

**Session III – Connecting People and the Ecosystems That Support Them  
4:40 PM**

**The Fishery of Blue Swimming Crab *Portunus pelagicus* Linnaeus, 1758 by Using Collapsible Crab Traps at Kung Krabaen Bay, Chanthaburi Province, Thailand**

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**Abstract**

Samples were collected monthly from January to December 2005 by using collapsible crab traps. The results show that crab production showed a decline from 80 tons/year in 2004 to 62 tons/year in 2005. Most of them were juvenile stage with ages less than 1 year old. It also showed that 60% of female crab caught would not get a chance to spawn. The sex ratio of male to female was 1:1.20. Analysis of crab population dynamics was performed with FiSAT using carapace width and frequency distribution. It was found that growth parameters of the male crab were  $L_{\infty} = 13.23$  cm.;  $K = 0.87$  per year, while the growth parameters of the female crab were  $L_{\infty} = 12.95$  cm.;  $K = 1.05$  per year. Total mortality rate of male and female crabs were 3.17 and 3.55 per year, respectively. The recruitment period occurred all year with two particular peaks. The first peak was from February to March and the second peak was from July to October. Crab distribution has a relationship with salinity at day time and dissolved oxygen at night time. Particularly, female crab distribution in spawning season has a relationship with temperature at night time. The gonad somatic indexes (GSI) for female were 0.26-2.30% and the highest average GSI was found in January while the lowest was found in June. The ratio of target species to bycatch in crab trap was 3.44:1. Bycatch species are 15 crustaceans, 10 fish and 5 molluscs.