

Blue Peace

Central Asia

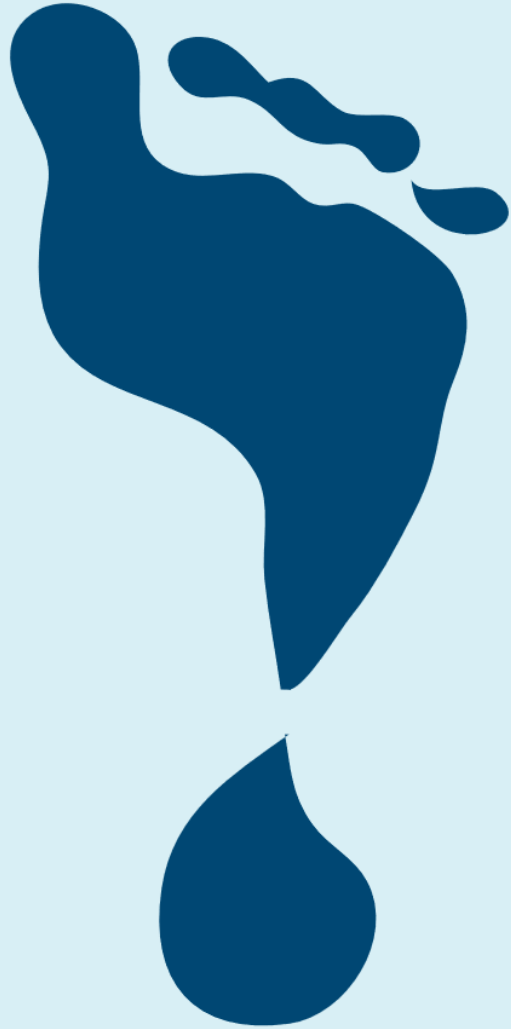
- Water Footprint



Ioana Dobrescu

- Managing Director, Water Footprint Implementation





Water footprint

What is a water footprint?

Basic concepts

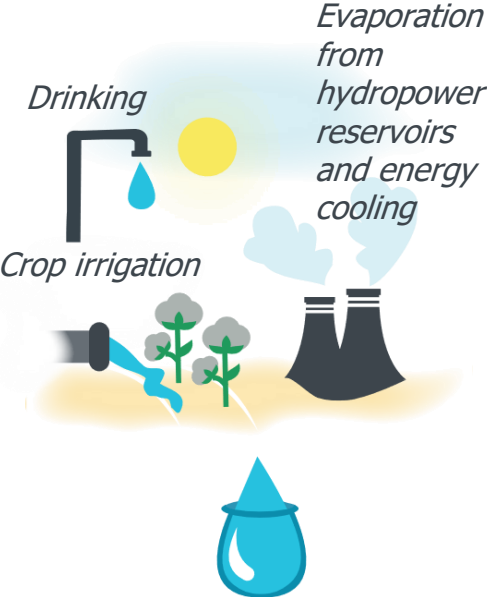


Rainwater used by vegetation & crops



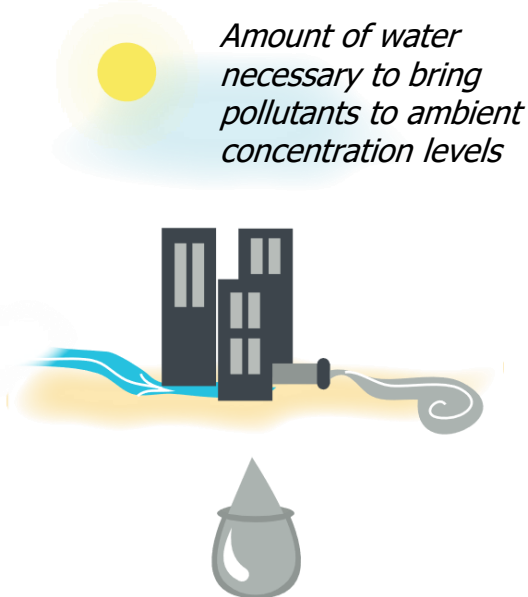
Green water

Surface and ground water



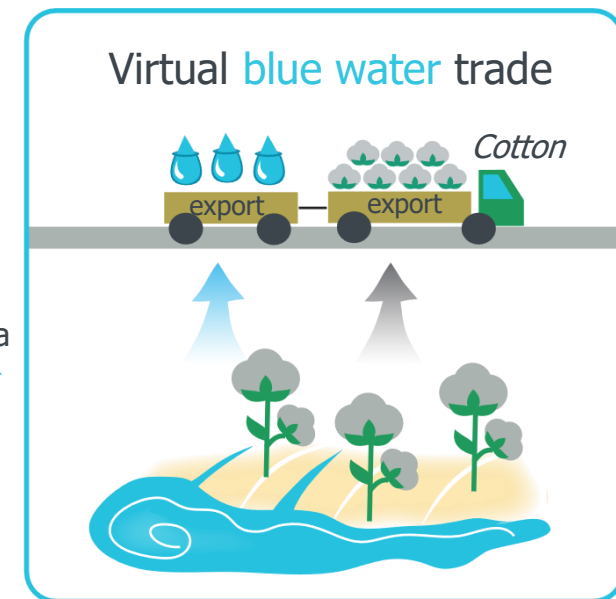
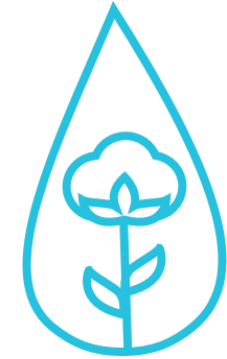
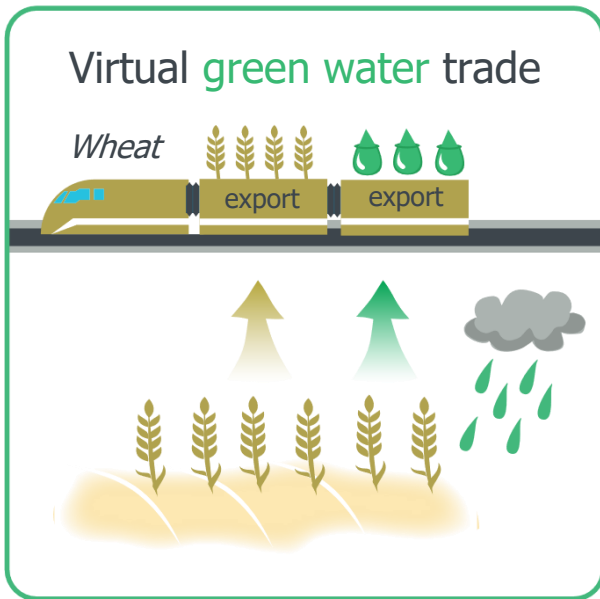
Blue water

Polluted water



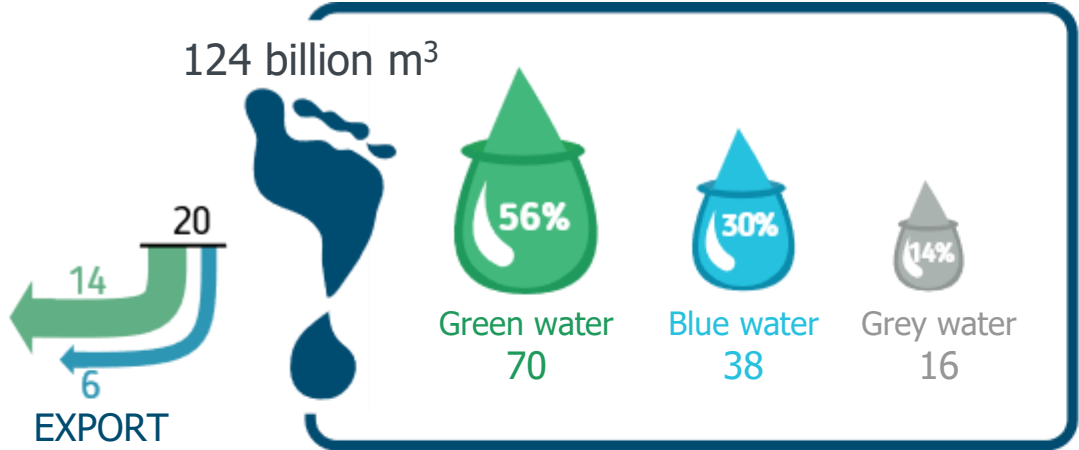
Grey water

Virtual water and agricultural trade

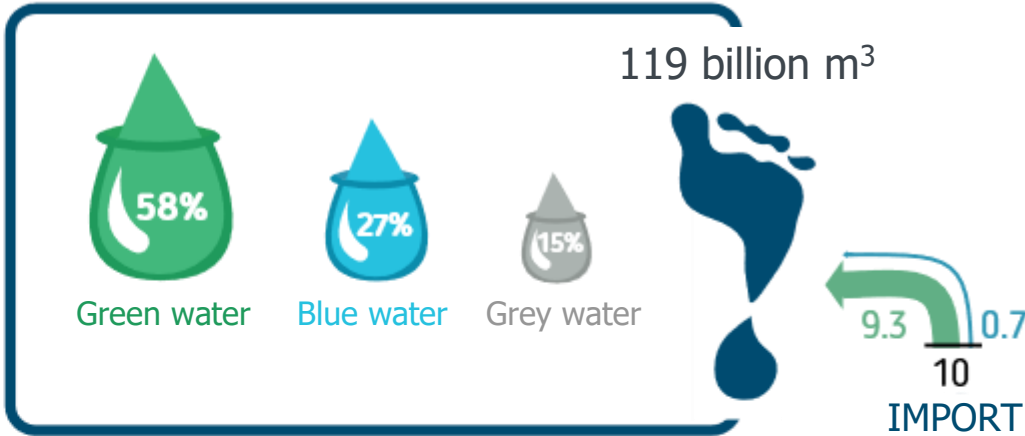


Water footprint of Central Asia

Production



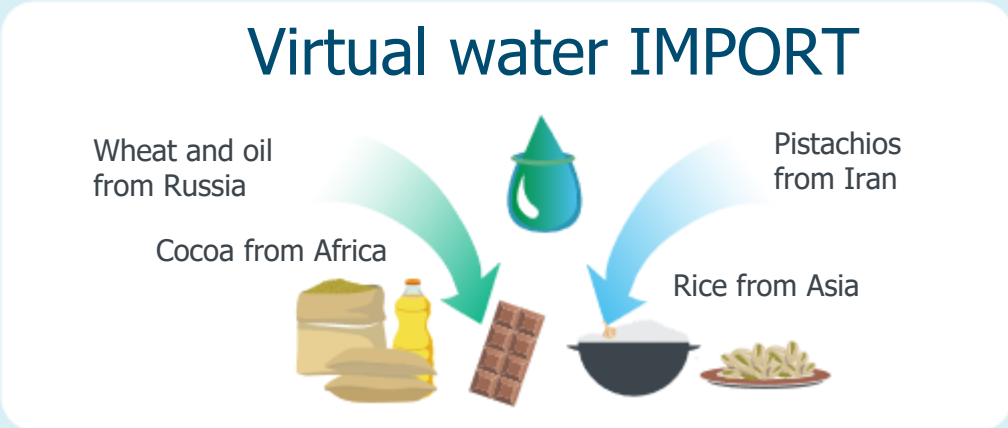
Consumption



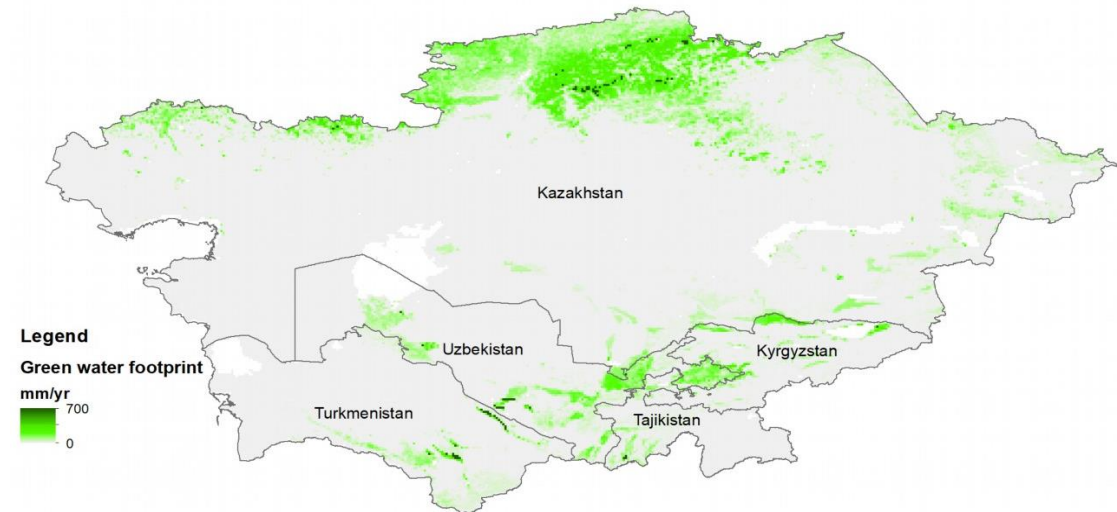
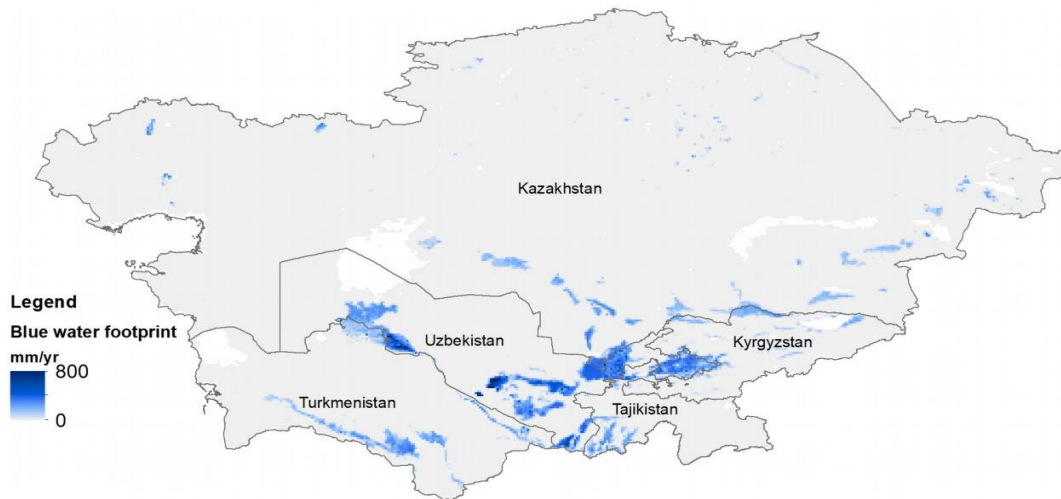
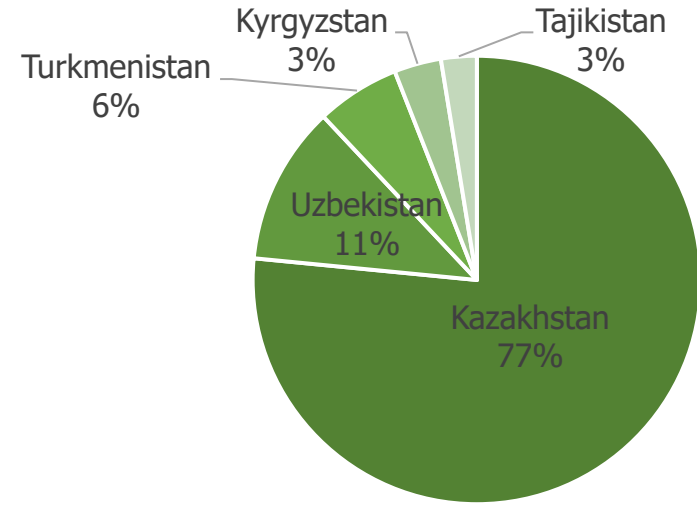
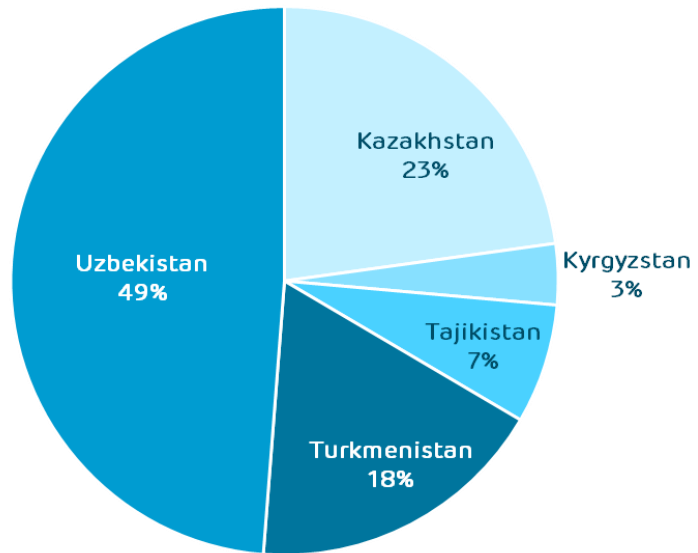
Virtual water EXPORT



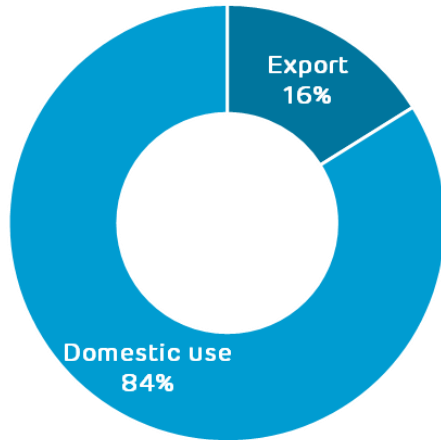
Virtual water IMPORT



Blue & Green water footprint of production, per country

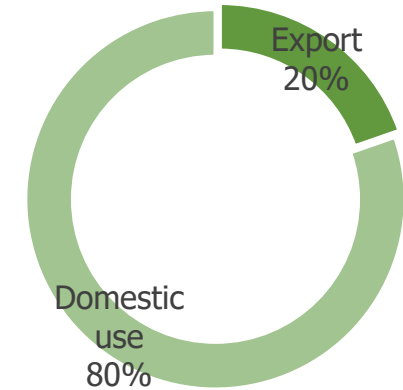


Major crops: green & blue WF

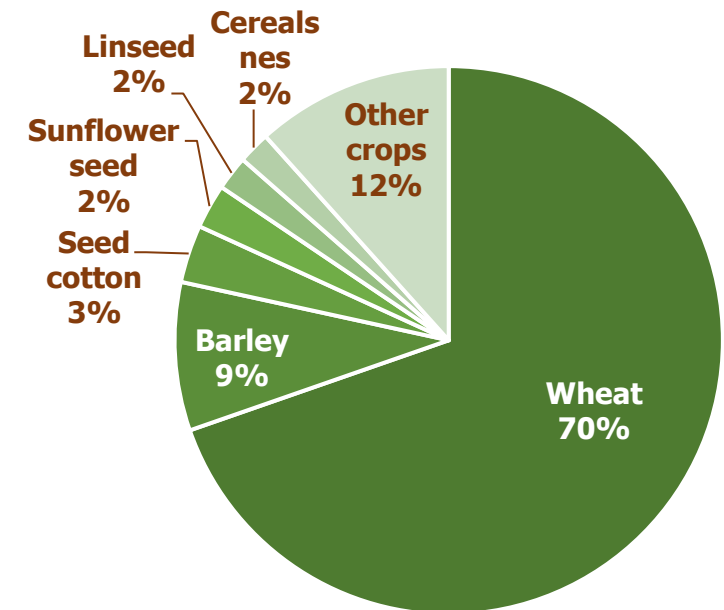
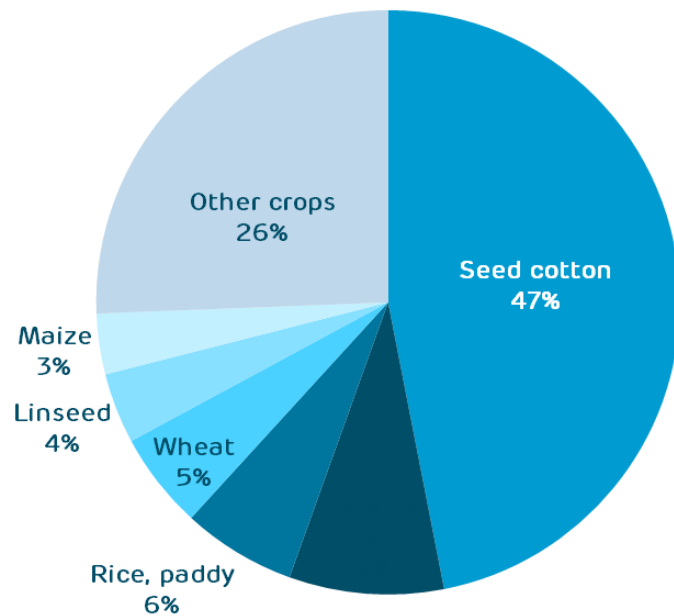


Both blue and green water is used in regional (domestic) consumption and only up to 20% is exported outside of the region.

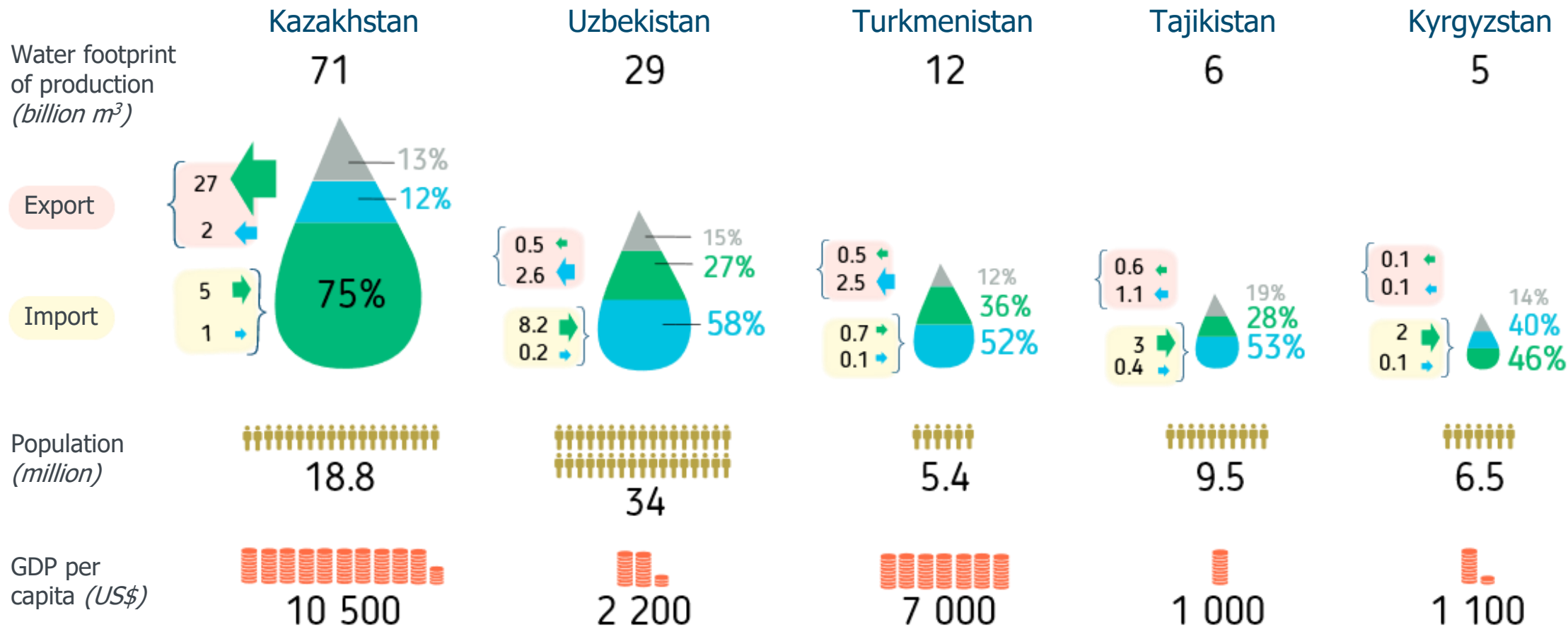
However, trade statistics don't include absolutely all traded products, export ratio might be a bit higher.



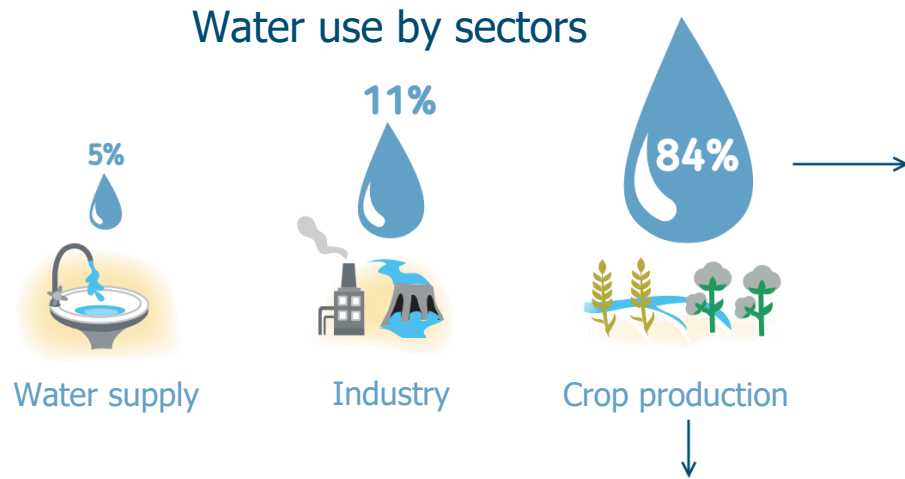
■ Export ■ Domestic use



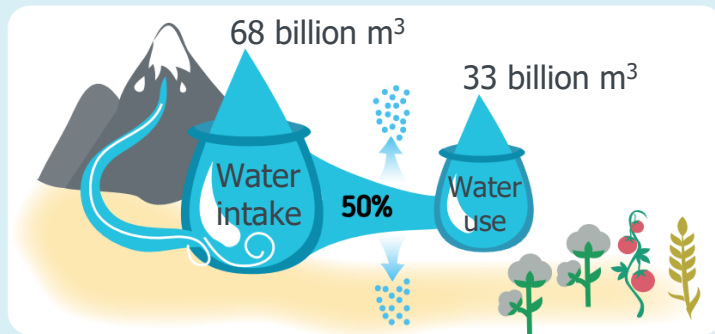
Water footprint, population and economy of the Central Asia countries



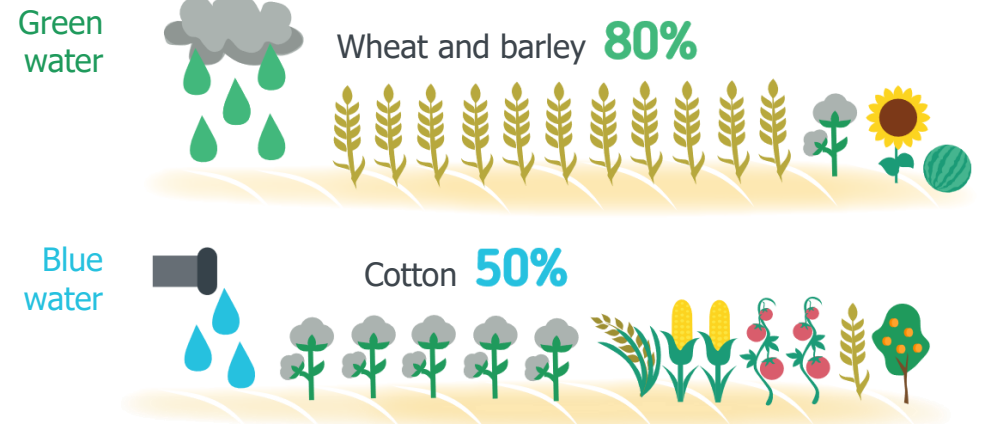
Water footprint of production in Central Asia



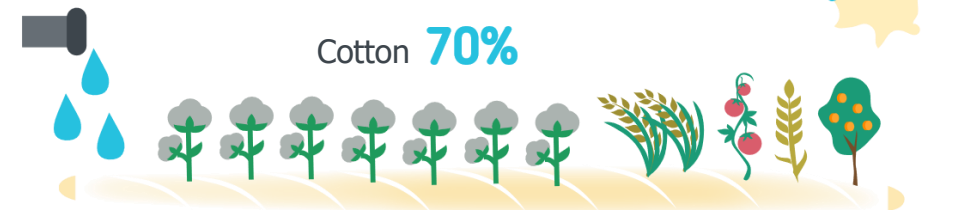
High losses of blue water in agriculture



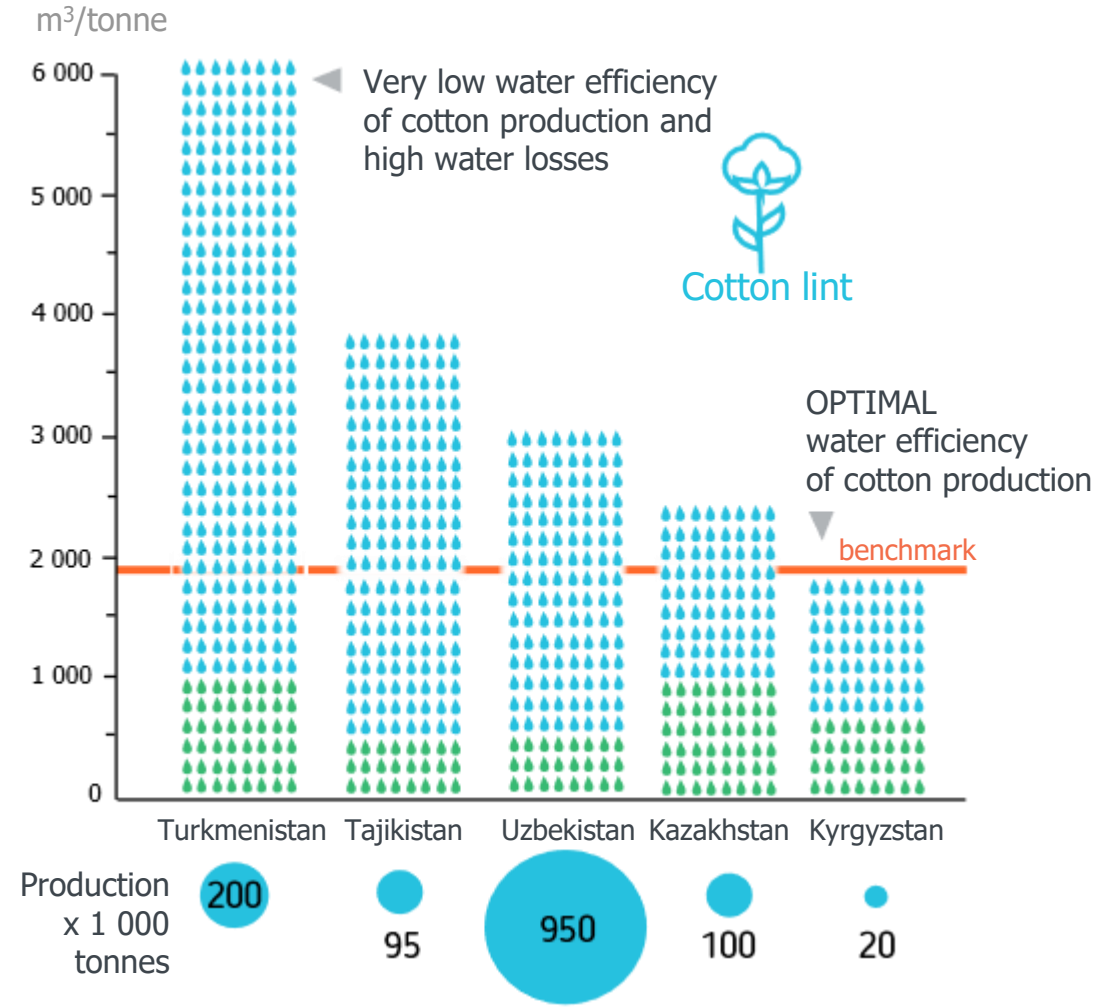
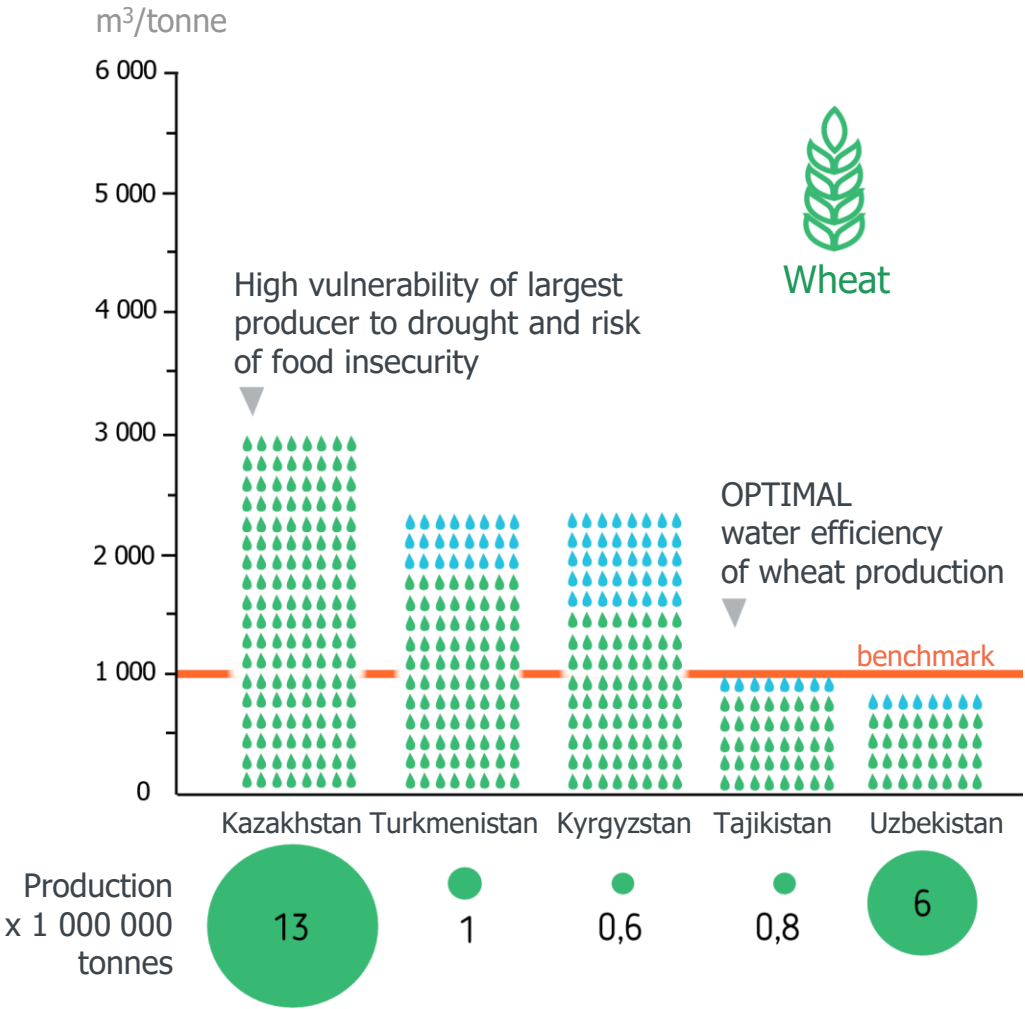
Major crops and water use in Central Asia



Blue water use in agriculture in the Aral Sea basin



Water footprint of agriculture production

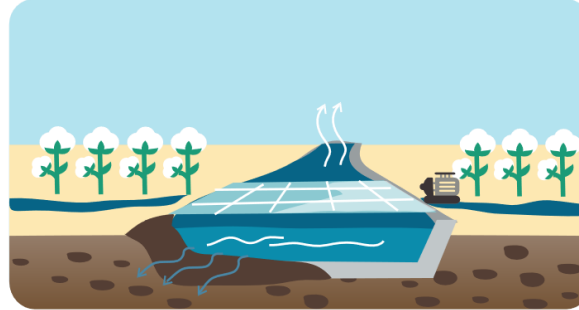


Recommendations

Reduce impact of drought



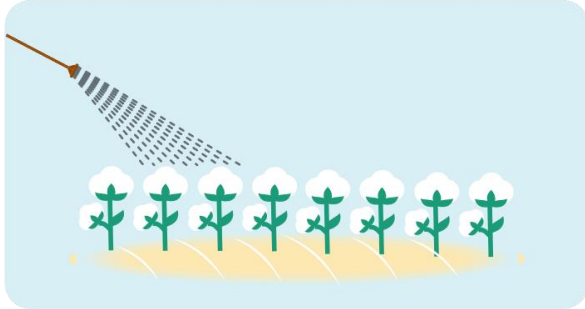
Reduce water losses



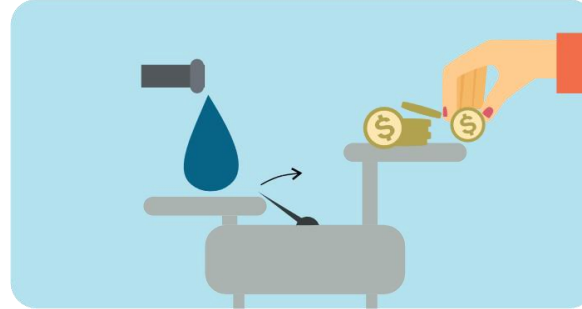
Crop rotation



Optimize fertilizer input and runoff



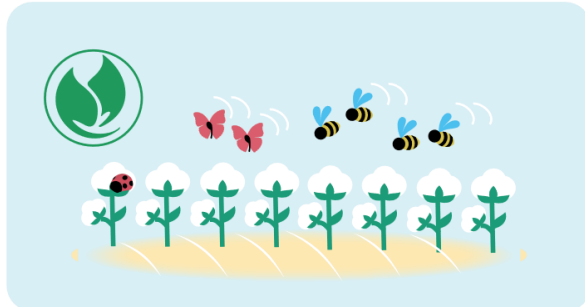
Revise water tariffs



Use of salt-tolerant crops and recycled wastewater and runoff



Increase organic farming



More efficient irrigation



Expand water conservation

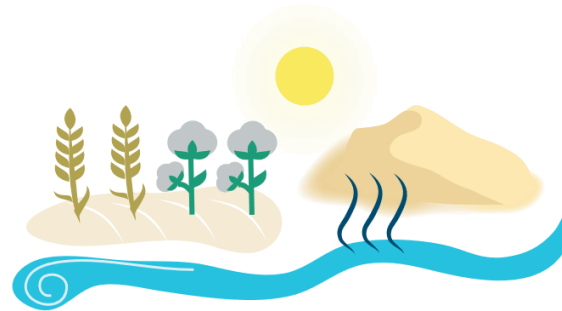


Water Footprint: Key messages



Kazakhstan

- * Important player in wheat supply;
- * Climate risks to rainfed agriculture;
- * Main exporter of green water;
- * Increase in blue water use (linseed).



Uzbekistan, Turkmenistan

- * Important player in wheat supply;
- * Climate risks to rainfed agriculture;
- * Main exporter of green water;
- * Increase in blue water use (linseed).



Kyrgyzstan, Tajikistan

- * Important player in wheat supply;
- * Climate risks to rainfed agriculture;
- * Main exporter of green water;
- * Increase in blue water use (linseed).



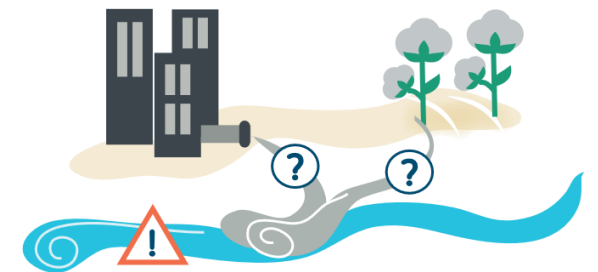
Water remains in the region

- * About 80% of green and blue water remains (traded) within the region;
- * High potential for more productive water use and re-allocation of crops.



Blue water is in peril

- * Cotton contributes most to water scarcity;
- * Inadequate water pricing gives no incentive to use water more efficiently and invest into infrastructure.



Grey water management and data are inadequate

- * Limited environmental flow of rivers;
- * Water quality and pollution are not well known and managed.