The purposes of the study were to determine factors which are dominantly contribute to development of seaweed culture business and to formulate development strategy of seaweed culture business. The primary data was collected from 74 seaweed farmers living in Pulau Pari, 12 chief of seaweed farmers group and 7 persons of expertise. SWOT and Analytical Hierarchy Process (AHP) were used to analyse collected data.

Seaweed culture, especially Eucheuma cotonii Sp. in Kepulauan Seribu, Jakarta is very prospective, because there are many natural resources, simple culture technology, need short time culture period (45 days), availability of human resources and have good domestic and international markets. In the 1999, there were 1,959 seaweed farmers in Kepulauan Seribu, spread out in Pulau Pari, Pulau Payung, Pulau Tidung, Pulau Panggang, Pulau Pramuka and Pulau Kelapa. The average seaweed production with 341 lines was 40,920 kg/farmer/year. Fresh seaweed average price is Rp. 400,-/kg. Average income was around Rp. 4,874,000,-/farmer/year or Rp. 407,167,-/farmer/month. In early year 2000 seaweed harvest was failed because it was attacked by pest and seaweed diseases and caused the decrease of production and income drastically.

Result of the analyses indicate that: factors which dominantly contribute to development strategy of seaweed culture were human resources, culture and process technology, tools and infrastructure and natural resources. The formulate strategy to increase production and income seaweed farmers are increase of process technology, the arrangement of natural resources, tools and infrastructure, culture technology, law enforcement of culture right, increase capital and increase of partnership.

The implication strategy that could be constructed for the government of DKI Jakarta Province such as developed seaweed prime seed (hybrid) which immune on pest and diseases, diversification of culture seaweed species such as Gracillaria Sp, and Gelidium Sp, seaweed processing to become carageenan, Jelly and alginate, re-arrangement of mariculture, law enforcement of seaweed culture right, increasing capital and partnership and creating a new institution like Technical Operation Unit of Sea Culture under Fishery and Marine Services of DKI Jakarta Province.