



Turkmenistan-Afghanistan-Pakistan-India Pipeline

For Prelims: [Turkmenistan-Afghanistan-Pakistan-India Pipeline](#), [Natural gas](#), [Asian Development Bank](#), [Coal](#), [Renewable energy](#), [Net-Zero Emissions Target](#), [Iran-Pakistan-India \(IPI\) pipeline](#), [China-Pakistan Economic Corridor](#)

For Mains: Regional Cooperation and Development, Role of India in Development of Central Asia, Asian Development Bank and Infrastructure Projects

[Source: TH](#)

Why in News?

Afghanistan is set to begin work on the long-awaited [Turkmenistan-Afghanistan-Pakistan-India \(TAPI\) pipeline](#), a landmark USD 10 billion project that promises to enhance regional energy connectivity and drive economic development.

- This development comes after **years of delays primarily due to security concerns in Afghanistan.**

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Trans-Afghanistan pipeline

Route of the Turkmenistan-Afghanistan-Pakistan-India (TAPI) natural gas pipeline



What is the TAPI Pipeline?

- **About:** The TAPI pipeline is a major infrastructure project designed to transport **natural gas from the Galkynysh gas field** in Turkmenistan through Afghanistan, Pakistan, and India.
 - The pipeline will span approximately **1,814-kilometres** and is expected to deliver around **33 billion cubic metres (BCM) of natural gas annually**.
 - It will supply gas to Afghanistan (5%), Pakistan (47.5%), and India (47.5%) during its 30-year operational period.
 - The pipeline is also known as the **'Peace Pipeline'** due to its potential to foster regional cooperation and stability.
 - The project's origins trace back to the 1990s, with significant progress made in 2003, supported by the **Asian Development Bank (ADB)**. **India joined the initiative in 2008**, marking a major milestone in its development.
 - The **TAPI Pipeline Company Limited (TPCL)**, is responsible for the construction and operation of the pipeline. The company is a joint venture of Turkmenistan, Afghanistan, Pakistan, and India, each holding shares in the project.
- **Significance:**
 - **Environmental Impact:** The pipeline offers a **crucial alternative to coal**, reducing **carbon dioxide emissions** compared to coal-fired energy.
 - **For India, which relies heavily on coal, TAPI could facilitate a transition to cleaner energy sources and help meet its ambitious [emission reduction goals\(Net-Zero Emissions Target\)](#).**
 - TAPI pipeline has the potential to alleviate **air pollution issues in major cities** like Delhi, Mumbai, Karachi, and Islamabad by providing a cleaner energy alternative.
- **Economic Benefits:** Beyond energy supply, the pipeline offers opportunities for economic growth in Afghanistan and Pakistan through **transit fees and job creation**. It could also spur investment in **renewable energy** sources in these countries.
- **Strategic Influence:** TAPI is a key element in the broader geopolitical competition for influence in Central Asia. The US sees the pipeline as a strategic counter to the **Iran-Pakistan-India (IPI) pipeline**, which is supported by Iran and Russia.
 - For Turkmenistan, TAPI represents a chance to diversify its export markets and reduce dependency on existing routes to China and Russia.
 - China's investment in the **CPEC** highlights the competitive nature of energy infrastructure projects in the region. TAPI could serve as a **counterweight to Chinese influence, particularly in Pakistan**.
 - The pipeline enhances cooperation among Central and South Asian countries, potentially fostering collaborations in energy, communication, and transportation.
 - For India the pipeline positions **Turkmenistan as a crucial energy partner**, enhancing **India's connectivity with Central Asia**. It aligns with India's broader strategy of improving regional connectivity and energy security.

What are the Challenges Regarding the TAPI Pipeline?

- **Security Concerns:** Most of the pipeline will traverse Afghanistan, a region known for its challenges like **political instability**, and **humanitarian crisis**. Ensuring the smooth implementation of the project has been a recurring issue.
- **Financing and Administration:** Securing **adequate funding remains a major hurdle**. The Asian Development Fund is expected to contribute a small portion, with the rest to be sourced from private investors.
 - Additionally, the administration of the pipeline is complicated by the involvement of four separate pipeline companies, one for each participating country.
- **Investment Climate:** Turkmenistan's closed economy and limited integration into the global market pose significant obstacles to attracting investment. **Corruption and governance issues** further complicate the investment landscape.
- **India's Conflicts with Pakistan:** India's own conflicts with Pakistan raise questions about its long-term commitment to the TAPI pipeline. **Political tensions between the two countries could hinder cooperation** and smooth operation of the project.
- **Environmental Concerns:** While natural gas is cleaner than coal (natural gas emits 50 to 60% less CO₂ than coal burned in a comparable plant), it is not without environmental issues.
 - The extraction and transportation of natural gas involve risks such as water and soil

pollution, and the potential for earthquakes from fracking.

India's Other Bilateral/Multilateral Energy Infrastructure Projects

- [India-Bangladesh Friendship Pipeline](#)
- [Motihari-Amlekhgunj Pipeline \(India-Nepal\)](#)
- [Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation \(BIMSTEC\)](#)
- [International North-South Transport Corridor \(INSTC\)](#)

How is India Enhancing its Influence in Central Asia?

- **Securing Trade Routes:** Central Asia's strategic location makes it a focal point for global powers. India's involvement aims to enhance its **regional influence and secure vital trade routes**.
 - The region's resources are crucial for India's growing economy, and strengthening ties with **Central Asian countries aligns with its economic interests and long-term growth strategies**.
- **Enhancing Economic Presence:** The 10-year [Chabahar Port Agreement with Iran](#) enables India to bypass traditional maritime chokepoints, facilitating trade through Iran to the **South Caucasus and Central Asia**.
 - This strategic move aims to improve logistical efficiency and expand economic ties in the region.
 - **India is pursuing a free trade agreement with the negotiations with the [Eurasian Economic Union \(EAEU\)](#) to strengthen economic relations and access Eurasian markets.**
 - This effort reflects India's commitment to integrating more deeply into regional trade networks and leveraging economic opportunities with EAEU member states.
 - Global crises such as **Covid-19**, the **political instability in Afghanistan**, and the [Russia-Ukraine Conflict](#) have prompted India to reassess its trade routes and strategies.
 - The development of the [International North-South Transport Corridor \(INSTC\)](#) and potential EAEU membership are central to India's efforts to diversify and secure trade routes.
- **Military and Security Initiatives:** India maintains military bases in Tajikistan (Farkhor Air Base, and Ayni Air Base) and conducts regular joint exercises with countries like Uzbekistan ([Exercise DUSTLIK](#)), highlighting its strategic interests in the region and efforts to build defence partnerships.
- **Challenges and Geopolitical Considerations:** China's [Belt and Road Initiative \(BRI\)](#) poses a challenge with its extensive infrastructure projects in Central Asia, potentially overshadowing India's investments.
 - China's growing trade relations with Central Asian countries, may impact India's competitive edge in the region.
 - Strained relations with neighbouring rivals Pakistan and China limit India's overland trade routes, necessitating reliance on alternative maritime paths and regional alliances.

Way Forward

- Explore alternative funding sources beyond the Asian Development Fund, such as private sector investment, international financial institutions, and government grants.
 - Provide **tax breaks, subsidies, and other incentives** to attract foreign investment. **Clear and stable regulatory frameworks** will also boost investor confidence.
- Promote **industrial development along the pipeline route** to create jobs, generate economic activity, and diversify regional economies.
- Strengthen regional security cooperation to address common issues and ensure the safety of the pipeline. Establish a **central coordinating body to oversee the project, ensuring streamlined decision-making** and efficient management.

- Foster positive relationships with local communities along the pipeline route to gain their support and minimise security risks.
- Implement best practices for natural gas extraction and transportation to **minimise environmental impact** and prevent pollution.

Drishti Mains Question:

Q. Analyse the significance of the Turkmenistan-Afghanistan-Pakistan-India (TAPI) pipeline. How does the pipeline impact India's energy security and regional influence?

UPSC Civil Services Examination Previous Year Questions (PYQ)

Prelims

Q. What is the importance of developing Chabahar Port by India? (2017)

- (a) India's trade with African countries will enormously increase.
- (b) India's relations with oil-producing Arab countries will be strengthened.
- (c) India will not depend on Pakistan for access to Afghanistan and Central Asia.
- (d) Pakistan will facilitate and protect the installation of a gas pipeline between Iraq and India.

Ans: (c)

- A commercial contract for the development and operations of Chabahar Port was signed between India and Iran in 2016. The contract is for a period of 10 years.
- **Chabahar Port will provide India with an alternative and reliable access route into Afghanistan and also a reliable and more direct sea-route access into the Central Asian region.**
- It will eliminate dependency on Pakistan for access to Afghanistan and Central Asia. **Therefore, option (c) is the correct answer.**

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