

# Responding to climate change: Surakarta city tourism on legal and policy perspectives

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**Abstract.** Like other destinations in the Asia region, Surakarta's tourism policy is vulnerable to the impacts and implications of climate change. The city reliance on its culture and service product which is potentially under threat, coupled with the potential for changing consumer demand patterns, particularly in long-haul markets, should be concerning for the tourism. Yet, the tourism has been criticized for its short-term, profit orientation and lack of action regarding climate change, mainly on legal and policy perspectives. It is against this background that a qualitative study was undertaken with primary and secondary data of Surakarta's tourism policy to explore the legal perspectives on current challenges and future directions regarding climate change.

## 1. Introduction

Increasing global surface temperatures that have occurred in almost all parts of the world in recent decades have an impact on temperature increases, changes in weather patterns, sea level rise, and the occurrence of extreme events will also have a major impact on destinations [1]. Tourism destinations that rely on climate, natural and cultural resources as their main tourist attraction, include the tourism sector in the Surakarta City. Climate change will have a major influence on the tourism world, both on tourist preferences for tourist destinations, as well as changes in the tourist attraction of destinations that result in changes in the management of tourism destinations [2]. The relationship of climate change with tourism can be seen from two different ways, namely by: (i) seeing the effect on tourists, what must be prepared and how they react; and (ii) looking at its effects on tourism destinations, how changes in tourist attraction coincide with climate change and its management.

At the 1992 Earth Summit in Rio de Janeiro, Indonesia became one of the countries that agreed on the United Nations Convention on Climate Change (United Nations Framework Convention on Climate Change). As a follow-up, Indonesia issued the Law No. 6 of 1994 on the Ratification of the Climate Change Convention which contains 3 main things, namely: (i) the achievement of stability in GHG emission concessions at a safe level; (ii) the existence of common but differentiated responsibilities; and (iii) developed countries will help developing countries (funding, insurance, and technology transfer).

The rise of the Bali Roadmap or the Bali Action Plan 2007, the Copenhagen Accord 2009, and Cancun Commitments 2010 are nothing but a global agreement meant to create a better condition of the earth in the long term (Post Kyoto Protocol period, ie until 2012). These agreements, although have not yet explicitly set quantitative targets and implementation schedules, directly or indirectly



influence national development policies, one of which is the direction of infrastructure development policies.

Surakarta is one of the cities on the island of Java that is vulnerable to flooding. Floods that occur can be caused by the overflow of the Bengawan Solo River or due to the occurrence of inundation because of abundant rainfall. Historically in 1966, Surakarta had experienced major flooding submerging the Surakarta city square. History of flooding in the Surakarta, among others, occurred on March 1966, March 1968, March 1973, February 1974, March 1975, January 1985, February 1993, December 2007, March 2008, February 2009, 2012 and January 2013. In fact, Surakarta has a lot of potential in tourist destinations and strategic tourism areas. The mapping carried out by the Surakarta City Tourism Promotion Agency (*Badan Promosi Pariwisata Kota Surakarta, Indonesia*) concluded that some tourist destinations in Surakarta have tourism potential if combined with tourism activities in Surakarta.

This paper tries to examine the response of the Surakarta City Government to climate change in relation to tourism policies. Planning destination development and tourism promotion in Surakarta at the level of implementation in current conditions tend to be based on strengths, weaknesses, obstacles, and challenges. Cross-sectoral cooperation has become the role of tourism in contributing to local revenue. The development of tourism destinations and tourism promotion is then expected to be able to contribute to the economy of Surakarta as an effort to increase growth, employment opportunities, reduce poverty, and preserve the environment.

## 2. Geographical landscape and policy typologies

Surakarta City is geographically located between 110°45'15"- 110°45'35" East Longitude and 7°36'00"- 7°56'00" South Latitude. Surakarta is one of the major cities in Central Java and the Special Region of Yogyakarta which supports other cities such as Semarang and Yogyakarta. Surakarta or better known as the "Kota Solo" in Bahasa Indonesia includes low-lying areas that have a height between ± 92 meters above sea level and land slope between 0% and 15%.

Surakarta is classified as a tropical climate, which has a dry month of 5 months (May-September) and a wet month of 7 months (October-April) with an average temperature of 24.8 ° C to 18.1 ° C. Humidity level is classified as medium, which ranges from 66-84%. While the sun radiation in Surakarta City tends to be higher in August or September with solar radiation between 80-84%, while the lowest radiation occurs in December or January with solar radiation around 48-50%. Air pressure is between 1,007-1,011 atmospheres, an average of 1,010 atmospheres. The Conditions of rainfall in 2011 amounted to 2,548.50 mm per year, lower than in 2010 of 3,408 mm per year and in 2009 amounting to 2,332.5 mm per year.

Surakarta is an urban area with limited natural resources. Agricultural land is increasingly narrowing due to shifting functions into settlements, trade and industry. It has an impact on the decreasing role and contribution of the agricultural sector in supporting regional production, even for the benefit of agricultural products such as food crops, plantations, fisheries and livestock. Likewise, mining materials, almost none except underground water and quarry materials C, and even then are relatively small. However, the potential of underground water and C even though small in the era of regional autonomy is important because it is one of the sources of regional income from the tax and retribution sector after the affairs are submitted by the Provincial Government to the City / District Government.

With such geographical conditions, the development of trade, services and tourism are the main choice. In terms of tourism, potential destination and development are based on the non-natural sector, such as culture and culinary. Tourism in Surakarta makes it a city of the cultural presenter. Surakarta has enough sites to represent its image, with its historic buildings and museums.

Historically, there are many historic buildings in Surakarta City, ranging from religious buildings, public buildings, palaces, to military buildings. Historical relics such as the Surakarta Palace, *Pura Mangkunegaran*, there is also the Vastenburg Fortress, and *Loji Gandrung* which is currently used as the residence of the Mayor of Surakarta. The most complete batik museum in Indonesia, the House of

Danar Hadi, and the oldest museum in Indonesia, the Radya Pustaka Museum are located on the protocol road of Slamet Riyadi, Surakarta.

Some of these architectures, libraries, and cultural heritage represent cultural characteristics in Surakarta City. Some of these destinations are also supported by cultural activities in the form of festivals, annual events, and other tourist attractions such as “Kirab Pusaka 1 Suro”, “Sekaten”, “Grebeg Sudiro”, SIPA (*Solo International Performing Arts*), and SIEM (*Solo International Ethnic Music Festival*). There are 43 calendars of tourism every year. The calendar of tourist events preferred by tourists is Haul Habib Ali bin Muhammad Al Habsyi, a weeklong event attended by 12,000 people.

The tourism market segment of Surakarta in terms of geography is a tourism consumer group from major cities in Indonesia, especially from Jakarta and Surabaya which have a cultural attachment to Indonesia. In addition, tourism consumers in the two cities have strong purchasing power. The segment of foreign tourists for the tourism of Surakarta City from the geographical side is Malaysia, Middle East (Jeddah) and China. This is based on the direct flight routes from Surakarta to Kuala Lumpur, Jeddah and Guangzhou. The potential tourists from China are quite large due to the country's healthy economic conditions, giving rise to a new middle class that is beginning to be concerned with lifestyle.

The major policy of City Government includes 6 policies: (i) Development of an integrated area as a mass tourism area with diverse activity attractions; (ii) Increased cooperation, coordination and integration between relevant agencies, business executives and the community in developing tourism potential; (iii) Provision of convenience for investors to be interested in investing their capital in the area that has been and will be used as a tourist area; (iv) The formation of tourism conscious and environmentally conscious community groups in collaboration with relevant agencies for the benefit of environmental conservation; (v) Entrepreneurship development in tourism for local communities; and (vi) Preparation of community-based programs and activities in order to encourage the growth of community participation in the tourism sector.

### 3. Analysis

Climate change will have a major influence on the world of tourism, both on tourist preferences for tourist destinations, as well as changes in tourist attractions owned by destinations that also affect changes in the management of tourism destinations. For this reason, then the 6 main policies in the development of tourism in Surakarta as described above are not much related to climate change.

Concerned about climate change, tourism policies are related to spatial planning. Basically, spatial planning can be seen as an effort in optimizing space use. Optimization, in this case, means providing opportunities for the sector to develop optimally without neglecting the quality of the environment.

According to Law Number 26 of 2007 on Spatial Planning, spatial planning is the process of spatial planning, spatial utilization, and control of spatial utilization. In this law, it is explained that spatial planning can be carried out based on the system, main functions, administrative areas, main activities in the region, and the strategic value of the region.

Policy orientation still revolves around the efforts to increase regional income. For this reason, the integration of culture as a tourist destination with climate change has not been taken seriously. Orientation to the environment, which then influences the way and attitude of the preservation of cultural tourism destinations should be a response to climate change. It is necessary to note that climate change for an industry and tourism destination also always depends on the impact of climate change on its competitors. Until there is a systematic assessment at the regional level, the definitive statement about economic costs or the social impact of climate change becomes unreal. The impact on the tourism sector can be very parallel to the global economy, where a temperature increase of 1°C can produce net benefits for the world economy, but a greater increase in temperature will actually result in a decline [3]

Community empowerment leads to entrepreneurship which refers to the development of capital. Decisions issued only from developers and the government without involving or considering the

opinions of users or communities in the process will only create conflicts and cause a decline in environmental quality in the future.

Efforts in preserving this cultural heritage must be supported by all levels of society. Governments in the era of regional autonomy have a greater role in the efforts to preserve historical sites must involve more local community participation. This is because regional development planning needs to be carried out in an integrated manner in all sectors so that the benefits are greater than the various regional economic potentials. In addition, integrated planning will also reduce unexpected impacts both now and in the future.

Whereas in fact cultural tourism as a priority in Surakarta City usually depends on living elements or is built from culture and leads to the use of the past as tourism research. On the one side, tourism needs to provide strong political and economic justification to expand conservation activities. But on the other hand, increased visits, excessive use, inappropriate use and commodification of the same assets without respecting cultural values that pose a threat to asset integrity.

#### **4. Conclusion**

The orientation of tourism policies in Surakarta City is still closely related to the acquisition of regional income sources. Spatial utilization has been carried out and there are already outlines of policies in the context of developing the tourism sector. The response to climate change, which is expected to encourage the preservation of environmental functions in the context of tourism based on culture, has not yet become an integrated policy.

#### **References**

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