

CHAPTER V

CONCLUSION AND SUGGESTION

5.1 Conclusion

The term of green building is considered as new method or design in Indonesia. However, due to the deteriorating of our environment and also the increasing of emissions produced from the building and construction sector, we should start considering green building as our method to do the construction activity.

In this thesis, there are two steps of comparisons between 2 assessment tools. First layer is the comparison of outer layer, which is the indicator to give the overview and general information. For the second layer, it is evaluated with 5 topics that represent green building, including energy saving, water saving, material saving, site selection and outdoor environment and indoor environmental. The characteristics of both assessment tools were summarized as well.

After doing the comparison, we can conclude that Greenship has broader scope compare to the EEWH, but the calculation approach is not as detail as EEWH. There are also some criteria in the Greenship that is not very clear. Also, there are some indicator that is important, but we can't find in the Greenship. Thus, by carrying out this comparison, some suggestions can be provided. For example, in energy saving, it is suggested to revise the unclear criteria and adopt the calculation or criteria from EEWH Taiwan. Also, it is suggested for Greenship Indonesia to add additional indicator based on the local issues. It also suggested for Greenship Indonesia to combine the calculation and checklist yes/no method to do the

assessment. Some important indicator such as, sewage and garbage improvement and construction waste management should be added in the Greenship system also. Thus, all the suggestions from this comparison study between EEWH Taiwan and Greenship Indonesia, hopefully can be used for GBCI to revise or improve Greenship Indonesia.

5.2 Suggestion

For further studies, extending the analysis to cover all buildings types, such as office building or industrial building can be done. Full case studies assessment using Greenship and EEWH can be done also for next research. Also, more detailed comparison can be done such as pay attention to the relationship between environment, economy and society (Triple Bottom Line) with the green building method.

REFERENCES

- Anisah, Inayati, I., Soelami, F. and Triyogo, R., 2017. Identification of Existing Office Buildings Potential to Become Green Buildings in Energy Efficiency Aspect. *Procedia Engineering*, 170, pp.320-324.
- Berawi, M., Miraj, P., Windrayani, R. and Berawi, A., 2019. Stakeholders' perspectives on green building rating: A case study in Indonesia. *Heliyon*, 5(3), p.e01328.
- Darko, A. and Chan, A., 2016. Review of Barriers to Green Building Adoption. *Sustainable Development*, 25(3), pp.167-179.
- Li, Y., Chen, X., Wang, X., Xu, Y. and Chen, P., 2017. A review of studies on green building assessment methods by comparative analysis. *Energy and Buildings*, 146, pp.152-159.
- Liu, Chen and Chou, 2019. Comparison of Assessment Systems for Green Building and Green Civil Infrastructure. *Sustainability*, 11(7), p.2117.
- Lockwood C, Building the green way, *Harvard Business Review*, 84 (2006) 129-137
- Mediastika, C. and Lie, K., 2015. Occupants' Perception on Green-rated Office Building in Surabaya, Indonesia. *Procedia Engineering*, 118, pp.546-553.
- Ramírez-Villegas, R., Eriksson, O. and Olofsson, T., 2016. Assessment of renovation measures for a dwelling area – Impacts on energy efficiency and building certification. *Building and Environment*, 97, pp.26-33.
- Robichaud, L. and Anantatmula, V., 2011. Greening Project Management Practices for Sustainable Construction. *Journal of Management in Engineering*, 27(1), pp.48-57.

Varma, C. and Palaniappan, S., 2019. Comparison of green building rating schemes used in North America, Europe and Asia. *Habitat International*, 89, p.101989.

Wu, C. and Lo, S., 2018. What Makes a Greener Building? Lessons from Taiwan. *Journal of Environmental Protection*, 09(09), pp.957-972.

Zhang, Y., Wang, J., Hu, F. and Wang, Y., 2017. Comparison of evaluation standards for green building in China, Britain, United States. *Renewable and Sustainable Energy Reviews*, 68, pp.262-271.

