International coastal cleanup application at local marine area as an environmental solution

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Abstract

The International Coastal Cleanup (ICC) is an international campaign for international communities and marine environment. This annual action engages schools, government agencies, and business as volunteers to conduct local cleanup events. One of the ICC’s primary goals is to record and trace marine pollution and its sources over the world. The method was divided into three main steps. First of all, preparation was needed in order to organize the action such as surveying the appropriate site and inviting volunteers or participants. Second, during the event, the participants were divided into several smaller groups including their Data Card for recording marine pollutants. All action materials such as plastic bags and gloves were also important to be given to the participants for collecting the debris. Last, after the action, each bag was weighted and recorded into the data card. Data analysis from each card was the final step of ICC. This application method shows its importance and solution the marine environment.

Keywords: marine debris, Sindangkerta beach, environment, plastic bags.

Introduction

Indonesia’s geographical location (situated at equatorial latitudes between the Southeast Asia and Australian land masses and at longitudes between the Pacific and Indian Oceans) places it in a position to be known as the Maritime Continent, which has coastline for about 81,000 km. Indonesia’s coastlines are recognized as the best coastline in the world which has familiar beaches and marine tourism such as Pangandaran Beach, Palabuhanratu Beach, Kuta Beach, Sanur Beach, etc. All that coastline sites attract many tourists not only local but also international tourists. The situation is potentially raising environmental issues such as marine and coastal pollution (Hutabarat & Evans, 1987; Dahuri, 1999).

The other local tourist sites which have environmental problem are Pameungpeuk and Sindangkerta Beaches, which are located at southern part of West Java Province (Handaka et al., 2007; Awaluddin, 2011). Based on Awaluddin (2011) survey, tourist and local people at Sindangkerta Beach have concern at marine litters, but they do not know the appropriate method to clean up the beach.

Many surveys have been conducted all over the world and have been recorded for about past 25 years (Ocean Conservancy, 2011). According to Hall (2000), previous surveys have been identified four main sources of litter; recreational tourists to the coast, shipping, fishing and sewage outfalls. As far as author aware, there are limited marine litter surveys in Indonesia, especially in local marine tourist area.

The cleanup campaign is needed in order to clean up hazardous marine debris, endangered pollution to the wildlife and human life, and dirty scenery beach at the beach. The International Coastal Cleanup is the familiar campaign to clean up the beaches in the world (Ocean Conservancy, 2011; Awaluddin, 2011). Application in local coastal site would be interesting to solve the environmental issues.

Materials and Methods

International Coastal Cleanup (ICC) method was used to assess marine litter in the Sindangkerta Beach as an example of local tourist site. Some materials are needed in order to support this method such as ICC’s data card, trash bag, cloves, weigh meter, and logistics.

Technically, all participant were divided into small groups consist of five persons. Each group was supplied by required materials above including ICC’s data card, which is the standard form for recording marine debris. Every volunteer were picking up marine litters they found and record it into the card. Collected trash bags were weighted and recorded into the card. Finally, the card was analyzed together with Ocean Conservancy organization.

Results and Discussions

There are three steps in this implemented ICC method. First of all, preparation is needed in order to obtain detail problem of the beach location.