

Tjahjono, Benny; Irawati, Dessy

**Article**

## Rediscovering the potentials of Indonesia facing the challenges in the ASEAN region

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## Editorial

### Rediscovering the potentials of Indonesia facing the challenges in the ASEAN region

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Various factors have contributed to the development of countries in the Association of the South East Asian Nation (ASEAN) region. The geographical proximity and the significant roles these countries play in the past two decades had shown a remarkable transition from being an individual producer at the regional level, to being the international production networks and global value chain for a popular investment destination of the MNEs (Multinational Enterprises).

Nevertheless, ASEAN is now at a crossroads. Some countries in ASEAN have been able to tap into the stability in terms of democracy and institutional stability but some others are still catching up with their counterparts. Each ASEAN nation must therefore develop new and knowledge-based trajectories to ensure the sustainable economic development.

This special issue is proposed to stimulate and spread further debate and discussion about the potential and opportunity in ASEAN region, and ultimately to disseminate the scientific and the knowledge-based research. It also aims at collating and highlighting the Indonesian contributions as one of the significant players in ASEAN to develop their own capacity in terms of social, economic and technology, regionally and internationally. Adopting a multidisciplinary approach, we have compiled nine papers relevant to this theme.

In the first paper, Felaza proposes an environmental approach for analysing an indigenous technology used in *batik* production involving the use of natural dye and colouring. The ultimate goal is to suggest the most effective and efficient way to conserve the tradition and culture of Indonesia and at the same time to preserve the nature.

The second paper by Riandy and Handayani reveals the richness of the Indonesian marine biodiversity. They focus on the sustainable development of the marine bio discovery programme to support the pharmaceutical industry which might be enabled

the regulation on the access of the marine resources, benefits sharing, strong support to the research centre and stimulating bio discovery research.

Dwiyanti, Topril and Satria expose the issues of Intellectual Property (IP) rights protection within the Small-Medium Enterprises (SME). They further suggest the adoption of the so called 'technopreneurship' to increase the competitiveness of the Geographical Indication (GI) products in Indonesia.

In the energy sector, Kartikasari and Suntara discuss the formation, extraction and processing of coalbed methane as a future source of clean energy. They further recommend some future work to optimise its use for the stability of the future national energy supply and to reduce the dependence on the dwindling oil reserves.

Ramelan, Usup and Anggraeni explore the potential of producing biogas from the waste of tofu (whey) that can be used to substitute the Liquefied Petroleum Gas (LPG) for domestic usage. Using a relatively rudimentary experimental rig, they concluded that biogas generated from the whey could be directly used as fuel in the tofu production process.

In the agri-food sector, Riandy and Sofyan propose a method to increase the rice grain yield. In their experiments, they studied the influence of slow-released fertilizer coated by nano-carbon material on nitrogen loss in surface water of paddy soil, hence rice yield.

Moving on to food industry, Gani, Hidayatullah, Wahyudi and Hidayatullah suggest a method to prevent the productivity decline of *windu* shrimps by improving farmers' awareness of the epidemic and viral diseases. They propose an algorithm to recognise the symptoms and early indications of the disease using the data collected from physical characteristics and behaviours of the infected shrimps.

Pamungkas, Sukmatullahi and Amhariputra bring forward the issues of income diversification to improve value-added fisheries as superior local products through the integrated micro aquaculture industry, with the long-term view to facilitate the industry to become the ready-to serve producers.

As Indonesia is a maritime country, the special issue would not have been complete without the discussion on the marine sector. The paper of Prima and Ash-Shidqi reveals that vocational training of fisheries and marines is critical to improve the maritime sector. Their paper attempts to provide an in-depth analysis of various factors impeding the development of marine vocational schools in Indonesia and then suggests possible solutions.

We hope that the discussion and the experiences from these papers will be a useful contribution to the body of knowledge and could be used as a scientific discourse to inform or even forecast the likely outcomes for Indonesia and other ASEAN countries.