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India's Mars mission: worth the cost? (+video)

At \$73 million, India's Mars mission is the world's least-expensive attempt to reach the Red Planet and a source of national pride. Yet some question the cost when 320 million remain in poverty.



A rocket carrying the Mars orbiter streaks across the sky after taking off from the east-coast island of Sriharikota, India, Tuesday, Nov. 5, 2013. India on Tuesday launched its first spacecraft bound for Mars, a complex mission that it hopes will demonstrate and advance technologies for space travel.
(Arun Sankar K/AP)

By Shivam Vij, Correspondent / November 5, 2013 at 12:40 pm EST

New Delhi

India today successfully launched its first mission to Mars in an attempt to become the fourth nation and the first Asian country to reach the fourth planet from the sun.

It's the first step in a complex 10-month mission designed to reach Mars on the lowest-budget ever for such an attempt. It's also a point of national pride for a country that has been dismayed by a faltering "economic miracle" in recent months, but has also raised questions since India continues to have large numbers of poor.

"This mission is of great importance to not only India but also the world at large," says Pallav Bagla, a science journalist and author of *Destination Moon: India's Quest for Moon, Mars and Beyond*. "Not many countries have put resources in Mars exploration, and when an emerging country like India does that, it distributes risks and resources [between countries]. The global scientific community is very excited about the mission."

The Mars Orbiter Mission named Mangalyaan (meaning Mars-craft in Hindi), will next try to leave Earth's orbit for the atmosphere of Mars, where it will orbit around the planet for six months. Its five

instruments will conduct experiments on the atmosphere of the outer planet, and study Mars' surface, topography, mineralogy and atmosphere.

The Indian Space Research Organization (ISRO) is also aware that the next phase of the mission is where two-thirds of the Mars mission have failed.

"There have been 51 launches by the US and Russia. Only 21 of them have been successful," ISRO chairman K. Radhakrishnan told reporters earlier in the day, after coming out of a temple where he offered special prayers for the program to succeed.

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Space race

India is the sixth nation after the US, Russia, European Union, China and Japan to launch a Mars mission. Yet the 2011 Chinese and 1998 Japanese attempts were unsuccessful.

India made official its announcement of planning a Mars attempt days after the Chinese Mars probe failed to leave Earth's orbit. The Indian space agency completed the project in 15 months. It is the cheapest Mars mission undertaken by any country so far, at a cost of \$73 million.

"This mission has national pride written on it. If we can do it before China, why not?" asks Mr. Bagla.

China has completed other space feats before India, successfully launching a human into space in 2003 and a probe that orbited the Moon in 2007. In response to India's Mars mission, a Chinese Foreign Ministry spokesman told reporters today that "outer space is shared by the entire mankind. Every country has the right to make peaceful exploration and use of outer space."

Chinese state-run media was less diplomatic. The state-owned Global Times criticized India for spending on a Mars mission despite its 320 million people in poverty and suggested the mission was meant to overtake the Chinese program.

"India has an ambitious goal of leading Asia in this area, especially having an advantage over China," Global Times said in an editorial titled "India's space ambition offers clue to China."

Poverty vs. Pride

The Mars mission comes amid otherwise gloomy times in India, with the economy sagging and a bitter election campaign underway. "Every Indian is proud of this outstanding scientific feat," said Sonia Gandhi, president of the ruling Congress party.

Hundreds gathered to watch the launch on the island of Sriharikota off the country's eastern coast or on live TV; the nation waited excitedly for the countdown.

Yet, it wasn't just a few socialists wondering if the money was worth it. On Twitter and in TV debates, people debated the decision to launch and spend.

"What is the point of sending some metal on a stony planet so far away, that too when so many others have done it?" says Rajat Sharma, a Delhi-based equity research analyst. "The money would have been better spent on building homes for the poor."

In the past, India's space program has concentrated mainly on satellites that have helped its own communication needs in weather, defense, and even medicine and education. In 2008, its moon mission, which found evidence of water on the moon's surface, marked a shift toward inter-planetary exploration, which, some critics say, does not have larger social or economic benefits.

Foreign policy commentator Kabir Taneja felt those who were complaining were missing the bigger picture. "Only 0.8 percent of India's national budget is spent on the space program, and only 0.7 percent of that budget has been spent on the Mars mission," he says.

"To put it in perspective, the budget was like that of four big Bollywood movies. India has reduced poverty by 15 percent in ten years and you can't do it any faster. Events like these are useful in spurring innovation in a country known for running mere call centers," he argues.

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