



Salinity issue in agriculture and solutions scoping study in Iran

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Background of salinity in Iran



Iran is located in southwest of Asia and covers an area of ca. 1.75 million km². Agricultural land in Iran was reported at 28 % of total land area in 2014. Based on previous estimations, approximately 20% of the country is under salt-affected soils (Table 1). In majority of dry land areas of Iran, since all irrigation water contains salt, irrigation is known a major driver for salinization.

Table 1. Some reports on salt affected soils area in Iran

Reference	Dewan and Famouri (1964)	Soil and Water Research Institute (1987)	Dent et al. (1992)	FAO (1994)	FAO (2000)	Sayyari and Mahmoodi (2002)
Estimated salt affected area (%)	9.4	10.9	12.8	19.8	20.6	15.2

The spatial pattern of soil salinity in Iran has also been depicted in Figure 1 (Banie 2001).

Major crop production systems in Iran are based on irrigated agriculture, where about 50 % of the area falls under different types of salt-affected soils (Cheraghi 2004). Khuzestan and Central provinces have the most saline and sodic affected soils, 17 and 16.5 % of total Saline and sodic soils of Iran, respectively. It is estimated that in areas where salinity is present, the average yield losses may be as high as 50 % (Qureshi et al. 2007).

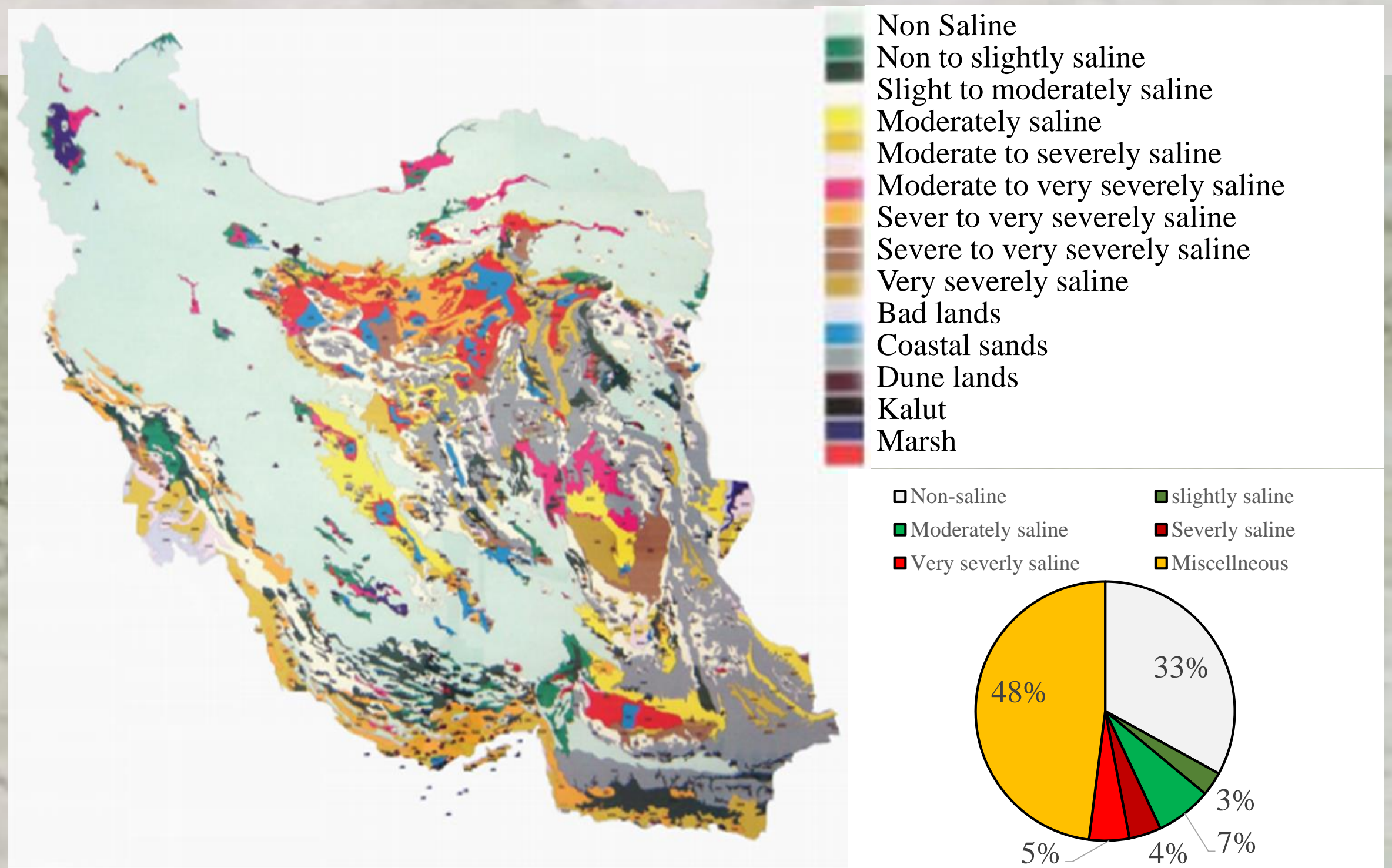


Figure 1. Spatial pattern of salinity in Iran (Banie 2001)

It is also predicted that about 50% of the irrigated lands of Iran falls under different types of salt-affected soils as depicted in Figure 2 (World Bank 2005). Land and water resources salinization in Iran has been the consequence of natural and anthropogenic conditions.

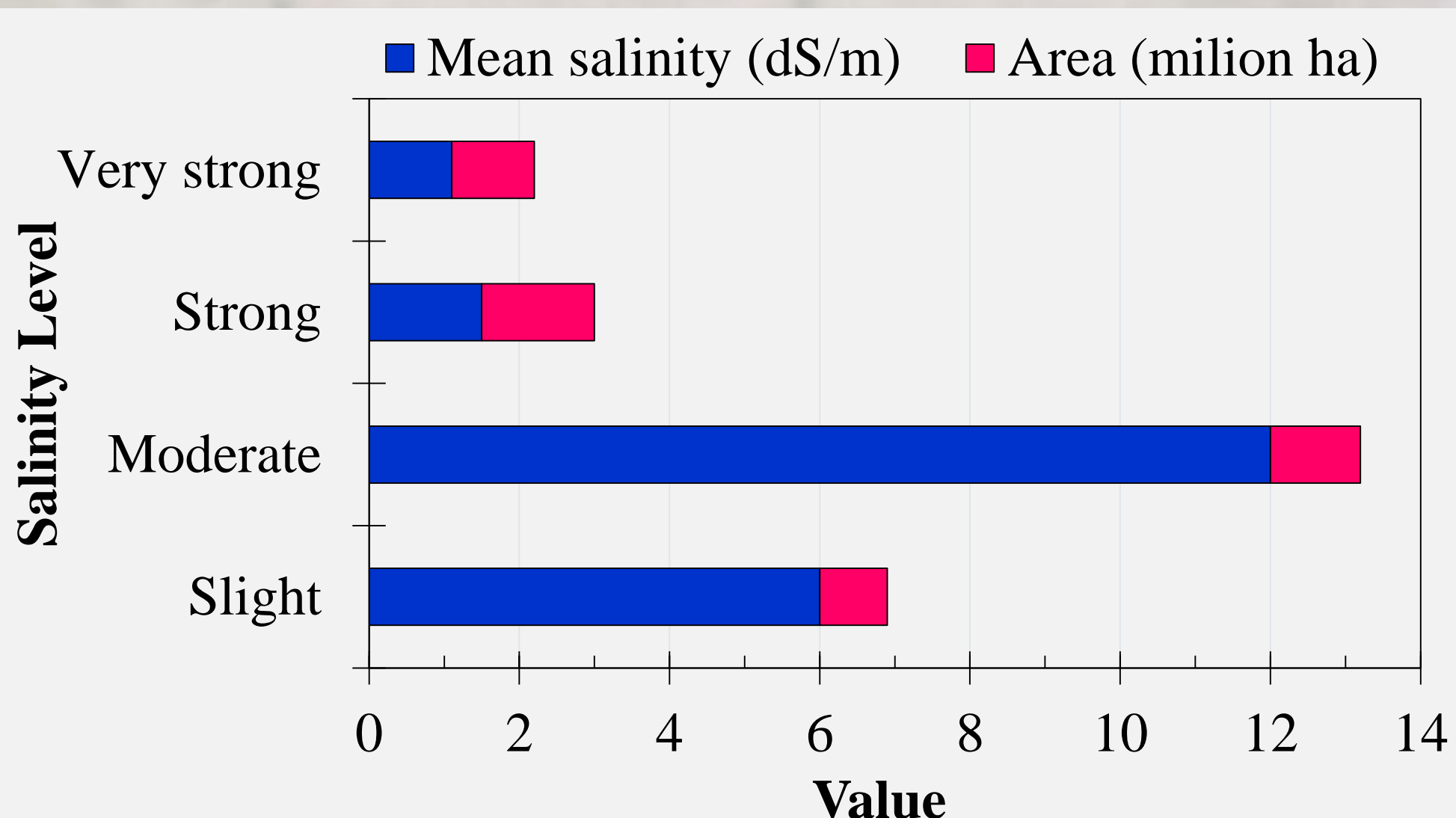


Figure 2. Soil salinity status in irrigated lands in Iran

Future Plan

Towards the mentioned issues, the present paper emphasized the necessity to:

- ✓ Define the **national salinity study project** by collaboration of a group with related specialties in several provinces such as Khuzestan, Fars, Yazd and East Azerbaijan following by complete list of the problems facing the salinity crisis, and for each of them, using the views of experts and bring short- and long-term solutions to update previous and available data and ultimately help to better management of Iranian salt-affected soils.

References

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