

CHAPTER V

CONCLUSION AND RECOMMENDATIONS

5.1 Conclusion

Based on the results of the research and field data collection regarding dynamic capabilities in waste management in Bangkalan Regency, especially at the Recycling House (RDU) of Bangkalan Regency, several conclusions can be drawn:

1. **Thinking Ahead:** The Government of Bangkalan Regency, through the Environmental Agency (DLH), has shown anticipatory efforts to address the risk of waste overload through plans to expand waste processing facilities into strategic areas such as the Masaran Village Terminal and through a vision of decentralized waste management down to the village level. Technological innovation in converting residual waste into fuel briquettes reflects a future-oriented perspective that integrates environmental aspects with the concept of a circular economy.
2. **Thinking Again:** There has been a critical reflection on the failure of the conventional waste management model (end-of-pipe system). This capability can be seen in the willingness of the authorities to evaluate the limited processing capacity (10–15 tons per day) compared to the total daily waste generation (approximately 417 tons per day). This condition encouraged changes in fleet maintenance strategies and faster waste processing methods to reduce waste accumulation.
3. **Thinking Across:** A collaborative strategy has been implemented through strategic partnerships with third parties, academics (UNESA), and the

industrial sector (PHE WMO) to overcome regional fiscal limitations, which account for only 0.028% of the regional budget (APBD). The practice of conducting comparative studies with other cities, such as Surabaya, shows a willingness to learn across boundaries in order to adopt appropriate technology.

The findings of this research reveal that although the Dynamic Governance theoretical framework is able to explain the cognitive processes within bureaucracy, there are empirical complexities that create major challenges, especially budget limitations. This condition indicates the existence of a “capability gap,” where strategic visions (thinking ahead) are often constrained by managerial obstacles. This study not only confirms the theoretical assumption regarding the importance of bureaucratic agility, but also expands the conceptual understanding by showing that in regions with low fiscal capacity, dynamic capabilities highly depend on creativity in building networks (network-based governance) and utilizing abandoned assets through plans for expanding waste processing facilities.

Although this study provides a comprehensive description of RDU governance, it has limitations because the research scope focuses only on one technical unit. Therefore, future research is expected to explore the wider integration of community-based waste management systems or examine the effectiveness of reward and punishment policies in changing public behavior, in order to improve a truly dynamic and sustainable waste governance ecosystem in the future.

5.2 Recommendations

Based on the research findings and discussion, several recommendations can be proposed for the Government of Bangkalan Regency, especially the Environmental Agency (DLH) of Bangkalan Regency, regarding the development of the Recycling House (RDU) of Bangkalan Regency, as follows:

1. The Environmental Agency (DLH) of Bangkalan Regency is recommended to immediately implement and expand the self-funding scheme through formal partnerships with third parties. Considering the extremely limited regional budget (APBD), which is only 0.028%, the local government should not rely solely on the regional budget for infrastructure expansion. Cooperation schemes with private sectors or third parties, such as the one planned at the Masaran Village Terminal, should be formally strengthened so that the operational costs of the RDU (electricity, employee salaries, and machine maintenance) can be fully supported through the economic value generated from recycled waste products.
2. The RDU management together with the Environmental Agency (DLH) of Bangkalan Regency needs to follow up the evaluation results of field workers' performance through the reconstruction of Standard Operating Procedures (SOPs), especially during holidays and periods of waste surges, such as religious celebrations. The process of thinking again should not stop at providing wage incentives or material-based reward and punishment systems alone. There should also be stricter supervision, more organized shift scheduling, and improved technical capacity for the 12 field workers so that

mechanical operations can continue effectively and daily waste sterilization can be achieved without causing waste overflow onto public roads.

3. The Environmental Agency (DLH) of Bangkalan Regency is also advised to expand its cross-boundary learning process (thinking across) by studying other regions that have successfully implemented strict household waste sorting regulations. Cross-boundary learning should not only focus on downstream waste processing technologies, such as briquettes or incinerators. The RDU will continue to experience overload problems if the incoming waste still consists of mixed, wet, and foul-smelling waste. Therefore, DLH needs to adopt policy instruments from other regions regarding law enforcement, sanctions, or incentives for neighborhood communities (RT/RW) that successfully implement waste sorting practices, in order to reduce the habit of improper waste disposal among the community.