

CHAPTER V. CONCLUSION

5.1 Conclusion

From the research results it can be concluded that:

1. The growth pattern of frigate tuna (*Auxis thazard*) obtained from the catch of fishermen in West Sumatra Waters is positive allometric ($b > 3$) in both male and female individuals, which means that weight growth is faster than length growth. This growth pattern is supported by the value of the frigate tuna condition factor (*Auxis thazard*) in stable condition, with an average value obtained > 1 , namely 1.24, meaning that the frigate tuna caught by fishermen in West Sumatra waters has a fat body condition.
2. The sex ratio shows the number of male frigate tuna is less than female frigate tuna with a ratio of 0.9:1. Gonad maturity level (GML) is dominated by GML IV in both male and female frigate tuna. The value of the gonad maturity index (GMI) increases as the level of gonad maturity increases. Fecundity ranges from 261,468 - 775,590 grains which indicates that the value of frigate tuna fecundity in West Sumatra Waters is high. From several parameters of reproductive biology used in this study, it can be concluded that the condition of frigate tuna reproductive biology in West Sumatra Waters is in good condition so that the presence of these fish in the Waters can still be maintained.

5.2 Suggestions

Further studies need to be carried out on the time series of frigate tuna reproductive biology in West Sumatra waters and the relationship between environmental

parameters such as temperature and chlorophyll-a, food availability and the number of fish caught. The period of fishing for frigate tuna in certain months needs to be limited to provide opportunities for frigate tuna to spawn so that their presence in the waters is maintained.

