

# A Sustainable Asset Valuation (SAVi) of the Uchkuduk- Kazakhstan Border Highway, Uzbekistan

## SUMMARY OF RESULTS



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The Navoi region, located in the sparsely populated central part of Uzbekistan, covers 110,990 km<sup>2</sup> and is home to more than 930,000 people. The region's administrative centre is the city of Navoi. The region is home to the Kyzylkum plateau as well as the Nurata mountain ranges in the east and the Zarafshan River in the south. It borders Kazakhstan to the west and north. Road transport is currently the most common form of transportation in the mostly deserted region.

In collaboration with the Ministry of Transport in Uzbekistan, we developed a Sustainable Asset Valuation (SAVi) assessment of the highway road in Uzbekistan. The planned road project passes through the Republic of Karakalpakstan (through the city of Uchkuduk), the Navoi region, and across to the border of Kazakhstan. The highway is located in an important trade corridor with Kazakhstan. The project will help provide an efficient, safe, and sustainable road network in the region that will facilitate domestic and regional connectivity, contributing to sustainable economic growth through increasing domestic and foreign trade. The main objectives of the highway project are to increase road capacity and efficiency of trade, reduce vehicle operating costs, and lower travel times, all of which have significant economic benefits. The total projected investment costs for the project are UZS 6,278 billion (USD 599 million), including taxes, duties, and social tax in the amount of UZS 547 billion (USD 52 million).

The SAVi methodology provides policy-makers and investors with a comprehensive analysis of the costs and benefits of an infrastructure project or policy intervention throughout its life cycle. We consider a wide range of economic, social, and environmental risks and impacts that are typically overlooked in traditional valuations, looking below the surface for the broader knock-on effects of implementing a transport project.

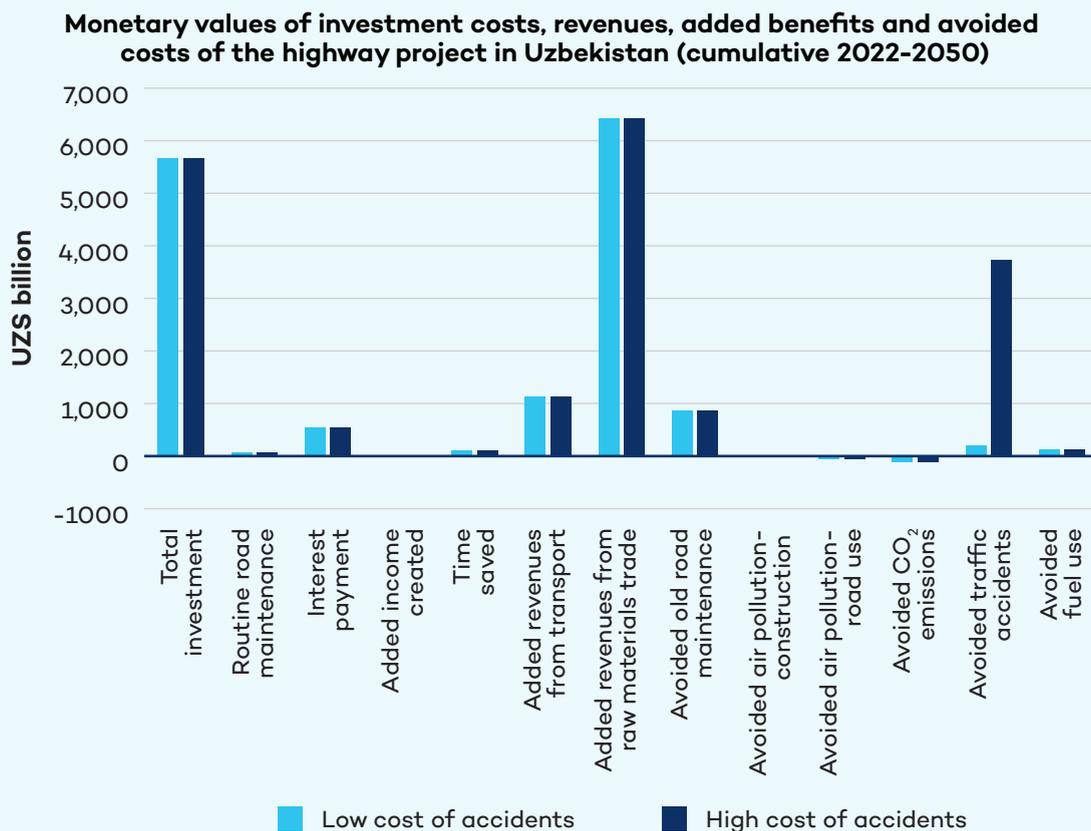
**Our assessment shows that the proposed highway project in Uzbekistan would provide efficient, convenient, and safe transport while also delivering substantial benefits to the region of Navoi.** We have modelled a higher and a lower range for the value of the externalities, specifically the direct and indirect impacts of the avoided cost of accidents.

We found that the highway project in Uzbekistan would generate a cumulative net benefit of UZS 2,411 billion (USD 230 million) in the “low cost of accidents” scenario and UZS 5,942 billion (USD 567 million) in the “high cost of accidents” scenario, considering a project period of 30 years, from 2022 to 2052, including 5 years of construction (2022–2027). When accounting for the full range of the highway project’s benefits, the results show an integrated benefit-to-cost ratio of 1.38 per USD invested in the “low cost of accidents” scenario and 1.95 per USD invested in the “high cost of accidents” scenario.

In addition, the highway project in Uzbekistan will produce significant economic benefits for the public sector in Uzbekistan and the inhabitants of the Navoi region, such as revenues from transport and public revenues from the trade of raw materials, avoided costs of road accidents, and avoided costs of fuel and maintenance. On the other hand, the project will lead to some negative environmental impacts, such as an increase in CO<sub>2</sub> emissions and air pollution from road use.

The greatest impact of the highway project in Uzbekistan is the added benefit from public revenues from the trade of raw materials, valued at UZS 6,426 billion (USD 613 million), and from revenues from transport, valued at UZS 1,129 billion (USD 107 million).

Secondly, in the “high cost of traffic accidents” scenario, the avoided costs of traffic accidents are valued at UZS 3,732 billion (USD 356 million). The “high cost of traffic accidents” scenario includes the loss of part of the national income due to permanent disability or death of the victims, delivery of victims to a medical institution, payment of ballots, pensions, and benefits to the victims as well as restoration, delivery, and repair of damaged vehicles, and repair of damaged road structures. In the “low cost of traffic accidents” scenario, this number is significantly lower, valued at UZS 202 billion (USD 19.3 million).



Integrated valuations, such as the SAVi assessment, build a fuller picture of the long-term effects that the conventional benefit-cost ratio (BCR) is unable to consider. A traditional BCR for this project, considering only the tangible impacts (e.g., investment costs, routine maintenance, interest payments, and revenues from transport), amounts to 0.18 for every USD invested. This would, therefore, not be considered an investment-worthy project by traditional standards. However, the sustainable BCR (S-BCR), which considers the project from a societal point of view and is based on the estimation of the full range of economic, social, and environmental added benefits and avoided costs, amounts to 1.38 in the “low cost of accidents” scenario and 1.95 in the “high cost of accidents” scenario, demonstrating the significant value the proposed highway project would bring from a socioeconomic perspective.

<b>Net results of valued-added benefits and avoided costs</b>			
<b>Scenario</b>	<b>Unit</b>	<b>Low cost of accidents</b>	<b>High cost of accidents</b>
Cumulative net benefits (undiscounted)	UZS billion	10,017	15,867
Cumulative net benefits (discounted)	UZS billion	2,411	5,942
Cumulative net benefits (discounted)	USD million	230	567
BCR		0.18	0.18
<b>S-BCR</b>		<b>1.38</b>	<b>1.95</b>

The SAVi assessment demonstrates that advancing sustainable transport investment options, such as the highway project in Uzbekistan, requires identifying, assessing, and valuing these societal benefits and avoided costs so that city planners and project developers can advocate for their implementation and financing.

It is crucial that policy-makers design and implement processes that enable the recognition and accounting of these wider benefits so that decisions are made that favour transport investments that provide the greatest benefits to society while minimizing their environmental impacts.

This is a stand-alone assessment of the highway project in Uzbekistan. In the future, mitigation measures that are identified in environmental impact assessments can be integrated into the SAVi analysis to demonstrate the economic viability of investments in reducing environmental impacts.

## About SIPA

The Sustainable Infrastructure Programme in Asia (SIPA) is funded by the German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety under their International Climate Initiative (IKI). SIPA is implemented by the OECD and international partners. It aims to help selected Central and Southeast Asian countries scale up energy, transport, and industry infrastructure investments and shift them towards infrastructure projects consistent with low-emission, resilient development pathways and the Sustainable Development Goals.



On behalf of:



of the Federal Republic of Germany

## Why Use SAVi?

SAVi calculates the environmental, social, and economic risks and externalities that impact the financial performance of infrastructure projects. These variables are typically ignored in traditional financial analyses.

SAVi is a simulation tool that is customized to individual infrastructure projects. It is built on project finance and systems dynamics simulation.

Visit the SAVi webpage: [iisd.org/savi](https://iisd.org/savi)

## About SAVi

SAVi is a simulation service that helps governments and investors value the risks and externalities that affect the performance of infrastructure projects.

The distinctive features of SAVi are:

- **Valuation:** SAVi values, in financial terms, the material environmental, social and economic risks and externalities of infrastructure projects. These variables are ignored in traditional financial analyses.
- **Simulation:** SAVi combines the results of systems thinking and system dynamics simulation with project finance modelling. We engage with asset owners to identify the risks material to their infrastructure projects and then design appropriate simulation scenarios.
- **Customization:** SAVi is customized to individual infrastructure projects.

[iisd.org/savi](https://iisd.org/savi)