

Ecosystems, land use, agriculture, forestry, water, salinization and biodiversity. Case of Uzbekistan

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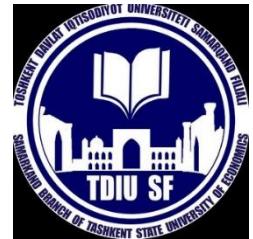
Samarkand branch of TSUE, Uzbekistan



Uzbekistan: General Info



- Area: 447,400 km²
- Population: 36,799 mln. (01.01.2024)
- Population density: 82,2 inhabitants / km²
- Capital: Tashkent (3.7 million inhabitants)
- Currency: Sum (about 13500 UZS = 1 €)
- Official language: Uzbek (since 1989)



Major industries

- Agriculture (cotton, cereals, fruits, vegetables, livestock)
- Food processing
- Textile industry
- Chemical industry
- Oil and gas processing
- Mining (gold, uranium, copper)
- Machinery and equipment
- Automotive
- Aircraft
- Construction





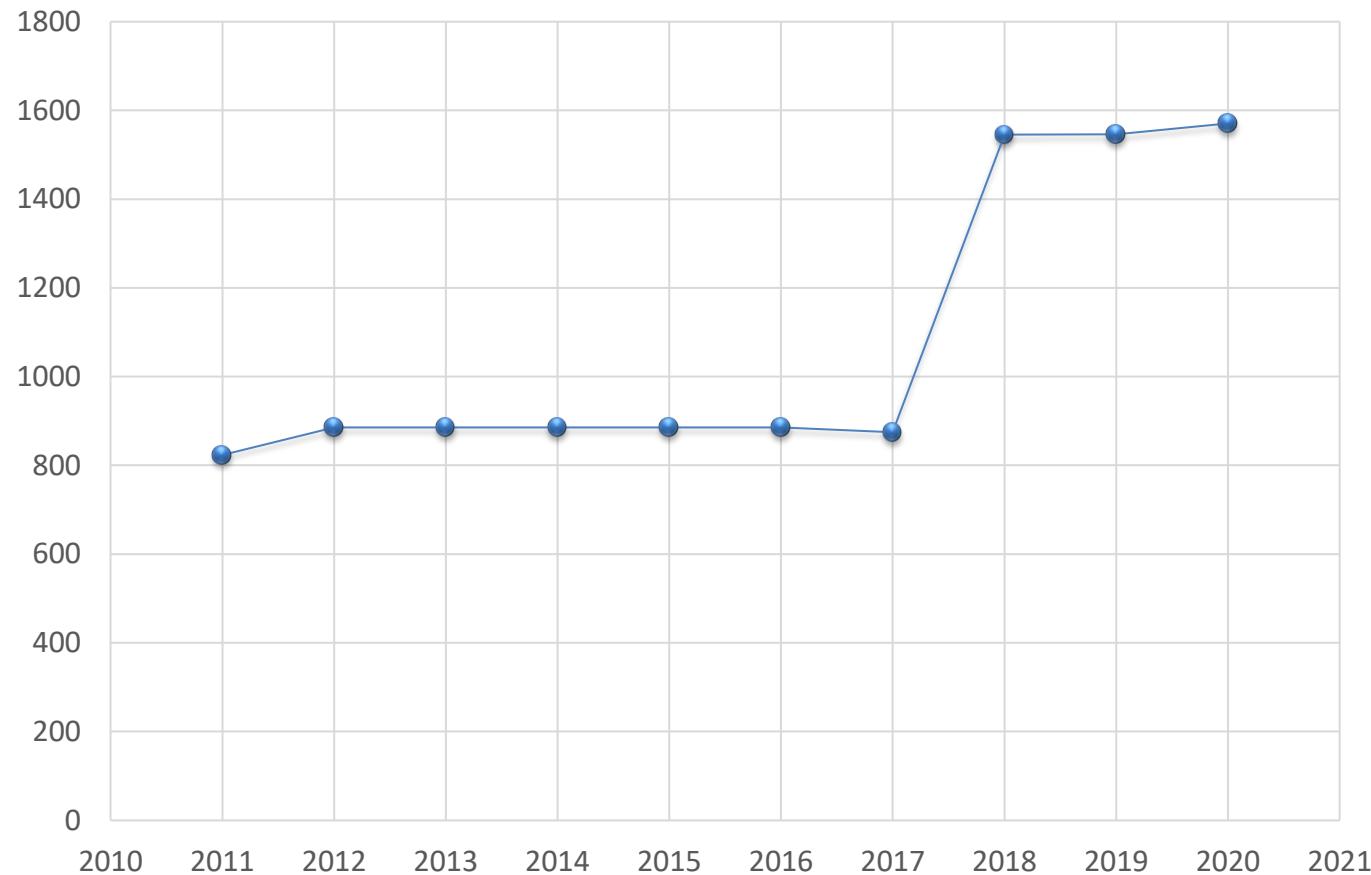
Agriculture in Uzbekistan

- agr. used area 24,057 million hectares = 65.95% of TA
- 13.9% of arable land, 71.17% pasture, 10.68% forests
- Share of GDP: 2023-23,4%
- about 48% of the population lives in rural areas

Source: stat.uz (2023)

Protected natural areas

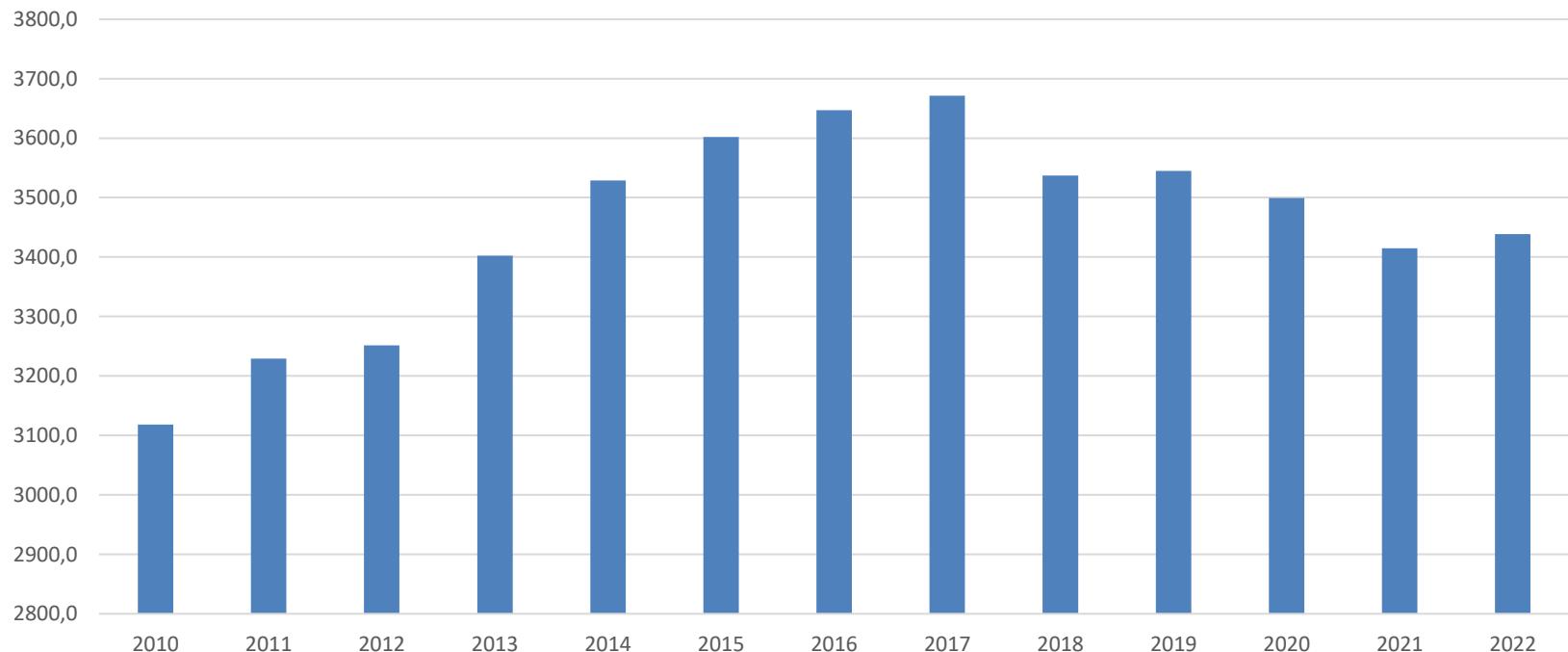
(thousand hectares)



Source: stat.uz

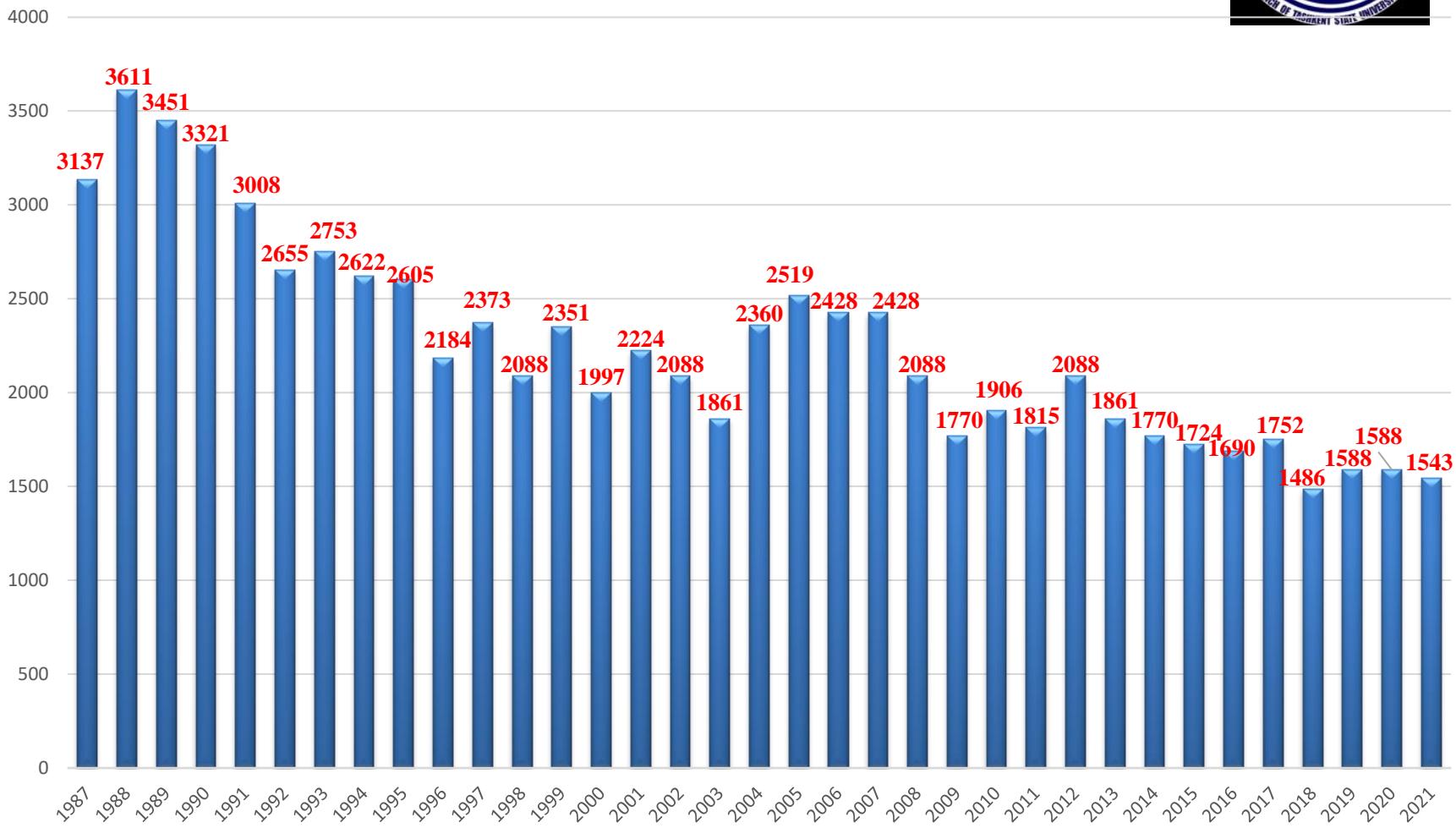
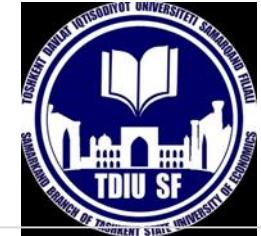


Employed in agriculture, in thousands



Source: stat.uz 2024

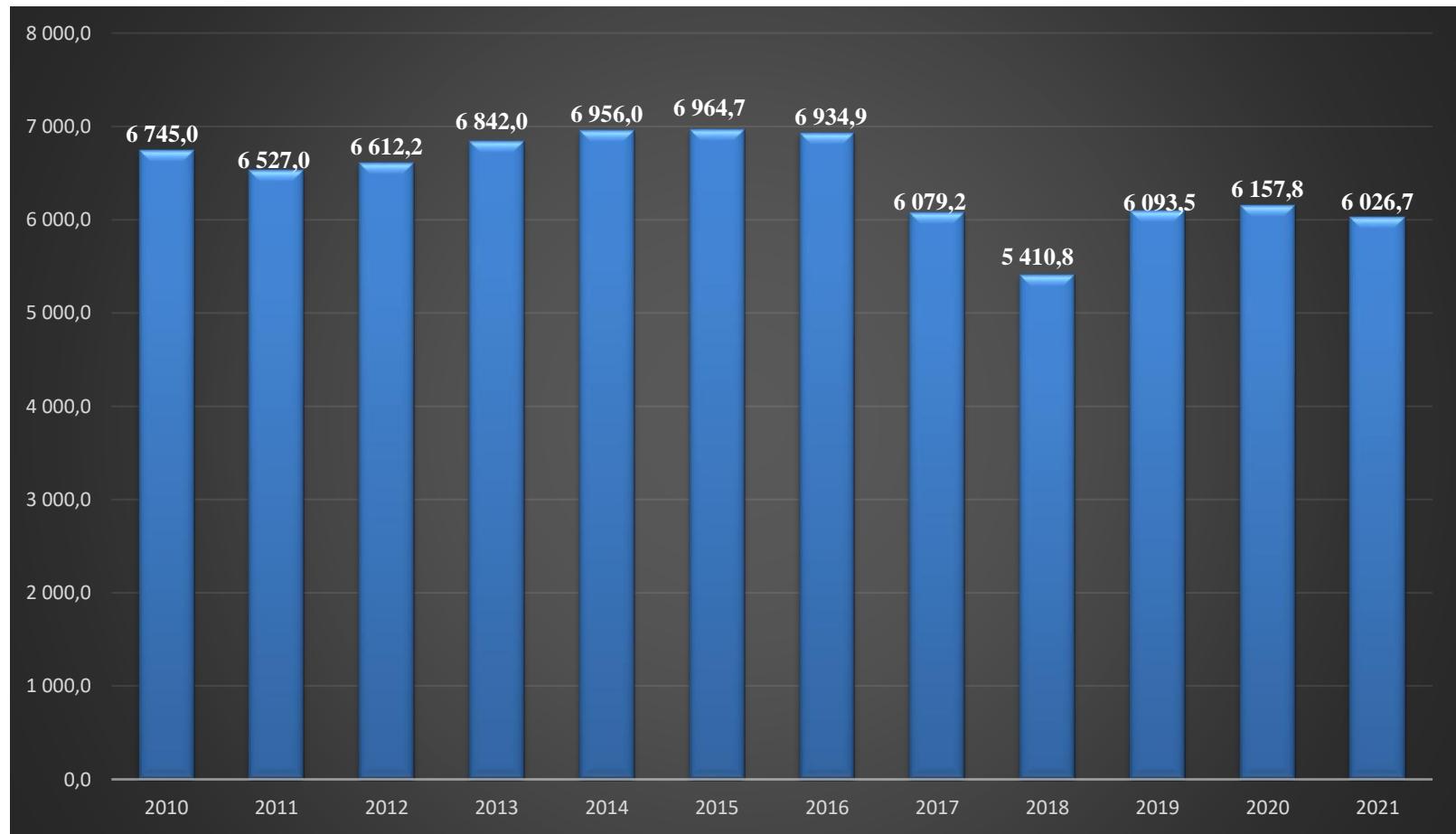
Cotton production in Uzbekistan, th.ton



Source: <https://www.indexmundi.com/agriculture/?country=uz>



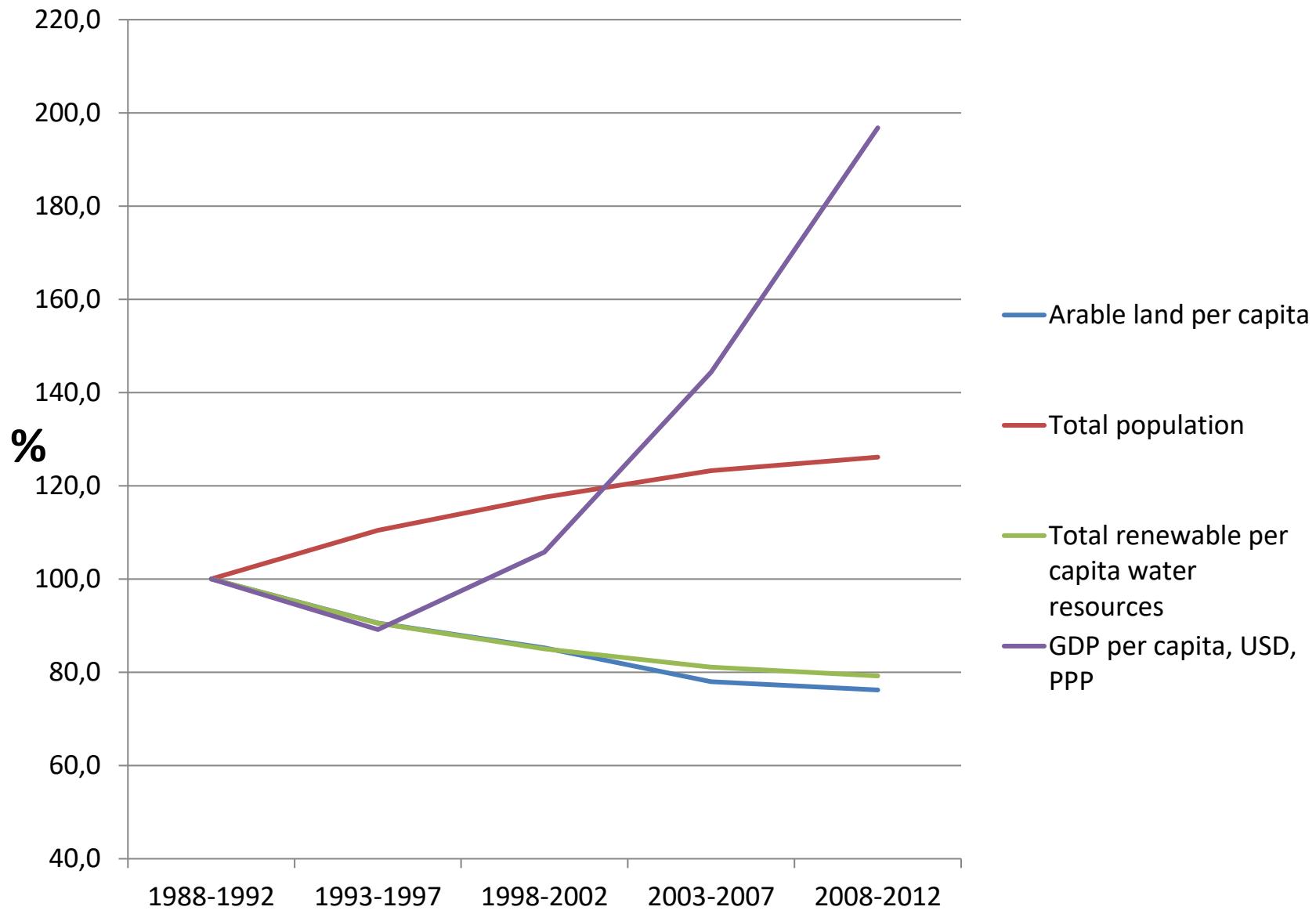
Wheat production in Uzbekistan, th.tonnes



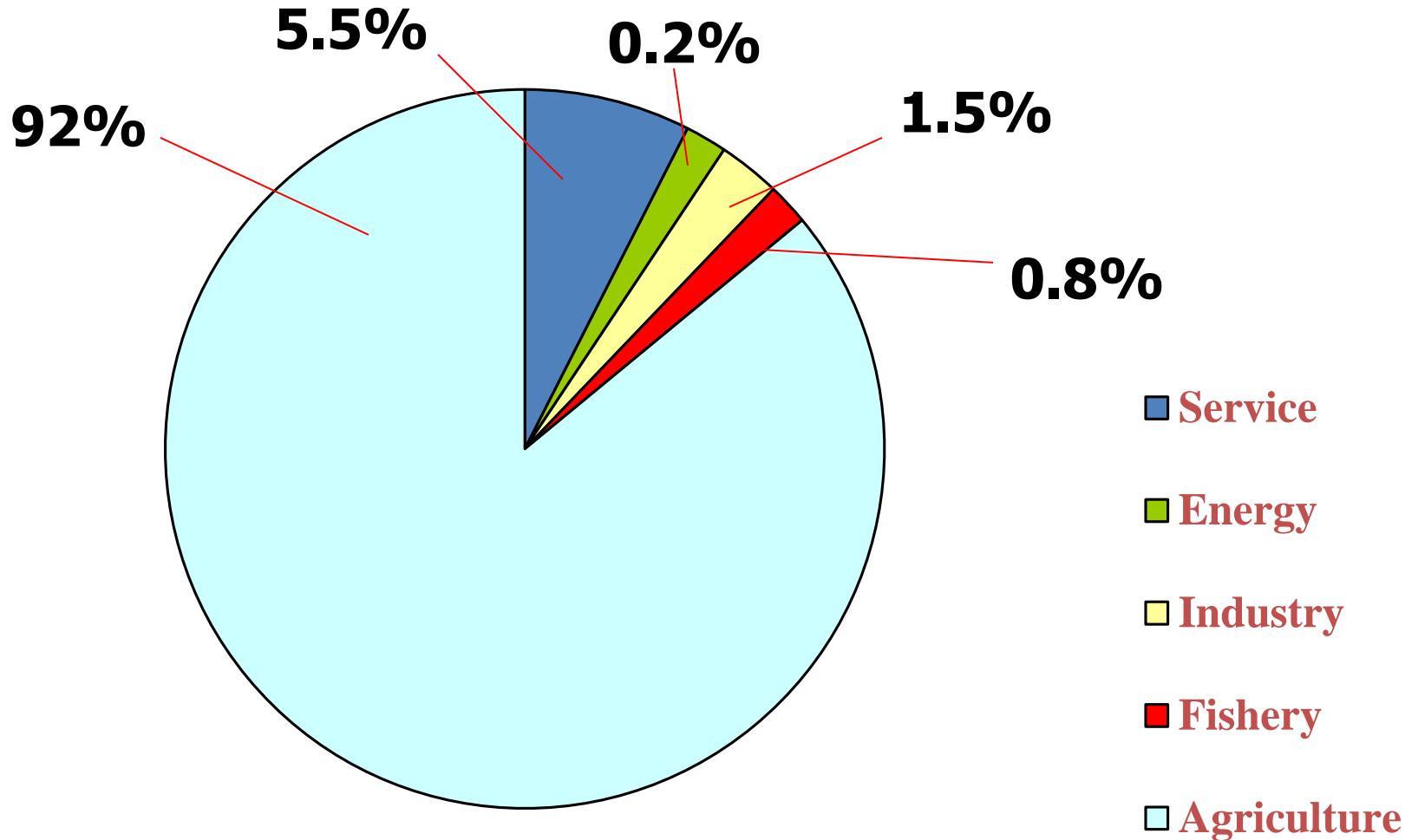
Source: stat.uz

Problems of agriculture of Uzbekistan

Pressure to natural resource in agriculture of Uzbekistan



Water use by branches of economy



Land degradation in the Uzbek agriculture

- Irrigation erosion - 722 thousand ha
- Wind erosion - 1,812 thousand ha
- Due to the erosion yield losses in cotton
450-500 thousand tons per year

Source: Soil and cadastre committee Uzbekistan, 2012

Irrigation system and channels



Irrigation ditch



Inefficient water use (I)



Inefficient water use (II)













A photograph of a narrow, brownish stream flowing through a lush green landscape. The water is calm, reflecting the surrounding vegetation. On the right bank, there is a dense cluster of green bushes and tall grasses. A fallen log lies across the stream near the center-right. The left bank is also covered in greenery, including some tall, blade-like plants. The background shows a steep embankment covered in grass.

2010/06/29 02:17 PM







Burned straw



Inequal distribution of straw



Plowed soil in autumn







Soil structure



Possible recommendations for a Sustainable use of resources (I)

- Charges on irrigation water would undoubtedly contribute to improved water management;
- Therefore is a prerequisite for the introduction of water pricing and land pricing, the liberalization of markets;
- Reallocation of taxes from land tax to water tax(payment).
- As consequence, investments on newer methods and technologies such as drip or sprinkler irrigation will be profitable.

Possible recommendations for a Sustainable use of resources (II)

- No monoculture, crop rotation of cultures
- Modification of the design of the leasehold right to be given;
- Protection against erosion;
- Liberalization of prices and markets;
- Measures to improve the environment (market access, pricing system, etc.);

Thank you!