

ASERS

Journal of Environmental Management and Tourism

Quarterly

Volume XI

Issue 1(41)

Spring 2020

ISSN 2068 – 7729

Journal DOI

<https://doi.org/10.14505/jemt>

 **ASERS**
Publishing



Editor in Chief

Ramona PÎRVU

University of Craiova, Romania

Editorial Advisory Board

Omran Abdelnaser

University Sains Malaysia, Malaysia

Huong Ha

University of Newcastle, Singapore,
Australia

Harjeet Kaur

HELP University College, Malaysia

Janusz Grabara

Czestochowa University of Technology,
Poland

Vicky Katsoni

Techonological Educational Institute of
Athens, Greece

Sebastian Kot

Czestochowa University of Technology,
The Institute of Logistics and International
Management, Poland

Nodar Lekishvili

Tbilisi State University, Georgia

Andreea Marin-Pantelescu

Academy of Economic Studies Bucharest,
Romania

Piotr Misztal

The Jan Kochanowski University in
Kielce, Faculty of Management and
Administration, Poland

Agnieszka Mrozik

Faculty of Biology and Environmental
protection, University of Silesia, Katowice,
Poland

Chuen-Chee Pek

Nottingham University Business School,
Malaysia

Roberta De Santis

LUISS University, Italy

Fabio Gaetano Santeramo

University of Foggia, Italy

Dan Selişteanu

University of Craiova, Romania

Laura Ungureanu

Spiru Haret University, Romania

ASERS Publishing

<http://www.asers.eu/asers-publishing>

ISSN 2068 – 7729

Journal DOI: <https://doi.org/10.14505/jemt>

Table of Contents:

1	The Effects of Multinational Companies on Deforestation: The Building Block or Stumbling Block Kumba DIGDOWISEISO, Eko SUGIYANTO	5
2	Institutional Designing of Food Security by Instruments of Matrix Modelling and Value Flows Synchronization Galina ASTRATOVA, Vladimir KLIMUK, Olga RUSHITSKAYA, Igor IVLIEV, Aleksey RUCHKIN, Nadegda YURCHENKO	12
3	A Review of the Impact of Consumerism, Recycling and Pollution: Evidence from Southeast Asia: 1999 to 2019 Tinashe CHUCHU, Eugene Tafadzwa MAZIRIRI	23
4	The Business Efficiency of Agroprocessing of Food Crops Commodities and Horticulture in Increasing Product Competitiveness in Central Sulawesi Indonesia M. Fardhal PRATAMA, Made ANTARA, Rustam Abdul RAUF, EFFENDY	29
5	The Theory of Planned Behavior and Pro-Environmental Behavior among Students Mohamad Irhas EFFENDI, Dyah SUGANDINI, Agus SUKARNO, Muhamad KUNDARTO, Rahajeng ARUNDATI	35
6	Improving the Energy Efficiency of Kazakhstan's Economy Zhanar M. ORYNKANOVA, Raissa A. BAIZHOLOVA, Aigul Zh. ZEINULLINA	44
7	Diversity of Birds for Ecotourism Attractions in the Mangrove Ecosystem of Nature Conservation Forum Putri Menjangan I Ketut GINANTRA, I Ketut MUKSIN, Martin JONI	54
8	Development of Industrial and Urban Areas in the Context of Ecological and Economic Security Aigul SHAIMERDENOVA, Kanat TIREUOV, Ukilyay KERIMOVA, Elmira MURSALIMOVA	65
9	Ecological Strategy of Development in Agricultural Enterprises of Ukraine Tetiana PIZNIAK, Olha KOVALOVA, Olha NOVIKOVA	73
10	The Process of Innovation Diffusion and Adoption of Innovations in the Implementation of Community-Based Total Sanitation Policy in South Sumatera Katriza IMANIA, Sri SUWITRI, Yoppie WARELLA, Nurmah SENIH	81
11	Animal Rights and Protection against Cruelty in Ukraine Ivan V. YATSENKO, Svitlana I. ZAPARA, Gregory A. ZON, Lydmyla B. IVANOVSKAYA, Alyona M. KLOCHKO	91
12	The Development of Agro-Tourism Based on Arabica Coffee Plantation in Bali I Dewa Ayu Sri YUDHARI, Dwidjono Hadi DARWANTO, Lestari Rahayu WALUYATI, Jangkung Handoyo MULYO	104
13	Tourism Impact on the Environment in Nusa Penida Tourism Area Nyoman SUDIPA, Made Sudiana MAHENDRA, Wayan Sandi ADNYANA, Ida Bagus PUJAASTAWA	113
14	A Study on the Improvement Plan of Facility in National Park Using Importance-Performance Analysis Joonho BAE, Seungmin NAM	125
15	Environmentally Oriented Anti-Crisis Management of Enterprises: Problems, Directions, and Prospects Ainur BALTABAYEVA, Aruna BEKMETOVA, Bibigul KYLYSHPAYEVA, Zhanna ASSANOVA, Gulshat ZHUNUSSOVA	131

Editor in Chief

Ramona PÎRVU

University of Craiova, Romania

Editorial Advisory Board

Omran Abdelnaser

University Sains Malaysia, Malaysia

Huong Ha

University of Newcastle, Singapore,
Australia

Harjeet Kaur

HELP University College, Malaysia

Janusz Grabara

Czestochowa University of Technology,
Poland

Vicky Katsoni

Techonological Educational Institute of
Athens, Greece

Sebastian Kot

Czestochowa University of Technology,
The Institute of Logistics and International
Management, Poland

Nodar Lekishvili

Tbilisi State University, Georgia

Andreea Marin-Pantelescu

Academy of Economic Studies Bucharest,
Romania

Piotr Misztal

The Jan Kochanowski University in
Kielce, Faculty of Management and
Administration, Poland

Agnieszka Mrozik

Faculty of Biology and Environmental
protection, University of Silesia, Katowice,
Poland

Chuen-Chee Pek

Nottingham University Business School,
Malaysia

Roberta De Santis

LUISS University, Italy

Fabio Gaetano Santeramo

University of Foggia, Italy

Dan Selişteanu

University of Craiova, Romania

Laura Ungureanu

Spiru Haret University, Romania

ASERS Publishing

<http://www.asers.eu/asers-publishing>

ISSN 2068 – 7729

Journal DOI: <https://doi.org/10.14505/jemt>

16	The Role of Human Capital in Ensuring Food Security of the Region Gorbunova Olesya SERGEEVNA, Voronin Boris ALEKSANDROVICH, Bukhtiyarova Tatyana IVANOVNA, Zyryanova Tatyana VLADIMIROVNA, Mitin Alexander NIKOLAEVICH, Mokronosov Alexander GERMANOVICH	139
17	Geotourism Concept Development in the Basis of Environment Sustainability, Socioculture, and Natural Science Wealth: A Case Study in Indonesia Endy MARLINA, Tutut HERAWAN	145
18	State Regulation of Environmental Taxes and Fees: National and International Experience Larisa Petrovna GRUNDEL, Natalia Alexandrovna NAZAROVA, Alexey Alexandrovich KOSTIN, Anastasia Viktorovna KNIAZEVA, Elena Samratovna GORBATKO	159
19	Adopting New Heritage Model for Ecotourism Plan in National Key Economic Areas to Improve Tourism Sector Performance in Malaysia Intan Maizura ABD RASHID, Irza Hanie ABU SAMAH, Wan Ahmad Fauzi WAN HUSAIN, Mohd Fitri MANSOR, Sallahuddin HASSAN	167
20	Efficiency of Optimized Technology of Switchgrass Biomass Production for Biofuel Processing Maksym KULYK, Vasyl KURILO, Natalia PRYSHLIAK, Viktor PRYSHLIAK	173
21	Environmental and Legal Framework for Regulating Consumer and Industrial Waste Management Dauren BEKEZHANOV, Alima OMIRALI, Bolat AITIMOV, Daniya NURMUKHANKYZY, Timur ZHUMAGULOV	186
22	Potential and Opportunities for Development of Tourism in Ukraine Yurii KOVALCHUK, Irina FURMAN, Halyna HUMENYUK, Anatolii KUCHER	194
23	The Burden and Effects of Cooking Fuels Usage on Women in Rural Areas: A Case Study of Afao-Ekiti, Nigeria Kehinde John AKOMOLAFE, Elizabeth YUSUF	202
24	Consumption Aspects that Create Life Satisfaction Orose LEELAKULTHANIT	215

Call for Papers Summer Issues 2020 Journal of Environmental Management and Tourism

Journal of Environmental Management and Tourism is an interdisciplinary research journal, aimed to publish articles and original research papers that should contribute to the development of both experimental and theoretical nature in the field of Environmental Management and Tourism Sciences.

Journal will publish original research and seeks to cover a wide range of topics regarding environmental management and engineering, environmental management and health, environmental chemistry, environmental protection technologies (water, air, soil), pollution reduction at source and waste minimization, energy and environment, modeling, simulation and optimization for environmental protection; environmental biotechnology, environmental education and sustainable development, environmental strategies and policies, etc. This topic may include the fields indicated above, but are not limited to these.

Authors are encouraged to submit high quality, original works that discuss the latest developments in environmental management research and application with the certain scope to share experiences and research findings and to stimulate more ideas and useful insights regarding current best-practices and future directions in environmental management.

Journal of Environmental Management and Tourism is indexed in SCOPUS, RePEC, CEEOL, ProQuest, EBSCO and Cabell Directory databases.

All the papers will be first considered by the Editors for general relevance, originality and significance. If accepted for review, papers will then be subject to double blind peer review.

Deadline for submission:	29 th May 2020
Expected publication date:	June 2020
Website:	https://journals.aserspublishing.eu/jemt
E-mail:	jemt@aserspublishing.eu

To prepare your paper for submission, please see full author guidelines in the following file: [JEMT_Full_Paper_Template.docx](#), then send it via email at jemt@aserspublishing.eu.



DOI: [https://doi.org/10.14505/jemt.v11.1\(41\).01](https://doi.org/10.14505/jemt.v11.1(41).01)

The Effects of Multinational Companies on Deforestation: The Building Block or Stumbling Block

Kumba DIGDOWISEISO
Department of Management
University of National, Indonesia
Corresponding author: kdigdowiseiso@gmail.com
Eko SUGIYANTO
Department of Public Administration
University of National, Indonesia
ekoantodr@gmail.com

Suggested Citation:

Digdowiseiso, K. and Sugiyanto, E. (2020). The Effects of Multinational Companies on Deforestation: The Building Block or Stumbling Block. *Journal of Environmental Management and Tourism*, (Volume XI, Spring), 1(41): 5 - 11. DOI:[10.14505/jemt.v11.1\(41\).01](https://doi.org/10.14505/jemt.v11.1(41).01)

Article's History:

Received November 2019; Revised December 2019; January 2020.
2020. ASERS Publishing©. All rights reserved.

Abstract:

Trade liberalization and worldwide economic integration have brought not only an increase in wealth but also in transnational threats. Environmental devastation caused by commercial activities of multinational corporations (MNCs) is one of such threats. While almost all countries have environmental laws designed from pollution, the rules differ per country. Yet, only in the context of legally binding regulatory measures should multinationals be compelled to conduct business in an environmentally friendly manner.

Keywords: MNCs; deforestation; regulation; Indonesia.

JEL Classification: Q20; Q23; Q28.

Introduction

In the most comprehensive survey on forest resources, 3.9 billion hectares of the earth's land area is covered by forests (Koyunen and Yilmaz 2009). It was estimated that the original forest cover was approximately 6.0 billion hectares and therefore, it indicates that the world has lost about 40% of forest area.

Industrial corporations have abundant resources in terms of technological innovations and investment capital in boosting their production (Pattberg 2005; Dura and Driga 2017). In a period of globalization, privatization, and market liberalization, they are seen as one of the most important factors to shape the future of the world. However, those factors have brought not only an increase in wealth but also in transnational threats. Environmental damage caused by commercial activities of transnational corporations (TNCs) is one of such threats while almost all countries have the discrepancy in environmental laws (Morimoto, 2005; Dura and Driga, 2017). Some studies found that cleaner technology and better environmental management of MNCs often disseminates a pollution effect to host country firms (Zarsky 2006, Yeganeh 2019). Other studies found that MNCs act as agents of ecological degradation, either by transferring outdated technology, disregarding local laws, extracting host countries resources, or by following poor local environmental practice (Zarsky 2006; Yeganeh 2019).

In another perspective, dependency theorists and environmentalists are generally pessimistic about the contributions of MNCs to the protection of the natural environment, particularly in host developing countries

(Zarsky 2006, Becker-Ritterspach *et al.* 2019). For these schools of thought, the profit-maximising nature of multinational enterprises as well as their extensive marketing networks suggests that MNCs would try to move their unwanted products from one country to another until a market is found for such products. Due to their urgent need for employment opportunities, low-income countries are often compelled to set lax environmental standards in order to attract foreign investors. This problem, coupled with the high costs of conforming to the more stringent environmental standards in the advanced world, means that developing countries are likely to remain the “havens” of the pollution-intensive industries of the multinational firms of the developed world.

In sharp contrast to the above assessment, neo-liberal economists contend that MNCs are perhaps the most significant catalysts for sustainable development, because multinational corporations typically possess newer and cleaner technology and have better management practices which can be transferred to their subsidiaries in the developing world. Thus, rather than “pollution havens”, MNCs create “pollution halos” in developing countries through the export of modern technologies. In support of the pollution halo hypothesis, Eskeland and Harrison (2003) found that foreign ownership was associated with cleaner and lower levels of energy use in Mexico, Venezuela and Cote d’Ivoire. Similarly, Blackman and Wu (1999) found significant support for the conclusion that foreign investment in electricity generation in China increased energy efficiency and reduced hazardous emissions.

MNCs need to be regulated if we are to turn them into a more positive force for good in the promotion of sustainable development. Also, host developing countries must remain primarily responsible for regulating foreign corporate activity because they are the most affected by environmentally-harmful corporate practices. Therefore, this paper tries to shed some light on the problem in forestry MNCs.

1. Research Background

The first MNCs were publicly listed corporations in search of new raw materials and new markets (Laffiteau 2008, Weber and Partzsch 2018). Their access to international capital markets allowed them to fund significant investments in exploration for resources and the research and development required to maintain and to strengthen their positions in the energy and technology industries, which in turn, fuelled the growth of other industries. As technological change accelerated, research and development costs increased. As a result, companies have been forced to seek additional markets abroad in a bid to gain the extra profits and to amortize their investments in order to compete with the competitors when the next technological advance comes (Laffiteau 2008, Yeganeh 2019).

In addition, the sheer size and enormous economic power of MNCs means they have the capacity to influence development policy (Abdul-Gafaru 2006, Dura and Driga 2017). In some cases, political and economic decisions are increasingly made to provide favourable environments for the investment and marketing needs of MNCs. Consequently, corporations are sometimes able to influence the domestic policy outcomes of host developing countries by threatening to move jobs overseas. This often raises questions about whether corporate power enables MNCs to effectively undermine sustainable development by circumventing domestic environmental standards. Moreover, the fear that firms will move jobs overseas and the calculation of the effect that this could have on the economy, can influence the degree to which developing countries will impose environmental regulations on multinational enterprises (Clapp 2005).

The extraordinary growth of MNCs also enables them to influence policy outcomes at the international level. In this situation, corporate lobbies have pushed for policies that will benefit business enterprises and let them get away with harming the environment (Abdul-Gafaru 2006, Becker-Ritterspach *et al.* 2019). During Rio’s meeting, for example, corporate groups were active in defining the concept of sustainable development and pressing for their interpretation of corporations as promoters of sustainable development to be represented in the official documentation coming out of the conference. The interests of the various giant corporations in the the auto, mining, oil and chemical industries also influenced the Kyoto Global Climate Change Conference outcome.

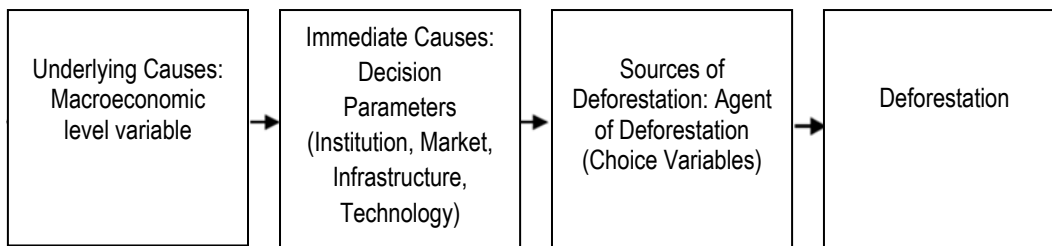
Basically, there is a significant difference between the rules of the home countries in which most of the MNCs are headquartered and ones of host countries where a number of MNCs are engaged in pollution-intensive industries (Morimoto 2005, Dura and Driga 2017). The rules of developed countries are much stricter than those of developing countries. It has been persistently alleged that MNCs conduct their operations in developing host countries in accordance with much lower environmental standards than those adopted in their home countries. Also, legal disputes about which nations’ laws apply further complicate the regulation of environmental practices of MNCs and their subsidiaries. This problem of extraterritoriality is inherent in the structure of all TNCs (Baylis and Smith 2001, Becker-Ritterspach *et al.* 2019), which in turn, causing TNCs’ operations become illicit.

Thus, transparency in MNCs can serve as an effective risk management tool to diminish the opportunities for corruption as well as to improve a company's image. Also, it improves a country's management of resources by providing relevant information to government entities, parliaments and civil society, and contributes to a more stable investment environment of good governance and rule of law that benefits for both the country and the company.

2. The Drivers of Deforestation

The starting point of defining deforestation is to identify the agents of deforestation such as small farmers, ranchers, loggers, and corporations (see Figure 1). These agents' actions are the sources of deforestation (Angelsen and Kaimowitz 1999, Dura and Driga 2017). The next step might focus on agents' decisions, which are based on their own characteristics (background, preferences, and resources) and on decision parameters such as prices, technology, institutions, new information, and access to services and infrastructure. Together, these factors determine the set of available choices and the incentives for different choices, which may be seen as the immediate causes of deforestation. Finally, the agents' characteristics and decision parameters influence agents' decisions through several channels such as the market, the dissemination of new technologies and information, the development of infrastructure, and institutions, particularly the property regime.

Figure 1: Variables Affecting Deforestation



Human activities that directly affect the environment act as the immediate causes of deforestation in which originate from land-use and directly impact upon forest cover (Waluyo *et al.* 2019). However, Transparency International report (2008) indicates that corporate behaviour could be one of the immediate causes of deforestation because certain countries has been experiencing in great wealth generated by extractive industries.

The immediate causes can be divided into agricultural expansion, harvesting or extraction of wood, expansion of infrastructure while underlying driving forces endorse proximate causes (Kaimowitz and Angelsen 1998, Dura and Driga 2017). They measure a complex of social, political, economic, technological, and cultural variables that constitute initial conditions in the human-environmental relations and point out that it is more difficult to establish clear links between underlying factors and deforestation since the causal relationships are less direct. Deforestation rates increase because of rising populations, which need more land for forest-based products. Also, growing populations push down the wage rates. But population growth induces technological progress and institutional changes that reduce pressures on forests.

In contrary, there is a concise evident between immediate factors and deforestation which makes farmers, loggers, and corporations decide to clear more forest (Angelsen and Kaimowitz 1999; Dura and Driga 2017). One example is agricultural price. Substantial evidence supports the assertion that higher prices for agricultural products stimulate forest clearing as the corporations, existing population and migrants opt to attain a higher profit. Another example is when farmers and corporations can obtain property rights by clearing forests which can encourage them to clear larger areas. Also, this relationship can be determined through timber prices, where the higher prices for timber are likely to promote deforestation by making logging more profitable.

3. Building Block

It is clear that from the previous section, MNCs act as an agent of deforestation. Until the 1980s, MNCs were legally accountable only to their shareholders for the financial performance of the corporation (Abdul-Gafaru 2006, Becker-Ritterspach *et al.* 2019). This view considered multinationals as purely profit-minded entities that did not have any legal obligation in incorporating society's interest into their activities.

From the 1980s onwards, however, a series of environmental catastrophes associated with the activities of MNCs coupled with the recognition that humanity's survival were largely depend on the continued functioning of the natural environment (Abdul-Gafaru 2006, Becker-Ritterspach *et al.* 2019). Given that MNCs are the most

important players involved in environmentally damaging activities, many scholars call upon business enterprises to place the long-term sustainability of the environment.

It is widely accepted that technological progress is an important factor in protecting the natural environment (Abdul-Gafaru 2006; Weber and Partzsch, 2018). Technological advancement may contribute to reducing environmental externalities in two major ways: First, high level of technology can help in the manufacture of products which are less environmentally damaging to use or dispose of (e.g. fuel-efficient vehicles); Second, through sophisticated technology, pollutants maybe emitted less intensively. Warhust and Bridge (1997) also suggest that technological innovations such as energy-efficient “flash” smelters, biotechnology-based leaching alternatives to smelting are substantially reducing the overall use of resources and the damage to water, land, air and ecosystems. If increased technology could contribute to improved environmental management capacity, then it might be true that MNCs are the key to achieving sustainable development, because they are the main transmission mechanisms of technology to developing countries. In 1995, over 80% of global royalty payments and license fees were paid by MNC subsidiaries to their parent companies (Abdul-Gafaru 2006, Yeganeh 2019).

MNCs are not only the major technology innovators, but they also possess skills in the safe handling, transport, storage, use and disposal of toxic materials, and in the development of pollution abatement technologies (Morimoto 2005, Weber and Partzsch 2018). Moreover, multinational enterprises can positively contribute to sustainable development through the transfer of environmental managerial skills that are not available to host developing countries. In support of this argument, Eriksen and Jansen (1998) draw our attention to the international environmental activities in China, from a Danish pharmaceutical MNC which developed a joint venture with the Suzhou Hongda Group in the production of starch-degrading enzymes for the alcohol industry. As a result, untreated water is no longer discharged, but processed through biological wastewater treatment plants which reduced the organic material by 90 per cent.

In another perspective, Transparency International report (2008) on promoting revenue transparency in oil and gas industries states that International Oil Corporations (IOCs) show better results in reporting on anti-corruption programmes and operations than in the area of payments to host governments, making payments transparency the weakest area evaluated. Companies such as Shell and BG Group demonstrate best practice, making available relevant information on their anti-corruption strategies and efforts. These results seem to reflect an increase in regulations (particularly from home governments and stock exchange listing requirements) requesting companies to implement company-wide measures related to anticorruption.

4. Stumbling Block

The fact that MNCs possess clean technologies that can enhance environmental sustainability puts a doubt on whether MNCs’ technology is safe for host developing countries (Abdul-Gafaru 2006, Becker-Ritterspach *et al.* 2019). MNCs usually have a negative effect on the environment when they newly produce in a host country due to their greater technological capacity with more ecologically damaging. The damaging environmental effects have increased as the market penetration and share of MNCs rise. For example, they involve in a large part of increased forest logging and deforestation in Asia-Pacific.

In addition, it has been suggested that MNCs apply inferior environmental technology, management practices and standards in their developing countries’ subsidiaries in order to reduce the costs (Abdul-Gafaru 2006, Becker-Ritterspach *et al.* 2019). A large proportion of equipment transferred to developing countries has been argued either too sophisticated to be accustomed or too obsolete to increase efficiency. Also, MNCs often put more emphasize on technological dependence than sustainable development as they supply technology with high price.

The most significant aspect of the MNCs’ technology relates to their environmental and safety dimensions as a part of their CSR guidelines (Abdul-Gafaru 2006; Becker-Ritterspach *et al.* 2019). There are claims that due to the high environmental standards in developed countries, MNCs systematically shift their environmentally noxious operations to developing countries. However, in a comprehensive study, Abdul-Gafaru (2006) finds that while the number of industrial accidents appears to have risen over the last fifteen years, available evidence indicates that many accidents have occurred in purely national firms or in state-owned enterprises.

Generally, it seems highly unlikely that developing countries will voluntarily strengthen their environmental laws to the same level as those enacted by developed countries (Morimoto 2005, Yeganeh 2019). This is partly because a number of developing countries fear that strict environmental regulations would discourage TNCs from locating their operations in those countries. In addition, the enhancement of environmental regulations would jeopardize the development of domestic companies, which lack the advanced and effective pollution

control technologies required to satisfy such strengthened regulations. Many developing countries still regard environmental quality as a 'luxury' that they are willing to forgo in favour of further economic development and increased wealth.

Nevertheless, recognizing that the conservation of the environment is essential for their long-term growth or responding to the increasing pressure from the international community, developing countries may enhance existing environmental regulations to some extent. Moreover, developing countries may enact laws enabling them to apply to the TNCs operating within their respective territories the environmental regulations in force in these TNCs' home countries. Unfortunately, however, such legislation would face various difficulties in relation to its enforcement (Morimoto 2005, Weber and Partzsch 2018).

Instead of allowing TNCs to operate entirely under the developing host countries' environmental laws, developing host countries could enact legislation that requires TNCs to comply with their home countries' rules in the territory of their host countries. This approach has a significant advantage in which local companies in host countries remain subject to only the local standards which means that the development of local industries will not be jeopardized. However, practical difficulties are anticipated in the enforcement process in a sense that environmental authorities of developing host countries would inevitably be required to identify, understand, and administer different standards for the various TNCs (Morimoto 2005, Yeganeh, 2019).

Regardless of whether environmental regulations of developing host countries are enhanced as a result of international agreements or at their own initiative, such regulations will always need to be enforced through the host countries' legal systems (Weber and Partzsch 2018). The enforcement of environmental regulations must be routine, reasonably resourced and predictable. Even though most individuals and corporations strive to abide by environmental laws, some part of the public evades legal duties. Regular enforcement is crucial to detect such evasion and prevent further evasion. Since environmental laws are generally enforced through the administrative process, the effectiveness of environmental law enforcement can be gauged by the strength and integrity of the administrative law regime. In this respect, many of the developing host countries even lack the institutional and legal frameworks in their administrative branches that are needed to enforce the existing environmental regulations.

In the proponent view, TI report (2008) indicates that the most notable feature of National Oil Corporations (NOCs)' revenue transparency practices is the strong tendency for companies to report data on operations and regulatory and procurement issues rather than on payments to the government or on anti-corruption programmes. In contrast, weak results in reporting payments to governments or anti-corruption programmes can be associated with a number of factors, including governmental restrictions on disclosure by state-owned companies, as the case in Pertamina Indonesia. However, some NOCs tend to show better results for the category of performance than for policy and management systems. Examples of this include China National Offshore Oil Corporation (CNOOC), Gazprom, Sonatrach and Rosneft. This may be due to the fact that the in-country interaction with IOCs leads NOCs to perform higher standards than their own stated policies.

5. Case Studies

In Indonesia, Sinar Mas and Raja Garuda Mas operate large pulp processing mills which are directly linked to affiliated paper production mills. Both groups established holding companies, Asia Pulp and Paper Co. Ltd. (APP) and Asia Pacific Resources International, Ltd. (APRIL), respectively. According to WWF (2006), Riau province is the home of two of the world's largest pulp mills which produces more than two thirds of Indonesia's pulp and is covered with more timber plantations and oil palm concessions than other provinces in Indonesia. Whether in the name of oil palm or of timber plantation development, forest clearings in Riau have provided a steady source for these two resident pulp and paper companies.

Although pulpwood plantations can be economically attractive to investors because of strong demand and a short growing period, they still supply only a small fraction of the raw material needed for the booming pulp industry (WWF, 2006). Both mills still relied on the clearing of natural forests for about 70 percent of their total wood supply. WWF (2006) calculated that about 170,000 hectares of natural forests were cleared to feed APP and APRIL's pulp mills in Riau in 2005. While the operators were only interested in the timber, the land was left barren, elephant and tiger habitats were destroyed, and the soil was eroding.

In 1982, Asian Rare Earth Sdn. Bhd (ARE) started monazite processing in Bukit Merah, Malaysia (Morimoto 2005). The extracted rare earth was shipped to Japan, while the radioactive and toxic wastes were left in Malaysia. It is reported that ARE maintained its operations in Bukit Merah for four years without performing an environmental impact assessment or even holding the proper licence for the generation, handling and storage of

radioactive effluents. The production of rare earth from 1982 to 1985 was conducted under extremely unsafe conditions. People in the region reported that they suffered from a bad smell, coughing, and tearing. Moreover, they claimed that the inappropriate dumping of wastes had caused leukaemia, infant mortality, and congenital diseases. Nevertheless, ARE closed down the plant in 1994.

Meanwhile, Ogoniland, which is located in the Niger Delta region of south-eastern Nigeria, is an area inhabited by approximately 500,000 Ogoni people, who live by fishing and farming (Morimoto 2005). In 1958, Shell started to extract oil from the Niger Delta region. Shell conducts its oil exploitation in Nigeria under the name of Shell Petroleum Development Company of Nigeria (SPDC), operating a joint venture on behalf of the state-owned Nigerian National Petroleum Corporation, Shell, etc. Through 35-year-long petroleum extraction, SPDC caused the devastation of water, air and land in Ogoniland, which caused a number of health problems for the Ogoni people. This environmental devastation was caused by SPDC's lack of due care. Pipelines were improperly maintained and regularly spilled a large amount of oil into the environment. As a result of 'blowout,' which is uncontrolled release of oil from wells, volumes of crude oil polluted the region. Such blow-outs resulted from inappropriate maintenance. Numerous oil spills were simply left untouched and thus aggravated the pollution.

Conclusion

Multinational corporations can voluntarily play a significant role in enhancing environmental sustainability through the diffusion of cleaner technologies and best management practices. However, the adoption and effectiveness of business-led voluntary initiatives is fortuitous, because it depends upon the commitment of a given corporation to the concept of corporate social responsibility. But if the environment is enabling for the survival of mankind, its protection should be objective and guaranteed. Yet, only in the context of legally binding regulatory measures should multinationals be compelled to conduct business in an environmentally friendly manner. A blend of both binding regulation and voluntary standards can ensure the realization of social responsibility of extractive corporations.

The integration of social and environmental concerns into extractive projects through impact assessment, stakeholder consultation and addressing human rights issues and social provisioning in the affected area can mitigate political risk factors in the extractive industry and can fill gaps in the framework of corporate self-regulation and regulation by a host country. Also, since the protection of forest requires a contribution of many parties, the need of assessment of an integrated set of programs initiated by host countries which matched with coordinated and complementary programs of home countries is very important to halt high deforestation rate. By doing so, we can measure whether MNCs have anti-corruption method on forestry sector, whether they have sustainable policies and standard operation procedures (SOP) in running their business. Without a coordinated global effort, the host countries themselves cannot continue the agenda of sustainability in forestry area.

Acknowledgements

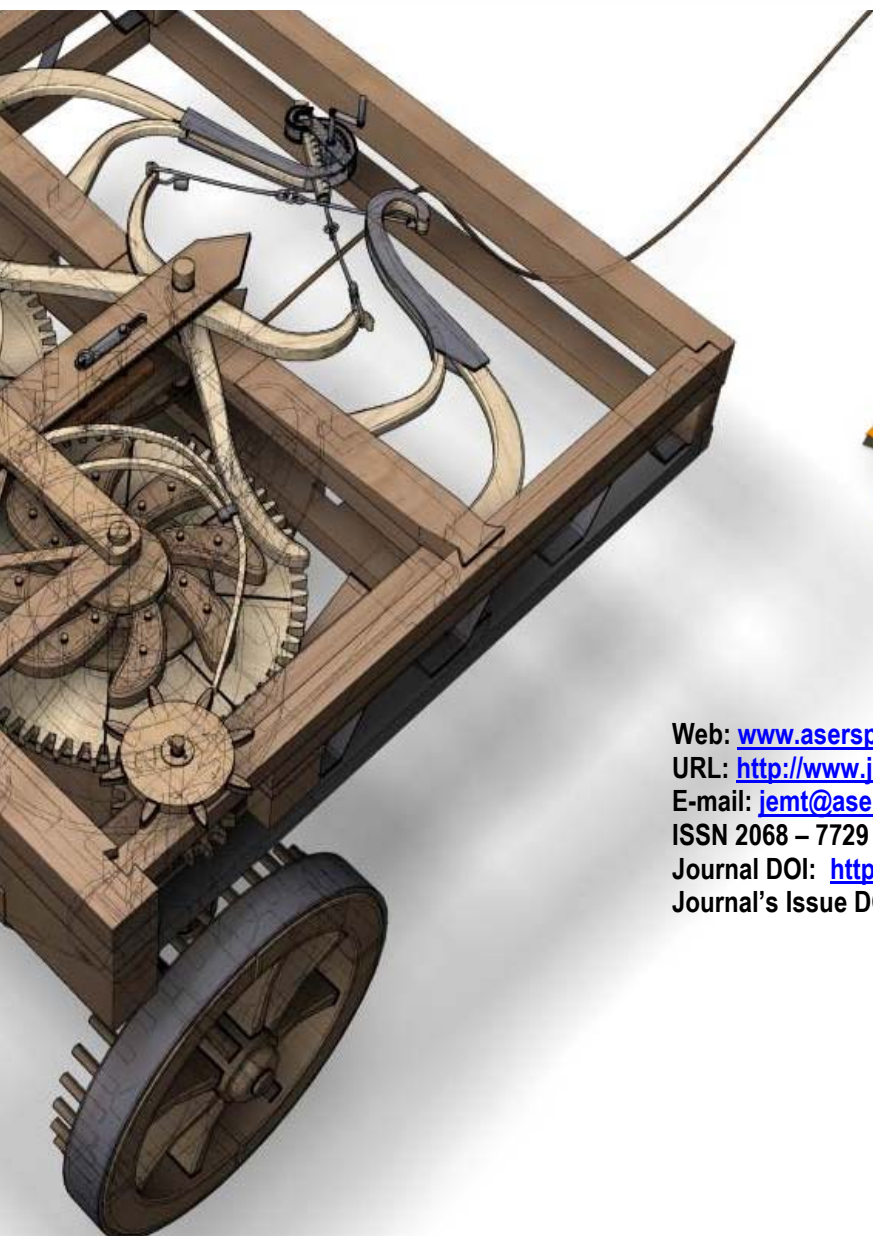
The authors convey a big gratitude to fellow colleagues from Department of Agrotechnology, Department of Management, and Department of Public Administration for the inputs and comments during our seminar.

References

- [1] Abdul-Gafaru, A. 2006. Are Multinational Companies Compatible with Sustainable Development? The Experience of Developing Countries. *Working Paper Series 2007-2008*, No. 001-07/08. Available at: <https://www.scheller.gatech.edu/centers-initiatives/ciber/projects/workingpaper/2007/001-07-08.pdf>
- [2] Angelsen, A. and Kaimowitz, D. 1999. Rethinking the Causes of Deforestation: Lessons from Economic Models. *The World Bank Research Observer*, 14(1): 73-98.
- [3] Baylis, J. and Smith, S. 2001. *The Globalization of World Politics: An Introduction to International Relations*. Oxford University Press.
- [4] Becker-Ritterspach, F., Simbeck, K., and El Ebrashi, R., 2019. MNC's Corporate Environmental Responsibility in Emerging and Developing Economies: Toward an Action Research Approach. *Critical Perspectives on International Business*, 15(2/3): 179-200.
- [5] Blackman, A. and Wu, X. 1999. Foreign Direct Investment in China's Power Sector: Trends, Benefits, and Barriers. *Energy Policy*, 27(12): 695-711.

- [6] Clapp, J. 2005. Global Environmental Governance for Corporate Responsibility and Accountability. *Global Environmental Politics*, 5(3): 23-34.
- [7] Dura, C. and Driga, I. 2017. The Impact of Multinational Companies from Romania on Increasing the Level of Corporate Social Responsibility Awareness. *Contemporary Economics*, 11(1): 45-66.
- [8] Eskeland, G. and Harrison, A. 2003. Moving to Greener Pastures? Multinationals and the Pollution-Haven Hypothesis. *Journal of Development Economics*, 70(1): 1-23.
- [9] Kaimowitz, D. and Angelsen, A. 1998. *Economic Models of Tropical Deforestation: A Review*. Available at: www.cifor.cgiar.org/publications/pdf_files/Books/model.pdf
- [10] Koyunen, C. and Yilmaz, R. 2009. The Impact of Corruption on Deforestation: A Cross-Country Evidence. *The Journal of Developing Ideas*, 42(2): 213-222.
- [11] Laffiteau A., C. 2008. Environmental Rights Agreements between Non-Governmental Organizations and Multi-National Corporations: A Paper Alliance or A Marriage of Mutual Interest? Available at: http://userpage.fu-berlin.de/ffu/akumwelt/bc2008/papers/bc2008_10_Laffiteau.pdf
- [12] Morimoto, T. 2005. Growing Industrialization and Our Damaged Planet: The Extraterritorial Application of Developed Countries: Domestic Environmental Laws to Transnational Corporations Abroad. *Utrecht Law Review*, 1(2): 134-159.
- [13] Pattberg, P. 2005. What Role for Private Rule-Making in Global Environmental Governance: Analysing the Forest Stewardship Council (FSC). *International Environmental Agreements: Politics, Law, and Economics*, 5(2): 175-189.
- [14] Transparency International. 2008. Promoting Revenue Transparency: Report on Revenue Transparency of Oil and Gas Companies. Available at: http://transparency.org/policy_research/surveys_indices/promoting_revenue_transparency
- [15] Waluyo, T., Digidowiseiso, T., Putera, E.A.B., and Sugiyanto, E. 2019. The Costs of Reduction Emission from Deforestation and Forest Degradation: Concepts and Issues. *Journal of Environmental Management and Tourism*, 10(1): 63-72.
- [16] Warhust, A. and Bridge, G. 1997. Economic Liberalisation, innovation, and technology transfer opportunities for cleaner production in the minerals industry. *Natural Resources Forum*, 21(1): 1-12.
- [17] Weber, A-K. and Partzsch, L. 2018. Barking Up the Right Tree? NGOs and Corporate Power for Deforestation-Free Supply Chains. *Sustainability*, 10(11): 1-18.
- [18] WWF. 2006. The Eleventh Hour for Riau's Forest: Two Global Pulp and Paper Companies will Decide Their Fate. Available at: http://assets.wwf.panda.org/downloads/bgr_06_2006_1.pdf
- [19] Yeganeh, H. 2019. A Critical Examination of the Social Impacts of Large Multinational Corporations in the Age of Globalization. *Critical Perspectives on International Business*, forthcoming. DOI: <https://doi.org/10.1108/cpoib-01-2019-0001>
- [20] Zarsky, L. 2006. From Regulatory Chill to Deep freeze? *Journal of International Environmental Agreements*, 6(4): 395-399.

ASERS



The logo for ASERS Publishing, featuring the word "ASERS" in a bold, orange, sans-serif font with a stylized orange and yellow fan-like graphic to its left. Below "ASERS" is the word "Publishing" in a smaller, orange, sans-serif font.

Web: www.aserspublishing.eu

URL: <http://www.journals.aserspublishing.eu/jemt>

E-mail: jemt@aserspublishing.eu

ISSN 2068 – 7729

Journal DOI: <https://doi.org/10.14505/jemt>

Journal's Issue DOI: [https://doi.org/10.14505/jemt.v11.1\(41\).00](https://doi.org/10.14505/jemt.v11.1(41).00)