

# National Rangeland Monitoring and Inventory of Iran

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# National rangeland monitoring and inventory of Iran

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**Key words :** monitoring , vegetation cover , site , satellite data

**Introduction** Information for sustainable utilization of rangeland requires accurate and frequent range assessment . Such information will be obtained from monitoring in the long term (Watson 2007) which is important for government agencies , range holders and application of remote sensing (RS) and geographic information systems (GIS) . Changes in quantitative parameters , including abundance , vegetation composition , canopy cover and yield , are influenced by climatic conditions and management activities (Arzani and Abedi 2006) . So distinguishing and separating these is important for better management (Anderson and Holte ,1981) . The objective of this research was to investigate variation of vegetation parameters in the long term and to determine trend and severity of changes .

**Materials and methods** Main vegetation communities of 17 provinces were considered . In the key area of each community one site was established . Factors including vegetation cover , density , and production along four-400 or six-200 meter transects within 60 two or one square meter quadrats in arid and semi arid areas were measured . Satellite data collected simultaneously to field data was applied .

**Results and discussion** Primary results showed that in arid regions , range ecosystems are in fragile condition . They were characterized with low vegetation cover and small production (Figure 1) . Desirable species were absent in vegetation composition . Biological balance has been lost because of severe grazing . Range condition in semi arid rangeland was better than arid areas . Moderate species were dominant and vegetation cover percentage and yield was higher (Figure 2) . Integration of field data and satellite data for a period of five years indicated the possibility of range assessment in wide areas using digital data .

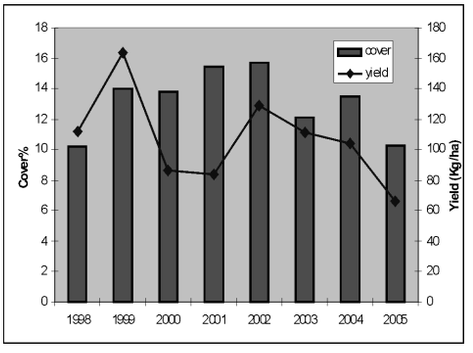


**Figure 1** *Variation of canopy cover and yield in arid rangeland of Iran (1998-2005) .*

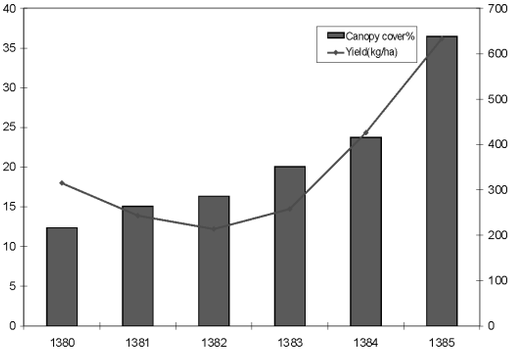


**Figure 2** *Variation of canopy cover and yield in semi-arid rangeland of Iran (1998-2005) .*

**Conclusions** Range assessment in wide areas , with the assistance of digital data is possible . A national monitoring system (NMS) for national data analysis collected in different years and various regions is suggested by the study .

**References**

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