

# ASEAN Research Digest

## SPECIAL EDITION

Research Partner: **BAIN & COMPANY** 



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## ASEAN SHOULD CREATE A STRONG SUSTAINABLE INDUSTRIAL ECOSYSTEM FOR THE REGION'S EXTRACTIVE INDUSTRY

Lifting-the-Barriers Report 2014: Minerals, Oil and Gas

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## OVERVIEW



RETAIL



LEGAL & TAX



FOOD & BEVERAGES



AUTOMOTIVE & MANUFACTURING



FINANCIAL SERVICES & CAPITAL MARKETS



MINERALS, OIL & GAS

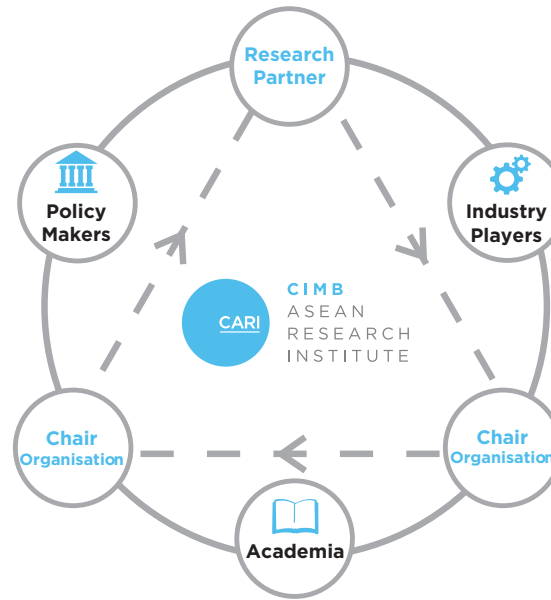
### Research objectives:

The CIMB ASEAN Research Institute (CARI) in collaboration with the ASEAN Business Club (ABC) launched the Lifting-The-Barriers Initiative (LTBI) in 2013 as an integrated year long research platform involving core research as well as stakeholder engagement.

The objective was to adopt a vertical approach by means of identifying bottlenecks and barriers hindering free trade of prioritised sectors in the context of the ASEAN Economic Community (AEC).

The LTB Initiative 2014 targets six identified sectors which have pressing relevance to the business landscape in ASEAN and will play a major role in the successful formation of the AEC. The six sectors were Retail, Legal & Tax, Food & Beverages, Financial Services & Capital Markets, Minerals, Oil & Gas and Automotive & Manufacturing.

## RESEARCH STRUCTURE



Two leading **ASEAN corporations** were selected to champion each sector, providing the direction and experiential insight into their industry. The input from these champions, or chair organisations, were key to understanding the issues faced by industry stakeholders and to develop the recommendations as part of the discourse.

CARI's Research Working Committee and its Strategic Advisors also worked closely with each of the six nominated Research Partners in producing these reports.

The Research Partners were either top management consulting firms or academic institutions who provided the technical knowledge and quantitative analysis required.

## METHODOLOGY

The Lifting-The-Barriers Initiative (LTBI) is divided into four phases.

### PHASE I

#### PRELIMINARY RESEARCH

Core research and compilation of qualitative and quantitative input from targeted sectors.

### PHASE II

#### ABC FORUM



LTB Roundtables



Plenary Sessions

### PHASE III

#### LTB REPORTS

The final outcome, a set of white papers, for ASEAN policy makers and community to effect real changes in the region.

### PHASE IV

#### FINDINGS SOCIALISATION

The findings from the LTB reports will be prioritised and presented to various stakeholders including policymakers.



# ASEAN SHOULD CREATE A STRONG SUSTAINABLE INDUSTRIAL ECOSYSTEM FOR THE REGION'S EXTRACTIVE INDUSTRY

By: Bain & Company | Published by: CARI, September 2014

Sector Chair: Shahril Shamsuddin, President & Group CEO, SapuraKencana | Co-Chair: Dr. Ilham Habibie, President & Director, PT Ilthabi Bara Utama



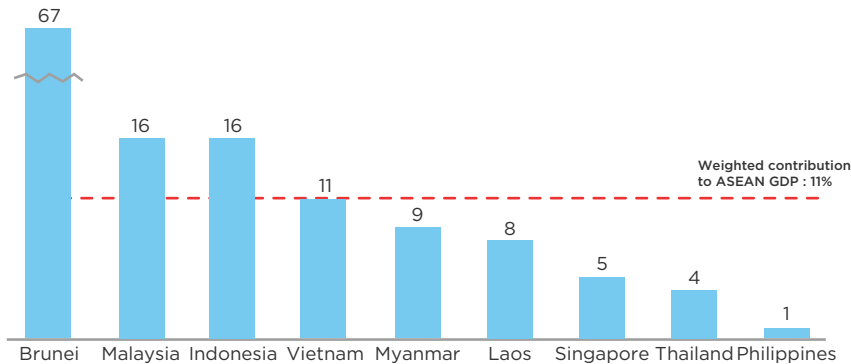
## BACKGROUND

### Research objective:

To explore the issues that resource-producing ASEAN nations are facing in the minerals, oil and gas sectors, as well as provide solutions on what ASEAN can do to break down cross-border barriers so the region can collectively pursue the goals of attracting investment, securing the best global capabilities, promoting local champions and building capability for the future.

- The mineral, oil and gas industries are significant contributors to both energy security and economic growth in ASEAN.
- The extractive industry plays a big role in the ASEAN economy, accounting for approximately 11% of the region's combined GDP in 2013.

### Extractive industry's share of GDP, 2013 (% of country GDP)



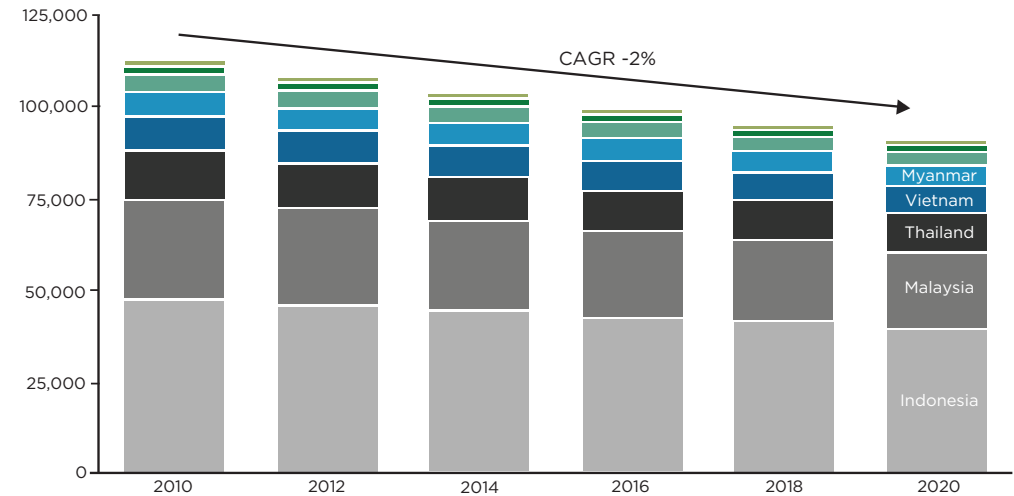
Source: Euromonitor; EITI; REFSA; Bank of Thailand; World Bank; Eleven Myanmar

Note: Data for Indonesia, Vietnam, Myanmar and Philippines were extrapolated from multiple reports and databases

- As geopolitical events and natural disasters increasingly roil global energy and resource markets, ASEAN countries are looking to domestic supplies to help ensure uninterrupted, affordable energy.
  - ▶ In 2013, ASEAN countries ratified the ASEAN Petroleum Security Agreement (APSA), a petroleum-sharing scheme for times of supply shortages.

- Resource producing ASEAN nations however face many challenges in the extractive sectors.
  - ▶ The resource base in many ASEAN countries is maturing, which affects the number of operators in the industry as well as their ability to reinvest.

ASEAN is a mature petroleum province with a shrinking resource base  
ASEAN oil and gas resources in place (Million BOE)



Source: Rystad Energy; Bain Analysis

Note: The barrel of oil equivalent (BOE) is a unit of energy based on the approximate energy released by burning one barrel of crude oil, used by oil and gas companies in their financial statements as a way of combining oil and natural gas reserves and production into a single measure.

- New investment and innovation are necessary to sustain competitiveness, as more mature energy-producing regions in the North sea have demonstrated, but there is a dilemma of whether to seek foreign investment or push local development

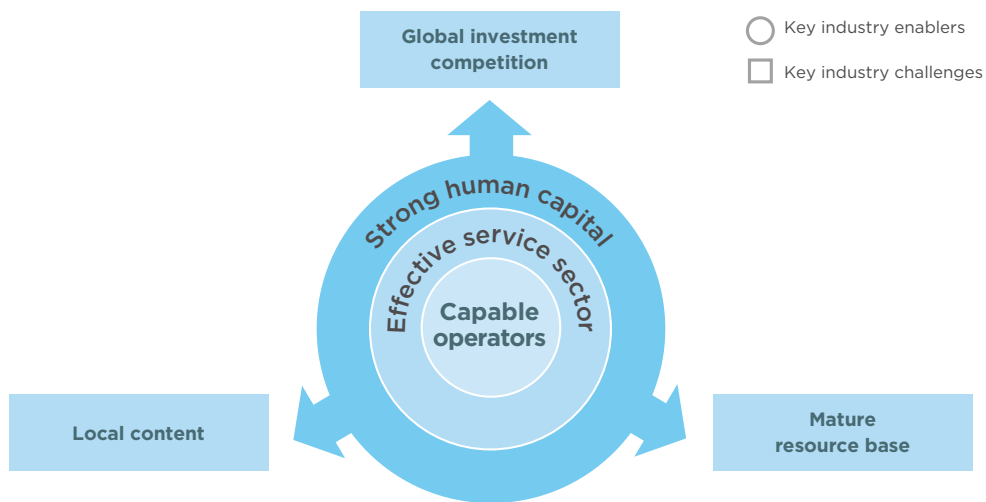




# ASEAN SHOULD CREATE A STRONG SUSTAINABLE INDUSTRIAL ECOSYSTEM FOR THE REGION'S EXTRACTIVE INDUSTRY

- Given the need for energy and the economic importance of the extractive industry, ASEAN countries must maximise the industry's value and capabilities by creating a strong, sustainable industrial ecosystem, which would include
  - operators (NOCs, internationals, and independents),
  - a network of service providers,
  - and the specialised talent that each of these companies needs.
- Creating such an ecosystem means managing three external challenges:
  - Global competition for investment,
  - the maturing resource bases in many ASEAN countries,
  - and governments' desire to promote local content and build local champions.
- It also means strengthening the ecosystem's three central elements:
  - A number of capable operators,
  - an effective and profitable energy service sector,
  - and a deep, strong pool of human capital.

## The extractive industry's key challenges and enablers



- This is a critical time in the life of the ASEAN extractive industry. How leaders handle the interplay of these elements and challenges now will chart the industry's course for many years to come



## KEY FINDINGS

### Key challenges - Oil and Gas

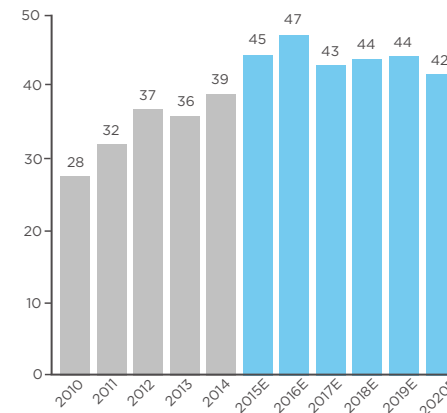
#### Challenge 1: Global competition for capital investment

**Even though ASEAN will continue to attract upstream oil and gas capital investment in the coming years, the region's share of global upstream investment is expected to stagnate or decrease over the next five years as capital moves to more promising zones, such as Latin America and Africa.**

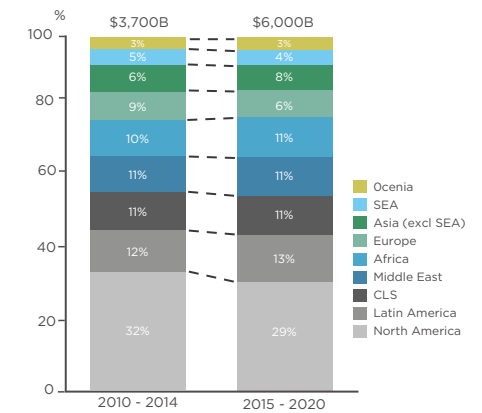
ASEAN is poised to attract upstream spending of -US\$250 billion by 2020

However, share of spending is expected to decline

Southeast Asia's upstream spending (US\$B)



Total global upstream spending (US\$B)



#### Challenge 2: Maturing resource base in ASEAN

**The dwindling resource base in many ASEAN countries further exacerbates the worsening oil and gas investment climate.**

- In mature petroleum regions, such as Malaysia, more than 30 years of extensive exploration and production have left fewer and fewer opportunities for large discoveries with easy access.



## Challenge 3: Desire to promote local content

A new strain of nationalism has emerged, and ASEAN governments increasingly want to promote local content and develop local champions.

- ▶ In Indonesia, for example, recent mineral policy rollbacks, such as stricter in-country mineral processing requirements, have deterred new mining investments.

## Key challenges - Minerals

### Challenge 1: Operating environment

Mine operators across ASEAN are challenged by a range of factors that limit the ease of doing business and the relative attractiveness of investment.

- ▶ Many countries are promoting policies to increase the government's take on mining revenues while limiting foreign ownership in the sector. While such moves enhance budgets in the short term, they undermine levels of absolute investment, in turn inhibiting the multiplier effect of investment for domestic economies. This is considerable in an industry where US\$2.50 to US\$3 of benefit is derived for every direct dollar of investment
- ▶ In many countries, such as Indonesia, miners are also challenged by regulatory complexity in permitting and other approvals, by a changing regulatory landscape around export requirements.

### Challenge 2: Infrastructure

The remote location of mining sites in many countries adds considerable cost. As competition for investment capital is increasing and capital expenditure for new mines is rising, ASEAN countries' cost competitiveness is challenged in many locations by the high cost to gain access to new mining sites, to secure the needed route, and to develop and market the supply.

### Challenge 3: Talent pipeline

Acquiring and developing local talent represent an additional test for mining operators. In many locales, operators are restricted in their use of expatriate staff, as well as in the free movement of ASEAN talent across projects within the region. At the same time, the local supply of experienced talent is in many cases lacking.

- While ASEAN countries need to address these external challenges, maximising the industry ecosystem's value also requires investment in its three main enablers:

1. Capable operators
2. An effective energy service sector
3. Strong human capital

### Case Study 1:

#### How regulatory changes revitalised the oil and gas exploration scene in the North Sea



- Exploration activity declined sharply in the North Sea in the early 2000s as major players began to move elsewhere as the petroleum province had reached maturity and the odds of discovering new oil fields became increasingly unlikely.
- To improve the situation, the Norwegian and UK governments used policy changes to attract new players that had greater interest in the region's mature areas than incumbents. Specifically, Norwegian authorities made three key changes that facilitated the entry of new companies, ranging from small independents to utility players.
  - ▶ They expanded the number of licenses available and made it easier to qualify for them.
  - ▶ They introduced the Awards in Predefined Areas (APA) to enable rapid circulation of acreage and more efficient exploration in mature areas
  - ▶ They launched the exploration reimbursement scheme to put new companies on an equal footing with established players in terms of deductible exploration costs.
- These changes in the North Sea's operating parameters and stronger underlying commodity prices have yielded strong results, with the number of operators increasing by nearly 65% between 2004 and 2012. In about the same time period, the number of exploration wells has seen a compound annual growth rate of 3%, revitalising the exploration scene in the North Sea.



## KEY FINDINGS

### Key Enablers – Oil, Gas and Minerals

#### Enabler 1: Capable operators

As the ASEAN resource base matures, easy-to-find resources are scarcer and smaller. Large operators, which focus on big fields or assets, typically do not find these marginal opportunities appealing. Smaller companies, however, are likely to be well positioned to capitalise on such opportunities, thanks to their light capital structures and use of innovative technical solutions.

- ▶ The changing composition of industry players has been a key factor in the revitalisation of the North Sea oil and gas landscape as it matures (see case study). Similar trends manifest themselves in the minerals industry.

Such shifts generally require encouraging more foreign operators and investors.

#### Enabler 2: An effective energy service sector

A strong extractive industry requires a vast network of service providers.

- ▶ To develop home-grown global champions, host governments need to support local service providers and ensure they are capable of delivering the same level and quality of services as those offered by their international competitors.
- ▶ A combination of temporary barriers and incentives can be used. The goal of these measures must be to ensure long-term optimisation of resources while at the same time achieving social-responsibility objectives.

Global best practices suggest that local service providers must have three key capabilities:

- Strong core suites of product and service offerings geared towards local challenges.**
  - ▶ In ASEAN nations, these challenges include marginal, deep-water, and enhanced oil recovery (EOR)
- Strong project management and cross-business-unit integration capabilities to handle external and internal stakeholders.**
  - ▶ Service providers can accelerate the development of these capabilities by partnering with global EPC firms that have distinctive technological know-how and strong project execution capabilities.
- Flexible business models that allow for a range of offerings.**
  - ▶ Service companies need to build the necessary track records to meet operators' requirements as well as have sufficient financial backing for delays and losses.

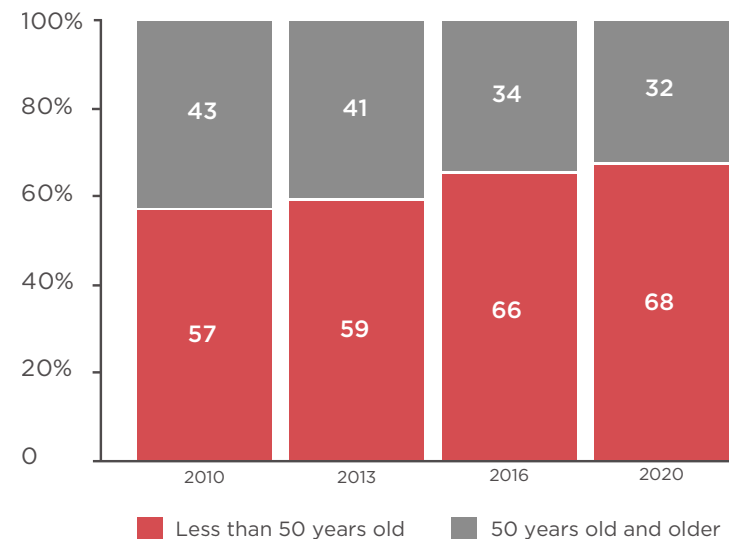
#### Enabler 3: Strong human capital

The need to attract, develop, and retain talent is particularly acute for the extractive industry in ASEAN countries. The ASEAN extractive industry is likely to face challenges in replenishing its workforce as approximately 40% of oil and gas professionals will approach retirement in the next decade, eliminating a major pool of expertise.

- ▶ Companies and governments need to forge stronger public-private partnerships to create programs that can train the next generation of the extractive workforce.
- ▶ A strategic task in developing strong human capital is to proactively identify the skill sets needed to tackle emerging industry challenges.

Example: mining companies in Indonesia are placing greater emphasis on training miners to operate autonomous equipment to improve operational safety and reduce costs in remote areas.

Percentage of ASEAN SPE members by age group



Source: Society of Petroleum Engineers (SPE) demographic Statistics

Note: Figures are prorated for the ASEAN region and excludes invalid age data; 2016 and 2020 figures were extrapolated from 2013 data with the following assumptions: annual retirement rate of 50% for members older than 60, constant graduate intake size and no attritions



# ASEAN SHOULD CREATE A STRONG SUSTAINABLE INDUSTRIAL ECOSYSTEM FOR THE REGION'S EXTRACTIVE INDUSTRY

- As ASEAN's extractive industry faces several challenges, the question is how to enhance the region's international competitiveness, attract investment, and help the industry deal with a maturing resource base.

## RECOMMENDATIONS

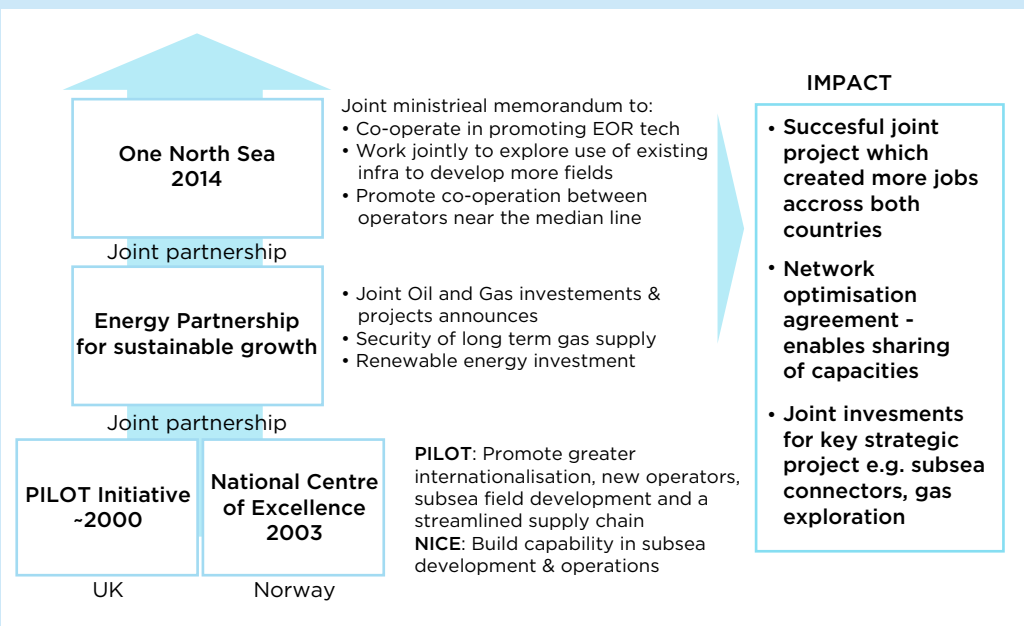
Barrier	Recommendation
<p>1. ASEAN's relative attractiveness is declining in oil and gas, and it will be increasingly challenging to attract investments into the region.</p>	<p><b>Elevate awareness of the industry's changing dynamics</b></p> <ul style="list-style-type: none"> <li>Engage with energy/minerals ministers on issue</li> <li>Publish position paper to increase profile of issue</li> <li>Hold forums with industry leaders to draft action plan</li> </ul>
<p>2. Competition for skilled manpower is increasing all over the world. Also, ASEAN's manpower is aging and the portfolio of the skills needed in the extractive industry is shifting.</p>	<p><b>Develop human capital for future needs</b></p> <ul style="list-style-type: none"> <li>Establish alliances between industry and local universities</li> <li>Offer scholarships and training on critical technical skills</li> <li>Promote "work in ASEAN" policy to attract key talents</li> </ul>
<p>3. Despite the proximity between ASEAN nations, the movement of skilled individuals is not facilitated in any substantial extent.</p>	<p><b>Promote free movement of human capital</b></p> <ul style="list-style-type: none"> <li>Allow movements of certain technical professionals and craft labour within ASEAN</li> <li>Develop specific regulations to establish common standards</li> <li>Create flexible policies to allow companies to meet employment commitments across countries</li> </ul>
<p>4. Knowledge and technical skills are not systematically shared between ASEAN countries. Sharing of data is also limited.</p>	<p><b>Share technical knowledge</b></p> <ul style="list-style-type: none"> <li>Promote joint studies on specific topics (e.g. geosciences, drilling optimisation, mine management, technical training)</li> <li>Implement policies to enable more open sharing of selected technical data</li> <li>Knowledge-sharing forums among leading professionals</li> </ul>
<p>5. The portfolio of assets in ASEAN is changing, existing conventional assets are maturing and the importance of complex and unconventional assets are increasing.</p>	<p><b>Collaborate on next-generation assets – see case study 2</b></p> <ul style="list-style-type: none"> <li>Optimise the service base across all ASEAN countries</li> <li>Establish regional forums to discuss technical challenges</li> <li>Promote joint pilots to cost-share R&amp;D in EOR for offshore</li> </ul>
<p>6. The energy service sector in ASEAN needs to be strengthened to move the extractive industry to the next level. The movement of equipment between ASEAN countries remains difficult.</p>	<p><b>Enhance service-sector effectiveness</b></p> <ul style="list-style-type: none"> <li>Develop selective local content exemptions for critical technologies and capabilities</li> <li>Create a working group to evaluate the next generation of technologies</li> <li>Revisit duties and tariffs to allow for free movement of equipment</li> </ul>
<p>7. ASEAN governments have not achieved much success in building non-governmental local champions/companies.</p>	<p><b>Build non-governmental local champions</b></p> <ul style="list-style-type: none"> <li>Consider preferential treatment to develop more ASEAN providers and suppliers</li> </ul>





## Case Study 2: UK & Norway Collaboration For North Sea

An example of a cross-country collaboration that has produced immense benefits is the North Sea energy industry. Norway and UK initially operated as separate entities with limited technical and commercial collaboration. Over the past decade, however, the two countries have increased their joint efforts and have realized great benefits in terms of investment, job creation, and capacity building for both.



## CONCLUSION

- The success of ASEAN's next phase of development depends to a large extent on the effective management of the extractive sector. The path towards an effective ecosystem that meets production and investment targets, offers a free and attractive market and supports home-grown champions is full of challenges but the establishment of the ASEAN Economic Community provides opportunities for the region to break down barriers and address these challenges together.
- While the resource sector is strategic by its nature and requires single-country policies, this paper has identified a wide range of recommendations that can create the right balance in the pursuit of a healthy ecosystem.



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