speed in the occurrence of rain or before the intersection. Do not turn on your hazard light when in the rain as it would confuse other drivers. Hence, only turn it on when emergency events occurred. Stay alert for any pedestrian who walks across the street or other drivers.

Do avoid the zig-zag way of driving as it will only disturb other drivers. Please make sure that other drivers understand your position and what you are going to do. And then to also make a way for other drivers to overtake your position. If you want to stop, please make sure that your surroundings are safe by looking through the rearview mirrors and to hit the brake pedal gradually. Lastly, do obey the traffic signs and the speed limit. ▀

MUDIK BAWA KENDARAAN PRIBADI, PAHAMI ATURAN SAFETY DRIVING DULU YUK...

Mudik dengan menggunakan kendaraan pribadi, harus disiapkan dengan fisik yang matang. Selain kondisi fisik pengendara, fisik kendaraan juga sangat penting untuk untuk di cek. Berikut beberapa hal yang wajib dipersiapkan sebelum berkendara:



1. Perhatikan Kondisi Kendaraan

Sebelum berpergian, cek terlebih dahulu kondisi mobil ataupun motor di bengkel terdekat kepercayaan Anda paling tidak 1 minggu sebelum waktu pergi anda.



3. Perilaku Berkendara

Taat terhadap segala peraturan lalu lintas serta empati terhadap sesama pengendara lainnya. Jangan berkendara di bawah kondisi pengaruh obat-obatan terlarang maupun alkohol.



2. Pastikan Tubuh dalam Kondisi Fit

Oleh sebab itu pastikan diri Anda tidak mengalami kelelahan ataupun mengantuk. Jika hal itu terjadi, segeralah menepi atau mencari tempat peristirahatan seperti rest area di SPBU.



4. Cara Berkendara Aman

- Jika mendahului kendaraan lain jangan terlalu lama di sampingnya, segeralah berpindah kejalur yang lebih aman
- Kurangi kecepatan kendaraan Anda pada saat terjadi hujan atau menjelang persimpangan.
- Hindari cara berkendara zigzag, lantaran hal ini sangat mengganggu para pengemudi lainnya.



BERDAMAI DENGAN DIRI SENDIRI

**MAKE A PEACE WITH
YOURSELF**

Reinhard Damopolii



Setiap orang pasti menginginkan kesuksesan dalam hidupnya. Namun untuk mencapai kesuksesan, pasti tidak semudah membalikkan telapak tangan. Ada kerja keras untuk mencapainya.

SEMANGAT JUANG TINGGI

Adalah Reinhard Damopolii merasakan hal tersebut sehingga bisa menjadi pekerja Pertamina. Ia berkisah, ketika kuliah di Universitas Padjajaran jurusan Akuntansi Fakultas Ekonomi, dirinya sudah aktif dalam berbagai kegiatan. Mulai dari unit kegiatan AIESEC (Association International des Etudiants en Sciences Economiques et Commerciales), menjadi asisten dosen untuk mata kuliah Komputer Akuntansi, bekerja sebagai Oracle Programmer, hingga berhasil menulis buku yang berjudul 'Belajar Sendiri Administrasi Database Oracle: Menjadi Mahir Tanpa Guru'.

Setelah lulus kuliah tahun 2003, Reinhard mengikuti proses rekrutmen di Pertamina dan berhasil lolos kemudian ditempatkan di Dumai, Riau. Kariernya pun bersinar, Reinhard aktif dalam berbagai kegiatan dan dipercaya mejadi *leader* dalam sebuah tim. Sampai tahun 2006, Reinhard dimutasi ke Kantor Pusat Jakarta dan bergabung dengan tim implementasi software baru di Pertamina.

Tak hanya sampai di situ, tahun 2008 Reinhard mendapatkan kesempatan dalam program magang untuk karyawan Pertamina di perusahaan konsultan manajemen ternama, McKinsey. Reinhard juga melanjutkan kuliah ke jenjang S2 Jurusan Akuntansi di Universitas Indonesia dan pencapaian-pencapaian lainnya yang ia dapatkan.

Saraf di tengah tulang punggung Reinhard terganggu sehingga mengakibatkan fungsi gerak atau motorik bagian bawah tubuhnya tak dapat dikontrol oleh otak. Reinhard tidak bisa menggerakkan bagian bawah tubuhnya mulai dari dada, paha, betis, sampai telapak kaki. Artinya Reinhard tidak bisa berjalan bahkan menggerakkan kakinya seperti sedia kala.

MUSIBAH DATANG DAN PUTUS ASA

Namun siapa yang pernah membayangkan dalam satu malam kehidupan Reinhard bisa berubah 180 derajat? Ia yang tadinya sehat bugar, sempurna secara fisik dan mental, saat ini menyandang status difabel.

Reinhard tak pernah membayangkan ia akan kehilangan fungsi motorik pada setengah bagian tubuhnya pada 19 Agustus 2013. Secara tiba-tiba, Reinhard mengalami cedera medula spinalis atau cedera saraf tulang belakang atau dalam bahasa Inggris adalah *spinal cord injury* (SCI). SCI adalah trauma yang menyebabkan kerusakan pada spiral cord sehingga menyebabkan menurunnya atau menghilangnya fungsi motorik maupun sensorik.

Saraf di tengah tulang punggung Reinhard terganggu sehingga mengakibatkan fungsi gerak atau motorik bagian bawah tubuhnya tak dapat dikontrol oleh otak. Reinhard tidak bisa menggerakkan bagian bawah tubuhnya mulai dari dada, paha, betis, sampai telapak kaki. Artinya, Reinhard tidak bisa berjalan bahkan menggerakkan kakinya seperti sedia kala.

Kondisi ini umumnya disebabkan cedera (*injury*) akibat kecelakaan fisik yang mengakibatkan trauma atau patah di tulang punggung. Namun, dalam kasus Reinhard hal ini disebabkan penyakit (*disease*) pecahnya pembuluh darah di sekitar saraf.

"Sejak kejadian itu, dunia seolah berhenti. Saya menyerah, putus asa. Saya merasakan sakit yang luar biasa bahkan sempat berpikir untuk mengakhiri hidup dengan Eutanasia (menyuntikkan cairan mematikan ke dalam tubuh yang diawasi dokter, *red*)," tutur Reinhard.

TERAPI DAN DUKUNGAN

Berbulan-bulan Reinhard dirawat di rumah sakit. Berbagai metode pengobatan ia jalani mengharapakan keajaiban, bahwa ia bisa sembuh dan kembali berjalan. Rehabilitasi sangat diperlukan dalam kasus ini. Setelah trauma tertangani, rehabilitasi oleh fisioterapi bekerja bersama pasien untuk mencapai fungsi mobilitas yang maksimal dan mandiri melalui latihan.

Karena keterbatasan gerak, waktunya sering dihabiskan untuk mencari informasi mengenai

Everyone dreams to achieve success in their lives. However, to achieve it, a steep road must be beaten first. There is no success as easy as flipping over your palms.

A GREAT FIGHTING SPIRIT

That kind of spirit has led Reinhard Damopolii to become Pertamina's employee. He started his story from college life as an accountancy student at the Faculty of Economy at Padjadjaran University, where he gained experience from various activities. During the time in college, he joined AIESEC (Association International des Etudiants en Sciences Economiques et Commerciales), became an assistant lecturer for Computer Accountancy subject, working as an Oracle Programmer and also wrote a book with a title of "Self-Studying Oracle Database Information: Becoming Proficient Without Teachers".

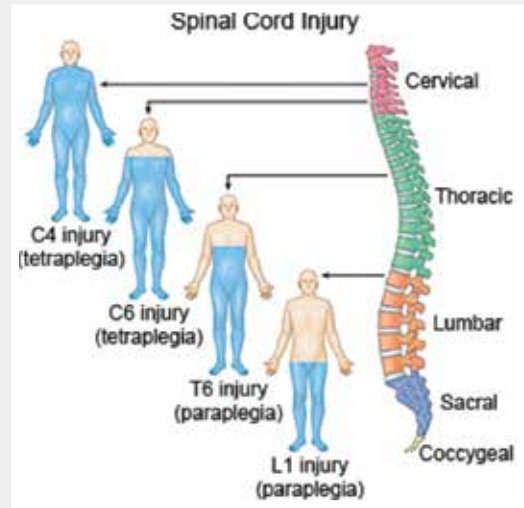
After graduated from college in 2003, Reinhard took the recruitment test in Pertamina, passed the test and then he was placed in Dumai, Riau. After that his career took off, Reinhard was actively involved in various company's activities and also entrusted to lead a team. In 2006, Reinhard was transferred to Pertamina's head office and joined a team that has a role to oversee the implementation of new software in the company.

Furthermore, two years later Reinhard got another opportunity, which is provided for Pertamina's employees, to become an intern in the famous consulting firm McKinsey. Reinhard also has the chance to pursue an accountancy post-graduate degree in the University of Indonesia and followed by another kind of achievement.

UNDESIRE REALITY HAPPENS AND THEN COMES DESPERATION

Who could predict that one night can change Reinhard's life turn around 180 degrees? Once he was a healthy, physically and mentally fit person, but now he has to carry the status of a person with a disability.

Reinhard could not have imagined that someday half of his body will lose its motoric ability, which was on August 19th, 2013. Suddenly, Reinhard has a spinal cord injury (SCI). SCI is a trauma that causes damage to the spinal cord, which could make a person's motor



Spinal Cord Injury (SCI) is a trauma that causes damage to the spinal cord, which could make a person's motor skills and his sensory ability to weaken or to lose it all.

skills and his sensory ability to weaken or to lose it all.

Reinhard's back spine central nerves were disrupted, causing the motoric function in the lower part of his body could not be controlled by the brain. He was unable to walk or even to move his feet like before.

The condition often caused by an injury that came after a physical accident, which will lead to a trauma or a broken spine. However, for Reinhard it was a disease that ruptures the blood vessels around the nerves.

"From that moment, the world seems to stop. I gave up and felt hopeless. I felt great pain and even once thought to end my life with euthanasia [by injecting a poisonous liquid into the body under doctor's supervision]," Reinhard said.

THERAPY AND SUPPORTS

For months Reinhard was treated in a hospital. Various treatment methods have been tried by Reinhard, hoping for a miracle to happen that he could be healed and able to walk again. Rehabilitation is needed in this case. After the trauma is treated, the next step is the rehabilitation step, which done with series of practices, conducted by a physiotherapist together with the patient in order to bring back the maximum and independent mobility function.

With the movement limitation, most of Reinhard's time



penderita paraplegia dalam menjalani hidup dengan ceria. Mulai dari menonton video di youtube tentang kehidupan seorang paraplegia, membaca blog Ridwan Sumantri seorang difabel paraplegia, dan membaca sebuah buku karya Handry Satriago yang juga seorang paraplegia. Semua itu sangat menginspirasi Reinhard. Orangtua, istri, dan anak pun memberikan dukungan penuh. Inilah yang membuatnya tersadar bahwa hidup begitu berharga untuk disia-siakan. Seperti pelangi setelah hujan, semangat Reinhard muncul setelah keterpurukkan.

Reinhard berhasil mengembalikan semangat hidupnya. Reinhard kembali menjalani aktivitas seperti dulu, ia mulai pergi bekerja. Ternyata tak seseram yang ia bayangkan, dukungan mengalir dari mana-mana. Rekan kerja di Pertamina menyambutnya dan memperlakukan Reinhard seperti biasa. Mereka tetap memandang Reinhard sebagai seorang insan Pertamina, partner kerja bukan sebagai orang yang terlihat dikasihani.

"Hal yang paling membuat senang ialah diperlukan seperti biasa, seperti sebelum musibah ini datang. Saya justru malah kurang nyaman jika dikasihani, saya ingin membuktikan bahwa saya masih sama, meskipun dengan keterbatasan ini," ujarnya.

Menurutnya, walaupun secara fisik berubah, namun keahlian yang dimiliki tidaklah hilang. "Saya masih mahir menggunakan komputer, berkomunikasi dengan baik. Intinya berdamai dengan diri, menerima keadaan saat ini. Banyak hal yang harus disyukuri, saya bersyukur masih diberi kepercayaan dalam pekerjaan bahkan pernah dipercaya untuk dinas ke luar kota," imbuh Reinhard.



Saya masih mahir menggunakan komputer, berkomunikasi dengan baik. Intinya berdamai dengan diri, menerima keadaan saat ini. Banyak hal yang harus disyukuri, saya bersyukur masih diberi kepercayaan dalam pekerjaan bahkan pernah dipercaya untuk dinas ke luar kota.

Ia menggarisbawahi bahwa dalam hidup, perubahan pasti terjadi. "Kita sebagai manusia tak bisa menghindarinya. Sama halnya dengan perusahaan, fenomena VUCA (*volatility, uncertainty, complexity, dan ambiguity*) pasti terjadi. Karena itu, kita harus enjoy dalam menyikapi setiap perubahan. Berdamai dengan diri sendiri, beradaptasi, dan lakukan apa yang bisa kita lakukan demi keluarga dan perusahaan," pungkasnya. ▀

was spent with web-surfing the information about how the paraplegia patients could live their lives happily. Starting from watching the videos of paraplegia patient in Youtube, reading the blog from a paraplegia patient Ridwan Sumantri and reading a book made by also a paraplegia patient Handry Satriago. All of those things inspired Reinhard. His parents, wife, and children also gave him full support, which made Reinhard realize that life is too precious to be wasted. Like a rainbow after a rain, Reinhard's spirit emerged after falling into a deep pit.

He managed to rebuild his spirit to live. Reinhard was finally able to continue his old activities and starting to work again. He later found out that re-starting his life was not as scary as what he imagined before, especially with support from every corner. His Pertamina's co-workers welcome and treat Reinhard like a normal person. They see Reinhard as Pertamina's individual and as a working partner, not like someone who has to be pitied.

"The thing that made me happy the most is to be needed like the day before the disaster happened. Because I felt less comfortable when someone is pitying me. I want to prove that I'm still the same person, even though with my current limitation," he said.

He said that his skills never faded even though there is a change in the physical aspect. "I'm still good at using a computer and can communicate well. The point is to make peace with yourself, accepting the current situation. There are a lot of things that need to be appreciated and I'm grateful that I still got the trust to



Reinhard saat menggunakan alat bantu berdiri (standing frame) untuk meregangkan otot.

do my job and even for out-of-town duty," he said.

Reinhard underlined the importance to understand that change is inevitable in this life. "We as a human could not avoid it [the change]. It's similar to the situation in a company, that a VUCA (volatility, uncertainty, complexity, and ambiguity) phenomenon is unavoidable. Hence, we need to enjoy the change. Make peace with ourselves, to adapt and do the best for our family and for the company." he said. ■



TENTARA ORGANIK

ORGANIC SOLDIER

Sampah saat ini selalu menjadi masalah utama dalam pencemaran lingkungan baik pencemaran tanah maupun laut, khususnya sampah plastik. Sifat sampah plastik yang tidak mudah didaur ulang serta lamanya proses penguraian, dipercaya banyak kalangan baru bisa terurai alami setelah tertimbun tanah sekitar 400 – 1.000 tahun lamanya. Namun perkembangan terbaru, ternyata ada larva alias serangga (berupa ulat) yang belum dewasa yang baru keluar dari telurnya bisa melakukan proses penguraian dalam hitungan jam. Namanya, larva *Galleria Mellonella*.

Berdasarkan hasil penelitian Dr. Jenna Jambeck dari Universitas Georgia, USA, yang dipublikasikan pada Jurnal Science (www.sciencemag.org) pada 12 Februari 2015, Indonesia berada di peringkat kedua dunia penghasil sampah plastik ke laut yang mencapai 3,2 juta Metrik Ton (MT), setelah Cina yang menghasilkan 8,8 juta MT. Sementara di urutan selanjutnya adalah Filipina yang menghasilkan 1,9 juta MT, Vietnam yang menghasilkan 1,8 juta MT, dan

Sri Lanka dengan 1,6 juta MT.

Pada tahun 2017, Indonesia Solid Waste Association (InSWA) merilis, sampah plastik di Indonesia mencapai 5,4 juta ton per tahun. Badan Pengelolaan Lingkungan Hidup Daerah (BPLHD) Jakarta melaporkan tumpukan sampah di wilayah DKI Jakarta saja sudah mencapai lebih dari 6.000 ton per hari dan 13 persen dari jumlah tersebut berupa sampah plastik.

Padahal, sebagian besar plastik dibuat dari produk turunan minyak. Wajarlah jika efek kerusakan lingkungan menjadi kekhawatiran bersama yang sudah harus mulai dicari solusinya.

PENEMUAN TAK SENGAJA

Salah satu peneliti Institute of Biomedicine and Biotechnology of Cantabria, Spanyol Federica Bertocchini bersama tim bergerak untuk melakukan riset mengenai pengurai plastik secara biologis dengan memanfaatkan ngengat *Galleria Mellonella*.

Trash has and always become the main problem of environmental pollution whether in land or sea, especially plastic trash. The characteristic of plastic trash is difficult to be recycled and it need a long time to be decomposed, which experts estimated it will take around 400 to 1,000 years. However, a new development said that a freshly-born larva or a worm could decompose the plastic trash only within hours. It is the *Galleria Mellonella* larva.

According to research from Dr. Jenna Jambeck from US-based Georgia University that was published in the Science Journal (www.sciencemag.org) on February 12th, 2015, Indonesia was the world's second largest plastic trash producers in the sea with 3.2 million metric ton (MT) of trash. The first place was held by China with 8.8 million MT, whilst the third, fourth and fifth places were for the Philippines, Vietnam and Sri Lanka with 1.9 million MT, 1.8 million MT and 1.6 million MT, respectively.

In 2017, Indonesia Solid Waste Association (InSWA) released a report saying Indonesia produces about 5.4 million tons of plastic trash annually. In Jakarta alone, more than 6,000 tons per day of trash is produced and 13 percent of it is plastic trash, according to the Jakarta Environmental Management Agency (BPLHD).

Most of the plastic products are made from oil derivatives. Looking at the facts, it is urgent to start worrying and to find the solution for the effect of plastic trash on our environment.

ACCIDENTAL DISCOVERY

One day, Federica Bertocchini, one of the researchers from Spain's Biomedicine and Biotechnology of Cantabria Institute, was in a research project with her team to find a biological way to decompose plastic trash using a *Galleria Mellonella* moth.

The trial showed that the moth could break up a bind in the plastic just like what they usually do when digesting the wax of beehive. Naturally, *Galleria Mellonella* larva lives in the wax of beehive. That is why the larva existence has become a threat for European bee farmers,



“We've found that *Galleria Mellonella* larva is able to decompose one of the hardest plastic material to be decomposed and the most used one, which is polietilena.

Federica Bertocchini

Peneliti Institute of Biomedicine and Biotechnology of Cantabria

.....
including Bertocchini who is also in the profession.

As reported from www.mediaindonesia.com, the first research to use *Galleria Mellonella* was started in an accidental event when Bertocchini had a unique story with a beehive at her house. The event was when she put the larvae inside a closed-plastic bag and placed it in one of the house's rooms, whilst she continued to clean up the hive.

When she returned to the room, she found that the larva were scattered everywhere. They could get away after crunching out the plastic bag until it created holes. The plastic bag's surface was filled with holes after the larva were inside the bag for only around 40 minutes. After conducting a test lab, the researchers found that 100 *Galleria Mellonella* larva could devour

Percobaan yang dilakukan Bertocchini menunjukkan bahwa ngengat tersebut dapat memecah ikatan plastik dengan cara seperti mereka mencerna lilin sarang lebah. Secara alami, larva *Galleria Mellonella* hidup di lilin sarang lebah. Karena itulah kehadiran larva ini menjadi momok bagi peternak lebah di seluruh Eropa. Termasuk Bertocchini yang juga berprofesi sebagai peternak lebah.

Seperti dilansir www.mediaindonesia.com, pertama kali ia memulai penelitian tentang larva pengurai plastik ini karena ketidaksengajaan atas satu kejadian unik di sarang lebah di rumahnya. Kejadian tersebut terjadi saat dia meletakkan larva *Galleria Mellonella* tersebut di kantong plastik yang tertutup, dan meletakkan kantong tersebut di kamar rumahnya sementara dia menyelesaikan pembersihan sarang.

Saat kembali ke kamar ia menemukan larva-larva tersebut di mana-mana. Mereka berhasil lolos dengan cara mengunyah kantong hingga bolong secara cepat. Kantong plastik tersebut penuh dengan bolong setelah larva *Galleria Mellonella* terkurung di dalamnya selama sekitar 40 menit. Dalam tes laboratorium, peneliti menemukan bahwa 100 larva *Galleria Mellonella* dapat melahap 92 mg polietilena dalam waktu 12 jam.

Untuk memastikan bahwa larva *Galleria mellonella* tidak hanya mengunyah plastik menjadi potongan-potongan kecil, Bertocchini menumbuk beberapa larva dan mengoleskannya pada kantong plastik. Hasilnya, terbentuk bolongan-bolongan pada plastik-plastik tersebut.

"Kami telah menemukan bahwa larva serangga *Galleria mellonella* mampu mengurai salah satu material plastik paling sulit terurai, dan paling banyak digunakan: polietilena," kata Bertocchini seperti dikutip Wired.

Menurut ulasan nationalgeographic.com, kemampuannya mencerna kantong plastik polyethylene (PE) karena pada habitat alaminya, larva *Galleria Mellonella* (*beeswax*), suatu senyawa lemak yang sangat kompleks. Ikatan kimiawi karbon yang ada dalam struktur lilin Lebah menyerupai yang ada dalam PE, dan kemungkinan menjadi target penghancuran oleh

LARVA SI "TENTARA ORGANIK"

Larva - larva tersebut menjadi "tentara organik" yang bisa dikembangkan di Indonesia untuk mengatasi masalah sampah plastik.

LARVA GALLERIA MELLONELLA



- Larva *Galleria Mellonella* dapat memecah ikatan plastik dengan cara mencerna lilin sarang lebah.
- Ikatan kimiawi karbon yang ada dalam struktur lilin Lebah menyerupai yang ada dalam PE.
- Kemampuannya mencerna kantong plastik **polyethylene (PE)** karena pada habitat alaminya.



mikroorganisme yang ada dalam sistem pencernaan ulat.

TIDAK CUMA GALLERIA MELLONELLA

Ternyata, tak hanya larva *Galleria Mellonella* yang bisa mengurai sampah plastik. Larva *Tenebrio Molitor* atau Mealworms pun bisa melahap Plastik jenis PS (*styrofoam*) yang sulit diurai secara biologis. Di Indonesia, mealworms dikenal sebagai ulat Hong Kong dan biasa dijadikan pakan burung.

Para peneliti dari Beihang University Beijing dan Stanford University menemukan bahwa larva-larva *Tenebrio Molitor* memakan styrofoam sebagai satu-satunya sumber pakan mereka.

Laju kesintasan (survival) kelompok larva yang diberi makan styrofoam tidak berbeda nyata jika dibandingkan dengan kelompok larva yang diberi makan dedak. *Styrofoam* tersebut terdegradasi secara efisien menjadi biomassa larva, CO₂, dan kotoran Mealworms oleh sistem pencernaannya dalam kurun waktu kurang dari 24 jam.

Para peneliti tersebut menginvestigasi peranan

LARVA TENEBRIO MOLITOR

- Larva Tenebrio Molitor bisa melahap Plastik jenis PS (styrofoam) yang sulit diurai secara biologis.
- Styrofoam tersebut terdegradasi secara efisien menjadi biomassa larva, CO₂, dan kotoran Mealworms oleh sistem pencernaannya dalam kurun waktu kurang dari 24 jam.
- Dari sistem pencernaan larva, bakteri *Exiguobacterium sp. strain YT2* berhasil diperoleh, dan diketahui dapat membentuk lapisan biofilm serta membuat lubang-lubang kecil pada permukaan styrofoam. Dalam media cair, kultur *Exiguobacterium sp. strain YT2* dapat mendegradasi 7,4% styrofoam dalam kurun waktu 60 hari.



SOLUSI UNTUK MENGURANGI SAMPAH PLASTIK

Prinsip 3R

Mengelola sampah secara umum dengan memilah sampah organik dan non-organik



Hindari plastik

Mengurangi penggunaan peralatan atau perlengkapan dari bahan plastik sekali pakai dan menggantinya dengan :



92 milligrams (mg) of polietilena in 12 hours.

To make sure that *Galleria Mellonella* larva is not only able to crunch plastic to little pieces, Bertocchini then pounded some of the larva and spread it on a plastic's surface. And the same result emerged, holes.

"We've found that *Galleria Mellonella* larva is able to decompose one of the hardest plastic material to be decomposed and the most used one, which is polietilena," Bertocchini said as quoted from *Wired*.

According to the review from www.nationalgeographic.com, the larva's ability to digest a polyethylene plastic bag came from its natural habitat, where the place feeds them with wax that has a similar carbon backbone like the polyethylene. The wax is used to be the "target to be destructed" by a microorganism that lives inside the worm's digestion system.

NOT ONLY GALLERIA MELLONELLA

There is another larva beside *Galleria Mellonella*

that could decompose plastic trash. It is *Tenebrio Molitor* larva or known as mealworms, which could crunch a styrofoam-based plastic or one of the hardest plastic to be decomposed naturally. In Indonesia, mealworms are known as Hong Kong worm and usually used as bird's food.

Group of researchers from Beijing's Beihang University and Stanford University found that *Tenebrio Molitor* larva eats styrofoam as their only source of food.

The larva that was feed with styrofoam has turned out to have a similar survival rate with the larva that was feed with bran. The styrofoam will be degraded efficiently by the larva's digestion system to larva biomass, CO₂ and mealworms' feces in 24 hours.

The researchers then investigated the bacteria's role inside the *Tenebrio Molitor* larva's digestion system. From the system, the researcher obtained *Exiguobacterium sp.*

bakteri yang terdapat dalam sistem pencernaan larva *Tenebrio Molitor*. Dari sistem pencernaan larva, bakteri *Exiguobacterium* sp. strain YT2 berhasil diperoleh, dan diketahui dapat membentuk lapisan biofilm serta membuat lubang-lubang kecil pada permukaan styrofoam. Dalam media cair, kultur *Exiguobacterium* sp. strain YT2 dapat mendegradasi 7,4% styrofoam dalam kurun waktu 60 hari.

Larva-larva tersebut menjadi “tentara organik” yang bisa dikembangkan di Indonesia untuk mengatasi masalah sampah plastik.

SOLUSI JANGKA PANJANG

Walau kita bisa menggunakan larva sebagai ‘tentara organik’, solusi utama tetap terletak pada upaya kita mengurangi sampah plastik yang kita hasilkan setiap hari. Tak hanya sekedar menerapkan prinsip 3R (*reduce, reuse, recycle*) dalam kehidupan sehari-hari, tapi kita juga harus mampu mengelola sampah secara umum dengan memilah sampah organik dan non-organik.

Selain itu, yang terpenting, hindari penggunaan peralatan atau perlengkapan dari bahan plastik sekali pakai. Cobalah langkah kecil tapi rutin, seperti membawa tas belanja sendiri, menggunakan kotak makanan dan botol minuman yang dapat diisi ulang, dan memakai sedotan *stainless steel* yang dapat dicuci dan dipakai kembali. ▀

strain YT2 bacteria, which then was found to be able to create biofilm coating and to create small holes in the surface of styrofoam. In a liquid medium, Exiguobacterium sp. strain YT2 culture could degrade 7.4 percent of the styrofoam in 60 days time.

Therefore the larva could become “an organic soldier” that is possible to be developed as a tool to overcome the problem of plastic trash in Indonesia.

LONG TERM SOLUTIONS

Even though we have found the “organic soldiers” larva to beat the plastic trash problem, the main important solution is still depended on our efforts to reduce plastic trash that we produce every day. Not only by implementing the 3R principals (reduce, reuse, recycle) in our daily lives but we must also capable to organize our trash by sorting out the organic and non-organic trash.

Besides that, another important thing is to reduce the use of single-use plastic tools. Please do start with a small step but do it continuously, like bring your own shopping bag, using a reusable food box and bottle and also to use a stainless-steel straw, which could be cleaned up and reused. ▀



MUSICOOOL

Hematnya Energi, Hijaunya Bumi

HEMAT
20%



HEMAT ENERGI




HEMAT BIAYA
LISTRIK




RAMAH LINGKUNGAN



 Meet Up

 Priyo Widiyanto

 Priyo Widiyanto

BECKY TUMEWU : TERUS BELAJAR, TAMBAH JAM TERBANG



Siapa yang tak kenal Becky Tumewu. Walaupun saat ini wanita kelahiran Jakarta 48 tahun yang lalu tersebut jarang muncul di layar kaca, namun di era 90-an namanya berkibar setelah sukses berperan di sinetron komedi “Lenong Rumpi”. Founder TALKinc, sekolah presenter TV/MC dan public speaking tersebut sekarang fokus berada di belakang layar, membentuk generasi milenial menjadi presenter TV/MC yang andal dengan kapabilitas public speaking yang tidak diragukan.

Menurut ibu dua puteri ini, kunci berbicara di depan publik sebagai presenter atau public speaker berawal dari diri sendiri. “Artinya, kita harus nyaman dengan diri sendiri dulu. Di saat kita sudah nyaman dengan diri sendiri, dengan penampilan kita, maka dengan sendirinya tingkat percaya diri kita akan bertambah,” ujarnya.

Becky mengaku, di awal karier sebagai pembawa acara, ia juga banyak melakukan kesalahan. “Tapi dengan terus belajar dan menambah jam terbang, saya bisa jadi seperti sekarang,” tukasnya. ▀

Who doesn't know Becky Tumewi. Though, this woman who was born 48 years ago, rarely appeared on the screen, her name was well known in the 90s after successfully playing in comedy soap opera “Lenong Rumpi”. As a TALKinc founder, a TV presenter or MC and public speaking school, she focused on working behind the scenes, shaping millennial generation as a reliable TV presenter or MC with undisputed public speaking skill.

According to this mother of two daughter, the key to speaking in public as a presenter or public speaker starts from ourselves. “That is, we must be comfortable with ourselves first. If we're comfortable with ourselves, with our appearance, naturally our level of confidence will increase,” she said.

Becky admitted, at the beginning of her career as a host, she made many mistakes. “But by keep learning and gaining experiences, I can be as I am,” she said. ▀

Profil Singkat

Nama Lahir :

**Ruth Ludwina Rebecca
Tumewu**

Nama Panggung:

Becky Tumewu

Tempat, Tanggal Lahir :

Jakarta, 27 Mei 1970

Pekerjaan :

**Aktris, Presenter,
Penyanyi**

“Artinya, kita harus nyaman dengan diri sendiri dulu. Di saat kita sudah nyaman dengan diri sendiri, dengan penampilan kita, maka dengan sendirinya tingkat percaya diri kita akan bertambah.”

SHIREEN
SUNGKAR :
RAMADAN
FOKUS
IBADAH
BERSAMA
KELUARGA

*TO BE WITH
MY FAMILY
IS MY AIM
IN THIS
RAMADHAN*



Siapa yang tak kenal dengan Shireen Sungkar, aktris yang terkenal berkat sinetron “Cinta Fitri” yang booming hingga tujuh season dari 2007 – 2011. Kini, Shireen sudah menjadi istri aktor Teuku Wisnu dan memiliki tiga anak.

Shireen bercerita, setiap kali Ramadan tiba, ia dan suami sepakat tidak mengambil banyak pekerjaan yang dapat mengganggu kebersamaan dengan keluarga dan dalam menjalankan ibadah.

“*Alhamdulillah* ada beberapa kerjaan yang sudah selesai tapi belum sempat tayang dan tayangnya saat Ramadan. Jadi bisa lebih banyak ngurusin anak-anak dan suami. Jaman dulu sebulan *full* kerja, sekarang sudah cukup,” tutur ibu dari Teuku Adam Al Fatih, Cut Hawa Medina Alfatih, dan Cut Shafiyah Mecca Alfatih.

Walaupun anak-anaknya masih kecil, ia dan suami tetap mengajarkan kepada mereka arti dari puasa serta sejarah puasa Ramadan tersebut.

“Ya, pelan-pelan dikasih tahu sambil bercerita. Biar mereka *happy*,” tutupnya. ▀

Who does not know Shireen Sungkar? The famous actress who gained her fame in the local soap opera called “Cinta Fitri”, which lasted for seven seasons from 2007 to 2011. Shireen is now the wife of Indonesian actor Teuku Wisnu and has three children.

Shireen said that she and her husband agreed to take fewer jobs during Ramadhan as past experiences of having more jobs during the season will only disturb her family time and also it will interrupt their time for worship.

“Thanks to God [*Alhamdulillah*] that a number of my [acting] jobs have been completed, but it’s not yet on air and it’ll only to be screened during Ramadhan. Hence, I’ll have more time to take care of my children and my husband. Previously I spent a whole month to work, but now it’s enough,” said Shireen who is the mother of Teuku Adam Al Fatih, Cut Hawa Medina Alfatih and Cut Shafiyah Mecca Alfatih.

Even though their children are still young, Shireen and her husband keep on teaching them about the meaning of fasting and also the history of Ramadhan’s fasting.

“Yes [we teach our children about fasting], but in gradual pace through story-telling, so they will be happy to hear it.” she explained. ▀

Profil Singkat

Nama Lahir :
Shireen Sungkar

Tempat, Tanggal Lahir :
Jakarta, 28 Januari 1992

Pekerjaan :
Aktris, Penyanyi

“*Alhamdulillah* ada beberapa kerjaan yang sudah selesai tapi belum sempat tayang dan tayangnya saat Ramadan. Jadi bisa lebih banyak ngurusin anak-anak dan suami. Jaman dulu sebulan *full* kerja, sekarang sudah cukup.”

Mencari Ketenangan DI DESTINASI WISATA BINAAN PERTAMINA

Salah satu yang dinantikan keluarga menjelang Lebaran adalah mudik. Biasanya, selama mudik tersebut, jalan-jalan alias piknik menjadi salah satu agenda wajib yang dijadwalkan. Agar kegiatan *refreshing* tersebut benar-benar menjadi momen yang tepat untuk merelaksasi badan dan pikiran bersama keluarga, cobalah ke destinasi wisata bernuansa alami yang dibangun Pertamina di beberapa kota di Pulau Jawa yang menjadi tujuan mudik.





*Finding
Serenity*

IN PERTAMINA'S TOURISM DEVELOPMENT PROJECTS

One of the things that a family has been waiting during the Lebaran Holidays is the mudik (annual mass migration). Usually during the mudik, picnic is one of the obligatory activities to be done. However, to get the best moment for your refreshing activities and to relax your body and mind with your family, do visit a number of Pertamina's Tourism Development Projects, which have a natural nuance, at some of the cities in Java Island, one of the mudik destinations.

BANTEN

Mencari ketenangan di Banten dengan suasana yang sangat alami bisa Anda peroleh di Kampung Badui. Di kampung yang terletak di Kabupaten Lebak, Banten, Anda akan merasakan aura kental adat Leluhur Sunda, suasana yang jauh dari hiruk pikuk kota, tenang, tenteram, dan jauh dari gemerlap modernisasi.

Jika ingin berkunjung ke sana, sebaiknya perhatikan waktu atau bulan yang diperbolehkan atau tidak diperbolehkan. Sebab, di Badui Dalam memiliki aturan sendiri soal jadwal kunjungan. Bulan Kawalu merupakan masa panen berturut-turut dari bulan Februari-April.

Akses menuju ke sana dari Jakarta dapat menggunakan kereta, bus atau kendaraan pribadi. Jika menggunakan bus, cobalah mencari jurusan ke Terminal Mandala. Setelah sampai di Mandala, dilanjutkan naik elf menuju Ciboleger. Jika tidak ada, Anda bisa naik angkutan umum menuju terminal Aweh baru dilanjutkan naik mobil menuju Ciboleger.

Cara kedua dengan kereta api, dari Stasiun Tanah Abang menuju Stasiun Rangkasbitung. Setelah tiba di Rangkasbitung dapat dilanjutkan naik angkutan umum menuju terminal Mandala kemudian dilanjutkan menuju Desa Ciboleger Badui Luar.

Desa Ciboleger merupakan pintu gerbang menuju Kampung Badui, tempat terakhir kendaraan diperbolehkan masuk. Tempat ini merupakan tempat pendaftaran untuk berwisata di sana, Anda harus mengisi buku tamu terlebih dahulu. Di tempat ini juga disediakan porter atau pengangkut barang dari suku Badui sendiri. Untuk menuju tempat tinggal suku Badui dari Desa Ciboleger dapat dilalui dengan jalan kaki menyusuri jalan setapak. Terdapat pemandangan perkebunan, sungai, perkampungan Badui luar, hutan lindung, jalanan berliku, menanjak dan menurun yang menambah keseruan selama perjalanan. Untuk memasuki suku Badui Dalam membutuhkan waktu sekitar 5-6 jam dengan berjalan kaki.

Selain melalui Ciboleger, sejak akhir November 2017, Pertamina membuka jalur baru menuju Desa Badui Dalam melalui Cijahe. Di sini, Pertamina membantu pembangunan fasilitas umum penunjang Desa Wisata Badui. Hal ini dilakukan Pertamina untuk mengembangkan potensi masyarakat adat Badui baik dari segi pariwisata maupun ekonomi kreatif.

Jalur baru tersebut berada di Desa Kebon Cau Kecamatan Bojongmanik, Kabupaten Lebak. Di lokasi itu, terpampang Gapura Desa Wisata, Saung Informasi, akses jalan batu Cijahe-Cibeo dan Danau Dandang-Desa Campaka, pembangunan jembatan, toilet umum dan instalasi tempat sampah serta pipanisasi jalur air bersih.





BANTEN

You can have a peaceful and also a natural-feel place in Badui Village, Banten. You can feel the original tradition of Sundanese Ancestor (Leluhur Sunda) in the village that is located in Lebak Regency, Banten. The place will offer you the quietness, a pause from modern life and from the city's daily bustle.

However, you must pay attention to the travel date as there are moments or months when tourists are not allowed to visit the village. In Badui, there are several regulations about visitation time. Kawalu Month is a non-stop harvesting period from February to April.

To reach the place, you can use a train, bus or with your own vehicle. If you opt for a bus, find the bus that travels to Mandala Terminal. After you arrived in the terminal, you could use elf (mini-bus) to Ciboleger or you could use other public transportation to Aweh Terminal and then continue your travel with a car to Ciboleger.

Going by train is the next possible option as you could depart from Tanah Abang Station to Rangkasbitung Station. After that, you shall continue your travel with public transportation that drives you to Mandala Terminal and then travels from there to Ciboleger Badui Luar Village.

The village is the main gate to reach Badui Village and

also the last place for any vehicle to be allowed in. It is also the registration place for Badui Village. Any visitor should fill in the registration book first before they could enter the village.

In the main gate, you could also find porters, who are the Badui people. From Ciboleger Village to the home of Badui people, you should walk by following the existing footpaths. During the walk you will be accompanied by beautiful sceneries, starting from the plantations, rivers, the Badui Luar Villages, protected forest, winding roads, uphill and downhill roads. You need 5 to 6 hours of walking to reach the home of Badui Tribe.

Since the end of November 2017, Pertamina has opened a new route to reach Badui Village through Cijahe. In this route, Pertamina helped to build the supporting public facilities. By doing so, Pertamina hoped it could develop the potentials of Badui Tradition in terms of tourism or creative economy.

The new route is located in the Kebon Cau Village, Bojongmanik Subdistrict, Lebak Regency. In the location, you can see the gate for the tourism village, an information center, stone-based road accesses from Cijahe to Cibeo and Dandang Lake to Campaka Village, a bridge construction, public toilets, trash can installation and a pipeline of clean water.

MENUJU KAMPUNG BADUI

Kampung Badui

Jakarta

1. Naik elf menuju Ciboleger

Berjalan kaki 5-6 jam menuju suku Badui Dalam

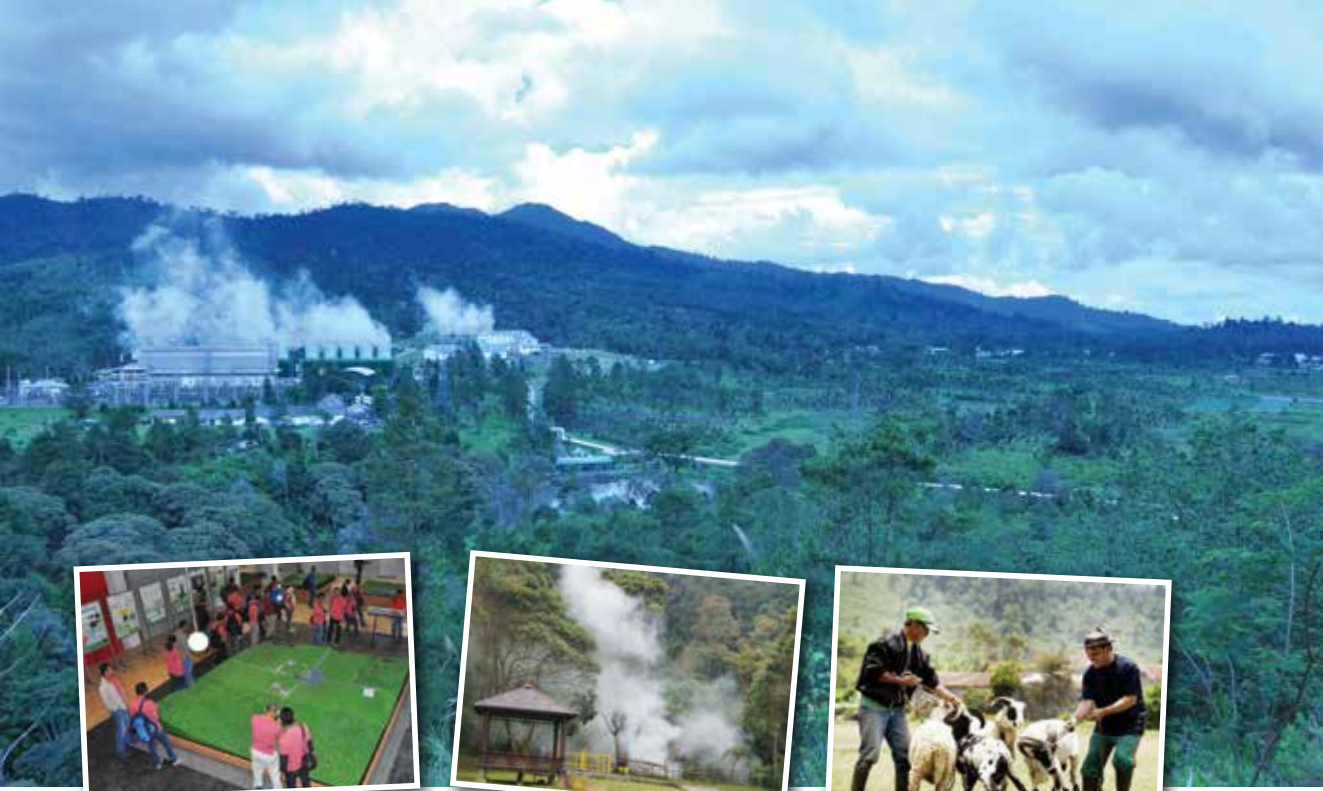
Jika tidak ada elf, terdapat kendaraan umum menuju terminal Aweh dan dilanjutkan menuju Ciboleger

Bus jurusan Terminal Mandala

2. St. Tanah Abang ke St. Rangkasbitung

- Naik angkutan umum menuju terminal Mandala lalu ke Desa Ciboleger Badui.
- Jalan kaki 5-6 jam menuju suku Badui Dalam

3. JALUR BARU : Di Desa Kebon Cau Kecamatan Bojongmanik, Kabupaten Lebak. Terdapat akses jalan batu dari Cijahe-Cibeo dan Danau Dandang, Desa Campaka.



JAWA BARAT

Jika Anda dari atau menuju ke Jawa Barat, Anda bisa mampir sejenak singgah ke Desa Wisata Geothermal Kamojang, di Garut. Desa wisata ini merupakan wisata yang ramah keluarga yang diinisiasi oleh PT Pertamina Geothermal Energy dengan tujuan untuk mengembangkan aspek perlindungan lingkungan, edukasi, pelestarian budaya dan meningkatkan keekonomian masyarakat sekitar. Di desa tersebut Anda bisa menjelajahi Kawasan Wisata Alam Kawah Kamojang, Wisata Pendidikan Geothermal Information Center, Wisata Argo, Wisata Budaya, Wisata Air, dan Wisata Penangkaran Elang.

Desa Wisata Geothermal Kamojang berlokasi di Desa Laksana, Kecamatan Ibum, Kabupaten Bandung dan Desa Sukarya, Kecamatan Samarang Kabupaten Garut. Dari Bandung terdapat dua rute untuk menuju destinasi tersebut, yaitu melalui Majalaya, atau melalui jalur konvensional melalui Nagreg. Jika menggunakan kendaraan pribadi melalui Majalaya, jarak yang ditempuh akan lebih singkat, sekitar 18 km dari alun-alun Majalaya. Sementara bila melalui jalur biasa Nagreg jarak yang ditempuh lebih panjang karena harus melewati Kota Garut lebih dahulu. Jarak dari Kota Bandung menuju Garut sampai Kawah Kamojang sekitar 97 km.

Ada satu lagi obyek wisata di daerah Jawa Barat yang patut Anda kunjungi bagi yang mudik melewati Jalur Pantura (Pantai Utara). Jika Anda melewati Indramayu, santai sejenak di salah satu objek wisata binaan CSR KEHATI Pertamina Refinery Unit VI Balongan di Karangsong. Saat ini ekowisata mangrove telah menjelma menjadi Mangrove Center Wilayah Indonesia Barat dan Edupark bagi para pengunjungnya. Mulai dari pantai, hutan mangrove, hingga arboretum yang merupakan lokasi pengumpulan berbagai jenis spesies tanaman mangrove dan vegetasi pantai.

Pantai Karangsong berada di sebelah utara Kota Indramayu tepatnya di Desa Karangsong, Kecamatan Indramayu, Indramayu, Jawa Barat. Di pantai ini dapat menikmati keindahan pemandangan laut Jawa yang luas. Terdapat saung kecil dari bambu sepanjang Pantai Karangsong yang dapat dijadikan tempat istirahat.

Akses untuk menuju destinasi wisata jika dari Jakarta, Anda dapat menuju Lohbener kemudian menuju Bangkir sampai Jembatan Cimanuk dekat Masjid Agung dan Alun-Alun Indramayu. Jika sudah berada di sana, Anda tinggal belok kiri mengikuti Jalan Siliwangi untuk sampai di gapura besar Karangsong, sekitar 3 kilometer untuk sampai lokasi.

WEST JAVA

If you are from or to West Java, you could stop by to the Kamojang Geothermal Tourism Village in Garut. The tourism village is a family-friendly destination that was initiated by PT Pertamina Geothermal Energy with an aim to develop the aspects of environmental protection, education, cultural preservation, and local economic development. In the village, you could explore the natural tourism area of Kamojang Crater, the educational tourism of Geothermal Information Center, Agriculture Tourism, Cultural Tourism, Water Tourism, and Eagle Conservation Tourism.

Kamojang Geothermal Tourism Village is located in two villages of Laksana Village, Ibun Subdistrict in Bandung Regency and Sukakarya Village, Samarang Subdistrict in Garut Regency. There are two routes to the village if you are coming from Bandung, namely through Majalaya or through a conventional route of Nagreg.

You will have a shorter distance or about 18 kilometers (km) when you are using the route from Majalaya City Center. However, if you used a common route of Nagreg, the distance will be much farther as it has to go through Garut first. You need to travel about 97 km from Bandung to Garut and then to Kamojang Crater.

There is one other tourism destination along the Pantura (Pantai Utara) or North Beach route that is worth to visit during a mudik trip in the West Java region. If you are going to pass Indramayu, you could have a moment of rest in one of the Pertamina's tourism development projects called CSR Kehati Pertamina Refinery Unit VI Balongan in Karangsong.

Their mangrove eco-tourism has now become the Mangrove Center in Western part of Indonesia and Edupark for the visitors. The place has a beach, a mangrove forest and also an arboretum, which has a role as a habitat for many species of mangrove plants and beach vegetations.

Karangsong Beach is located on the north side of Indramayu City. It is specifically located in the Karangsong Village, Indramayu Regency in West Java. In this beach, one could enjoy the beauty of the Java Sea, which spans widely.

For those who want to go to the beach from Jakarta, you could first drive to Lohbener and then to Bangkir before continuing from there to Cimanuk Bridge, which is located near Masjid Agung (the Great Mosque) and Indramayu City Plaza. From the plaza, you only have to turn left and follow the Siliwangi Road to reach the gate of Karangsong, which takes around 3 km to reach the location.





JAWA TENGAH

Ingin mencoba berlibur ke waduk dengan suasana perbukitan indah nan sejuk? Cobalah ke embung Banjaroyo, waduk mini yang berada di atas ketinggian Kalibawang Kulonprogo, Yogyakarta.

Embung Banjaroyo merupakan sebuah waduk mini yang berlokasi di Jl. Kalibawang Sendang Sono, Banjaroyo, Kalibawang, Kabupaten Kulon Progo, Yogyakarta. Wilayah ini berada tepat di Kulonprogo bagian utara, sekitar 38 km dari titik nol Yogyakarta jika ditempuh melalui Jalan Godean melalui Kenteng, Nanggulan. Akses menuju lokasi ini jika dari arah Kota Yogyakarta ataupun Magelang ialah masuk ke daerah Kalibawang Kulonprogo. Ketika sampai *Rest Area* Pasar Bendo Dusun Potronalan, Anda akan menemukan Jalan Menaik di samping pasar. Letak waduk terdapat di sisi kiri jalan.

Waduk mini tersebut menjadi sarana pengairan bagi 20 hektar kebun durian di sekitarnya.

Setiap musim durian, akan ada festival durian sehingga pengunjung puas menikmati durian menoreh khas Kalibawang. Tidak merogoh kocek dalam, untuk memasuki area ini Anda hanya dikenakan tiket parkir mobil Rp 5.000 dan parkir motor Rp 2.000.

Atau jika Anda berlibur ke Candi Borobudur, jangan lupa mampir ke wisata pedesaan Omah Guyub

Wringin Putih, yang hanya berjarak sekitar 2,3 km dari kawasan candi tersebut.

Dari Yogyakarta, Anda dapat menuju Jalan Magelang. Setelah sampai di pertigaan jalan ke Borobudur belok kiri dan ikuti petunjuk arah yang sudah tersedia. Setelah sampai di Candi Borobudur, Anda dapat meneruskan perjalanan ke Jl. Medang Kamulan/Jl. Sudirman, kemudian belok kiri ambil Jl Sentanu untuk menuju Wringin Putih. Dari Borobudur sampai di Balkondes Wringin Putih diperkirakan sekitar 10 menit.

Omah Guyub Balkondes Wringin Putih yang merupakan salah satu binaan Pertamina menyediakan 10 rumah anjungan dengan jumlah 20 kamar aneka jenis, terdiri dari 4 rumah tipe *single* (1 *bedroom*), 2 rumah tipe *double* (2 *bedroom*), 4 rumah tipe *family* (3 *bedroom*). Di wilayah ini juga terdapat lahan yang dapat digunakan untuk, membuat, latihan menari, Kebun Bambu Klataan, Eriana Batik, serta beragam wisata kuliner tradisional seperti clorot, tiwul, bubur candil, minuman badek. Selain itu terdapat fasilitas lahan panahan tradisional atau jemparingan dengan jarak sasaran 50 meter. Pengunjung juga dapat menikmati uniknya mobil VW yang dahulu digunakan sebagai mobil dinas camat pada tahun 1972-an.

CENTRAL JAVA

Craving to try a holiday in a water reservoir that is surrounded by hills along with its chilly air? Do try Bajaroja Embung or a small reservoir that is located on top of Kalibawang Kulon Progo in Yogyakarta.

In more detail, Bajaroja Embung is located in Kalibawang Sendang Sono Street, Banjaroja, Kalibawang, Kulon Progo Regency in Yogyakarta. The area is exactly located in the north-side of Kulon Progo, which is 38 km from the zero-point of Yogyakarta City if you using the route of Godean Street through Kenteng, Nanggulan.

If you are traveling from Yogyakarta or Magelang then the access to Bajaroja Embung is the Kalibawang Kulon Progo area. After you arrived in the rest area of Pasar Bendo Dusun Potronalan (Bendo Market in Potronalan Village), you will find Menaik Road, which is located beside the market. The water reservoir is then on the left side of the road.

The mini reservoir has a role to water a 20-hectare durian plantation that has been growing near the site.

There will be a Durian Festival during the harvesting season and visitors could enjoy the original taste of Kalibawang Durian. It is not that expensive to enter the festival as you only have to spend Rp 5,000 for a car parking ticket and Rp 2,000 for motorbike.

Next, for those who are on holiday in Borobudur Temple, you could have a countryside-experience

offered by Omah Guyub Wringin Putih village, which is only a 2.3 km drive from the temple.

To reach the village from Yogyakarta, you could drive to Magelang Street and then take left after you have arrived at Borobudur Street Junction. After that follow the road signs until it brought you to Borobudur Temple and then continue your drive to Medang Kamulan Street or Sudirman Street before taking left to Sentanu Street, which will take you to Wringin Putih. The total trip from Borobudur to Balkondes Wringin Putih takes around 10 minutes.

Omah Guyub Balkondes Wringin Putih, which is one of Pertamina's development projects, has 10 anjungan houses with a total 20 rooms of various characteristic. Four of the ten houses are a single-type house or a house with only one bedroom, two double-type houses with two bedrooms and the rest are family-type houses with three bedrooms.

The area also offered a space that could be utilized for practicing batik culture, dancing practice, Klataan Bamboo Garden, Eriana Batik and various traditional culinary tourism like clorot, tiwul, candil porridge and badek drinks. Besides that, there is also a ground for traditional archery practice or called jemparangan that has a 50-meter target distance.

Lastly, the visitors could also enjoy the uniqueness of VW car, which previously used by the past sub-district head as his official car around the year of 1972.





JAWA TIMUR

Berniat mudik ke Surabaya? Tempat ini menjadi salah satu wisata yang cocok untuk menghirup udara yang segar di Kota Pahlawan. Cobalah ajak keluarga ke Kampung Hijau yang terletak di RW 04 Kelurahan Jagir, Kecamatan Wonokromo, Kota Surabaya. Anda bisa belajar bagaimana cara pengelolaan wilayah, mulai dari cara menjaga kebersihan lingkungan hingga bercocok tanam walaupun berada di lahan yang cukup minim.

Dengan kegiatan dan program tersebut kampung hijau ini dinobatkan sebagai kampung dengan Inovasi Terbaik di Tahun 2015. Daerah ini juga menjadi tujuan studi banding perwakilan sejumlah Duta Besar negara sahabat sebagai contoh lokasi dengan pengelolaan lingkungan yang baik.


Kecamatan Wonokromo letaknya tidak jauh dari pusat Kota Surabaya. Untuk menjangkaunya, Anda bisa menggunakan perjalanan darat dengan menempuh waktu selama 20 menit via jalan Raya Malang – Surabaya.

Dari Surabaya kita menuju ke Banyuwangi. Di sana ada destinasi wisata edukasi Konservasi Penyu di Pantai Cemara, Banyuwangi. Anda akan disuguhkan pemandangan pantai nan indah, deburan ombak, ditambah barisan pohon cemara yang akan membuat pikiran dan hati Anda merasa tenang. Dijamin, lelah dan penat yang timbul akibat rutinitas aktivitas sehari-hari akan hilang begitu menginjakkan kaki di pantai Cemara.

Tak hanya melihat pantai, di sini Anda dan keluarga juga akan mendapatkan pengetahuan mengenai proses pengembangbiakan penyu, mulai dari pencarian telur yang terpendam di dalam pasir pantai, hingga proses penetasan. Dengan begitu, pengunjung akan teredukasi serta semakin paham dan menghargai peran penting penyu dalam menjaga keseimbangan alam.

Tempat penangkaran penyu ini merupakan bantuan dari Pertamina. Sejak 2013 lalu, Terminal Bahan Bakar Minyak (TBBM) Tanjungwangi bersama Dinas Perikanan, Kelautan, dan Ketahanan Pangan Pemkab Banyuwangi memberdayakan masyarakat sekitar pantai untuk melestarikan lingkungan sekitar dengan melakukan penanaman pohon cemara dan konservasi penyu.

Jika ingin datang, lokasi Pantai Cemara ini berada di Dusun Rowo, Desa Pakis, Kecamatan Banyuwangi. Bagi Anda yang menggunakan transportasi kereta Anda bisa turun di Stasiun Banyuwangi Baru. Sedangkan bagi yang menggunakan bus, bisa turun di terminal Sritanjung. Baik di terminal maupun stasiun terdapat pilihan, Anda bisa menggunakan angkutan umum ataupun ojek motor untuk menuju Pantai Cemara.

Itulah sebagian tujuan wisata yang menjadi binaan Pertamina. Suasana pegunungan atau pantai, pasti bisa membuat Anda sekeluarga rileks kembali menikmati liburan ketika mudik nanti. 

EAST JAVA

Going for mudik to Surabaya? This place has become one of the perfect tourism destinations to breath fresh air in the "City of Heroes". Try to bring your family to the Kampung Hijau (Green Village), which is located at the Community Unit (RW) No.4 in Jagir Sub-district, Wonokromo District, Surabaya. In this place, you could learn how to manage an area, starting from taking care of the environment to do a farming in a limited land.

Through those activities and programs, the village managed to win the award as the Village with the Best Innovation in 2015. The village also has been visited by a number of neighboring countries' ambassadors as a perfect comparative study site due to its good environmental management.

Wonokromo District, which is located near the main center of Surabaya, could be reached by a land-based transportation in a 20-minutes ride through the street of Raya Malang-Surabaya.

Now we moved from Surabaya to Banyuwangi, which has an educative tourism destination of turtle conservation in the Cemara Beach, Banyuwangi. In the area, you will be served with beautiful sceneries of the beach, waves and a row of pine trees that will calm your mind and heart. It is an assurance that your exhaustion and fatigue, which came from your daily activities, will be vanished once you set your foot on Cemara Beach.

Not only the beach, but you and your family could be enriched with the information about the breeding process of turtles, starting from the phase to find eggs buried inside the beach's sands to the hatching phase. By doing so, the visitors could be more educated and to appreciate more the turtles' role in keeping the nature in balance.

The turtle conservation center is developed with the help from Pertamina. Since 2013, Tanjungwangi Fuel Terminal (TBBM) with the Fisheries, Marine and Food Security Agency of Banyuwangi Regency Administration has been empowering the local people to preserve their surrounding environment by planting pine trees and to have turtle conservation.

If you have an intention to visit the place, the Cemara Beach is located in Rowo Hamlet, Pakis Village in Banyuwangi Sub-district. For those who opt to use a train to visit the beach, you can drop off at Banyuwangi Baru Station. Meanwhile for those who want to use a bus should drop off at Sritanjung Bus Terminal. From both options, you can continue to the beach by using public transportations or a motorcycle taxi (ojek).

These are some of the Pertamina's Tourism Development Projects. The feel of mountains or beach will definitely make you and your family to be able to relax and to enjoy the holiday during your mudik trip. 🚩



TIPS & TRICK SAAT BERWISATA

Berikut ini beberapa tips yang harus dilakukan sebelum mengunjungi perkampungan suku Badui:

1. KONDISI BADAN FIT

Pastikan fisik tubuh dalam keadaan yang prima agar dapat menikmati tempat wisata.

2. CEK KENDARAAN

Cek kondisi kendaraan , pastikan kondisi kendaraan prima agar dapat melakukan perjalanan wisata sesuai rencana

3. Mencari Informasi Mengenai Tempat Wisata yang Akan Dituju

Saat melakukan perjalanan disarankan untuk mengecek jarak tempuh dan rute perjalanan yang akan dilalui. Mencari informasi sebanyak-banyaknya mengenai biaya, tempat makan dan oleh-oleh dilokasi wisata.





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