



safe, reliable and environmentally responsible.

We grasp the market, master the skills and develop the tools to help customers reduce project risk and maximise value. We

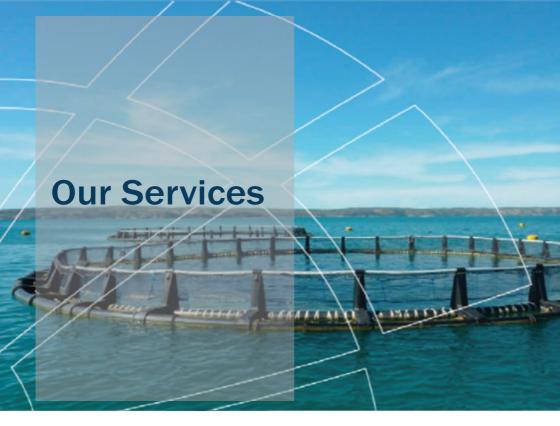
Helping our customers optimising asset and fulfill regulatory requirments at every phase of the project lifecycle.

succeed through:

Combining our deep sector and regional knowledge with expertise in economics and finance, design, engineering, environmental sciences, naval architecture, risk management and technical modelling.

Aiming to add value to our communities and environment in which we operate.

BMT consultants are hiahly specialised within the core markets we serve. These expertise have been cultivated through extensive educational and professional experiences. We understand your business because we ourselves area part of it. Together our consultants make up a diverse group of experts in science and commerce: engineers, naval architects, chemists, technologists, as well as business strategists and economists. It is through this unique mix that we develop fresh perspectives and retain the intellectual agility to continuously innovate and evolve our offerings to clients .



# **Environmental Impact Assessment and Permitting**

Each activity that has environmental impacts is required to obtain a permit to overcome the plausible adverse impacts, and AMDAL is one of them. Therefore, an environmental impact assessment study is required before the permit is issued.

BMT's expertise in this area is built upon our deep understanding in and direct experience with these local. We have an established relationship with the Indonesian Minister of Environment and Forestry (KLHK). The AMDAL process involves several stages and includes client, consultant and members of the public.

Consultant hold certification from the National Board of Certification Profession (BNDP) for the AMDAL experts. The trainings are from level A to level C. Provider of Environmental Document Compilation services of LPJP from the Indonesian Minister of Environment and Forestry (KLHK). The minimum requirement to acquire this certification is to have a minimum of 2 RTPA certified experts.

## **Case Studies**

ENI is an Italian oil and gas company that are supported by BMT for its AMDAL process for gas industry development and production in Jambo Aye Utara Blok in Kreungmane, Aceh

Pertamina is an Indonesian oil and gas company that are supported by BMT for its AMDAL process for oil mining in Badik field in Bunyu Island, North Kalimantan.

# **Social Impact Assessment**

#### **Social Perception Study**

To observe the existing local society condition, we deploy social perception study in terms of the local citizens' social economy aspect, health, religion, cultural and tradition. This part is usually conducted by doing in-depth interview with several local citizens in several survey points.

#### **Field Surveys**

We also assess the existing social condition through field survey that consists of basic information regarding the local citizens' household, family members, source of income, daily activities (depends on the surrounding environment condition), level of education for both parents and children, economic condition (i.e. income amount, etc.

## What We Delivered

The social impact assessment will start with observation of the basic social information, then moving on to the local citizens' economy, education and health condition, then at the last part is the perception study named in-depth interview. We put the perception study for the last part because this in-depth interview takes the longest time and we have to be efficient with the time we use. If we do not have enough time, the perception study will have to be rearranged.

Furthermore, our API social economy sector could deliver the social demography condition of related areas that are needed for the related project. We use questionnaires, in-depth interviews and field survey to complete the data. Our scope of work are follwing the ISO 9001 when we conduct the social impact assessment.



# **Environmental Monitoring**

Environmental monitoring is undertaken when monitoring activities on several specific parameters and matrices in a certain oil and gas surrounding environment are needed to fulfill regulation requirements related to the companies permit to work.

BMT has a proven record in addressing today's engineering and environmental issues.

Our dedication to developing innovative approaches and solutions enhances our ability to meet our client's most challenging needs.

#### Field Data Monitoring and Sampling

Our field monitoring and sampling services division conducts water, surface water, wastewater, groundwater, sea water, sediment, soil, sludge and air monitoring and sampling. EMT strives to comply with the myriad of environmental regulations that impact our clients' operations.

The way we conduct our field data monitoring is to produce our data through our QA/QC lab that consists of field data and lab analysis results following the standard of ISO 17025 – 2017. Our sampling and analysis method SOP are using the standard methods from Indonesian National Standard (SNI). However, if SNI does not have the required SOP, then our BMT Lab will adopt the standard method of Environmental Wastewater (SMEWW) / USEPA...

# **BMT's in-house Laboratory**

BMT's Laboratory provides a comprehensive range of environmental monitoring sampling and analyses with a solid commitment to quality and customer service. Both sampling and laboratory testing are performed in a modern laboratory, with qualified professionals and technology.

Our laboratory pecialises in analysis of any parameters of environmental contaminant in water, surface water, groundwater, wastewater, sea water, sediment, soil and sludge, as well as analysis of ambient air, air emission and industrial hygiene of workplace.



#### **Industrial Hygiene**

Few technology has been found in the production process that can eliminate the hazards of the work environment on occupational health. The negative impact of these hazards can cause occupational diseases (PAK) caused by exposure to chemicals and biological as well as physical hazards in the workplace.. The purpose of measuring the work environment: that is conducted by BMT are:

Evaluate the conditions of the work environment whether the workplace is dangerous; to obtain work environment data which will then become reference data to eliminate or at least reduce the impact of hazards due to the company's operational activities operasional; Prevent and maintain the health and safety of workers and company assets.

## **Metocean Services**

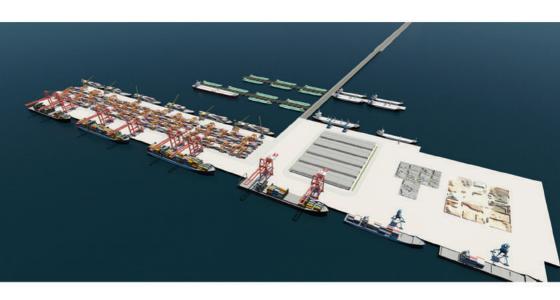
Metocean feasibility studies are a combination of meteorological and oceanography analytical studies, consist of several surveys and design. Our Metocean survey is using Acoustic Doppler Current Profiler (ADCP) to record and analyses current wave data in the ocean.

The Metocean design criteria can help to enable designs that can withstand local condition, for example breakwater design, offshore and near-shore structure, floating structures and pipelines. For the example, BMT has completed the Metocean survey in ENI Arguni I Ltd, and the survey data result will be useful for defining and analyzing Metocean climatic and extreme conditions for onsite activity during drilling using swamp barge riq and jack up riq.

## **Ports**

BMT offers an extensive portfolio of planning, design and assessment services for transport projects and supporting infrastructure. Services range from site selection, feasibility studies and concept designs to traffic impact assessments (TIA) and temporary traffic management (TTM) schemes, as well as detailed traffic simulation and network modelling studies.

By working closely with economic and environmental specialists, our transport experts provide customers with robust economic assessments for transport and logistics proposals, including green transport solutions, such as a port design, market and commodity survey related to the port project, terminal survey and design and Agribulk review survey.





BMT Asia Indonesia have done 6 AMDAL and 82 UKL-UPL which includes:

- Land Seismic Investigation Activities
- Offshore Seismic Investigation Activities
- Land Exploration Drilling
- Offshore Drilling Oil and Gas Exploration
- Oil and Gas Field Development Limited in the Army
- Oil and Gas Field Development in Offshore
- Environmental Monitoring in the Field

In addition to Amdal and UKL-UPL, BMT Asia Pacific Indonesia also have done some activities, among others:

- 1. Oil Spill
- 2. Port Engineering
- 3. Bathymetric Survey
- 4. Marine Surveying Services, Survey of Fish trap and Fish Attracting Devises
- 5. Environmental Monitoring Services
- 6. Metocean Data Gatthering Services
- 8. Dumping Permit
- 9. Environmental Laboratory Analysis

## **Clients**

Chevron Indonesia Geothermal Chevron Indonesia Company Pearl Oil Eni Indonesia

Santos Anadarko

BP West Java

Zaratex N.V.

Titan Resources

TOTAL E & P Indonesie.

Pertamina EP Cepu

PHE Nunukan Company

Medco E&P

Exxon Mobil Cepu Limited

IPC / Pelindo 2

Husky-CNOOC Madura Limited

Shell Indonesia

Techwin Energy

Petronas Carigali

Genting Oil

Pelindo 4

Chevron Pacific Indonesia

PHE ONWJ

Premier Oil

Pertamina EP Tambun

PT Novartis Indonesia

PT Actavis Indonesia

PT Soho Industri Pharmasi

## **Company Work Experiences**

#### 2018

**UKL UPL Monitoring Project Shell** 

**Environmental Analysis Report CNOOC** 

Environmental Monitoring Service Pertamina Hulu Kalimantan Timur

Environmental Baseline Assessment Repsol

UKL-UPL Drilling Exploration PT Medco EP Indonesia

#### 2019

Full Mission Bridge Nalla Rekayasa Teknologi Environmental Permit (Seismic 3D) Pertamina Tuban East Java UKL UPL Study Service PT Shell Manufacturing Indonesia UKL UPL Study and Environmental Permit Services Repsol East Jambi

#### 2020

Dumping Permit Parang-2 and Parang-3 PHE Nunukan Company Environmental Performance and Reporting Program Premier Oil Environmental Study and Socio Services PHE ONWJ Environmental Monitoring Supreme Energy Muara Laboh Metocean Design Criteria and Air Gap Analysis PT Medcoenergi Tbk

#### 2021

Environmental Monitoring Pertamina EP Tambun Field Environmental Monitoring Supreme Energy Rantau Dadap



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