

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

Farhod Ahrorov.

Samarkand branch of TSUE, Uzbekistan



Uzbekistan: General Info



- Area: 447,400 km²
- Population: 35,271 mln. (01.01.2021)
- Population density: 78,83 inhabitants / km²
- Capital: Tashkent (3.0 million inhabitants)
- Currency: Sum (about 12500 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





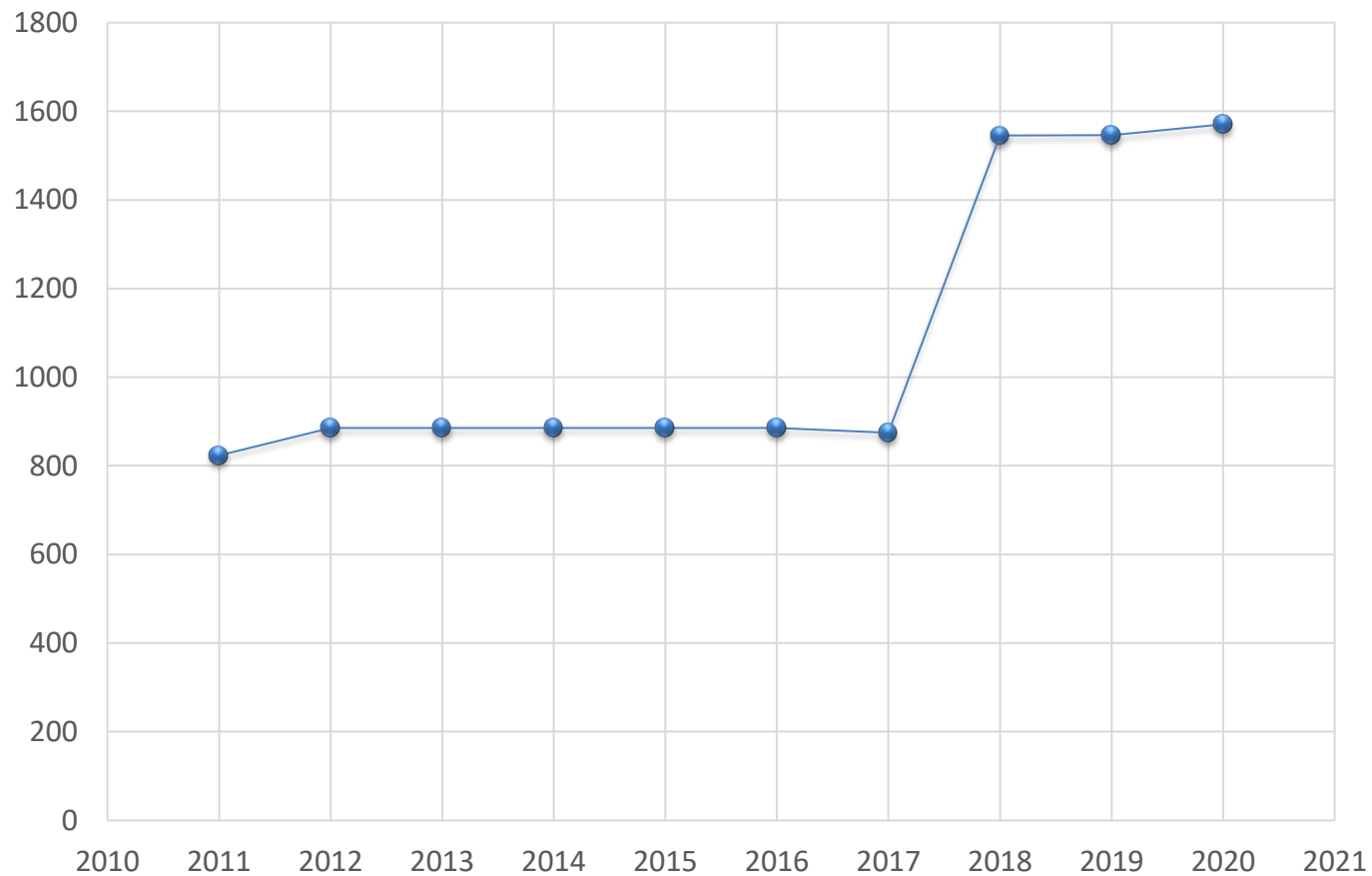
Agriculture in Uzbekistan

- 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: 2022-23,4%
- about 48% of the population lives in rural areas

Source: Ministry of Agriculture 2022, stat.uz (2023)

Protected natural areas

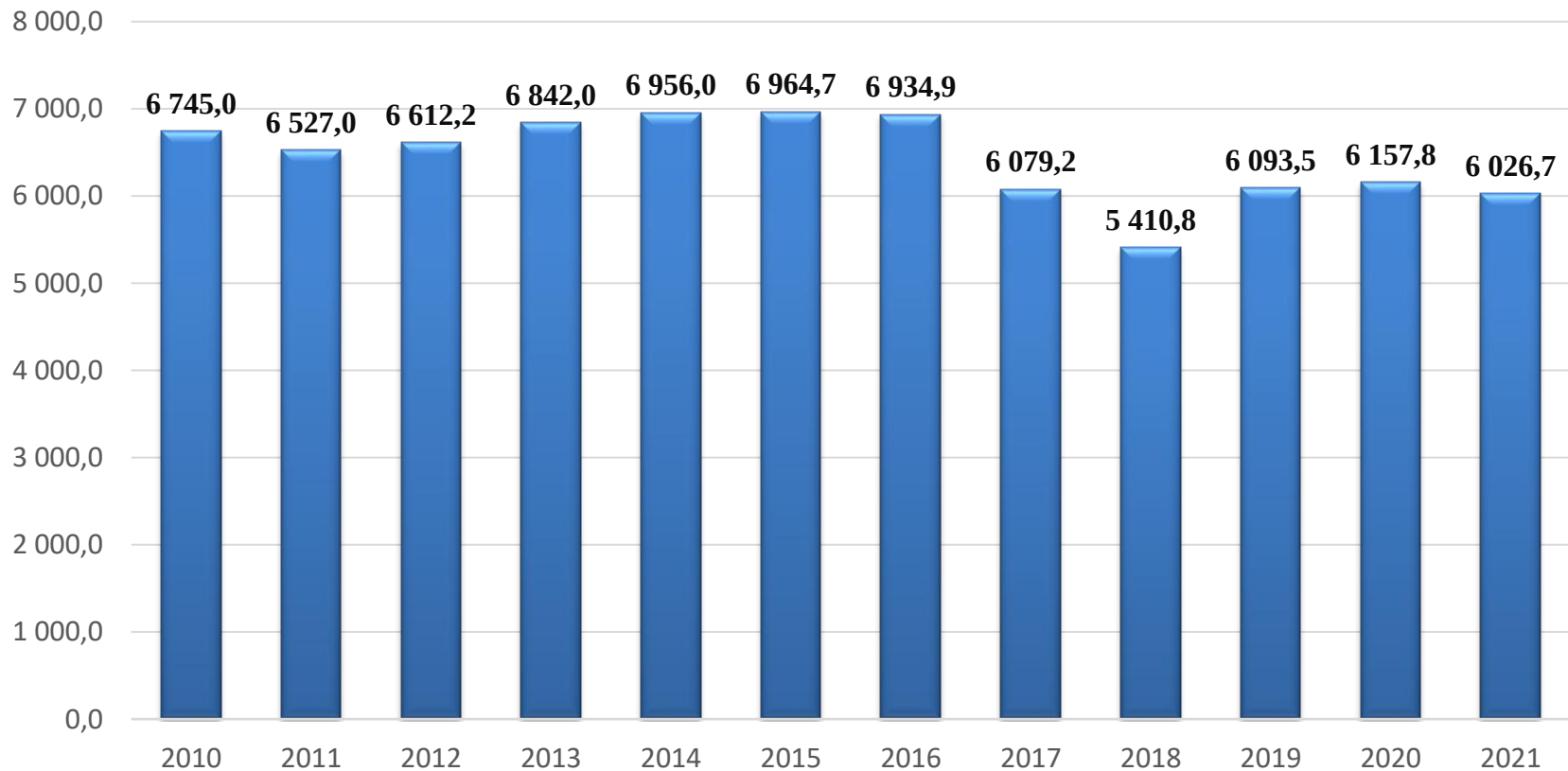
(thousand hectares)



Source: stat.uz

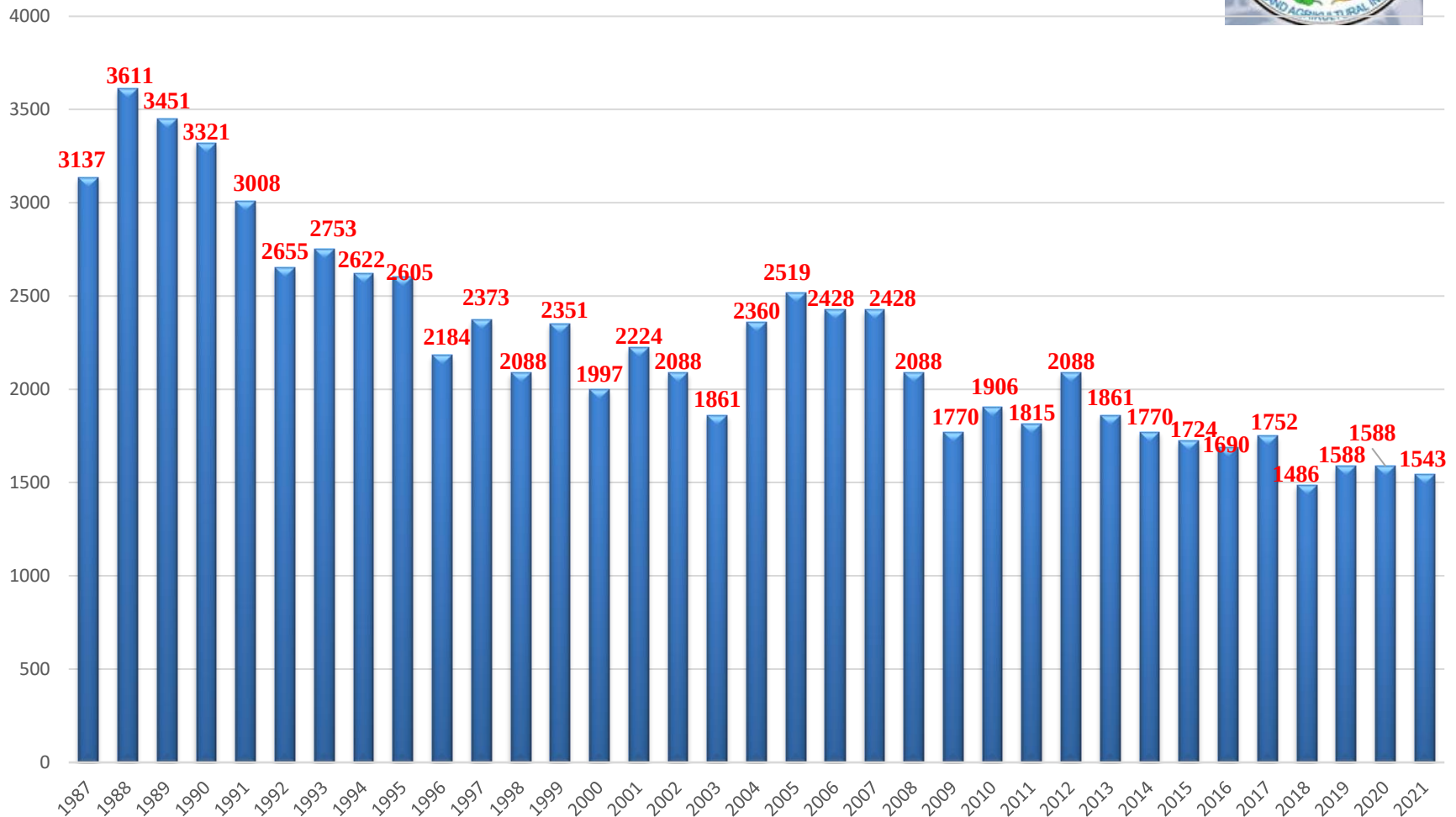


Employed in agriculture, in thousands



Source: stat.uz 2021

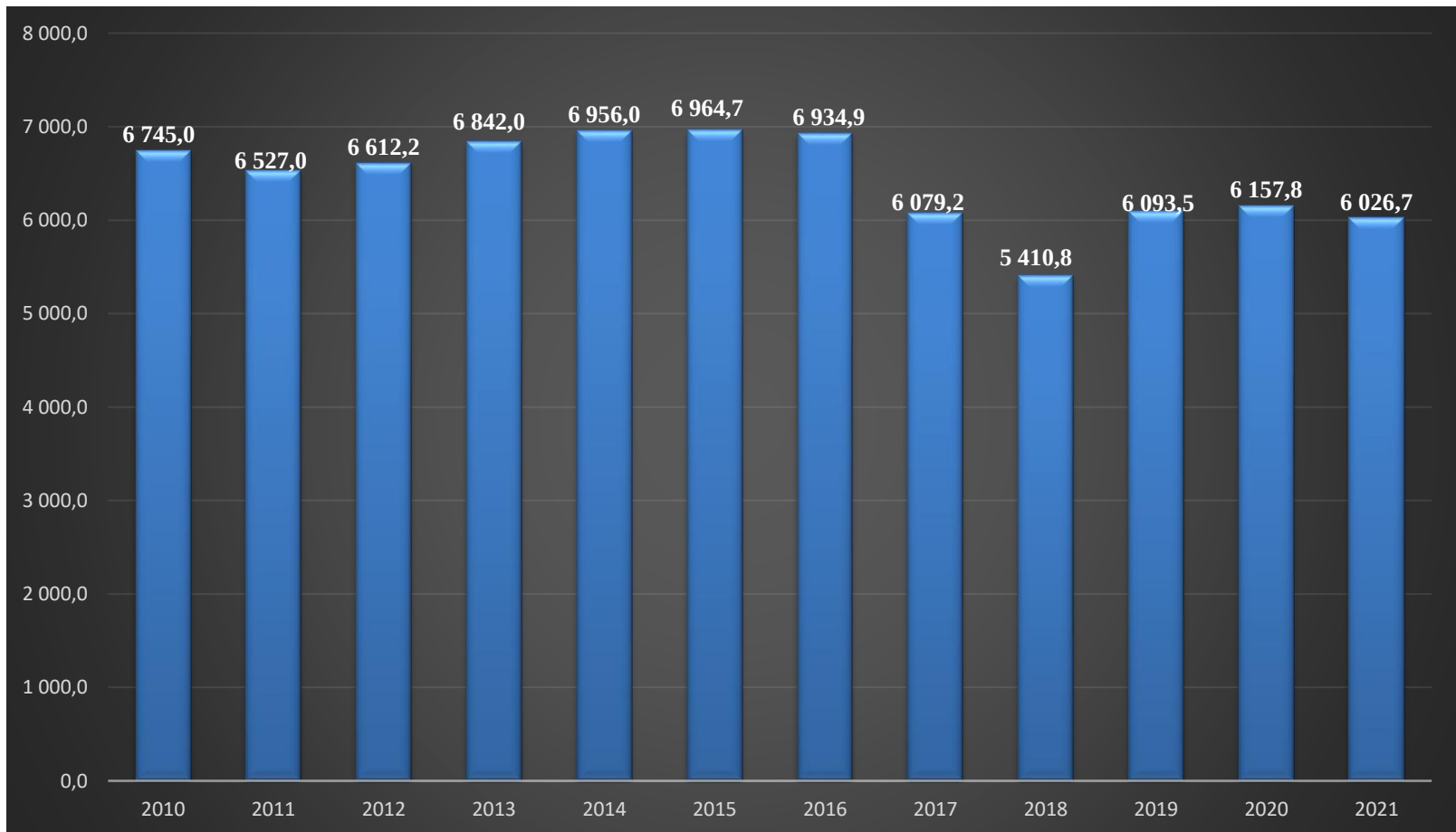
Cotton production in Uzbekistan, th.ton



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



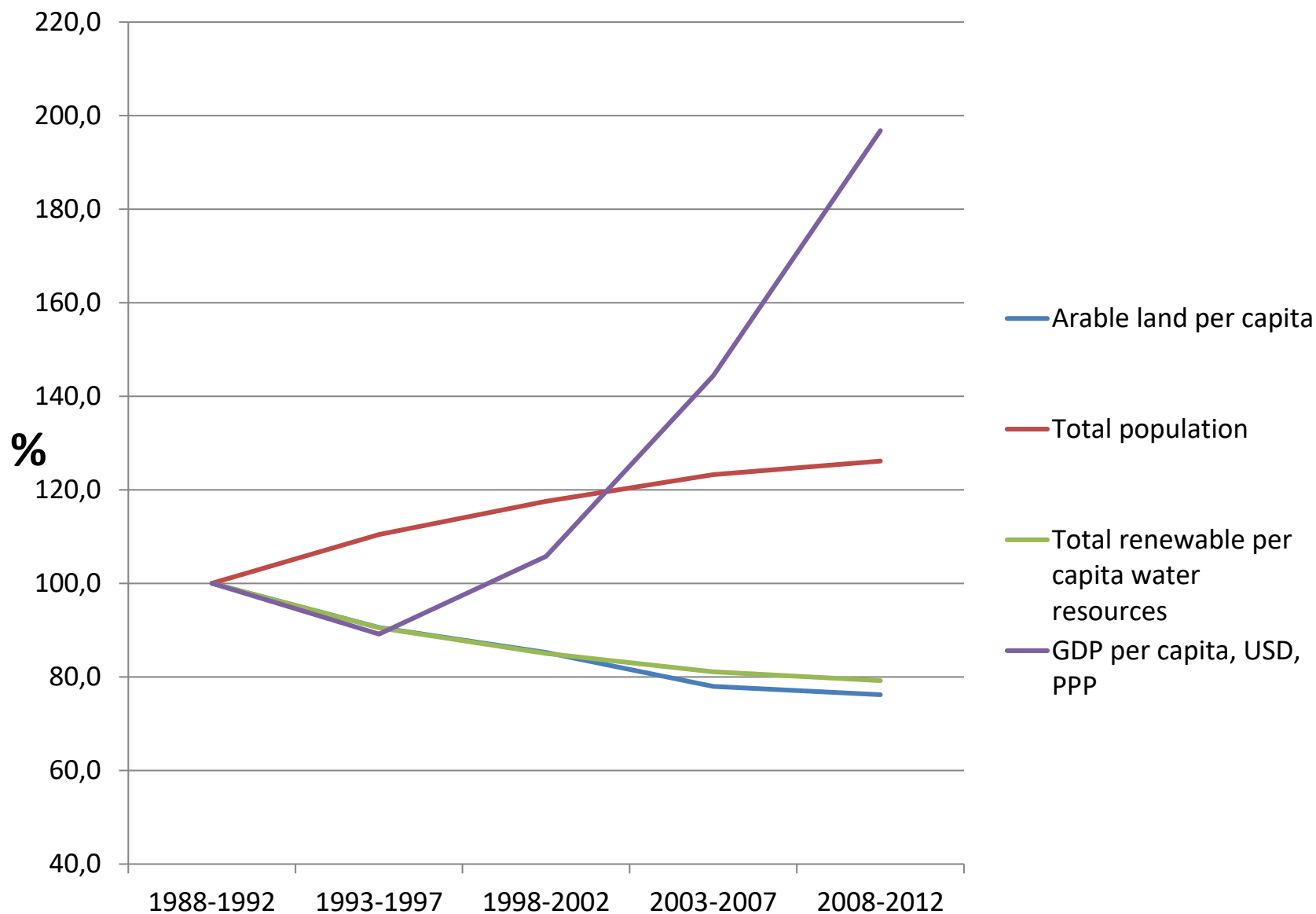
Wheat production in Uzbekistan, th.tonnes



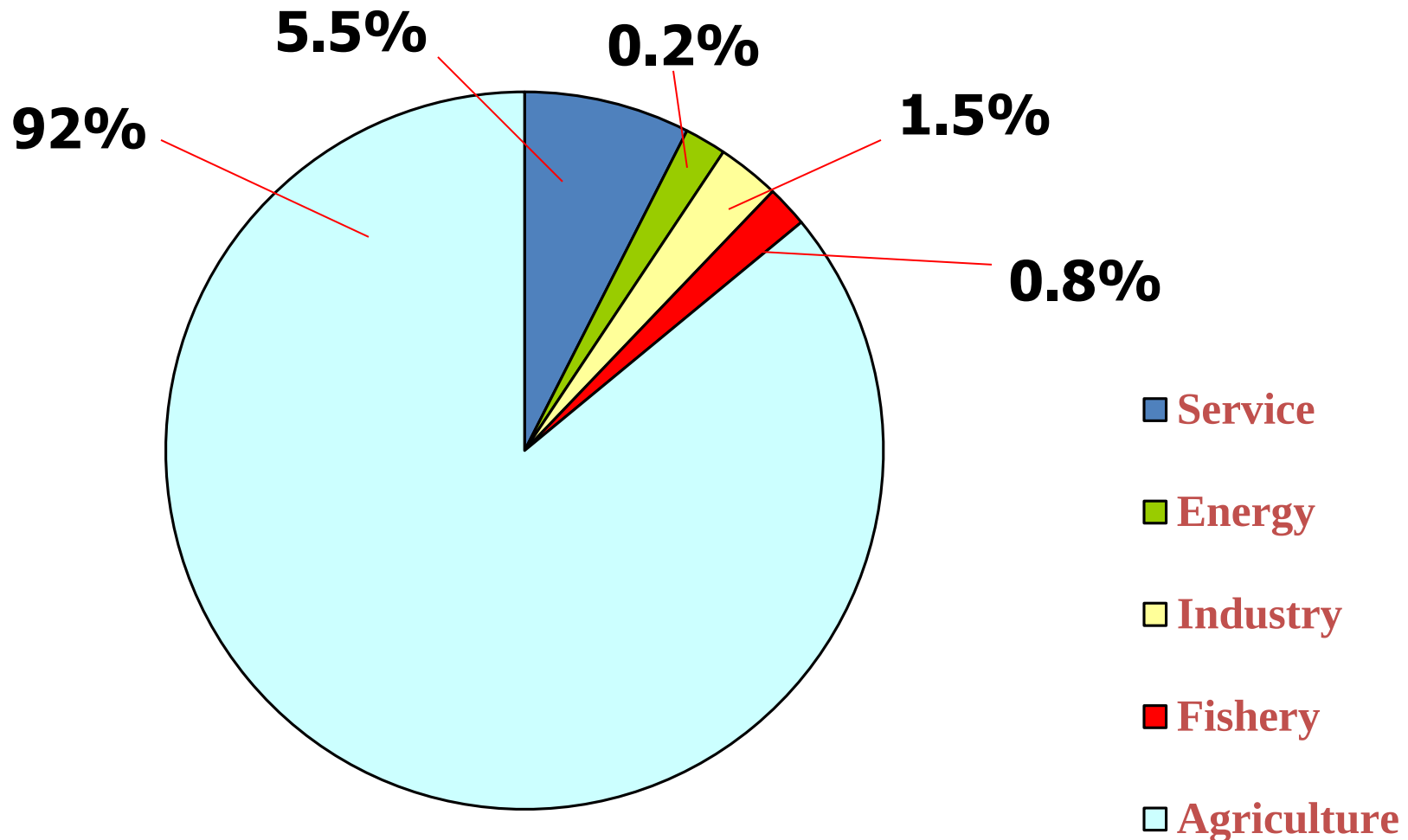
Source: stat.uz

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)





















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!