



## Research article

# Opportunities to enhance contribution of model forests in the sustainable forest resources management (example from Yalova Model Forest)

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## ARTICLE INFO

## Article history:

Received 1 April 2016

Received in revised form

25 July 2016

Accepted 10 August 2016

Available online 25 August 2016

## Keywords:

Model forest

Sustainable forestry

Nongovernmental organization

Yalova-Turkey

## ABSTRACT

Model forests are nongovernmental organizations at local, regional and international level which are mainly focused on reconciling the conflicts between the stakeholders. This is an innovative approach to organization, which has been receiving more and more attraction from increasing number of countries, which gradually increased the number of model forests for the last 25 years. If these organizations reach desired levels of structure, medium, impacts and assets their contribution in sustainable forest resources management will increase *ipso facto*. The very first model forest of Turkey was created in Yalova Province in 2010. Yalova Province has certain fundamental problems including but not limited to; population growth and unplanned urbanization caused by industrialization, uncontrolled increase in demand for fire wood and non-wooden products of forestry resources, questionable resource management decisions adopted in the past and low-income levels of the people especially those in the rural areas. The main objective of present case study is to analyze Yalova Model Forest (YMF) so as to determine the possible problems that may occur during implementation of sustainable management for forestry resources through a planning approach with multiple stakeholders. As a result of research, it has been revealed that YMF has certain significant structural, environmental and impact-related problems. In order to ensure continuity of YMF's contribution to sustainable forestry resources management, these problems need to be addressed promptly.

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## 1. Introduction and themes

The present case study focuses on opportunities for enhancing the effectiveness of sustainable forest resources management approach of Yalova Model Forest (YMF) that was originally established on the basis of compromising the conflicts between the stakeholders.

Mankind has many needs from the forests in form of goods and services (wood products, non-wood products, recreation, soil conservation, fresh drinking water, biodiversity, clean air, and so on). For the purpose of ensuring continuous supply of forestry products to the entire society, public/private economic units, called forestry enterprises were established within certain forestry lands. These pursuit production activities in accordance with such

fundamental principles like multifaceted utilization, continuity, productivity and efficiency. However, given the difference between expectations of various interest groups, conflicts can emerge during utilization of the forestry resources (Akamani and Hall, 2015; Svensson et al., 2012; Elbakidze et al., 2007). Therefore, in order to ensure sustainable forestry resources management, the conflicts which inevitably occur, must be eliminated.

As a source of wealth, forests play significant roles in national economies since they serve as un-depletable resource. However, this quality depends on the renewal ratio of the forests. In order to be un-depletable, the consumption rate ( $u$ ) of a forest must be equal or lower than its renewal rate ( $r$ ) ( $u \leq r$ ). Unfortunately, a consumption policy ( $u > r$ ) was implemented during utilization of forests in the past which allowed irregular and excessive logging. As a consequence, the forestry areas shrunk while the forestry flora and fauna were weakened in terms of quality and quantity and the volume of forestry assets reached critical points. New approaches related to sustainable development, such as model forests and

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forest certification were developed in order to improve forest management, environmental protection and social benefits from forest (Tolunay and Türkoğlu, 2014; Tolunay et al., 2014).

In 1990s, Canada introduced the volunteer organization called “Model Forest (MF)” and International Model Forest Network (IMFN) for sustainable forestry management. The IMFN includes more than 60 large-scale landscapes in six regional networks covering 84 million hectares in 31 countries (IMFN, 2015).

In the year 2015, IMFN defined MF as a volunteer and impartial medium (nongovernmental organizations) where in various interest groups on vast forestry areas are included in decision-making processes regarding utilization/preservation of natural resources and where decisions affecting the stakeholders are discussed. These nongovernmental organizations can also be defined as a broad-based and voluntary partnership system in a certain area that links the values of forestry, agriculture, mining, recreation, research and other land use types as well as interconnecting the interests and which, therefore, manages the conflicts between the stakeholders.

In Turkey, many public and governmental organizations as well as nongovernmental organizations engage in activities to achieve sustainable forestry resources management. Merely the international developments in the subject are monitored and an effort is put to develop solutions compliant with the local conditions. As a direct result of these efforts, the General Directorate of Forestry (GDF) took interest in the MF organization, which aims at managing the inevitable conflicts between the stakeholders of forestry resources through a new approach and signed a protocol with IMFN Secretariat in 2009. According to this protocol, Yalova Model Forest and Bucak Model Forest Associations were founded in Turkey (Tolunay et al., 2014; Özdemir, 2011).

With their expanding influence and fields of activity, NGOs such as associations, chambers, trade unions and foundations and similar, engage in impressive undertakings towards solutions for socio-economic problems of the country. For this reason the nongovernmental organizations (NGOs) are regarded and defined as the “Third Sector” after public and private sectors or “Fifth Power” after legislative, executive, judiciary and the media organs (TÜSEV, 2010; Özalp, 2008). However, in order to solve any number of social problems in a country by means of NGOs the third sector or the fifth power needs to be cleansed from structural and functional problems as to its strength, impact, collaborations and financial sustainability. The NGOs in Turkey, just like those in other countries, are gaining more strength in every passing day (Aktan et al., 2011, 2007).

Civic organization movements related to natural resources (environment) gained pace right after 2000s in Turkey. However, the increase in number of the organization was not duly reflected in the number of memberships. In other words, environmental NGOs gained strength in organization and professional aspects while lagging behind in popularization front. Also the associations with improved impact area, resources, number of employees and volunteers appear to prefer the form of foundations (Aktan et al., 2011).

The objective of the present study is to determine the elements of structural and functional problems of YMF, which extenuate its contributions to sustainable forestry resources management so as to identify suggestions for solution.

### 1.1. General information on Yalova Model Forest

YMF is an “association” a form of nongovernmental/non-profit organization, where stakeholders gather to achieve common goals on a given subject. The local people of Yalova Province as well as any and all public and private institutions-organizations in the

Province are natural stakeholders of YMF Association. The attributes of YMF Association are given in Table 1 below (YMO, 2015a; Özdemir, 2011).

### 1.2. Geographical location and characteristics

YMF is located within the administrative boundaries of Yalova Province, which is located on junction point of three of the largest, most industrialized and most populated provinces (namely, İstanbul, İzmit, Bursa) of Turkey (Fig. 1). Forests attract urban and rural dwellers who want to experience biodiversity, social activities, aesthetics and other opportunities. But forests are under constant pressure of intensive urbanization and rapid population growth (Bekiroğlu et al., 2015; Lee and Lee, 2015).

For this reason, YMF is also subjected to impacts of both rural and urban population. It is known that the demand for non-wooden forestry products has been increasing in recent years and also that YMF forests are very fertile in terms of these products (Özdemir et al., 2014). The total surface area of the province spans over 84.700 ha and 58% of this is forestry areas. 70% (35.958,2 ha) of these forests are classified as productive forests and an impressive 85% are virgin (YMO, 2015a; BURSAOBM, 2015). The population of Yalova Province was 203.741 in 2010 and 220.122 in 2013 (Yalova İl Özel İdaresi, 2016).

Whole body of YMF forests are publicly owned and managed and operated by governmental bodies. Yet other parties such as local population, private and legal persons are granted with permits (easements) to use certain parts for economic activities such as forestation, beekeeping, picnic-recreation and tourism investments, extreme sports, mining exploration and exploitation, intra-forest aquacultural operations and pasturage. Non-wood forestry product plants are also grown by local communities.

The forestry activities within YMF are conducted by “Directorate of Forestry Enterprise” one of the main stakeholders under the General Directorate of Forestry. The production (utilization) operations within the forestry areas are conducted according to forestry management plans and forestry products of YMF are produced by forestry cooperatives and dwellers of forest villages.

### 1.3. Foundation year and internal and external environmental characteristics

In the year 2010 the stakeholders underlined 4 strengths and 8 weaknesses for internal environmental characteristics of YMF and 9 opportunities and 14 threats for its external environmental characteristics (Table 2).

As it can be seen from Table 2, the opportunities, weaknesses of and threats against the YMF are clearly defined in detail.

### 1.4. YMF's strategic plan (2010–2014)

In Turkey, the “strategic planning” practices of the public organizations are held pursuant to the Law numbered 5018 which is still in force. Accordingly a strategic plan “of a public organization shall include the medium- and long-term objectives, main principles and policies, goals and priorities, performance criteria as well as the methods to be followed and distribution of resources to achieve them” (Maliye Bakanlığı, 2016).

YMF has a Strategic Plan for the period of 2010–2014. In this plan, the mission of YMF is defined as “to manage the natural resources in Model Forest as a unit of ecosystem so as to ensure a multi-dimensional utilization for society” while the vision is stated as “ensuring a sustainable forest management practice respecting human life, nature and environment” (YMO, 2015b). The plan defines 28 targets under 4 priority titles (Table 3).

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