

Impact of Environmental Law and Physical Planning Law to the Construction Projects in Sri Lanka

Isuru Pramodh Rathnasinghe
Department of Building Economics
University of Moratuwa
Moratuwa, Sri Lanka
irupramodh@gmail.com

Akila Pramodh Rathnasinghe
Lecturer, Department of Building Economics
University of Moratuwa
Moratuwa, Sri Lanka
akilapr1993@gmail.com

Mahesh Devinda Abeynayake
Senior Lecturer, Department of Building Economics
University of Moratuwa
Moratuwa, Sri Lanka
mabeynayake@uom.lk

Abstract

The construction industry plays a major role in the economy of a country. Therefore, the development of the construction industry mainly depends on the effect of the legal system of the country as well. The Environmental and Physical Planning Laws are the main two types of legal areas that affect the construction industry. Further, the problems or conflicts in the aforementioned law areas had become a reason to create disputes in the construction industry. Accordingly, the main aim of this research is to evaluate the applicability of the specific Laws and Regulations which are considered under by Environmental Law and Physical Planning Law relating to the Construction Industry of Sri Lanka. To attain the aim, an extensive literature synthesis was conducted to identify the problematic and conflicting areas in the existing Environmental and Physical Planning Law. Moreover, literature sources related to international Environmental and Physical Planning Law context were brought into the picture to recognize the potential solutions and the recommendations for the proper implementation of said Laws. Accordingly, problematic areas in the construction project licensing process, review of the power factor of the UDA regulations were identified as critical factors for a successful legal implementation. Conclusions had presented the impression that how the existing said law areas would affect the construction issues related to the Sri Lankan context.

Keywords

Sustainable Development, Physical Planning Law, Environmental Law, Construction Industry and Environmental Impact Assessment (EIA).

1. Introduction

Sri Lanka has a population of 20 million and a population density of 280 per sq. km. Due to the highest population density, it creates a higher demand for natural resources. The acceleration of development activities from the 1970s, the protection, and management of the environment had become a major concern (State of the Environment, 2001). According to Dakshitha (2008), the construction industry mainly plays an indispensable role in the Sri Lanka economy by providing the Physical infrastructure facilities for the development side of the country. The construction industry is not an environment-friendly process by nature (Li et al, 2009). Due to that reason after the Stockholm conference on environmental and development in 1972, the government in Sri Lanka's position regarding the environment was transformed (NARESA, 1991). In Sri Lanka the Environmental law regulations spanning over two millennia that took the form of royal decrees and customary law (De Mel et al., 2009).

The National Environmental Act was enacted to serve as the main legislation for environmental protection since it was amended by Act no 47 of 1980, Act No 56 of 1988 and Act No 53 of 2000. Provision for environmental assessment and environmental protection license for development projects in 1983 included the consideration of the cabinet of Ministers (Central Environmental Authority [CEA], 2017). Furthermore, De Mel et al. (2009) viewed the Environmental Impact Assessment (EIA) as the procedure to recognize the potential environmental effects of new construction or development before planning approval has been consented.

In the context of Sri Lankan Law there are many Physical Planning Acts and Ordinances such as Urban Development Authority (UDA) Law No 41 of 1978, Housing and Town Improvement Ordinance No.19 of 1915, Town and Country Planning Ordinance No. 16 of 1946, Municipal Council Ordinance, Urban Council Ordinance and Pradeshiya Sabha Act of 1987 for protection of the Environment and also these regulations and laws to promote planning of economic, social and physical development of the urban areas. Accordingly, this paper comprehends the preliminary findings of the literature synthesis on evaluating the degree of applicability of the specific Laws and Regulations that covered by the Environmental Law and Physical Planning Law relating to the Construction Industry in Sri Lanka.

2. Research Method

This paper seeks to answer the research problem of 'Are existing Environmental and Physical planning Law sufficient for the construction industry in Sri Lanka?' through a qualitative research approach. Hence, a comprehensive literature survey was carried out to identify the Applicability of Environmental Law and Physical Planning Law relating to the Construction Industry in Sri Lanka. The reason behind occupying such a research method is to conduct an in-depth investigation of research topics that are having an insignificant base of literature. Consequently, this research is based on a thorough investigation on literature bases such as; the Acts of the Sri Lanka Parliament, Judicial Reviews on Acts of the Parliament, and scholarly articles on international conventions related to Physical planning Law and Environmental Law. Subsequently, the outcomes have suggested amendments following the challenges that are being faced by the laws of the construction industry

3. Sri Lankan Construction Industry and its Significant Legal Aspects

The construction industry produces a wide range of products, starting from individual houses to major infrastructures such as petrochemical complexes, roads and power plants. Most of the country's output is approximately equally divided between housing, civil engineering projects and other buildings (International Labour Organization, 2013). Although attention is mostly focused on new construction, the maintenance of existing structures and renovation accounts for almost 50% of total construction output in some of the more developed economies and an even greater share of employment.

In Sri Lanka, the construction sector accounts for the majority of the total investment as a country marching towards a rapid economic expansion after the end of the civil war in 2009. Construction sector GDP stood at 247 billion rupees

in 2012 while the sector recorded a growth of 21.6% in 2012 compared to the GDP growth of 6.4% and industry sector growth of 10.3% (Wasantha and Jayasinghe, 2013).

The Main legal aspects affecting the construction industry do not refer to any specific area of Law. Instead, it is a shorthand way of referring to many different areas of Law as they appeal to the special context of the construction industry. The core of these legal aspects is the Law of contracts. At present Sri Lanka, the legal relationship between the main parties on any given construction project is governed very largely by the law of contracts. As such, the negotiations and conclusion of construction contracts is a key component of construction law practice (Baker, 2017). Further, Baker (2017) contended that these Laws and legislations are mainly introduced by the government to avoid the conflicts that could happen in the industry in many ways as described by the following. The consideration has already been given to how the government influences the level of demand for the construction industry. Mainly the government can influence the construction industry and its products which need to be considered. Such influences are exercised through Laws, planning, control and incidence of taxation. The government was influenced by the construction industry through direct physical controls by the issue of licenses and permits. Sometimes such controls are operated by the licensing of building construction, a license only is issued subject to satisfying a government agent as to need based on certain criteria, and usually carrying limitations on scale and quality. Sometimes control is exercised through the issue of permits for the purchase of materials or for obtaining labor. The amount of construction work may be increased by government action, because they require more buildings and works to meet policy needs, or because they wish to stimulate the economy.

A large number of aspects of government action generate a need for constructional work. These government regulations affect the standards of construction as well as the volume of work. Government building regulations are usually concerned with fire protection, public health, and structural safety and for energy conservation as well. Governments, as with other clients, in fact, more than most, lay down conditions and building standards and to be met by designers and contractors to maintain the standard of the industry. But all of these legislation does not appear to have significantly reduced the number of faults in buildings. Which, if not exactly making many of them physically dangerous in which to live, have certainly made them uncomfortable and in many cases downright unhealthy. Therefore, these regulations need to be improved than its present status.

3.1 Environmental Law with Impact to the Construction Projects in Sri Lanka

Environmental Law refers to a body of Law that regulates natural resources concerning human behavior and this law deals with the improvement and protection of the natural environment. To do so effectively, Environmental Law may draw upon a wide variety of sources. This includes Provincial and Local Authority Laws, human rights, Labour Law, and Trade Law. The main purpose is to minimizing or reducing the impacts of human activity both on humanity and the natural environment itself. This Environmental Law draws from and is influenced by principles of environmentalism, including conservation, prevention, responsibility, environmental sustainability and co-operation (De Mel, et al., 2009).

As mentioned earlier the construction Industry is not an environment-friendly process by nature (Li *et al*, 2009). Due to that reason after the Stockholm conference on environmental and development in 1972, the government in Sri Lanka's position regarding the environment was transformed (NARESA, 1991). According to the new constitution was enacted in 1978, environmental conservation was enshrined in its Article 18 ("It is the duty of every person in Sri Lanka to protect nature and conserve its riches") and in Article 27(14) ("the state shall protect, preserve and improve the environment for the benefit of the community") (National Environment Act No 47, 1980). Apart from legislation, the government has produced various policy statements such as the coastal zone management and sectoral plans for land use, energy generation, public investment plans, and regional development plans.

According to the National Environmental Act (1980) defines the term 'environment' as 'the physical factors of the surroundings of human beings including land, water, atmosphere, soil, tastes, sound, climate, odors and the biological factors of animals and plants of every description'. 'Environment' is defined broadly and enables judges to adopt a wide interpretation in applying it to a wide array of situations. In 1980, the National Environmental Act (1980) was enacted to serve as the main legislation for environmental protection, since it was amended by Act no 47 of 1980, Act No 56 of 1988 and Act No 53 of 2000. Central Environmental Authority (CEA) as the state agency was responsible for the formulation and implementation of policies and strategies for the protection and management of the environment in Sri Lanka. Also, Sri Lanka Parliament enacted various legislation.

This National Environmental Act adopts three main primary approaches to conservation and sustainability. They are; Environmental Protection, Environmental Assessment and the Approval of Projects, and Environmental Quality. According to this Act, Part IV C requires Environmental Impact assessment (EIA) approval to be obtained in respect of 'Prescribed Projects', which are listed in the Regulations framed under the Act and published in government gazette notifications. Then part IVA of the Act deals with 'environmental protection' by issuing licenses on certain activities like discharge, deposit or emission of waste from certain prescribed activities. These prescribed activities, therefore, can only be carried out under the authority of a license issued by the CEA. Part IVB of the Act provided for the regulation of 'environmental quality'. Unlike part IVA which applies only to 'prescribed activities', part IVB prohibits any person from carrying out the polluting activities listed in this part of the statute (De Mel, et al., 2009).

4. Legal Procedure and Licensing Part Related to Construction Projects in Sri Lanka

According to the National Environmental Act (1980), Part IVC mainly relates to the 'approval of projects' and establishes a process known as the 'environmental assessment'. Environmental assessment is a tool that was introduced around the 1970s to examine the impact a project or activity is likely to produce. It's planning tool formalized in law. In Sri Lanka, the 'environmental assessment' process was first introduced in the Coast Conservation Act. The assessment is conducted before the commencement of the project. A prior environmental assessment enables impacts to be identified and mitigatory measures to be incorporated into the planning process before the project commences and thus reduces the harm causes to the environment.

In terms of the Act all 'prescribed projects' must obtain prior approval from the relevant 'project approving agency' before such a project commences. This approval may be based on the following three types of reports.

- Initial Environmental Examination.
- Environmental Impact Assessment.
- Archaeological Impact Assessment.

The Legal procedure of the Environmental law-related acts throughout the above assessments and licenses can be described as the following topics (De Mel, et al., 2009).

4.1 Initial Environmental Examination (IEE)

The IEE is mainly carried out for construction projects which are likely to be less harmful. The IEE report is a public document and in theory, the public has access to the report. The IEE will identify potential environmental and social issues and the complexity of possible remedial actions. Under such circumstances, the proponent will be required to submit a detailed IEE for review and approval by the Project Approving Agencies (PAA). Upon reviewing the IEE, if the Technical Committee identifies any substantial environmental issues that may arise as a result of the proposed project, the proponent will be required to undertake a detailed EIA. The IEE review process is similar to the EIA review process, except for the level of detail and analysis involved, which is proportionate to the anticipated environmental and social impacts. Then a unique questionnaire is used by the CEA/PAA to determine whether the potential project results in long term irreversible or complex environmental and social issues and if so, it warrants an EIA. If no EIA is required. Then the proponent is required to prepare an Environmental Management Plan (EMP). EMP mainly contains remedial measures to address adverse environmental and social issues. The IEE is not required by law to be opened for the public for comments and does not go through the public consultation process required for an EIA. In the event the IEE is considered adequate, then the project proponent is requested to prepare an EMP. The main reason for that is to address any potential environmental and social issues as well as incorporate the PAA/CEA's approval conditions (Ministry of Defense, 2013).

4.2 Environmental Impact Assessment (EIA)

Both EIA and IEE are effective tools for evaluating opportunities for project proposals and improving the quality of outcomes, then the environmental risks. Ideally, the EIA should be carried out at the end of the preliminary design phase. EIA helps to evaluate the impacts of each planned activity and alternatives can be worked out for activities that have major impacts. The outcomes of the EIA should then be used to finalize the project design which should ensure that the impacts of the given project are minimal. The importance of this management tool as means of foreseeing potential environmental impacts caused by proposed projects and its use in making projects more suitable to the

environment has been highly effective. EIA has to accept as an important planning and environmental management tool (Zubair, 2001).

The EIA is carried out for projects that may produce 'significant' environmental impacts. In the case of a project required to prepare an EIA report, approval can only be granted by the relevant PAA with the concurrence of the CEA. The main responsibility for this consultation between PAA and CEA is to submitting the preliminary information to environmental scoping, to set the Terms of Reference (TOR) for the EIA. The TOR is prepared by a Technical Committee (TC) comprising experts in the relevant field, appointed by the PAA. (Central Environmental Authority, 2017).

In developing the TOR, the regulations provide for the PAA to consider the views of state agencies and the public. Upon submission of the EIA by the proponent, the PAA is required to determine whether issues referred to in the TOR have been addressed. Then it should have to notify the proponent of any inadequacies within 14 days. In the event any inadequacies are identified, the proponent is required to make necessary amendments and resubmit the report. Once accepted, in addition to the EIA being forwarded to the CEA by the PAA. After the notice is also placed in the government gazette and in a national newspaper published daily in Sinhala, Tamil and English languages inviting the public to make written comments, if any, to the PAA within 30 days from the date of the first appearance of the notice. According to the legislation, public consultation is mandatory is only at this stage of the EIA process. Depending on the nature of the project, the evaluation of environmental impact is delegated to various government bodies, of which the Minister has now specified. The TC would also evaluate the adequacy of the proponent's response to any comments raised during the public comments period. The TC appointed by the PAA would then evaluate the EIA and require the project proponent to respond to any queries raised by the TC. (CEA, 2017). The whole EIA and IEE Process can be briefly shown in the following Figure 2.2.

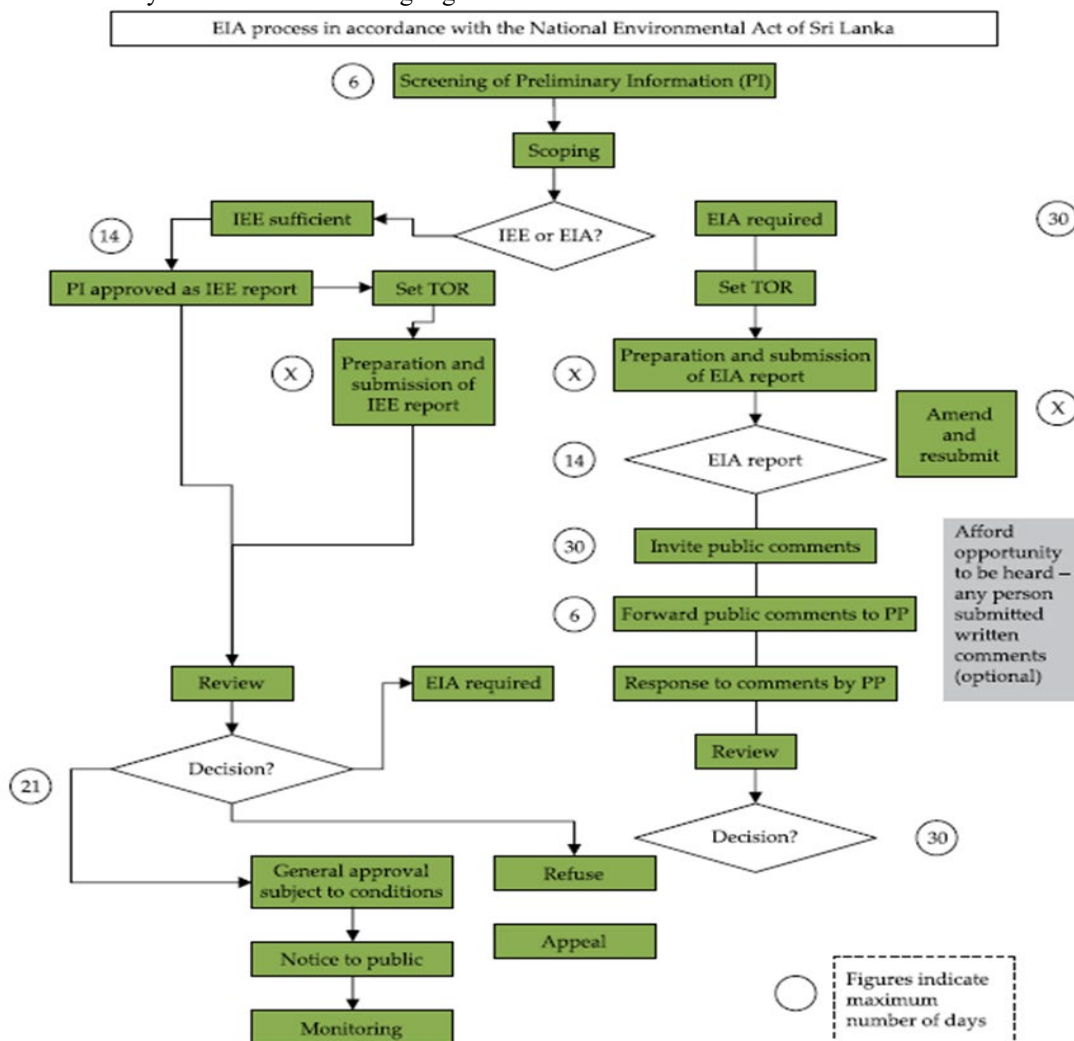


Figure 1. IEE and EIA Procedure

Upon completion of the evaluation of the TC, the PAA with the concurrence of the CEA. Then CEA would approve the implementation of the proposed project subject to specified conditions or refuse approval for implementation of the project, with reasons for doing so. The notification must be made within 30 days of the receipt of responses from the proponent. The PAA is required to specify a period within which an approved project should be completed. The EIA process is initiated by the Project Proponent (PP). The determination of the PAA appropriate to it is based on having the largest jurisdiction over the project area. Then they having jurisdiction over diverse unique ecosystems, within whose jurisdiction the environmental impacts are likely to be the greatest, and being the statutory authority to license or otherwise approve the prescribed project (Kodituwakku, 2004).

EIA has its strengths and weaknesses, as a decision-making tool. It plays a crucial role in project-level decision making. However, in the entire development process application of EIA as a tool to bring in environmental sustainability comes fairly at a late stage. At this point, it may be too late to change certain policy decisions and the choices are limited. An EIA may also result in 'public hearing'. Although not mandatory, the project approving agency may hold a public hearing if it thinks it is required under the circumstances. Any person aggrieved by the refusal to approve any prescribed project submitted for approval has a right of appeal to the secretary to the Ministry. This appeal is not available to a person aggrieved by the granting of approval. The primary benefit of this assessment process is that it happens at a stage 'prior' to the commencement of the project and so has the potential to minimize the subsequent impact on the environment (Ministry of Defense, 2013).

4.3 Archaeological Impact Assessment (AIA)

The archaeological impact assessment process mainly checks if there are any artifacts on the land on which the development project is to be carried out and if artifacts do exist, the impact on them by the due project. These things should be described while stating the alternative studies to be carried and reports also to be provided. An archaeological impact assessment must be obtained concerning any proposed development project to be carried out on a land of over 0.25 hectares in extent. The law in force in Sri Lanka about Archaeological Impact Assessment Survey Process is as follows. AIA process is briefly described in the orders made by the Minister of Cultural and Religious Affairs under the Section 47 read with Section 43(b) of the Antiquities (Amendment) Act No. 24 of 1998 and published in the Gazette No. 1152/14 dated 04.10.2000. These orders are cited as Project Procedure Orders No. 01 of 2000 (Department of Archaeology, 2012).

4.4 Judicial Review on Licensing Process of Construction Projects in Sri Lanka

Environmental Foundation Ltd vs. Geological Survey and Mines Bureau & Seven others (Maha Oya Sand Case) is relating to the conservation of Biological Diversity. In this case the petitioners claimed to prevent unsustainable sand mining i Source: (Central Environmental Authority, 2017) enses were not monitored by Geological Survey and Miniir ages. As a result of unchecked mining, more sand is being removed from river bed. The petitioner pointed out that adverse environmental impacts of these activities include coastal erosion, erosion of river banks, salt water intrusion, lowering of the water table, ecological imbalance and habitat loss. The petitioner requested court to order, carrying out EIA's, monitoring the mining activities and preventing the over exploitation of the resources. In this case Attorney General filed a case at Magistrate Court and the courts prohibited such wrong and illegal activities however the relevant businessman ignored the court order. Therefore Supreme Court heard this as a fundamental right case, prohibited that matter and confiscated all vehicles and equipment used for the activities. In this case also Supreme Court gives an order to protect the right to environment of the citizens who lived in that area (Maha Oya Sand Case, 2004)

In the **S.C. Amarasinghe and Three Others vs. the Attorney General and Three Others** lands belonging to the petitioners were to be acquired under the Urban Development Project Act No. 2 of 1980 for the Colombo Katunayake Expressway Project. The petitioners filed action challenging the order. The petitioners claimed that in forming an opinion that the expressway would meet the just requirements of the general welfare of the people. The petitioners also claimed that approval for the project must be obtained under the National Environmental Act and cannot be in respect of the expressway before and EIA has been prepared. The court states, it is not for this court to determine whether, upon a consideration of all these factors, the disadvantages out weight the advantages of the expressway or whether in its view the expressway meets the just requirements it the general welfare of the people. However, considering the suffering of people and the unfairness of situation court heard the case and ordered the closure of the

activity until obtaining the environmental clearance over EIA procedures and ordered to make clear the EIA report according to the Act (Colombo - Katunayake Expressway Case, 1993).

Then in the **Balankulame and Others vs. Secretary - Ministry of Industrial Development (Eppawala Phosphate Case)** is mainly relating to the Protection of Natural Resources and Cultural Heritage area. In here petitioners stated that Eppawala phosphate mining projects sites in agriculturally developed area, which closed to the Yoda Ela scheme. The plaintiffs filed a case against the government for proposal to allow a US multinational company to manufacture the phosphate fertilizer using apatite deposits at Eppawala. It was aimed to extract apatite from entire reserves of the area and export it. Due to that reason petitioners stated that the Yoda ela scheme could be getting damaged also. Supreme Court decides that, even the archaeological reserves definitions not cover a "cultural heritage landscape" such as Yoda Ela, it must be under the Heritage Convention. The court held that there are some environmental hazards due to implementing of the project and ordered the government for cancellation of the project. So from this court order it was help to protect the right to environment and also the economics right of the peoples who lived in that area (Eppawala case, 2000).

5. Impact on the Physical Planning Laws from the Environmental Laws Regarding Construction Issues.

This review mainly discussed the Environmental Laws and Physical Planning Laws that affect the construction industry of Sri Lanka. In that case, the related Acts, Ordinances, and Regulations also present to get a clear idea of this process. There are the main two authorities that control the above two Laws separately. The Environmental Law is controlled by the Central Environmental Authority and Physical Planning Law is controlled by the Local Authorities and Urban Development Authority in Sri Lanka. So the National Environmental Act of Sri Lanka also provides for the issue of directions by the CEA to local authorities. Under this legal mechanism, the CEA can instruct the local authority to undertake environmental improvements or protection work (Wijayadasa and Ailapperuma, 2005).

This arrangement is of much use, as in Sri Lanka the local authorities are responsible for planning approval for construction in urban and other built-up areas, as well as for cleansing and some sanitary services. Then Article 76(3) of the Constitution empowers Parliament to make law empowering any person or body to make subordinate legislation for prescribed purposes. The 13th Amendment to the constitution established nine provincial councils and empowered them to formulate Law on developed subjects. According to the Powers and functions that spelled out in the UDA Act develop environmental standards and prepare environmental improvement works also getting influenced by the NEA. And also in the National Environmental Act, Part IVC mainly relates to the 'approval of projects' and establishes a process known as the 'environmental assessment' (De Mel, et al., 2009).

1994 amendment of NEA delegated the authorization to the local authorities to issue EPL, for low polluting industries. In that case, the approval process of the project was mainly given to the Project Approving Agencies (PAA). These project approving agencies are the Ministries and other related government organizations like urban councils, Municipal Councils, and Urban Development Authority. That control by the Physical Planning Acts and Ordinances. The CEA's environmental management functions are holistic and they are very well set out in section IV of the act. Then Regime of liability and compensation for damage to the environment can see in the Environmental Handbook for Pradeshiya Sabha, Urban councils, under the Institutional arrangements.

6. Conclusions

This research commences with a brief introduction to the present status of the Sri Lankan construction industry. Throughout the discussion, the major legal aspects that affect the field were presented. Further, the Environmental Law and the relevant Acts such as National Environmental Act and other relevant environmental licenses such as environmental impact assessment, architectural impact assessment are being discussed under the point of view of the construction industry of Sri Lanka. Subsequently, this paper has elaborated on the physical planning Law and other Ordinances such as local government Laws, Urban Development Authority Laws and regulations, Housing and Town improvement ordinances which would mainly affect the process of the construction industry.

The objective to explore the impact of above mentioned Environmental and Physical Planning Laws regarding the operation of the construction projects was achieved by finding out the impact of the aforementioned Laws, and then

reviewing it in accordance to identify the further improvement process in Sri Lanka construction industry. During this process, both Environmental and Physical Planning Laws can be divided into the sub-sections. Further, the impact of all of those sub-topics which are related to the construction industry of Sri Lanka can be evaluated. However, the following major areas that are being affected by the construction process would be evaluated. They are the National Environmental Act, and the procedure of the licensing part. When it comes to the Physical Planning Law, the following major areas that are being affected by the construction process were evaluated. Those were Housing and Town Improvement Ordinance, Urban Development Authority Law and Regulations, Town and Country Planning Ordinance, Local Government Law (Municipal Council Ordinance, Urban Council Ordinance, Pradeshiya Sabha Act). All of these sections may principally explain the impact of each topic concerning the construction industry of Sri Lanka.

References

- Baker, A., What is construction law? Available: <https://www.fladgate.com/lawyer/adam-baker/>, 2017.
- Central Environmental Authority, Environmental Protection Licensing, Available: <http://www.cea.lk/web/index.php/component/content/article?id=25>, July, 2017.
- Central Environmental Authority, Environmental Impact Assessment (EIA) Procedure in Sri Lanka, Available: www.cea.lk/web/index.php/en/environmentalimpact-assesment-eia-procedure-in-sri-lanka, November, 2017.
- Colombo - Katunayake Expressway Case, 6/92, Supreme Court of Srilanka, January 21, 1993.
- Dakshitha, T., Integrated approach needed to sustain construction industry [online], Sunday times, Available: sundaytimes.lk/080713/FinancialTimes/ft309.html, 2008.
- De Mel, M., Sirimanne, N., Nanayakkara, A., Rajapakshe, R., Gunawardhana, J., and Nanayakkara, R., *Judges & Environmental Law*, Colombo: Environmental Foundation Limited, 2009.
- Department of Archaeology, Exploration and Documentation Division. Available: [www.archaeology.gov.lk/web/index.php?option=com_content&view=article &id=75&Itemid=82&lang=en](http://www.archaeology.gov.lk/web/index.php?option=com_content&view=article&id=75&Itemid=82&lang=en), July, 2012.
- Eppawala case, 3 Sri LR 243, Supreme Court of Sri Lanka, 2000.
- Griffith, A., Review of environmental assessment in UK building construction: current awareness, concerns and issues. *Engineering, Construction and Architectural Management*, 3(3), pp. 205 – 217, doi: /10.1108/eb021031, 1996.
- International Labour Organization, Construction Sector, Available: www.ilo.org/global/industries-and-sectors/construction/lang--en/index.htm, 2013.
- Kodituwakku, D. C., *The Environmental Impact Assessment Process in Srilanka*, pp. 2-3. 2004.
- Li, X., Zhu, Y. and Zhang, Z., An LCA-based environmental impact assessment model for construction processes, *Building Environment*, 45, pp.766-775, 2009.
- Maha Oya Sand Case, FR81/ 2004, Supreme Court of Srilanka, 2004.
- Ministry of Defense, *Environmental Assessment and Management Framework*, pp. 75-79. 2013.
- National Resources, Energy and Science Authority of Sri Lanka [NARESA], *Natural resources of Sri Lanka: Conditions and Trends*, Colombo: NARESA, 1991.
- National Environment Act No 47, *Parliament of the Democratic Socialist Republic of Sri Lanka*, Colombo, Sri Lanka: The Department of Government Printing, 1980.
- State of the Environment Sri Lanka, *United Nations Environmental Programme /The South Asian Cooperative Environment Programme*, Colombo, 2001.
- UDA Law No. 41 of 1978 as amended by Act No. 4 of 1982. *Parliament of the Democratic Socialist Republic of Sri Lanka*. Colombo, Sri Lanka: The Department of Government Printing, 1982.
- Wasantha, D., and Jayasinghe, S., Construction Sector underpins Srilanka's growth formula, Available: www.ft.lk/2013/11/14/construction-sector-underpins-sri-lankas-growthformula/, November, 2013.
- Weeramantry, C., *Justice without Frontiers: Furthering Human Rights*, Springer, 1997.
- Wijayadasa, K., and Ailapperuma, W. *Survey of Environmental Legislation and Institutions in the Sacep Countries Sri Lanka*. Colombo: Central Environmental Authority of the Ministry of Local Government Housing and Construction, 2005.
- Zubair, L, Challenges for environmental impact assessment in Sri lanka, *Environmental Impact Assessment Review*, pp. 470-472, 2001.

Biographies

Isuru Pramodh Rathnasinghe is a recently passed out B.Sc. (Hons) in Quantity Surveying graduate from Department of Building Economics, University of Moratuwa. Besides, he is an APC Candidate of RICS and, a post-graduate scholar of Robert Gordon University, Aberdeen and Birmingham City University, UK following master's degree – Construction Project Management and Masters in Law (LLM) on Construction Law and Arbitration. His research interests are Alternative Dispute Resolution, Construction Law, and Quantity Surveying practice.

Akila Pramodh Rathnasinghe is a Lecturer attached to the Department of Building Economics at University of Moratuwa who is holding B.Sc. (Hons) in Quantity Surveying with First Class Honors category (2018, December). His research interest includes with Building Information Modeling (BIM), Disaster Management, Supply Chain Management, Big Data, and Alternative Dispute Resolution (ADR).

Mahesh Devinda Abeynayake is a Senior Lecturer attached to the Department of Building Economics at University of Moratuwa who is holding LLB (Hons) from University of Colombo. Further, he earned Masters in Law (LLM) from University of Moratuwa and Masters in Philosophy (M.Phil.) from University of Moratuwa. His research interest includes with Information Technology Law, Dispute resolution, Health, safety and welfare, Environmental Law, and Law of the sea.