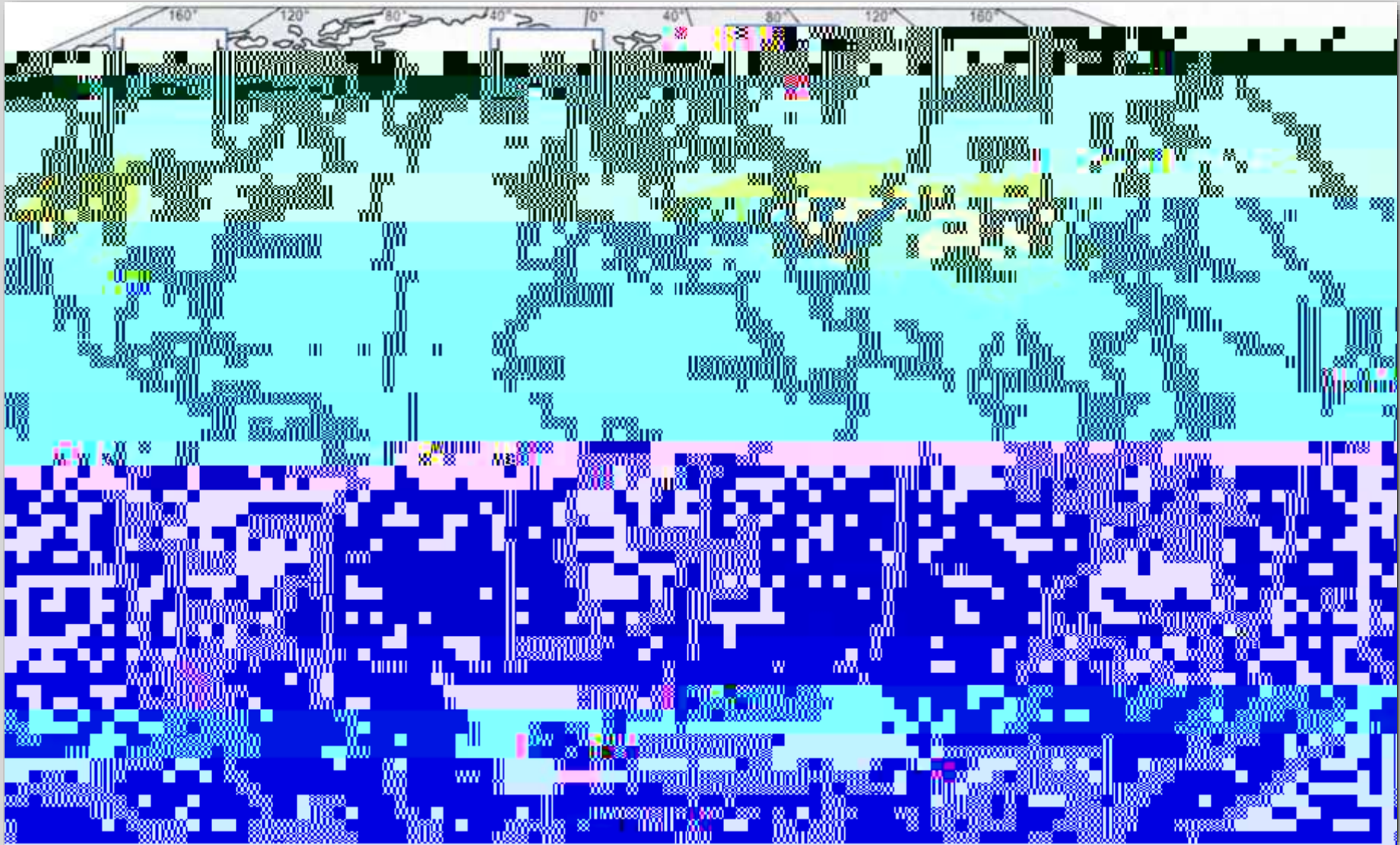




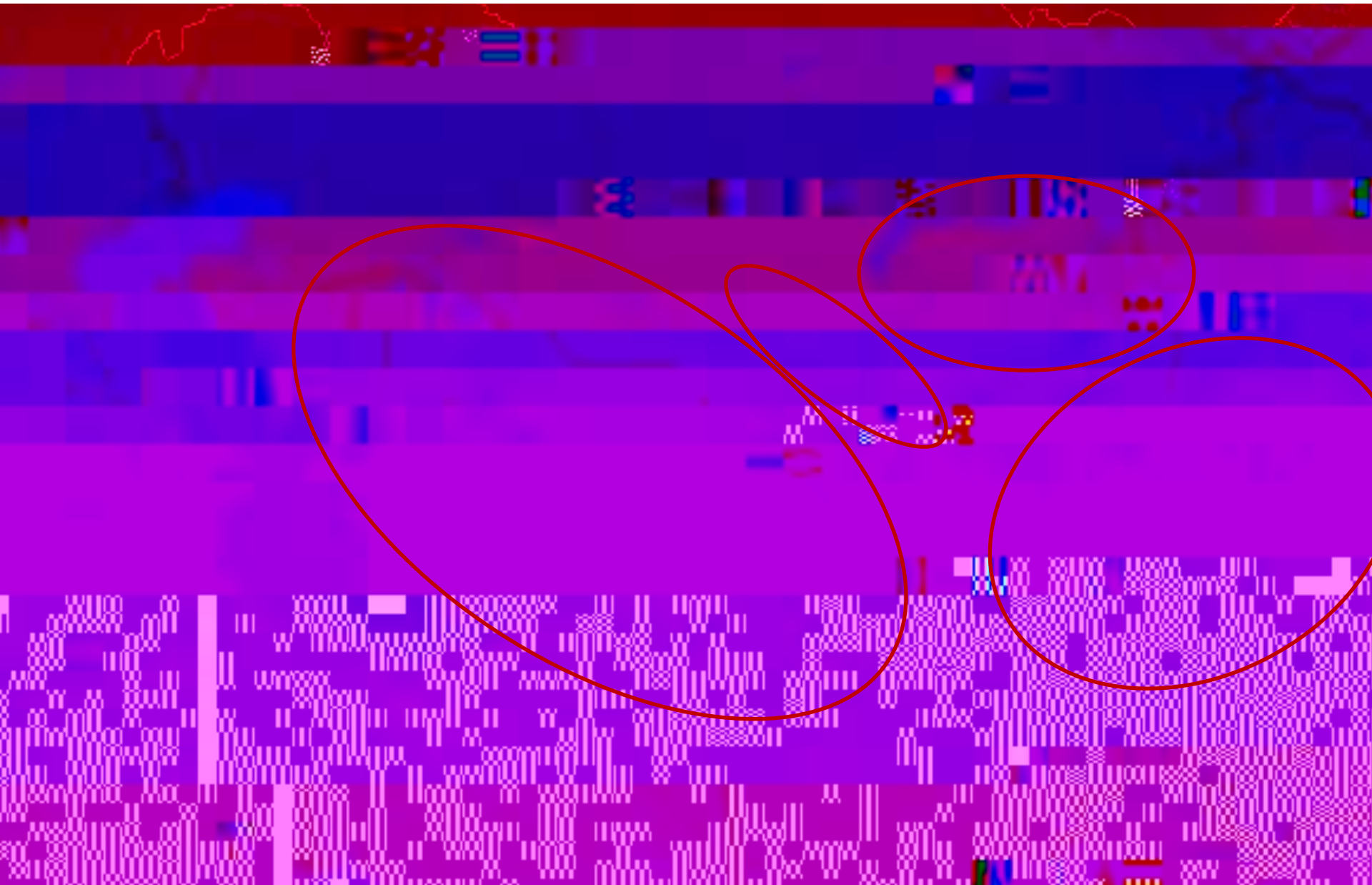
Food, fibre, and raw material from dryland regions of Central Asia

Central Asia part of the winter-cold drylands



Central Asia: Region with the

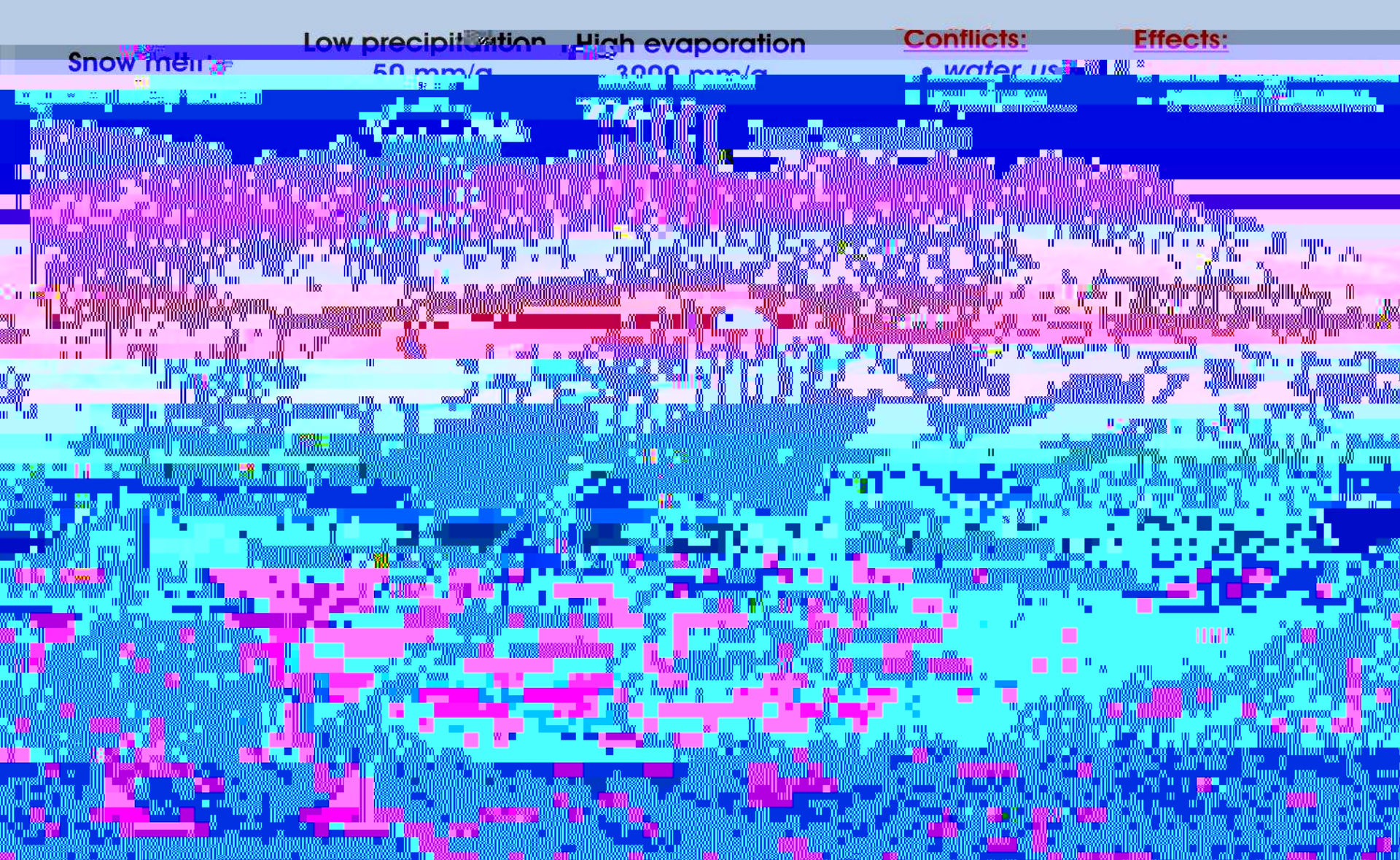
most



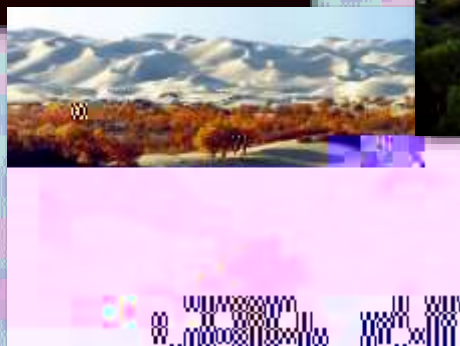
Irrigated lands: hot spots of population density dependent on rivers



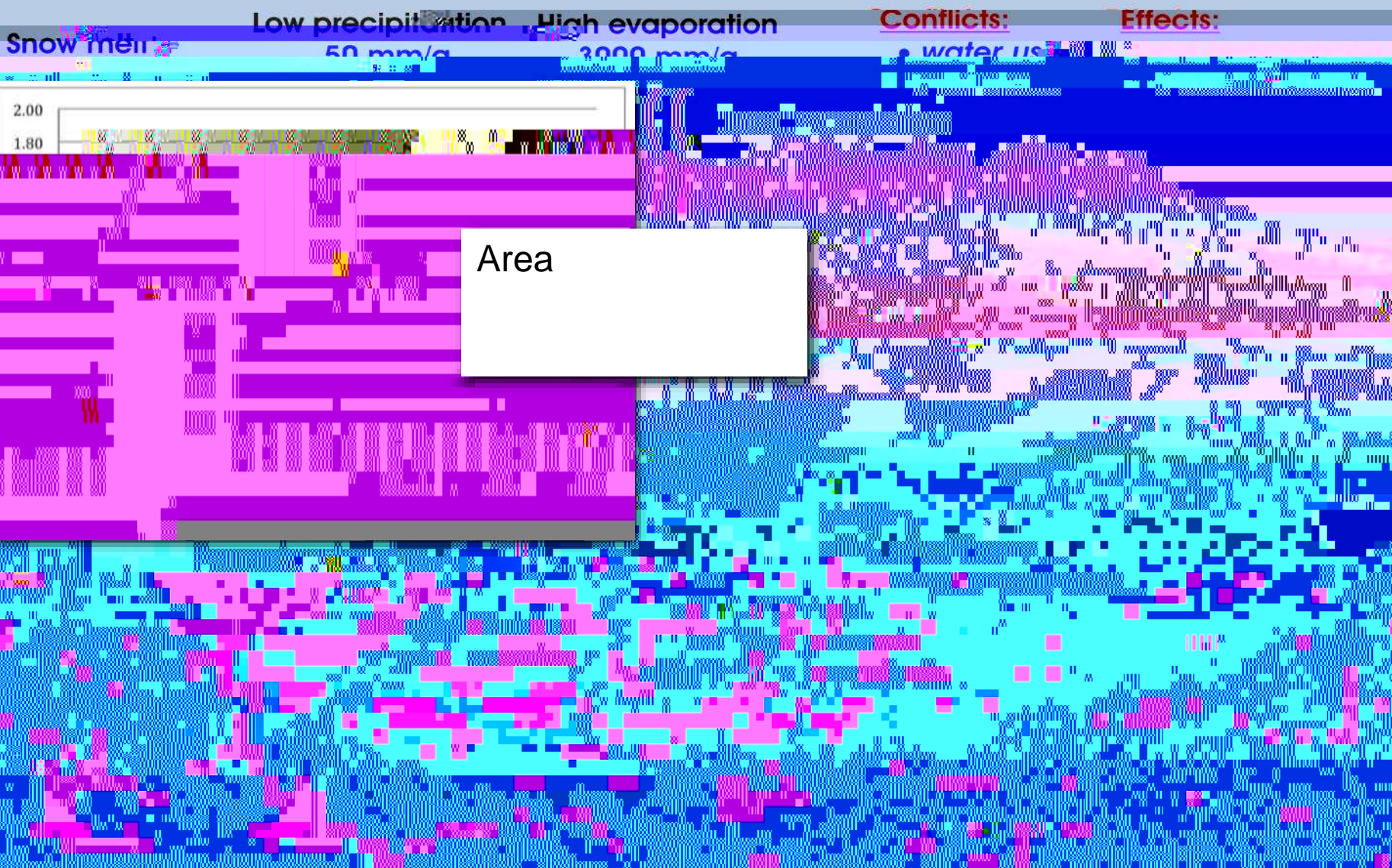
Water resources in a typical endorrheic river basin in Central Asia (Figure: Tarim Basin)



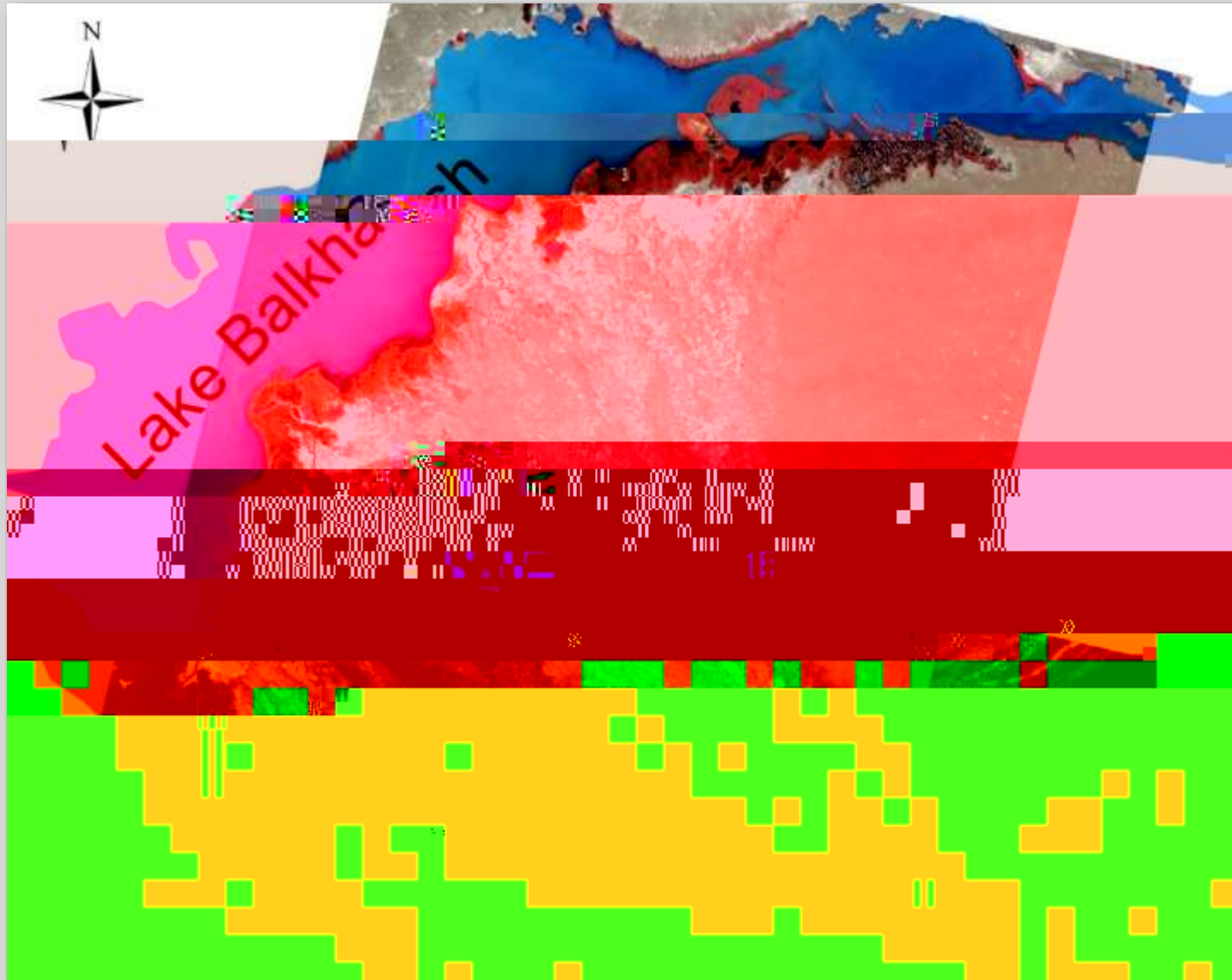
Water resources in a typical endorrheic river basin in Central Asia



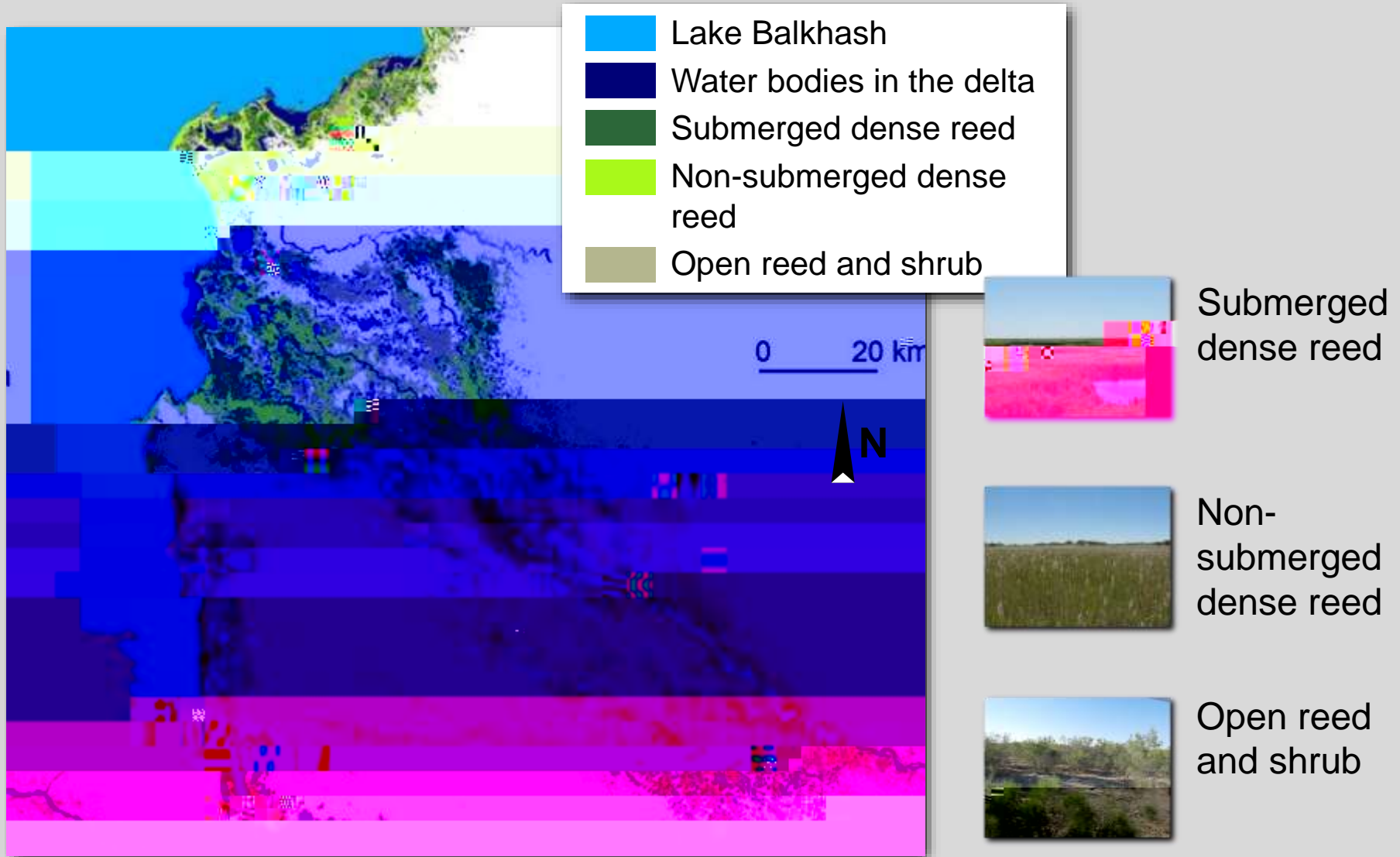
Which food, fibres, and raw material do we obtain from such a river basin?



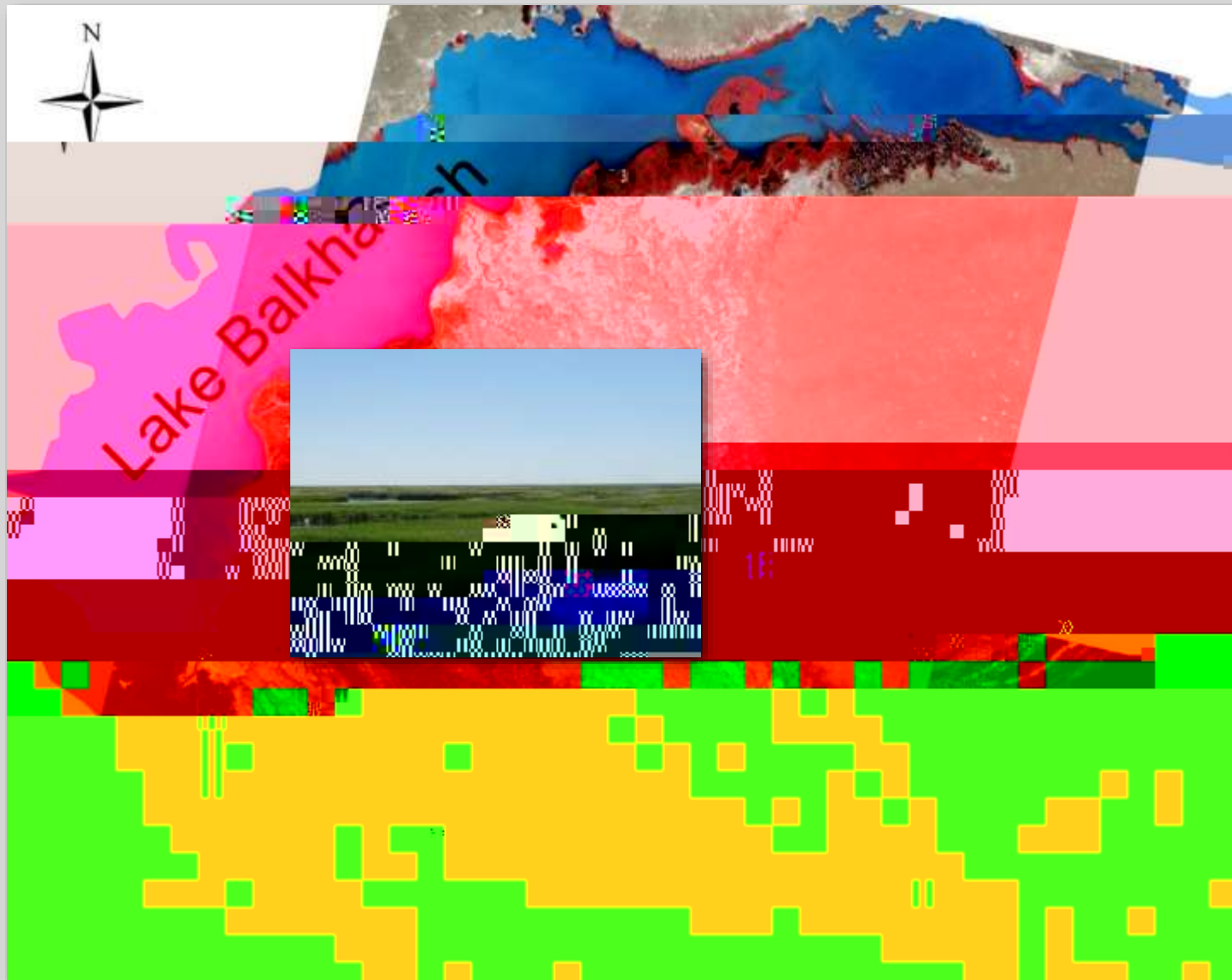
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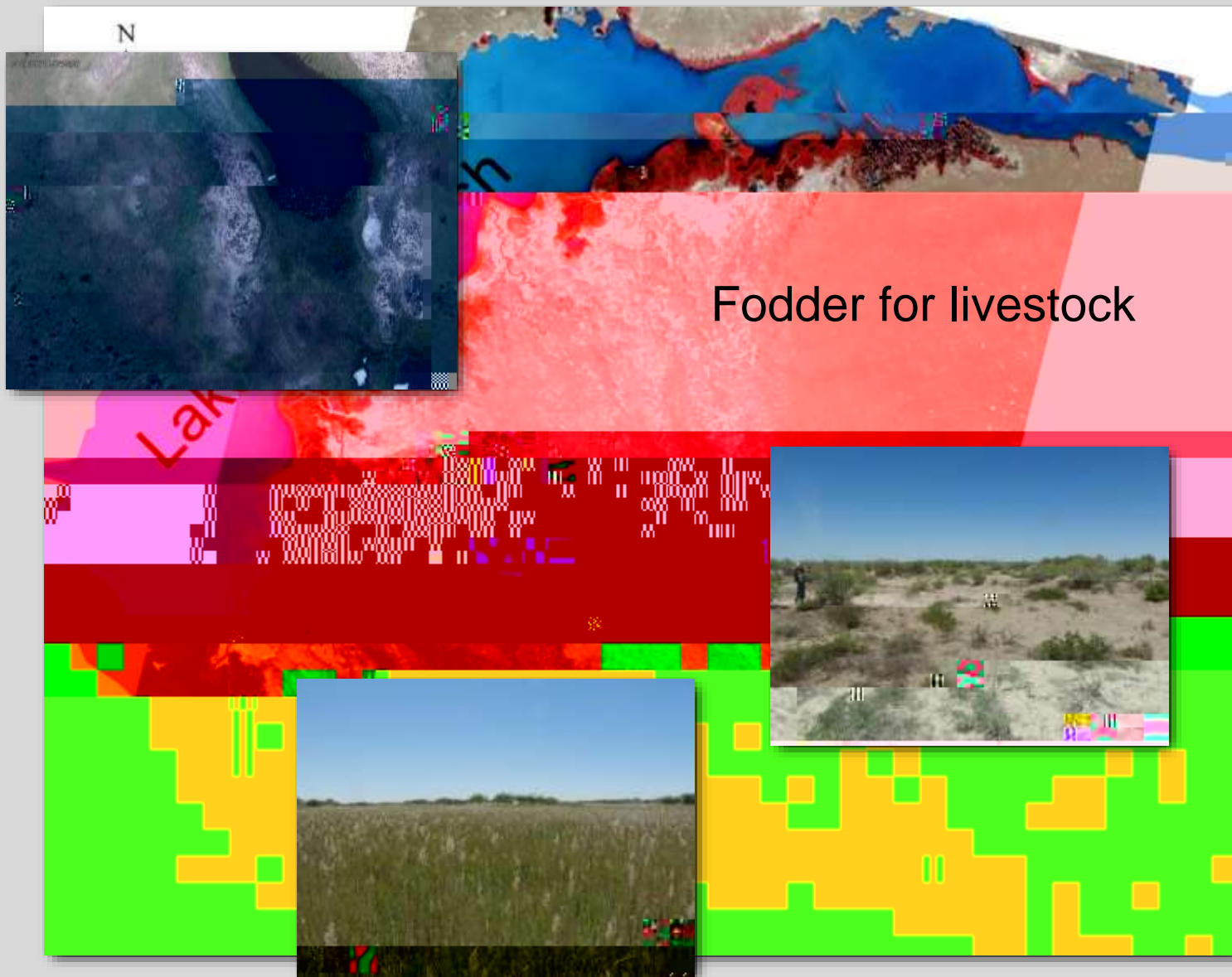
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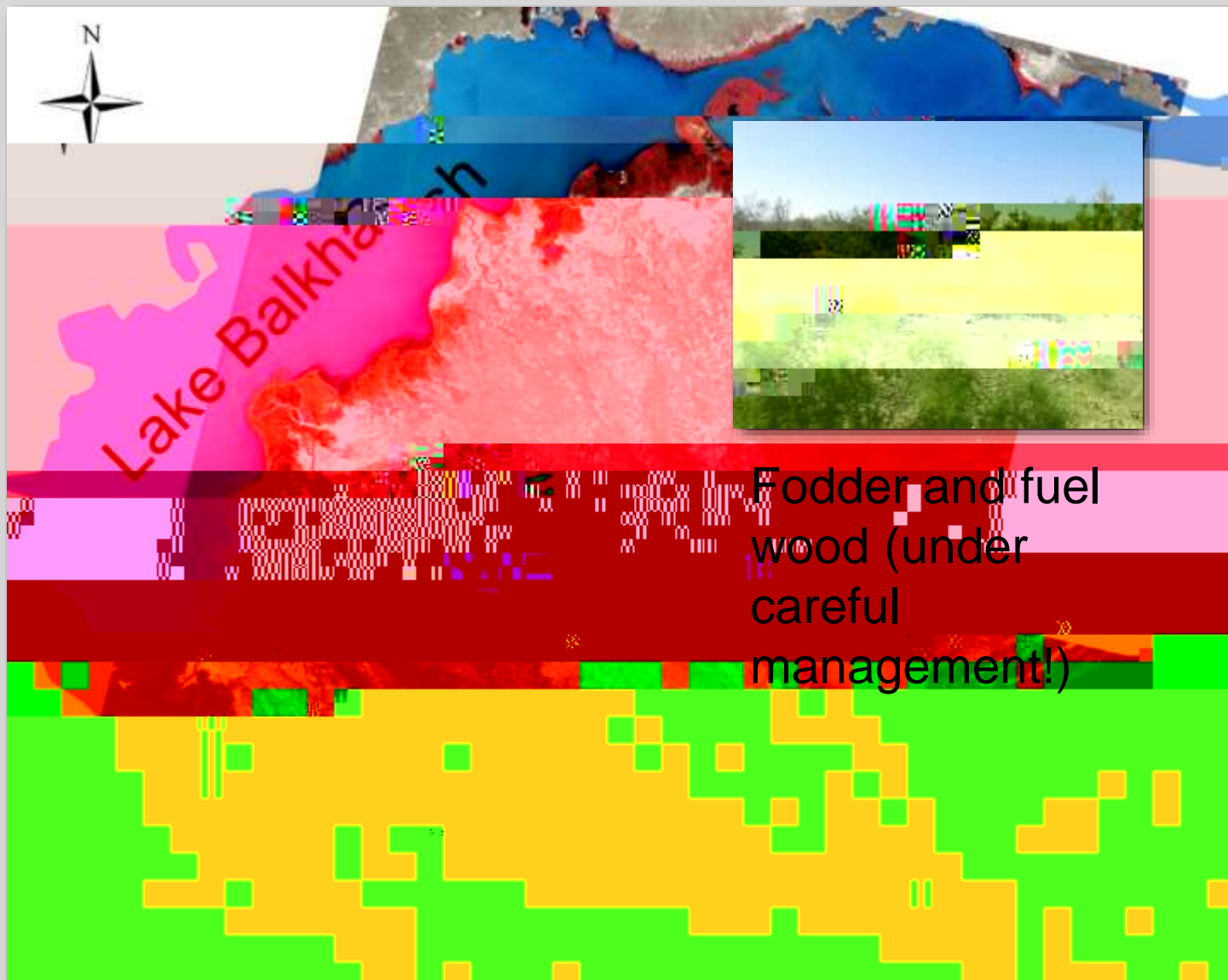
Which



Which food, fibres, and raw material do we obtain from such a river basin?



Which food, fibres, and raw material do we obtain from such a river basin?

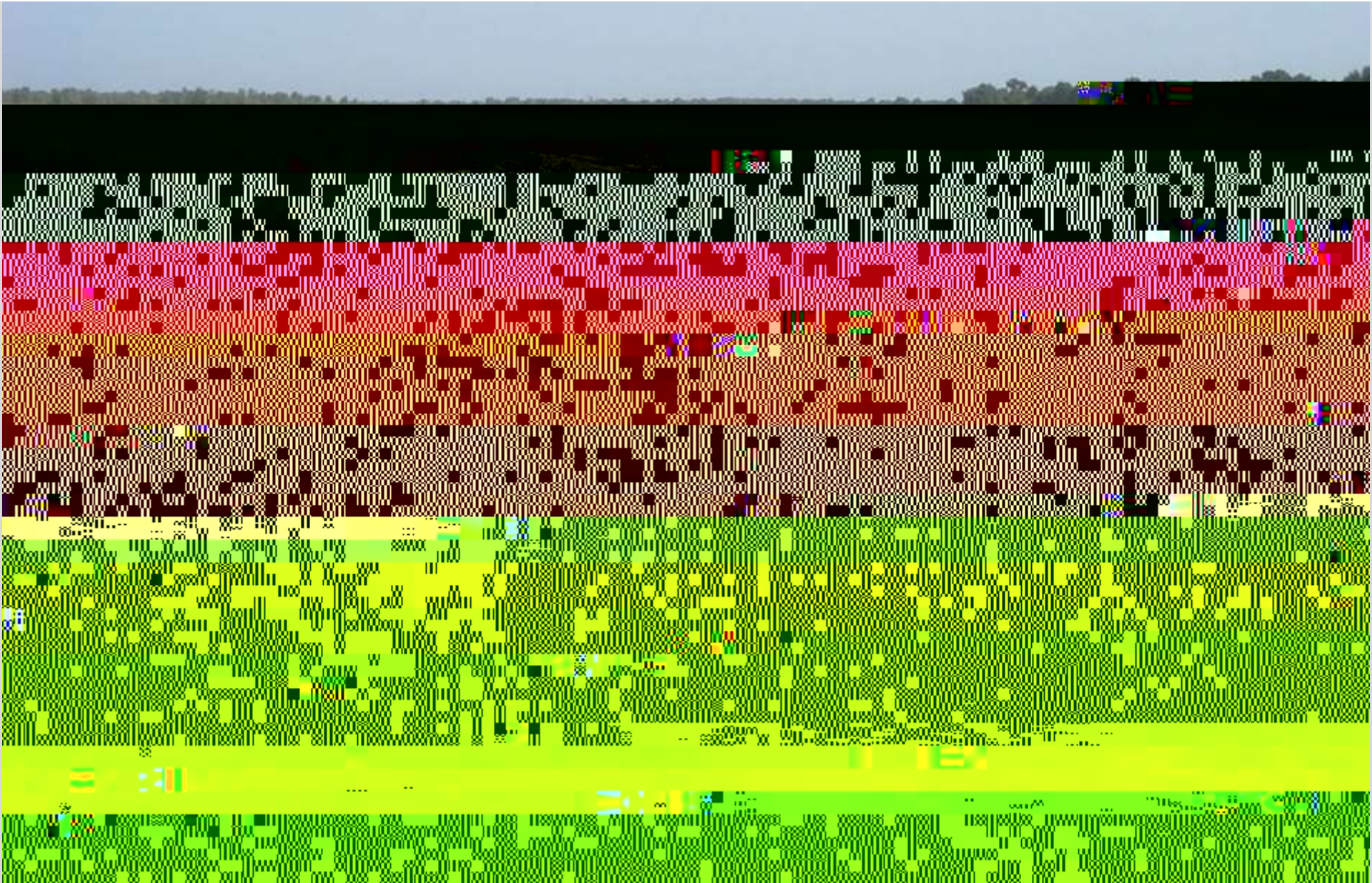


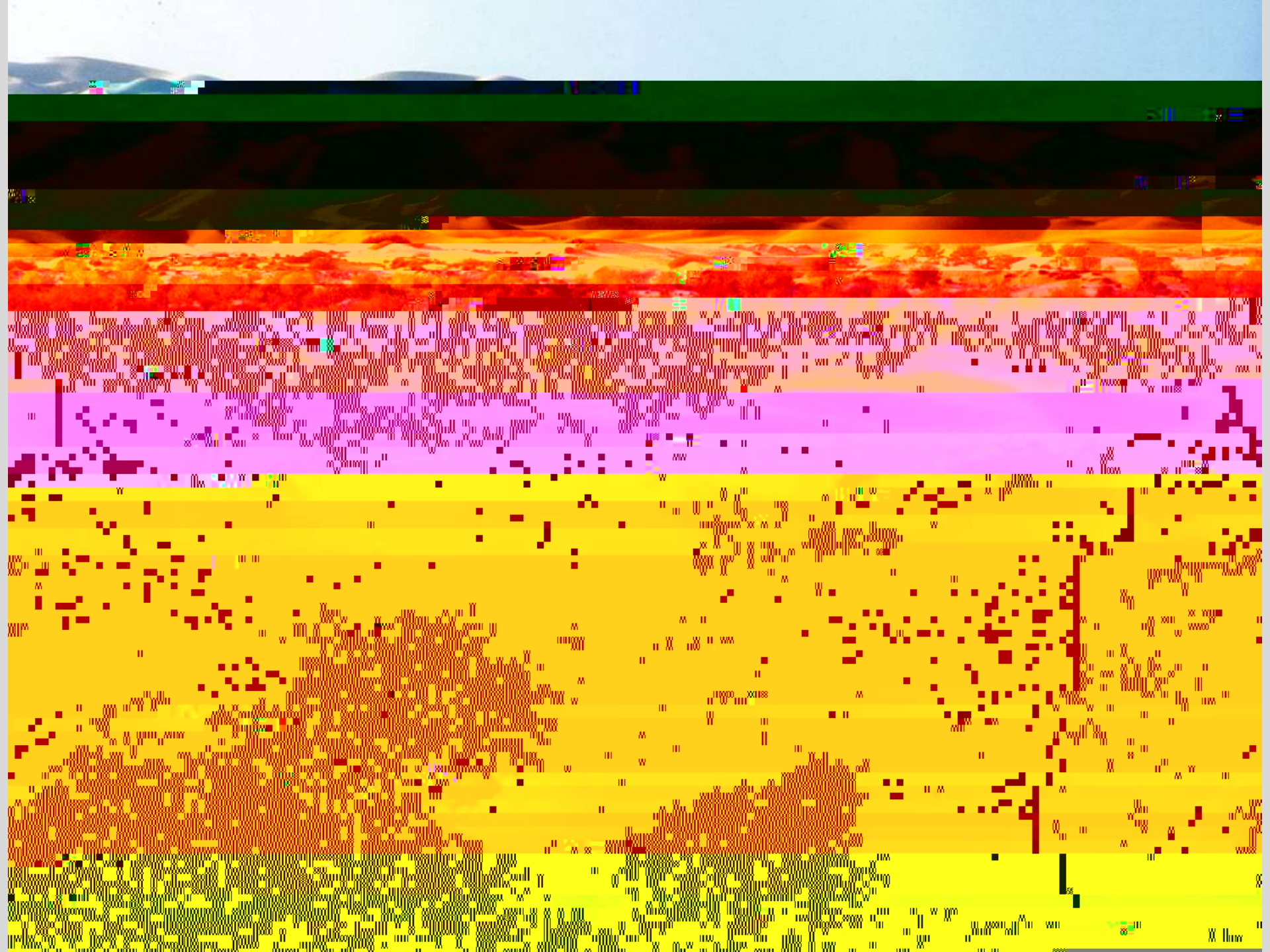
**Fodder and fuel
wood (under
careful
management!)**

Climate change and its effects



Salinization and desertification





Answers how do we address this



Technical solutions:

Improve irrigation infrastructure, from main channels down to implementation of drip irrigation.

Improved crops:

Breed and use more drought and salt resistant crops and varieties.

Agroforestry:

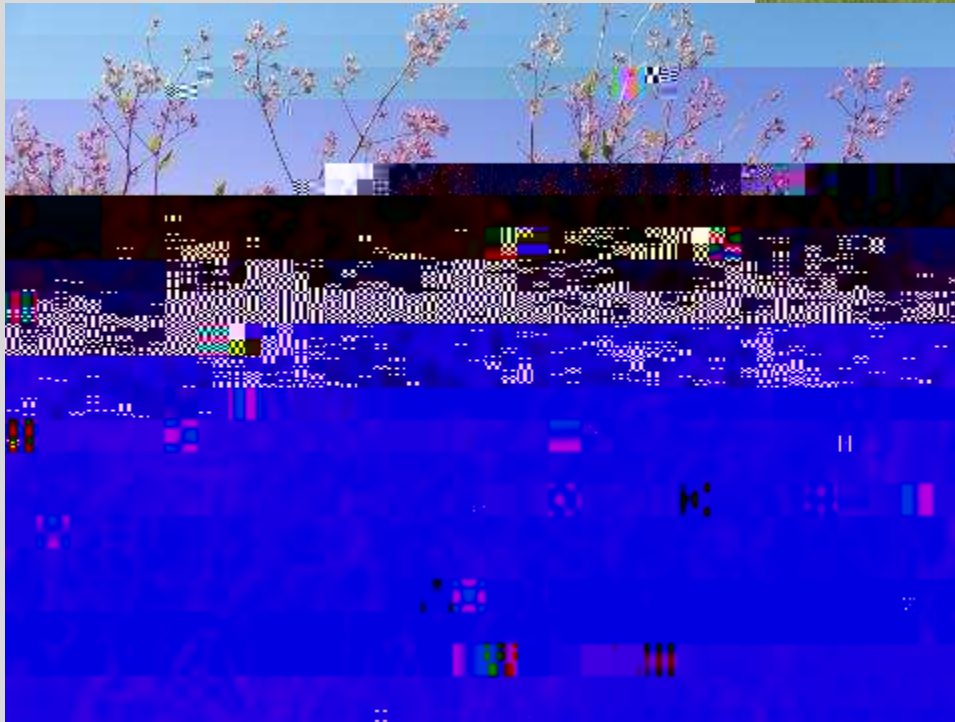
Tree wind breaks and trees that shade crops.

Make use of native plant species

-> **phreatophytes**

Kendyr / Kutra a promising phreatophyte: Fibres for textile and medicinal applications

A. pictum (White
Kendiyar), Lopnor,
Xinjiang, China



A. venetum (Red
Kendiyar), Ili Delta,
Kazakhstan

Kendyr / Kutra a promising phreatophyte: Fibres for textile and medicinal applications



Fibres are extracted from the stem and have similar properties like cotton.

Salt tolerance:

Fibers can be harvested from places that have become too saline for cotton.

Phreatophyte:

Irrigation is not needed, as long as groundwater levels are maintained.

Fiber extraction



Kendir straw from Chui
River and Ili Delta



Bast and fibres from
Kendir straw



Kazakhstan harbours 2 million ha of reed beds under its arid climate:

Potential for fodder, paper and pulp, boards, possibly for fibers (viscose) and bio.plastic.



Thank you for your
attention