# Asteroid Mining Neg

To uphold the negative side, I value **Societal Good**

**Barnes, Philosophy in Practice, 1996**

Eric Barnes, Philosophy in Practice: Understanding Value Debate, Clark Pub., 1996 0931054419, 9780931054419

**The basic idea is that groups (societies) are evaluated by different standards than are the parts**

**(citizens), even though a society is composed of citizens. By analogy, although a house may be entirely**

**composed of bricks, the house may be a total structural disaster, even if all of the individual bricks are**

**of the finest quality.**

VC: Social Contract Theory

From Plato.stanford.edu

Hobbes is famous for his early and elaborate development of what has come to be known as “social contract theory”, the **method of justifying political principles or arrangements by appeal to the agreement** that would be made among suitably situated rational, free, and equal persons

ROB: Colonialism----- OPTIONAL

Whichever Debater can best solve for the modern level of colonialism in the debate space today should win the round. This is because Colonialism is an issue that is often overlooked in the real world, prioritizing it today is essential to help solve the issues of colonialism today.

## Mining on Earth has an exacerbated rate of Mining Induced Displacement and Resettlement

Khan, Ghulam Dastgir, et al. “Mining-Induced Displacement and Resettlement in Afghanistan's Aynak Mining Community: Exploring the Right to Fair Compensation.” *Resources Policy*, Pergamon, 5 Aug. 2021, <http://www.sciencedirect.com/science/article/pii/S0301420721002968#:~:text=Research%20on%20mining-induced%20displacement%20and%20resettlement%20%28MIDR%29%2C%20as,to%20access%20that%20ore%20and%20to%20mine%20it>.

The mining industry can bring economic benefits to a region if the mining project is managed properly, but it may also create environmental, social, and cultural problems such as [land degradation](https://www.sciencedirect.com/topics/earth-and-planetary-sciences/land-degradation), deforestation, water contamination, loss of land, loss of livelihood, and broken social networks ([Adonteng-Kissi et al., 2016](https://www.sciencedirect.com/science/article/pii/S0301420721002968" \l "bib3); [Chandio et al., 2021](https://www.sciencedirect.com/science/article/pii/S0301420721002968#bib14); [Dastgir et al., 2018](https://www.sciencedirect.com/science/article/pii/S0301420721002968#bib15); [Espejo et al., 2018](https://www.sciencedirect.com/science/article/pii/S0301420721002968#bib18); [Hilson, 2002](https://www.sciencedirect.com/science/article/pii/S0301420721002968#bib23); [Shackleton, 2020](https://www.sciencedirect.com/science/article/pii/S0301420721002968#bib38); [Žibret et al., 2018](https://www.sciencedirect.com/science/article/pii/S0301420721002968#bib43)). In many cases, mining requires the expropriation of land, leading to the physical displacement of communities, which are often undercompensated ([Cernea, 2003](https://www.sciencedirect.com/science/article/pii/S0301420721002968" \l "bib12); [Terminski, 2012](https://www.sciencedirect.com/science/article/pii/S0301420721002968#bib39)). Indeed, undercompensation, as noted by [Adonteng-Kissi (2017)](https://www.sciencedirect.com/science/article/pii/S0301420721002968#bib1), [Adonteng-Kissi and Adonteng-Kissi (2018)](https://www.sciencedirect.com/science/article/pii/S0301420721002968#bib2), and [Hilson and Nyame (2006)](https://www.sciencedirect.com/science/article/pii/S0301420721002968#bib24), is a severe problem and the focus of our study.

Land is the main source of income for many poor people in developing countries ([Kidido et al., 2015](https://www.sciencedirect.com/science/article/pii/S0301420721002968" \l "bib27)), and displacement increases [homelessness](https://www.sciencedirect.com/topics/earth-and-planetary-sciences/homelessness), social [marginalization](https://www.sciencedirect.com/topics/earth-and-planetary-sciences/marginalization), unemployment, and health problems in affected areas ([Cernea, 2000](https://www.sciencedirect.com/science/article/pii/S0301420721002968" \l "bib11); [Korah et al., 2019](https://www.sciencedirect.com/science/article/pii/S0301420721002968#bib28)). In most developing countries, these problems are not well managed, and the benefits of mining projects are not adequately shared with the affected communities ([Adonteng-Kissi, 2017](https://www.sciencedirect.com/science/article/pii/S0301420721002968" \l "bib1); [Lawer et al., 2017](https://www.sciencedirect.com/science/article/pii/S0301420721002968#bib30); [Terminski, 2012](https://www.sciencedirect.com/science/article/pii/S0301420721002968#bib39)). In most cases, monetary compensation was insufficient to prevent the [impoverishment](https://www.sciencedirect.com/topics/earth-and-planetary-sciences/impoverishment) of project-affected families (PAFs) and support their future livelihood ([Adonteng-Kissi, 2017](https://www.sciencedirect.com/science/article/pii/S0301420721002968" \l "bib1); [Atahar, 2021](https://www.sciencedirect.com/science/article/pii/S0301420721002968#bib6); [Cao et al., 2018](https://www.sciencedirect.com/science/article/pii/S0301420721002968#bib9); [Cernea, 2008](https://www.sciencedirect.com/science/article/pii/S0301420721002968#bib13), p. 89; [Dastgir et al., 2018](https://www.sciencedirect.com/science/article/pii/S0301420721002968#bib15)). Consequently, PAFs often resist expropriation ([Mishra and Mishra, 2017](https://www.sciencedirect.com/science/article/pii/S0301420721002968#bib34)), which can cause further economic damage to the country due to project delays. Thus, it is in the common interest to offer landowners fair compensation packages.

This study focuses on the [copper mine](https://www.sciencedirect.com/topics/engineering/copper-mines) project at Aynak in Afghanistan and explores a fair compensation package that reflects the voices and interests of the PAFs. The legal framework of rights protection upon displacement is reviewed to underpin our queries of fair compensation and confirm the validity of our survey attributes. We use a randomized conjoint experiment (RCE) to measure a lower bound for the compensation package that PAFs would be willing to accept, which is a growing concern among stakeholders and policy makers. People affected by mining or other development projects in developing countries and particularly the least developed and most fragile states are prone to live in poverty and become worse off after displacement. Thus, based on public consultation, adequate compensation plans that include continued social support should be developed and properly implemented ([Terminski, 2012](https://www.sciencedirect.com/science/article/pii/S0301420721002968" \l "bib39)).

Regulations and national [resettlement policies](https://www.sciencedirect.com/topics/earth-and-planetary-sciences/resettlement-policy) regarding land acquisition and compensation differ among countries. [Korah et al. (2019)](https://www.sciencedirect.com/science/article/pii/S0301420721002968#bib28) found that after PAFs are displaced by a mining project, their situation worsens in terms of access to food, health, and other basic public services. Similar examples in various countries provide a wide range of evidence of inadequate compensation and unfair resettlement practices. Examples include India ([Mahalingam and Vyas, 2011](https://www.sciencedirect.com/science/article/pii/S0301420721002968#bib32); [Mishra and Mishra, 2017](https://www.sciencedirect.com/science/article/pii/S0301420721002968#bib34)), Pakistan ([Sabir et al., 2017](https://www.sciencedirect.com/science/article/pii/S0301420721002968#bib37)), Bangladesh ([Atahar, 2021](https://www.sciencedirect.com/science/article/pii/S0301420721002968" \l "bib6); [Feldman and Geisler, 2012](https://www.sciencedirect.com/science/article/pii/S0301420721002968#bib19)), Nigeria ([Alaka and Nnametu, 2015](https://www.sciencedirect.com/science/article/pii/S0301420721002968" \l "bib4)), Ghana ([Adonteng-Kissi, 2017](https://www.sciencedirect.com/science/article/pii/S0301420721002968" \l "bib1); [Adonteng-Kissi and Adonteng-Kissi, 2018](https://www.sciencedirect.com/science/article/pii/S0301420721002968#bib2); [Adonteng-Kissi et al., 2016](https://www.sciencedirect.com/science/article/pii/S0301420721002968#bib3); [Andrews, 2018](https://www.sciencedirect.com/science/article/pii/S0301420721002968#bib5); [Lawer et al., 2017](https://www.sciencedirect.com/science/article/pii/S0301420721002968#bib30)), Sudan ([Ladu et al., 2019](https://www.sciencedirect.com/science/article/pii/S0301420721002968" \l "bib29)), Sierra Leone ([Wilson, 2019](https://www.sciencedirect.com/science/article/pii/S0301420721002968#bib42)), and Mozambique ([Lillywhite et al., 2015](https://www.sciencedirect.com/science/article/pii/S0301420721002968#bib31)).

In the case of Aynak, an entire village has been involuntarily displaced, and households from several other villages in the copper mine area will be relocated once the compensation issue is resolved. The PAFs have been offered an unsatisfactory compensation package, and they are reluctant to accept it. For example, in 2011, the land of the displaced village was already confiscated by the mining company, but the PAFs have not received compensation for their land as of December 2020. [Dastgir et al. (2018)](https://www.sciencedirect.com/science/article/pii/S0301420721002968#bib15) noted that income from farming and livestock and income from daily agricultural labor were significantly reduced for relocated PAFs. The already displaced people have received only insignificant cash compensation for their houses, which was insufficient to build new structures. During relocation, the PAFs were dispersed across different locations, as none of them received plots at the resettlement site. Noticing the miserable situation of the already displaced PAFs ([Dastgir et al., 2018](https://www.sciencedirect.com/science/article/pii/S0301420721002968#bib15)), people from other villages at Aynak have resisted giving up their assets and relocating. In addition, social capital loss has not even been considered as part of the compensation package, and thus, the issue has remained unresolved for more than a decade.

While land expropriation, compensation, and stakeholder involvement in land expropriation processes have been studied previously (e.g., [Adonteng-Kissi et al., 2016](https://www.sciencedirect.com/science/article/pii/S0301420721002968#bib3); [Cao et al., 2018](https://www.sciencedirect.com/science/article/pii/S0301420721002968#bib9); [Cao and Zhang, 2018](https://www.sciencedirect.com/science/article/pii/S0301420721002968#bib10); [Kidido et al., 2015](https://www.sciencedirect.com/science/article/pii/S0301420721002968#bib27)), there is little empirical estimation of desirable compensation using a problem-solving and stakeholder-oriented approach. Thus, in this study, we aim to answer the following questions: what is the desirable compensation package that would satisfy PAFs?, and what should this package include (i.e., land, capital, cash, other noneconomical compensations)? Using RCE, we estimate and identify the desirable compensation package based on Aynak copper mine PAFs' preferences. In addition, we measure the welfare gains from our estimated package. All this information can help policy makers better mediate any future negotiations between [miners](https://www.sciencedirect.com/topics/economics-econometrics-and-finance/miners) and PAFs.

The randomized conjoint field experiment is based on [Hainmueller et al. (2014)](https://www.sciencedirect.com/science/article/pii/S0301420721002968#bib22) and identifies the effects of compensation policy attributes on the acceptance probability among families affected by the Aynak cooper mining project. In the experiment, we present a set of hypothetical compensation packages consisting of eight attributes: resettlement as a unit, the provision of a public good—a community facility, the timing of the relocation, the provision of agricultural land, the quality of agricultural land, the provision of residential land, loans for the construction of a house in the new resettlement area, and additional monetary compensation. Each attribute has different levels, which are randomly allocated. Then, we ask the respondents to rank the alternative compensation policies that incorporate various levels of these attributes and their willingness to accept (WTA) relocation. The set of attributes conforms with the legal framework of displacement and fair compensation, and the relevant literature serves to triangulate our approach.

Our study revealed the importance of social ties, agriculture as a livelihood and monetary compensation for PAFs. This finding is relevant to stakeholders and policymakers because a fair compensation package is more likely to ensure smooth and prompt relocation. Moreover, our results also show that those who were relocated assigned more importance to social ties than to monetary compensation. We therefore argue that the compensation package should be designed through the inclusion of PAFs' voices, and for that purpose, consultation is crucial. In the case of the Aynak project, restoration of social ties and livelihoods and loan provision would better support the PAFs.

The remainder of this paper is organized as follows. Section [2](https://www.sciencedirect.com/science/article/pii/S0301420721002968#sec2) presents the literature review, international and domestic legal framework and a summary of the compensation dilemma in the context of the Aynak copper mine project. The data, methods of the quantitative study component and empirical strategy are discussed in Section [3](https://www.sciencedirect.com/science/article/pii/S0301420721002968#sec3), and the results and interpretations are presented in Section [4](https://www.sciencedirect.com/science/article/pii/S0301420721002968#sec4). Section [5](https://www.sciencedirect.com/science/article/pii/S0301420721002968#sec5) concludes the paper.

## MIDR leads to major displacement and is a form of modern colonialism

Khan, Ghulam Dastgir, et al. “Mining-Induced Displacement and Resettlement in Afghanistan's Aynak Mining Community: Exploring the Right to Fair Compensation.” *Resources Policy*, Pergamon, 5 Aug. 2021, <http://www.sciencedirect.com/science/article/pii/S0301420721002968#:~:text=Research%20on%20mining-induced%20displacement%20and%20resettlement%20%28MIDR%29%2C%20as,to%20access%20that%20ore%20and%20to%20mine%20it>.

Research on mining-induced displacement and resettlement (MIDR), as defined by [Downing (2002)](https://www.sciencedirect.com/science/article/pii/S0301420721002968#bib17), presents evidence that the mining industry, as it currently exists, is not socially sustainable and creates major displacement problems. When rich ore is found, land is acquired to access that ore and to mine it. This acquisition of land leads to displacement effects such that those who previously resided on the land lose their homes, productive land, income-earning assets, and personal resources, which leads directly to poverty ([Bennett and McDowell, 2012](https://www.sciencedirect.com/science/article/pii/S0301420721002968#bib8)).

Furthermore, poor planning and a lack of understanding about the various impacts of resettlement on displaced people and inadequate compensation lead to not only short-term economic losses but also long-term poverty ([Adonteng-Kissi, 2017](https://www.sciencedirect.com/science/article/pii/S0301420721002968" \l "bib1); [Owen and Kemp, 2015](https://www.sciencedirect.com/science/article/pii/S0301420721002968#bib36)). For instance, [Tilt and Gerkey (2016)](https://www.sciencedirect.com/science/article/pii/S0301420721002968#bib40) noted that in China, two decades after displacement, households were impoverished. Given that land is traditionally purchased in areas where it can be acquired at a low cost or where the people are already impoverished ([Owen and Kemp, 2015](https://www.sciencedirect.com/science/article/pii/S0301420721002968#bib36)), previously impoverished families face a new era of even further [impoverishment](https://www.sciencedirect.com/topics/earth-and-planetary-sciences/impoverishment), which financially devastates the victims of MIDR.

## MIDR also destroys the Earth’s environment and damages the stability of food and water supplies.

Mondal, Puja. “9 Adverse Effects of Mining on Environment.” *Your Article Library*, 20 Dec. 2013, <https://www.yourarticlelibrary.com/environment/9-adverse-effects-of-mining-on-environment/12334>.

1. It leads to the emission of dust, suspended particle and gases which cause air pollution.

2. Release of harmful trace element e.g., CO, Pb, Cd etc. leads to the contamination of surface water.

3. Underground water is also contaminated due to seepage and infiltration of leached drainage.

4. Mining leads to the degradation of soil quality, fertility and makes it toxic.

5. Natural vegetation get adversely effected due to leached trace element.

6. The major consequences of mining is the deforestation which results in loss of flora and fauna.

7. It directly affect the ecosystem and its stability as many species are killed due to toxicity of water and soil and loss of habitat.

8. Mining results in wastage of land as it neither remain suitable for industrial use nor for agricultural purposes.

9. Mining directly results in the loss of landscape and beauty of surrounding.

## Asteroid Mining solves MIDR and significantly reduces the impacts of it

arXiv, Emerging Technology from the. “Asteroid Mining Might Actually Be Better for the Environment.” *MIT Technology Review*, **MIT Technology Review**, 2 Apr. **2020**, <https://www.technologyreview.com/2018/10/19/139664/asteroid-mining-might-actually-be-better-for-the-environment/>.

For a certain kind of investor, asteroid mining is a path to untold riches. Astronomers have long known that asteroids are rich in otherwise scarce resources such as platinum and water. So an obvious idea is to mine this stuff and return it to Earth—or, in the case of water, to a moon base or Earth-orbiting space station. There is no shortage of interest in these ventures. In the last decade, investors have funded half a dozen companies that have set their sights on various nearby rocks. To many observers, it’s only a matter of time before such a mission gets the green light.

But profit margins are only part of the picture. A potentially more significant aspect of these missions is the impact they will have on Earth’s environment. But nobody has assessed this environmental impact in detail. Today, that changes thanks to the work of Andreas Hein and colleagues at the University of Paris-Saclay in France. ~~These guys~~ [They] have calculated the greenhouse-gas emissions from asteroid-mining operations and compared them with the emissions from similar Earth-based activities. Their results provide some eyebrow-raising insights into the benefits that asteroid mining might provide. The calculations are relatively straightforward. Rocket launches release significant amounts of greenhouse gases into the atmosphere. The fuel on board the first stage of a rocket burns in Earth’s atmosphere to form carbon dioxide. For kerosene-burning rockets, one kilogram of fuel creates three kilograms of CO2. (The second and third stages operate outside the Earth’s atmosphere and so can be ignored.) Reentries are just as damaging. That’s because a significant mass of a re-entering vehicle ablates in the upper atmosphere, producing NOx such as nitrous oxide (N2O), a greenhouse gas that is about 300 times more potent than CO2. By one estimate, the space shuttle released about 20% of its mass in the form of N2O every time it returned to Earth. Hein and co use these numbers to calculate that a kilogram of platinum mined from an asteroid would release some 150 kilograms of CO2 into Earth’s atmosphere. However, economies of scale from large asteroid-mining operations could lower this to about 60 kilograms of CO2 per kilogram of platinum. That needs to be compared with the emission from Earth-based mining. Here, platinum mining generates significant greenhouse gases, mostly from the energy it takes to remove this stuff from the ground. Indeed, the numbers are huge. The mining industry estimates that producing one kilogram of platinum on Earth releases around 40,000 kilograms of carbon dioxide. “The global warming effect of Earth-based mining is several orders of magnitude larger,” say Hein and co.

The figures for water are also encouraging. In this case, the authors calculate the greenhouse-gas emissions from an asteroid-mining operation that returns water to anywhere within the moon’s orbit, a so-called cis-lunar orbit. They compare this to the emissions from sending the same volume of water from Earth into orbit. The big difference is that a water-carrying vehicle from Earth can haul only a small percentage of its mass as water. But an asteroid-mining spacecraft can transport a significant multiple of its mass as water to cis-lunar orbit. “Substantial savings in greenhouse gas emissions can be achieved,” say Hein and co. This interesting work should help to focus minds on the environmental impacts of mining, which are rapidly increasing in profile. But it is only a first step. There is significant uncertainty in the numbers here, so these will need to be better understood. Other factors will also eventually need to be taken into account. The Earth-bound mining industry could become more environmentally friendly by using renewable energy rather than burning coal to generate power (as it does in South Africa). Rocket launching could also become greener if more eco-friendly fuels are developed. Both these things would change the numbers. There are also emissions that this analysis does not take into account. For example, it does not include the emissions from mission control on Earth or from launch-pad construction. Then there are the ongoing effects of rocket launches on the ozone layer, which also need to be considered. So there is more work to be done. But Hein and co have taken a significant first step toward realistic environmental life-cycle assessments for asteroid mining, a task that will surely become more pressing as this industry matures.

## Asteroid Mining is economically feasible

Barucija, Elvira. “Is Asteroid Mining the Solution?” *Gildshire Magazines*, 13 Nov. 2021, <http://www.gildshire.com/is-asteroid-mining-the-solution/#:~:text=As%20you%20can%20imagine%2C%20asteroid%20mining%20is%20not,from%20asteroids%20is%20very%20interesting%20to%20rich%20businessmen>.

How would an asteroid be minded? No one really knows for sure how asteroid mining would look like but there are some assumptions. There are some differences and similarities between mining on an asteroid and mining on the Earth.

The first idea behind asteroid mining is that it will likely be powered by solar energy. As you can imagine this will reduce the need for fuel that would have to be delivered by spacecraft to an asteroid. Another important thing on that note is that the equipment needs to be lightweight to be transferred safely to an asteroid. Additionally, to make a transfer easier, experts have been in favor of robotic equipment use to limit personal needed. This would reduce the number of supplies required for a manned mission.

The methods of mining would be like those on Earth. The method of scraping the desired material. However, in space majority of ore might fly off so there would be a need for a large canopy that will collect it. Since there is no gravity on asteroids, grapples should be used to anchor themselves.

Once the material is mined, rocket fuel for a spacecraft could be produced. This can be done by breaking down water from the asteroid into oxygen and hydrogen. The equipment can be also transferred to the next asteroid.

So far, we have concluded that mining on an asteroid will revolutionize the supply of resources for humanity. The Near-Earth Asteroid (NEA) suggests that the mining should be focused on high-value minerals. This way, the mining process is economically valuable and feasible.

It’s estimated that more than one hundred spacecraft and operation of five years would lead to the break-even point.

The technical and economic approach to asteroid mining is the best assessment towards understanding if asteroid mining is feasible. Mining for simple materials that can be found easily on the Earth is not going to be economically and financially feasible.

Finding opportunities that can’t be found on the Earth or valuable material in a great amount in one place are feasible ideas for humanity and our future.

# Defense

## MIDR is a human rights issue- value bs

Terminski, Bogumil. “MINING-INDUCED DISPLACEMENT AND RESETTLEMENT: SOCIAL PROBLEM AND HUMAN RIGHTS ISSUE (A GLOBAL PERSPECTIVE).” *INDR*, 2013, <http://indr.org/wp-content/uploads/2013/04/B.-Terminski-Mining-Induced-Displacement-and-Resettlement.pdf#:~:text=Mining-induced%20displacement%20and%20resettlement%20is%20primarily%20an%20economic,access%20to%20basic%20resources%20on%20which%20communities%20depend>.

The mining industry is frequently associated with decisions that have enormous social consequences. One of the most negative effects of mining today is the forcing of thousands of people to abandon their current places of residence. Gold mines in Tarkwa, open-cast copper mines in Papua New Guinea, coal mines in Jharkhand (India), lignite mines in Germany, and diamond mines in Zimbabwe are just a few examples of activities leading to the displacement of large numbers of people worldwide. Today, mining-induced displacement constitutes a major social problem and a challenge for human rights. As pointed out by Theodore E. Downig only in India mining development displaced more than 2.55 million people between 1950 and 1990.1 It is therefore of great importance to conduct its profound analysis as well as inspire broad public debate. According to the WBED report (published in 1994), the thermal projects including mining was the cause of about 10,3 percent of the development-induced displacement caused by World Bank-financed projects (active in 1993).2 This report does not pretend to provide a comprehensive in-depth analysis. Its purpose is to highlight the problems encountered by displaced people in various parts of the world and complement already existing literature in this area. Contemporary literature on development[1]induced displacement (Cernea, De Wet, McDowell, Penz, etc.) focuses mostly on the consequences of dam construction, irrigation projects, and artificial reservoirs. The literature of Mining-Induced Displacement and Resettlement (MIDR) is rather small and limited to the well-known cases of contemporary India and a few African states. Specialists rarely look into the subject of mining[1]induced displacement and its social consequences. However, some instructive examples do exist. One particularly valuable and detailed study worth mentioning is entitled, Avoiding New Poverty: Mining-Induced Displacement and Resettlement, published in 2002 by professor Theodore E. Downing.3 Another equally important book concerning this issue is the report, Dirty Materials: Mining, communities and environment, prepared in 2004 by Oxfam America Earthworks.4 My publication concentrates—to a much greater extent—on the issues of human rights and the theoretical conceptualization of the subject. It also underlines the global nature of MIDR. As I argue here, the problem should not be limited to developing countries in Asia and Africa. Instead, this work intends to cast more light on the following themes

## Private Corporations are already on board to mine asteroids – Elon Musk Approved

Beg, Alaina Ali. “Asteroid Mining: An Aspirational Possibility in Space or Just Another Science Fiction?” *The Indian Wire*, 20 July 2021, <http://www.theindianwire.com/space/asteroid-mining-an-aspirational-possibility-in-space-or-just-another-science-fiction-317450/>.

We are depleting Earth for all our insatiable needs for we may need 1.68 times of the Earth available to us to sustain.

But is it the same case across our whole Universe? Simply, no.

With this scenario at hand, Space has become our new frontier. Not just a few people in physics, science or math and Astronauts, have their interests in the Cosmos. It is slowly becoming everybody’s business to know more about Space.

Although the stakeholders are increasing day-by-day with [Businessmen, enthusiasts etc.](https://www.theindianwire.com/space/space-the-new-playfield-for-billionaires-does-this-space-travel-augur-well-for-our-future-317045/) but the space remains largely unexplored.

We know that it may offer us resources for millions of years to come yet we cannot access them.

But with resolute goals, many scientists are preparing for a trip to the asteroids: not for research purposes but with the mere intention of exploiting the resources therein.

There exist firms with domains like Planetary Resources and Deep Space Industries claiming the need of asteroid mining.

While the astronomers are tracking millions of [asteroids in the Earth’s vicinity](https://www.theindianwire.com/space/an-asteroid-to-fly-past-us-on-march-21-and-it-has-got-some-secrets-for-humans-307695/), but the asteroid belt between Mars and Jupiter, is home to over 1 million asteroids.

Many of these, over 100 kilometers in diameter, are the heavy nuggets full of minerals and great fortune. This can be put to human use through only hypothetical exploration from such celestial objects.

Achondrites are rich in platinum group metals like ruthenium, palladium, rhodium, osmium, iridium and platinum.

While Chondrite asteroids can help in shielding us from radiation, provide hydration on the way to outer space (*$9000-$43,000 costs just to send a water bottle into space*).

According to NASA alone, **this belt is worth $700 quintillion**. Upon breaking this amount, it can yield about $100 billion for every single human on Earth.

NASA thereby, asked Elon Musk to mine a gold asteroid called 16 Psyche for serving the Earth but for the time being, he is reluctant and is betting on cryptocurrencies.

Andrew Glester has said: *“I’ll make a prediction right now. The first trillionaire will be made in space.”*

Though we have not yet unraveled the technology needed to mine an asteroid, we are hopeful to exploit this resource in the near future with increasing robots, spacecrafts etc. in space.

SpaceX’s development of most powerful rockets like [Falcon 9](https://www.theindianwire.com/business/us-military-partners-with-spacex-to-develop-groundbreaking-logistics-solution-to-engineer-rocket-capable-of-delivering-80-metric-ton-cargo-worldwide-in-1-hour-294598/) or Blue Origin’s New Glen, has made the hopes of asteroid miners alive because more the power, more we can travel further into space.

Even the high cost of spaceflights to such far-fetched objects, identification of asteroids to be suitable for mining, and ore extraction are few other challenges in line.

Economists have begun speculating that once these ‘rare metals on Earth’ start hitting the markets, the abrupt supply may outweigh the demand, plunging its prices on Earth.

Gold, platinum and other valuable metals will not be ‘precious’ anymore as they will no longer be scarce. Potential asteroid mining can therefore strip gold of its status as a store of wealth.

Also, if the cost of returning the mineral compositions back to Earth far outweighs their market value on Earth, private investment may not likely pour-in.