CHAPTER 5

CONCLUSION

This study was designed to investigate the abundance of small plastic debris buried in the sands at six sampling sites in Malaysian beaches. The beaches were selected to represent recreational and fishing area. The abundance of small plastic in these study areas originated from anthropogenic activities (mostly fishing and recreational) which are land-based and sea-based.

A total of 2,542 pieces (265.30 g/m^2) of small plastic debris were collected from all six beaches. The greatest quantity was found in Kuala Terengganu with 879 items/m^2 in Seberang Takir Beach, followed by Batu Burok Beach with 780 items/m^2. Other four beaches had lower quantities which ranged from 192 items/m^2 to 249 items/m^2.

The classifications within plastic debris in this study are different depending on the functions at the beach. Recreational beaches namely Teluk Kemang Beach, Batu Burok Beach and Tanjung Aru Beach have abundant distribution of plastic film, foam and fragment, whereas, common types of plastics were found in fishing beach areas (Pasir Panjang Beach, Seberang Takir Beach and Teluk Likas Beach) including line, foam and film. Plastic pellets were present only in three study areas namely Batu Burok Beach, Seberang Takir Beach and Teluk Likas Beach. This likely came from accidental spillage from ships.

Recreational beaches (Teluk Kemang Beach, Batu Burok Beach and Tanjung Aru Beach) have abundant of small plastic debris at the berm location whereas along the

fishing beaches the most abundant of small plastic debris was at the foreshore area (low tide and high tide). Pasir Panjang Beach and Seberang Takir Beach had the highest quantity of plastic debris in the high tide shoreline while it was in the low tide shoreline in Teluk Likas Beach.

Small plastic debris between 1 and 30 mm in size occurred on all of the beaches. Those more than 4.75 mm was the most abundant (73%), followed by debris which ranged at 2.80-4.75 mm (20%) while 1.00-2.80 mm (7%) was the least abundant in all beaches.

Data indicated that the abundance of small plastic debris would pose risk if no immediate attention is given to resolve this matter.