

Past trend of temperature changes in the mountains of Iran, **future outlook**

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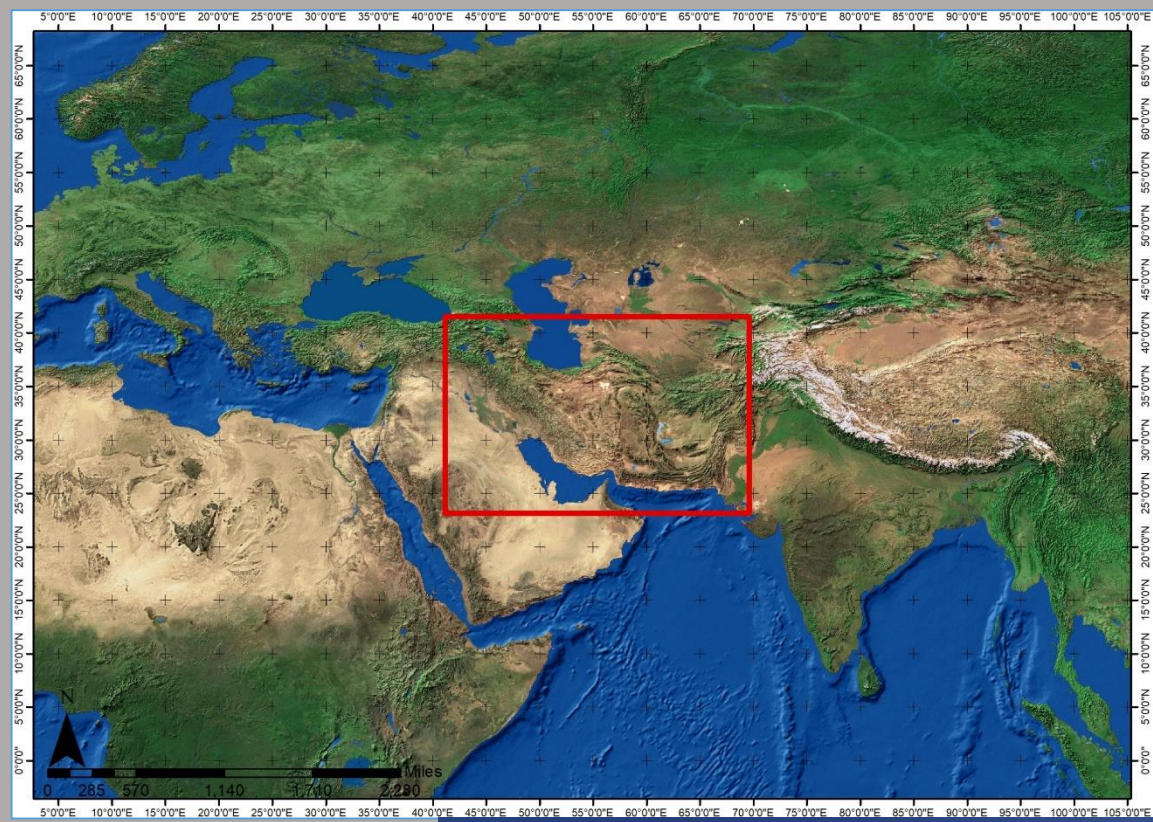


The mountains of Iran are located in the Alpine-Himalayan belt

Iran has two important mountain ranges called Alborz and Zagros. In addition, it has dozens of mountain ranges as well as independent mountain ranges

The importance of Iran's mountain ranges and mountains in terms of climate change and water supply is very vital for the ecosystem

Due to the location of these mountains in hot and dry regions, their importance is very vital for the ecosystem



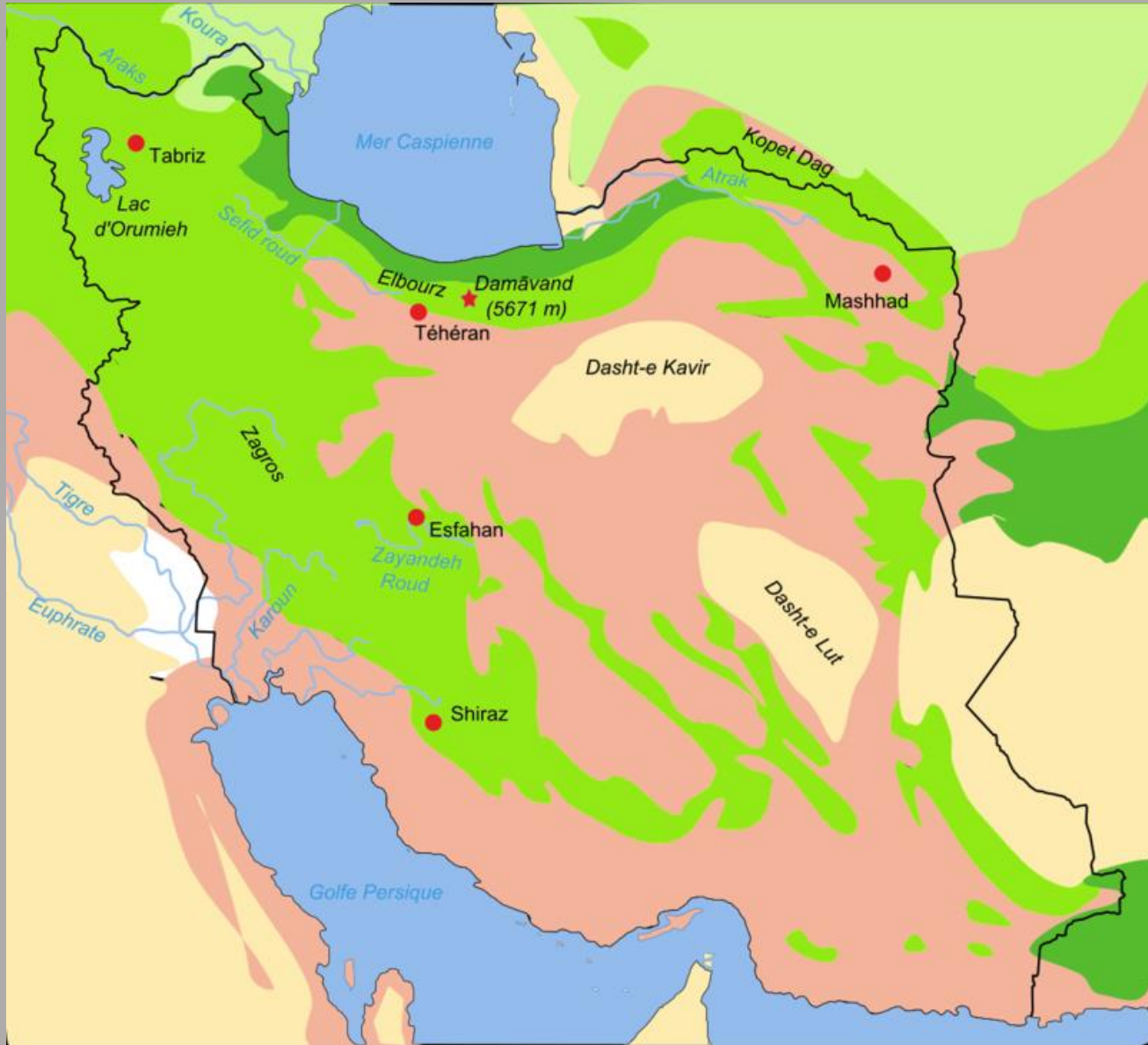
Tochal Mountain range near Iran s capital



Damavand is the highest volcano in Asia and the Middle East

**Alam Kuh massif with
its Glacier**





Forest distribution map of Iran



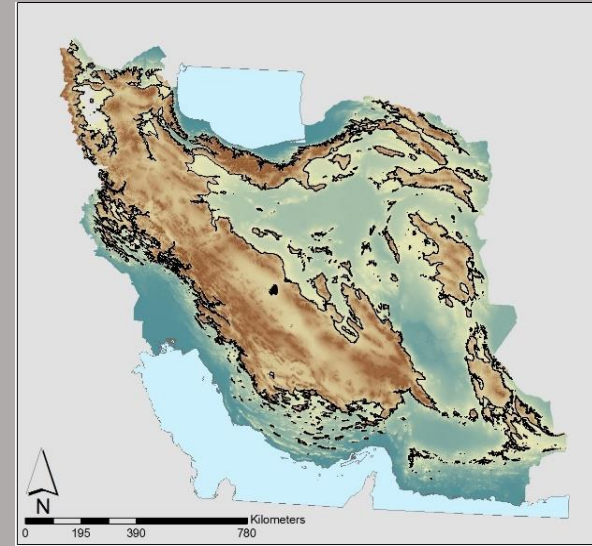
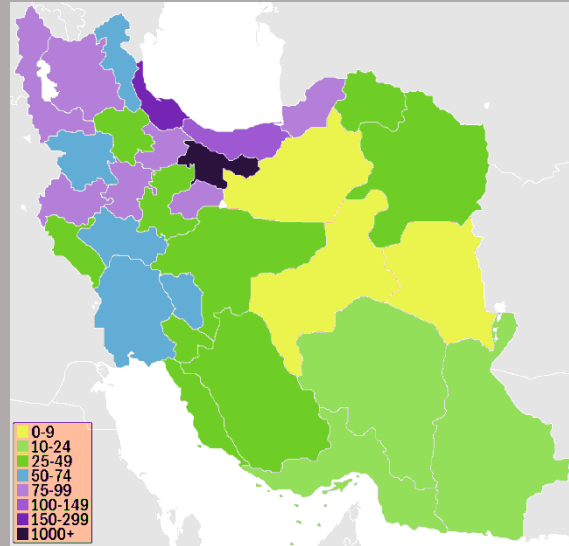
Animal species of the mountains of Iran



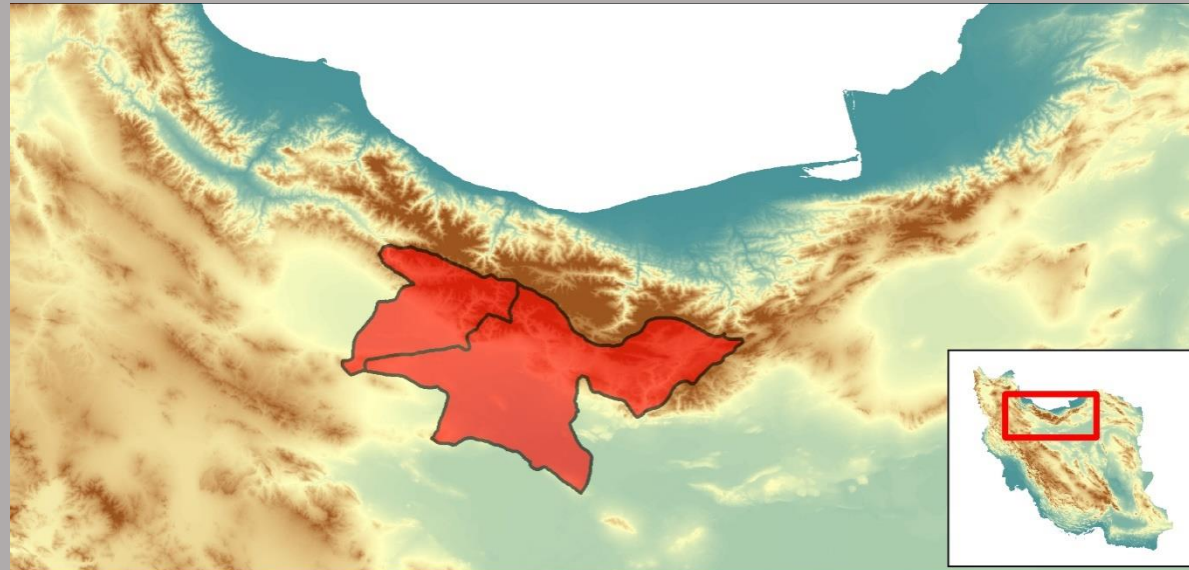
Hyrcanian forests as a world heritage today are found only in the Alborz Mountains

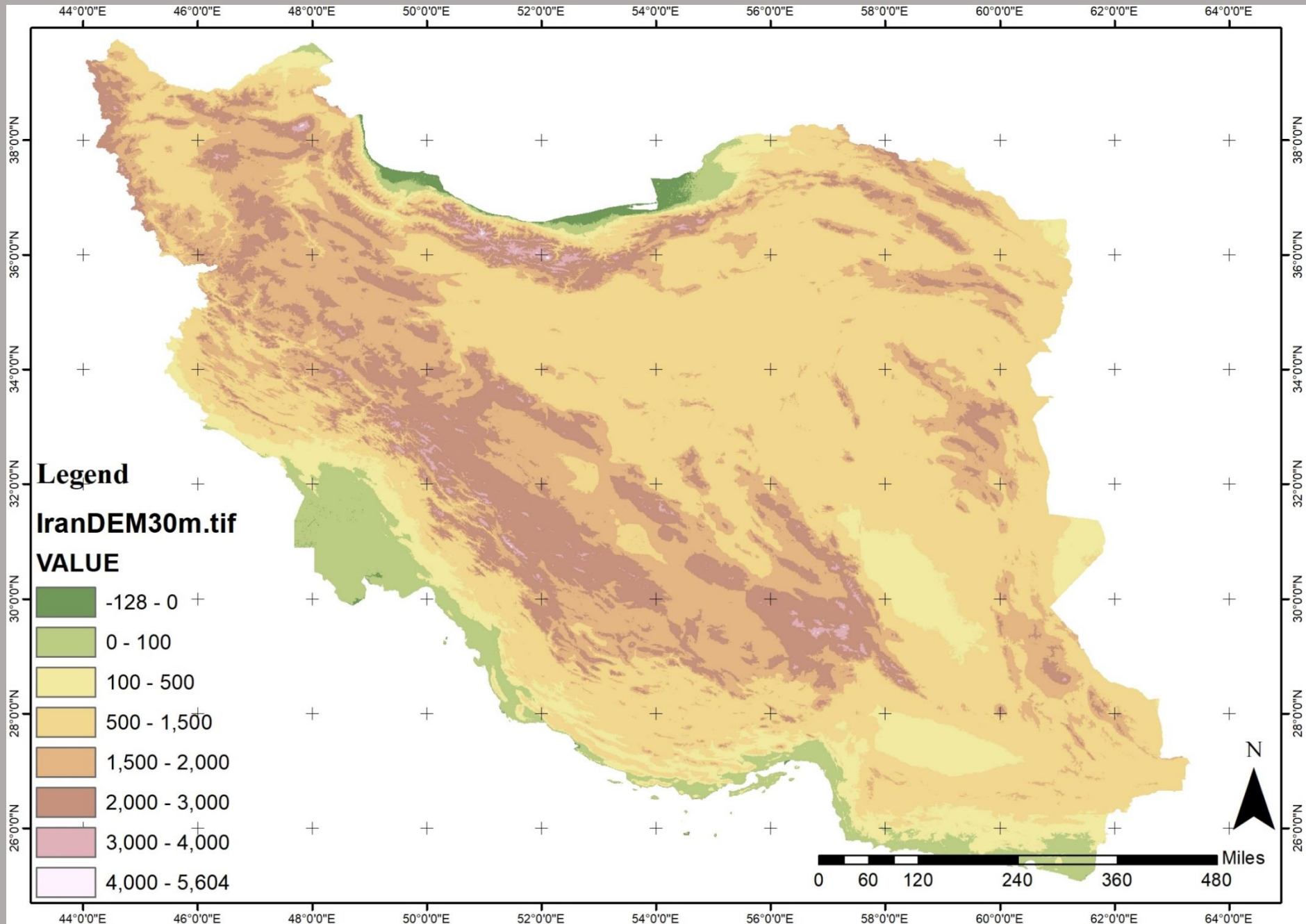
Only 16 million (20 percent of Iran's population) in the provinces of Tehran and Alborz depend on Alborz's water resources.

population density

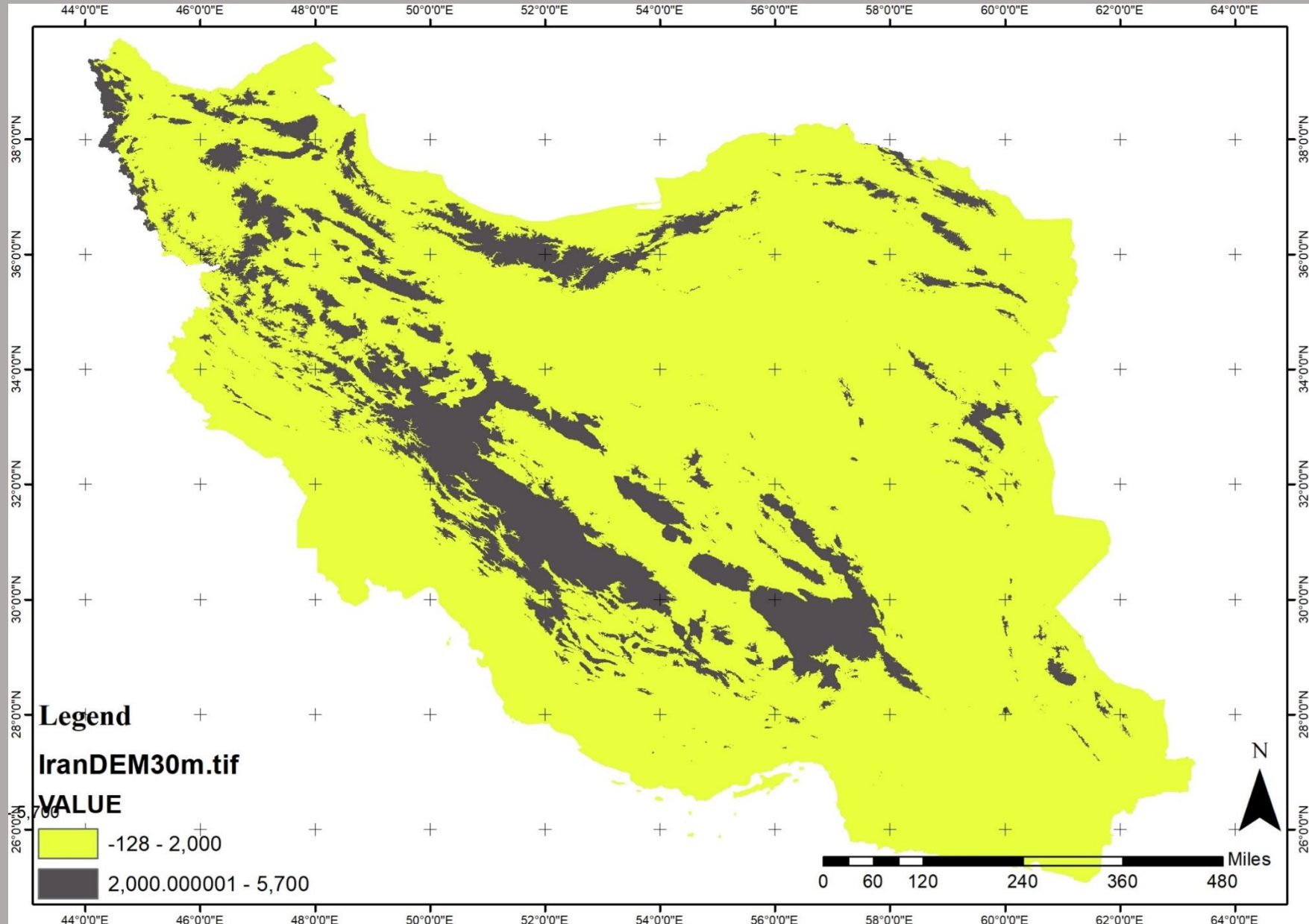


16 million (20%)

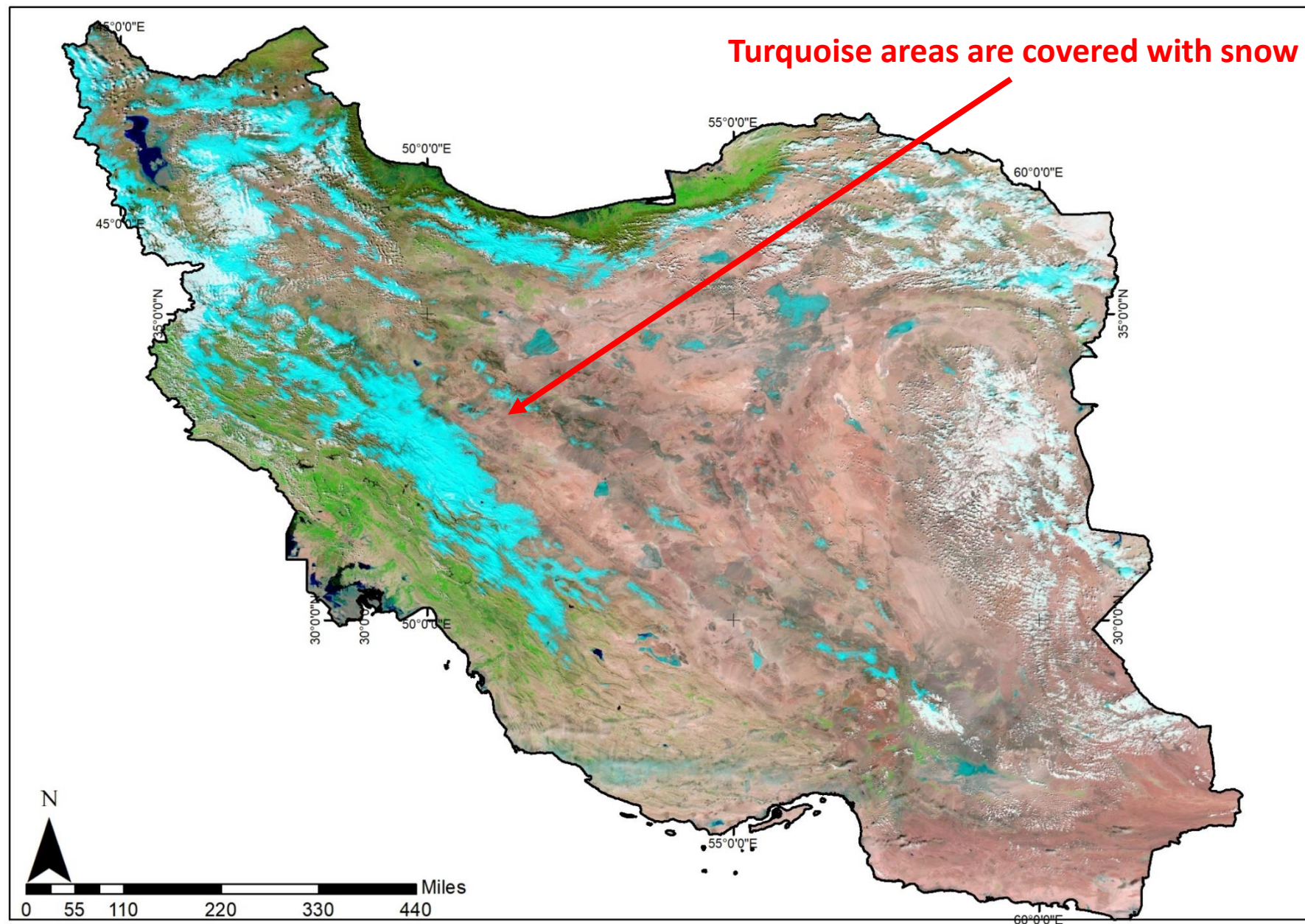




Elevation classification map of Iran

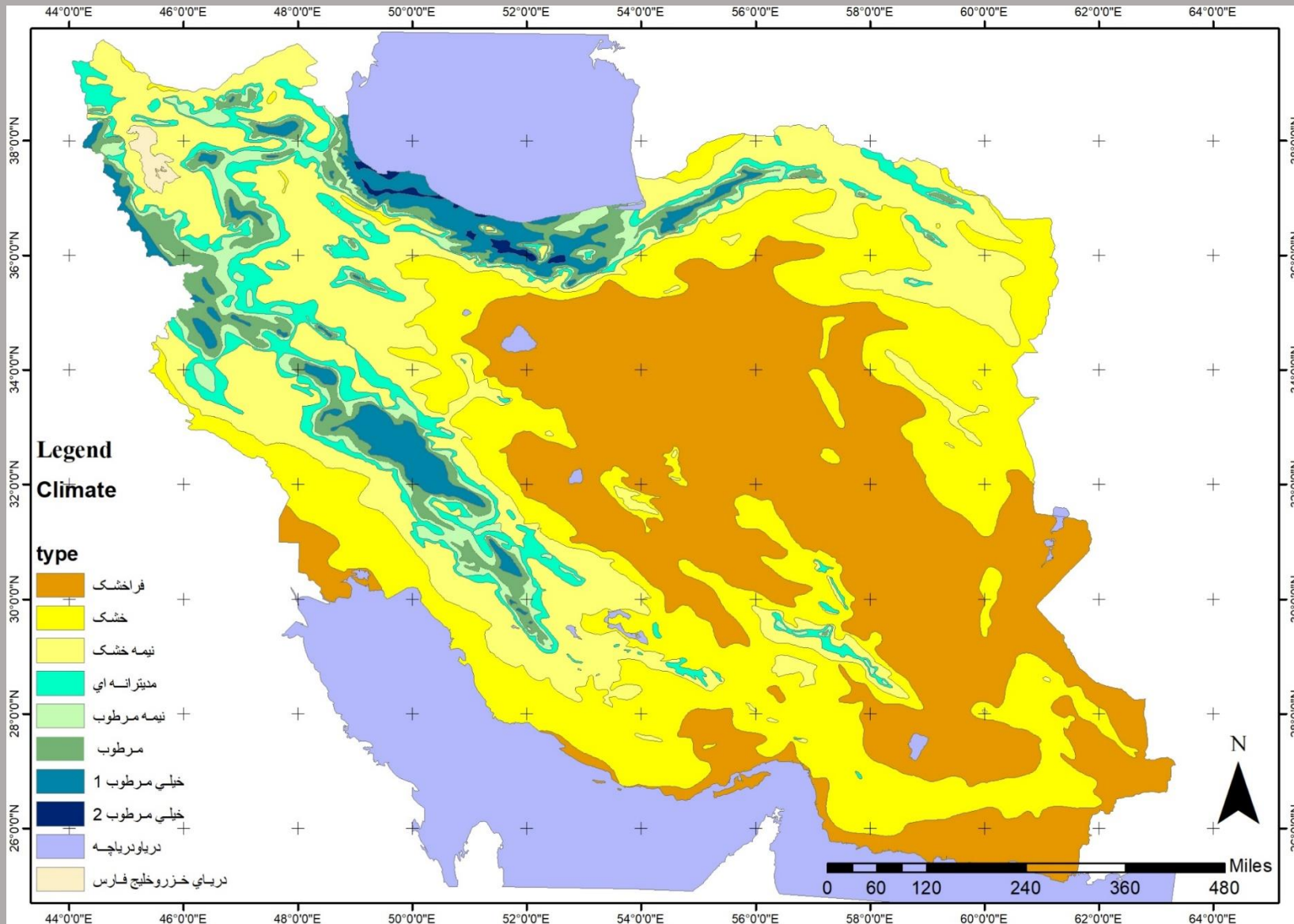


The map of areas with an altitude of over 2000 meters in Iran shows the mountainous conditions of Iran well



Turquoise areas are covered with snow

The mountains of Iran, as a snow reservoir, play an important role in supplying water to Iran's rivers



The mountains of Iran play an important role in the diversity of Iran's climate. A look at the parking of climate tents on the map shows that areas with semi-arid, Mediterranean and humid climates correspond to mountainous areas.

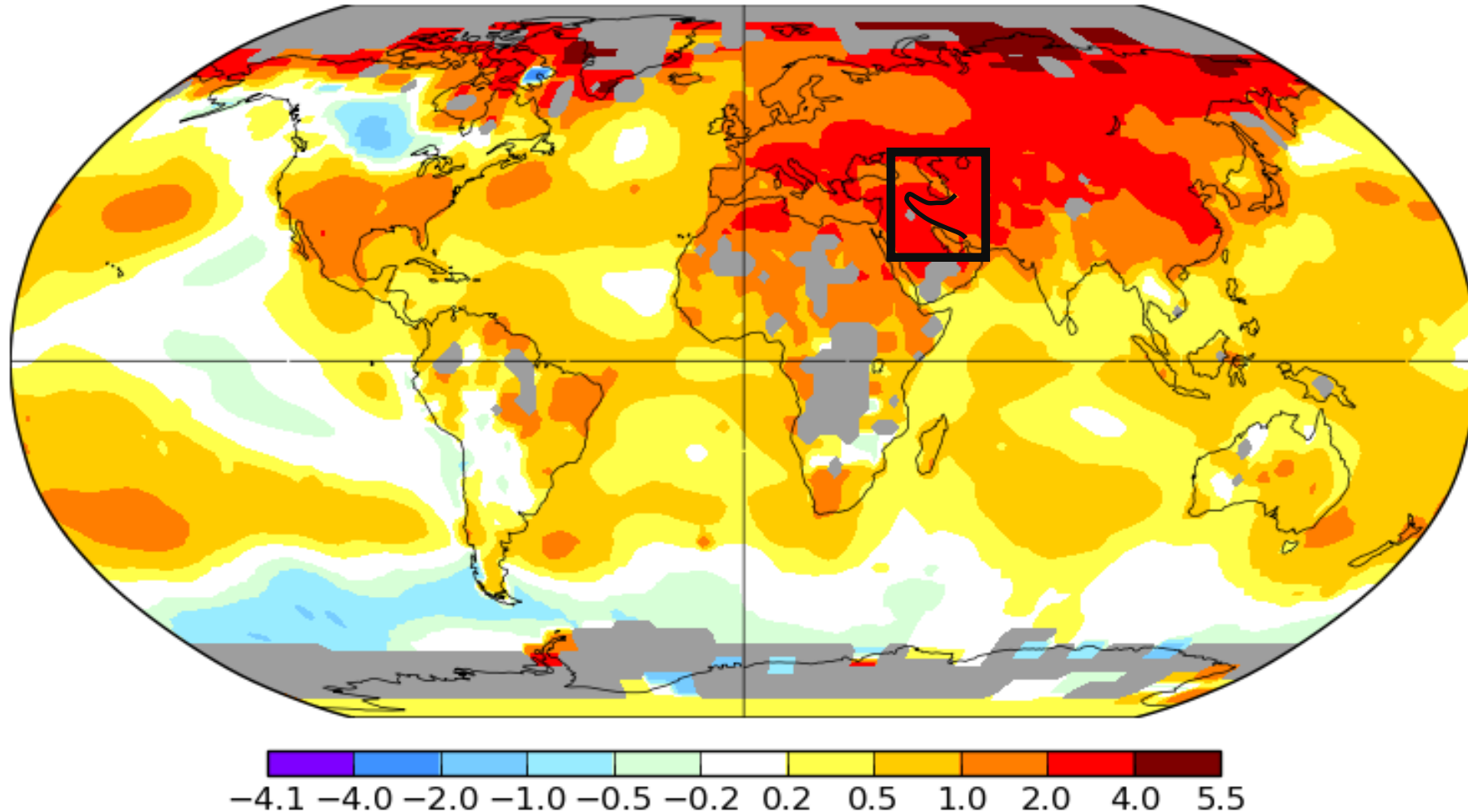
The trend of **temperature** changes from the past to the present



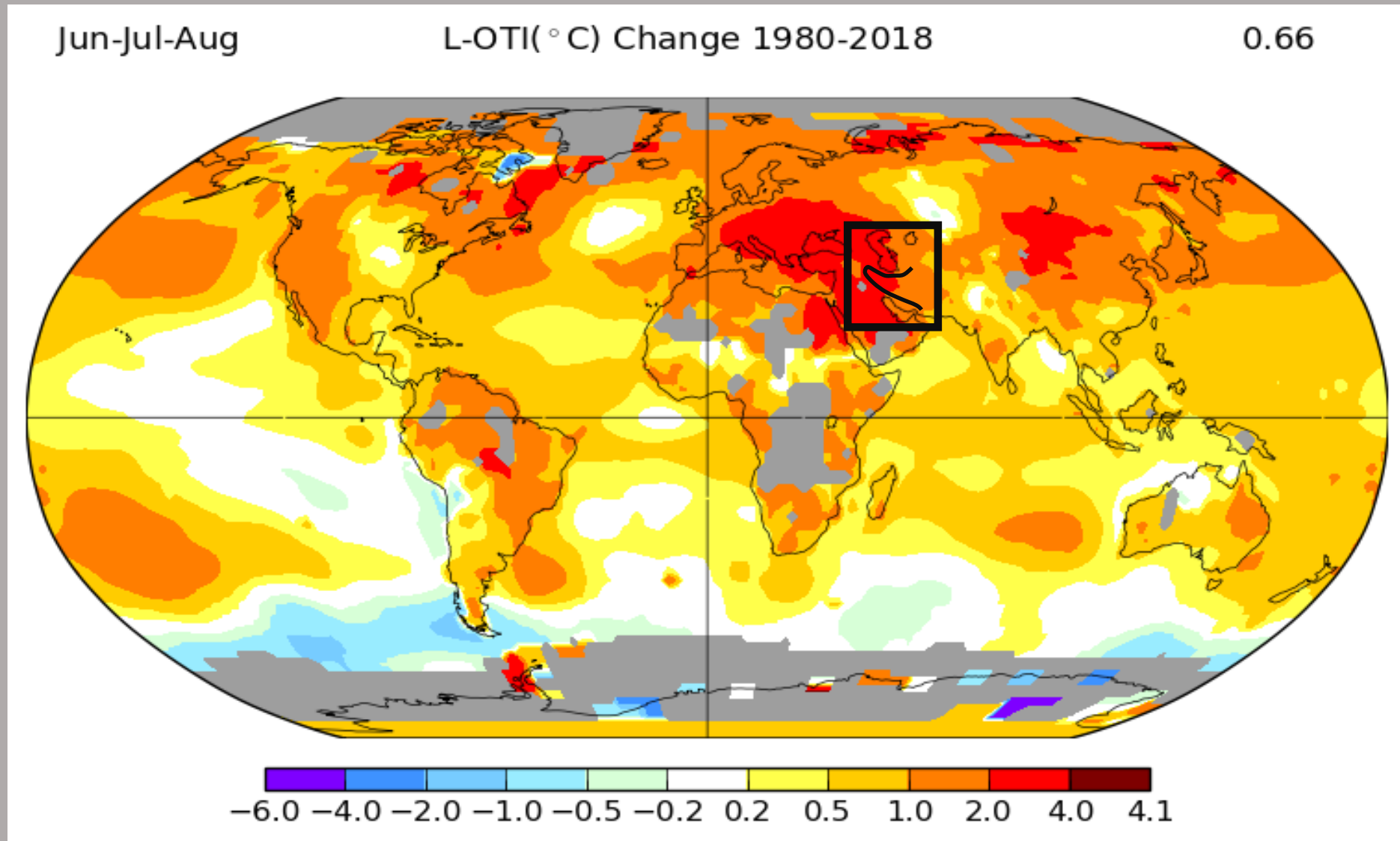
Mar-Apr-May

L-OTI(°C) Change 1980-2018

0.67



It shows the 4 degree changes in temperature during the last 30 years in the spring in the Middle East region - Iran's black box. The two lines show the location of the Alborz and Zagros mountain

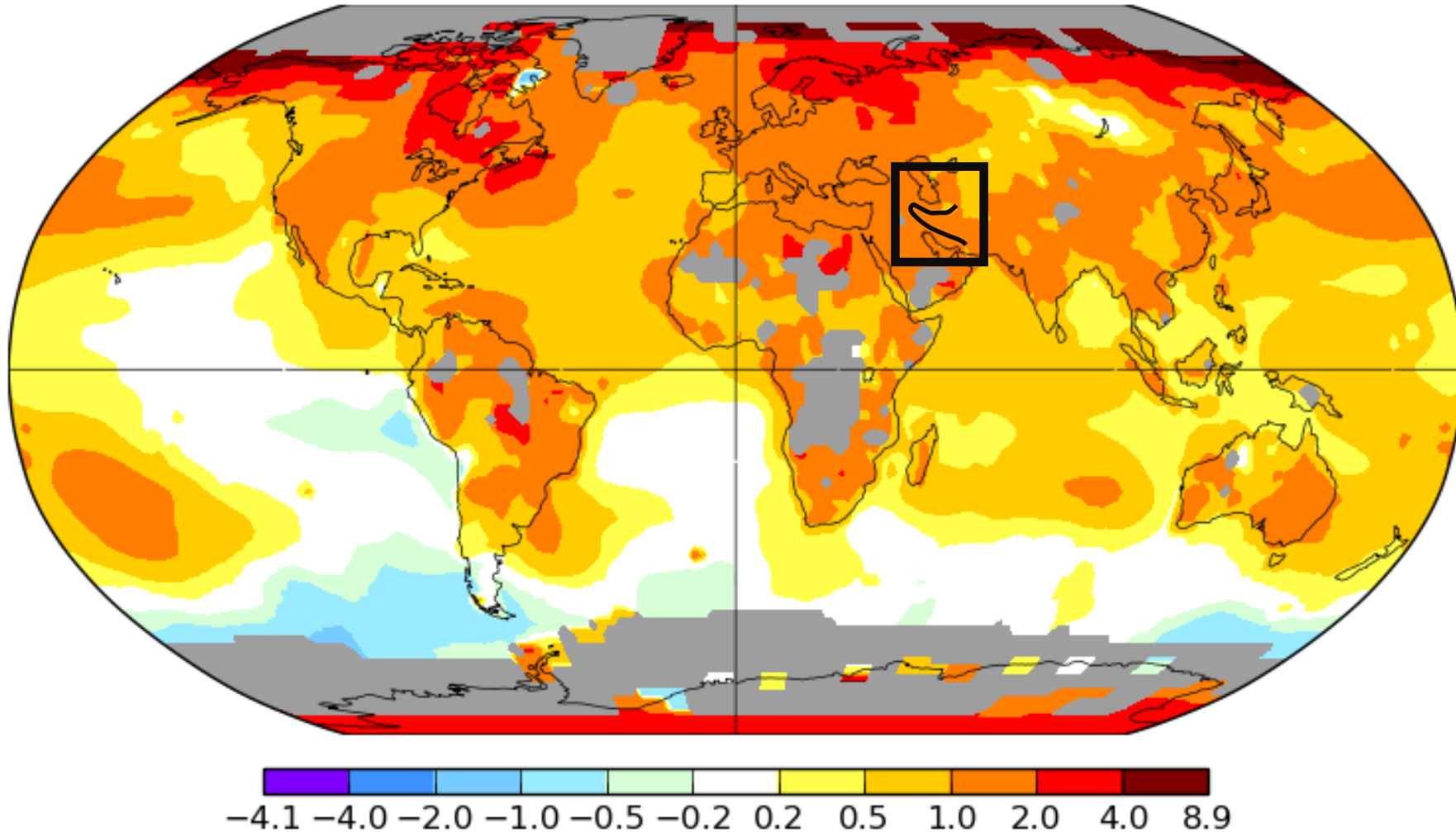


4 degrees of temperature changes over the past 30 years in the summer in the Middle East region - the black box of Iran. The two lines show the location of the Alborz and Zagros mountains

Sep-Oct-Nov

L-OTI(°C) Change 1980-2018

0.74

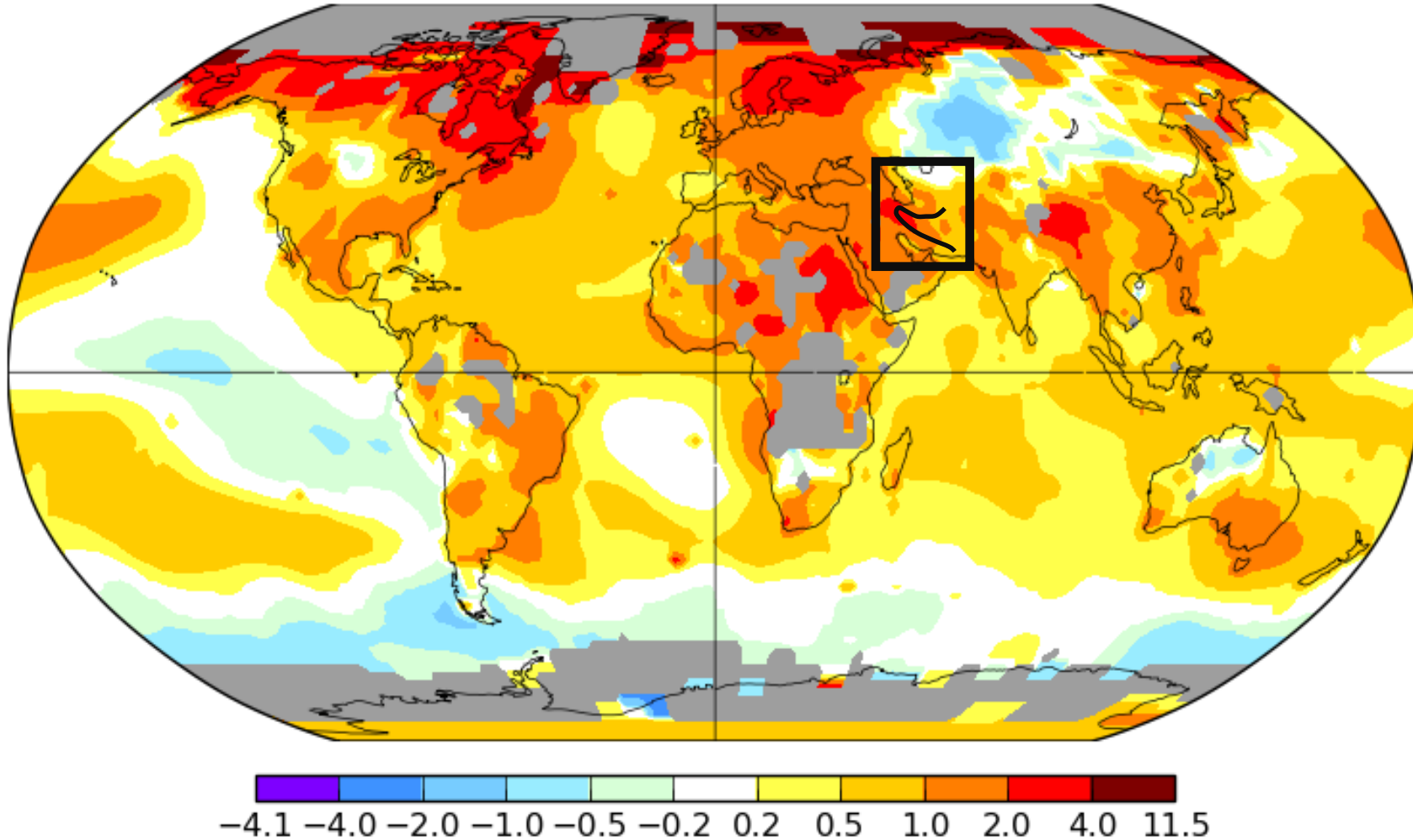


It shows the 2 degree changes in temperature during the last 30 years in fall in the Middle East region - Iran's black box. The two lines show the location of the Alborz and Zagros mountains

Dec-Jan-Feb

L-OTI(°C) Change 1980-2018

0.58

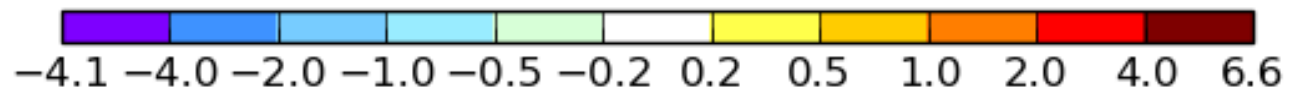
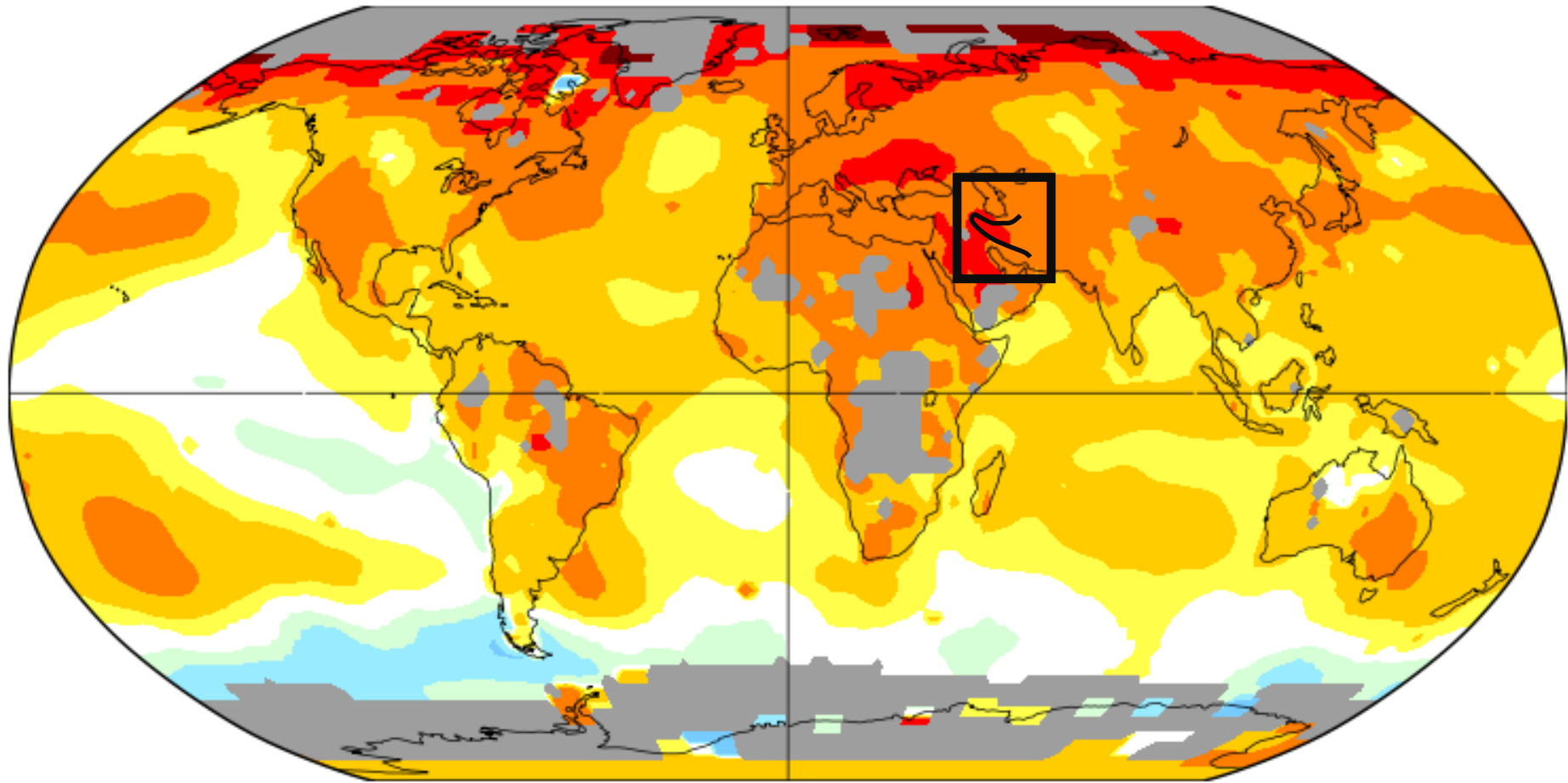


Shows 2 to 4 degree changes in temperature over the past 30 years in the winter in the Middle East region - Iran's black box. The two lines show the location of the Alborz and Zagros mountains

Annual J-D

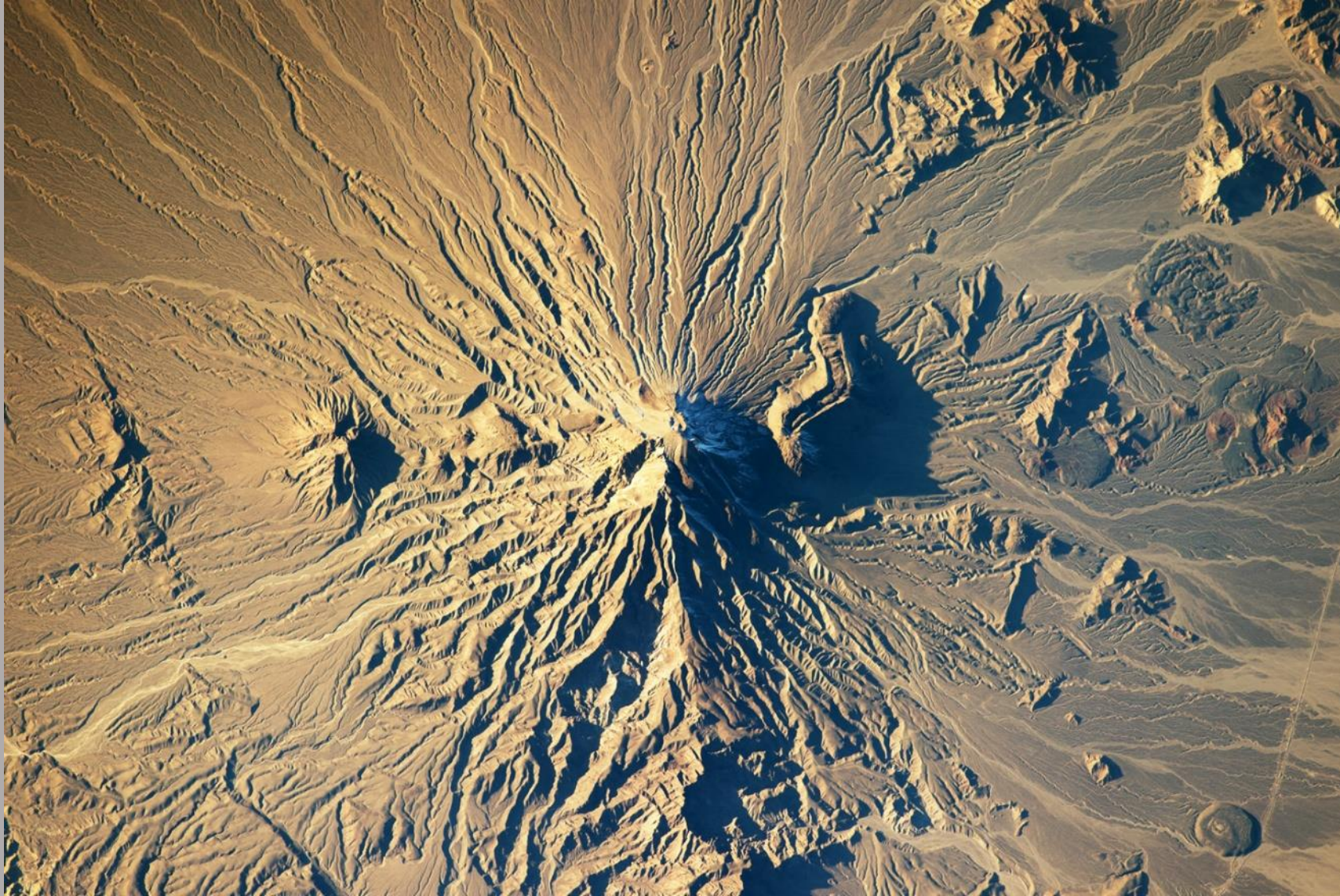
L-OTI (°C) Change 1980-2018

0.68

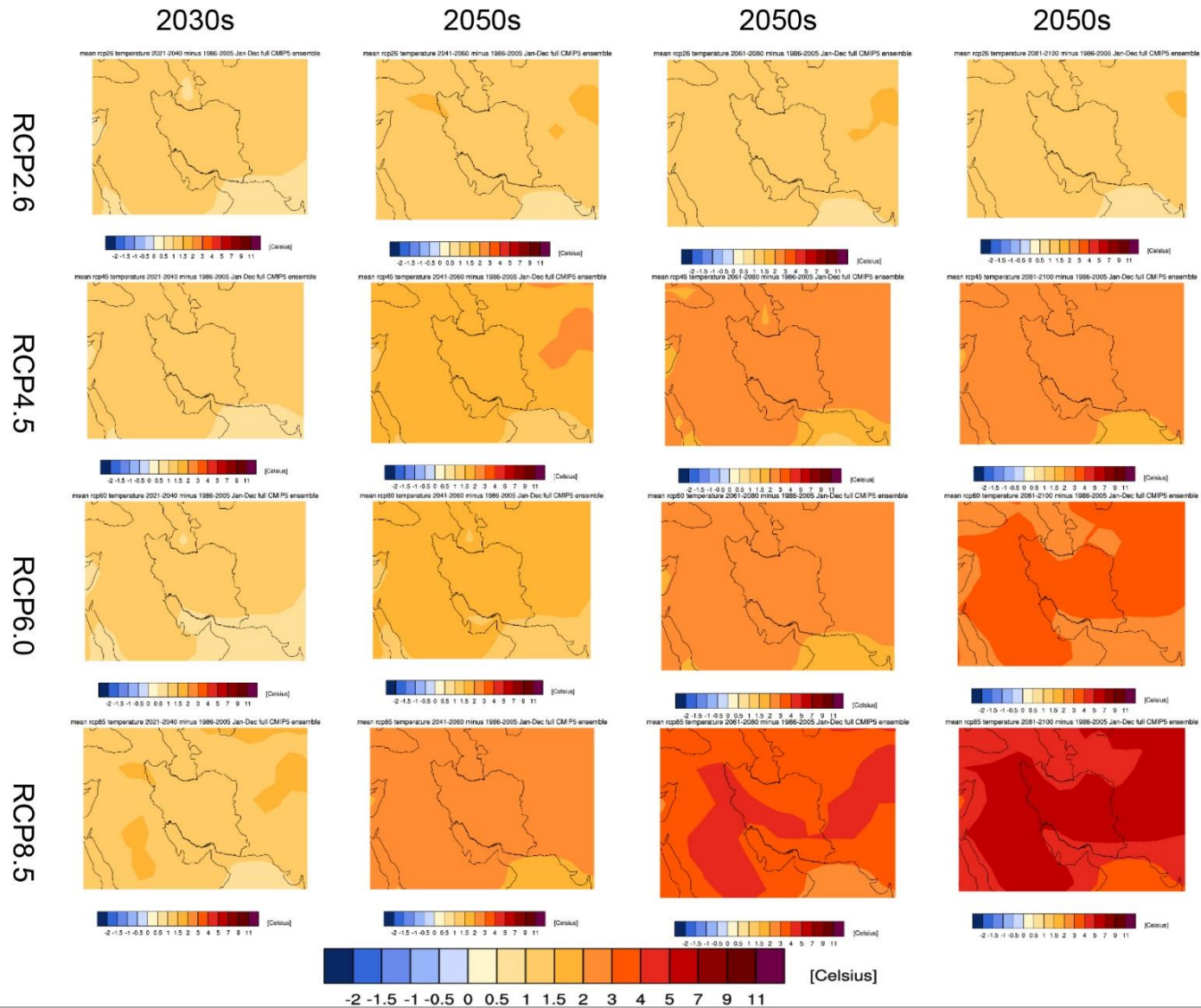


4 degrees of temperature changes over the past 30 years in the Middle East region - the black box of Iran. The two lines show the location of the Alborz and Zagros mountains

Global warming, the temperature future of Iran's mountains



Bazman volcano is located in a remote region of southern Iran



A variety of temperature forecast scenarios for the Iranian plateau, including optimistic and pessimistic scenarios, indicate significant warming in the coming decades. This issue will affect many foundations of life and ecosystem in Iran

The components that are most affected by global warming and its effect on the mountains of Iran are:

- ✓ Water supply sources
- ✓ Tourism
- ✓ Daily activities such as mountaineering
- ✓ Agriculture
- ✓ Gardening



Water farms



garden of Pistachio



Amirkabir Dam in Central Alborz



Shemshak ski slope



Mountaineering in Damavand

Tourism – power tool in support of local development

Mountain tourism in Iran is becoming more and more popular in the last decades.

Ski resorts - started in the 1930's, majority of them situated on high altitude, above 2000m.

Ski touring – virgin nature and undiscovered places

Mountaineering - Mount Damavand 5,609m, acts as a magnet for most ski mountaineers

Hiking – long season due to the diverse climate conditions, from peaks of Alborz to desert of Kavir-e Mesr



Tourism – threats due to increased temperature

Shorter ski season

Shorter hiking season

Insufficient snow fall for the ski resorts

Water problems in some areas

Impact on wildlife & botanical tours

