



Human-induced environmental degradation during Anthropocene in Turkey

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The Anthropocene is a new term in the literature meaning “a new geological age.” (Crutzen and Stoermer, 2000). It was created with the purpose of making it clear that human impact on the habitat increased and that humans became the main agent shaping the environment (Web-1). Despite opposing views, the Industrial Revolution has been considered the beginning of this age (Crutzen 2002; Crutzen & Steffen, 2003; Crossland, 2005; Andersson et al., 2005, Foley et al., 2013).

Human beings have to avail themselves of the nature in order to maintain their lives. The style and extent of the use of nature, however, depends on time and place. Hunting and gathering were common practices in ancient times. Later on, a shift to the agricultural society took place with the domestication of animals following the settlement of people. Thus, people started producing a number of much-needed products by themselves. The next phase saw the shift to industrialization process during which people began to create most of the items they needed to live at factories.

Industrialization led to significant changes in land use and human-nature relationships. In the first place, there was limited and relatively slow production from raw materials. Then, the Industrial Revolution sparked a faster production process. As the need for energy soared, the exploitation of natural resources became greater and faster. Human-nature relationships underwent a change about 200 years ago. Human imprint on the environment was indiscernible until the end of the 17th century. The anthropogenic factors accelerated and had a stronger impact on the environment due primarily to industrialization (Zalasiewicz et al. 2008), and resulting rise in population and human needs. Since the beginning of the 19th century, humans have had a greater impact on the nature, literally ruling it to a substantial extent.

Human activities impact much of the world today and, therefore, 85% of the total area of the world has already been affected by humans (Sanderson et al., 2002; Braje & Erlandson, 2014). The area left in its natural state corresponds to only 15%.

Due to population increase, agricultural areas shrank, forests were destroyed, and pastures declined in size. More chemical fertilizers and agricultural pesticides were used in order to obtain more products. A greater number of machines were employed in agriculture, which led to a rise in the number of products.

The human pressure on the environment in Anatolia dates back to thousands of years. Nomadic peoples on these lands have settled in the last 200 years due to settlement policies (Cürebal et al., 2015). This process saw the establishment of villages in higher and inclined areas as a result of the effects of the nomadic culture of Turkomans and other people in Anatolia. Forests in the inclined areas around these villages were destroyed and turned into agricultural areas. Machines, fertilizers, and pesticides were utilized in agricultural activities in order to produce more crops. This transformation led to an increased erosion effect, deterioration of soil, agricultural and environmental pollution (Chin et al., 2013; Hoang et al., 2014; Matteo et al., 2014).

The change caused by industrialization gained ground in the 1950s in Turkey. In particular, migration from rural areas to cities gaining pace after the World War II brought about an increased human pressure in and around big cities. Areas around the cities became centers of attraction for many people. Plains around settlement areas were opened to settlement, and most industrial facilities were established there. As a consequence, first class agricultural areas were lost. Settlements and industrial areas generated large amounts of solid and liquid waste. Uncontrolled discharge of liquid waste and intensely stored solid waste caused the physical and chemical pollution of rivers, lakes, and seas to increase in Turkey and other parts of the world (Andersson et al., 2006; Steffen et al., 2011; Dalton et al., 2014). Domestic tourism boomed after 1970, which led the Sea of Marmara, Aegean, and Mediterranean coasts to become secondary settlement areas for city-dwellers. This, in turn, sparked the construction of concrete buildings along the coastlines, making them less natural.

The shift from the agricultural society to the industrial society made it possible for the service sector to grow and develop. Land transportation among large cities gained importance, and road construction gained pace.

Development of industry, rapid rise in population, migration from rural areas to cities, unplanned settlement, and wrong agricultural practices are main factors for the environmental degradation in Turkey.

Key Words: Human, habitat, anthropocene, industrialization, Turkey.

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