# Where the Earth is Going!

Bharat, bharat0economics@gmail.com

Abstract: we are getting so busy in our jobs, that we have no idea where we are heading ‘collectively’. Our collective impact on Earth/natural systems is reaching alarming levels. If we do not pause and take a look at what all is going wrong – we may end up perishing ourselves (we may end up in a very unstable world).

---

While everything seems to be going well; collectively, the world is heading in wrong direction. And the speed is very high. We (whether rich or poor) are contaminating and depleting all resources that are necessary for our survival. Governments are getting weaker and disbursing more and more subsidies. We are not able to see these impact because it needs observation and reading. The world needs housekeeping time and more thoughtful brains.

Ever wonder! **What is going wrong?**

### We are consuming minerals at a very fast rate

The mineral resources are finite; that is, their quantity in the mine is limited. If we dig out minerals at a fast pace, they are going to exhaust quickly. We have lost control on supply; which is very fruitful in short-term but it will turn into serious problems in the long-term. (Read: Mineral Resources – do we care?)

### Waste is being generated at extremely fast rates and recycling is negligible

Our consumption is rising rapidly and so is the wastage. This is leading to two major problems: depletion of mineral resources and contamination of earth and natural resources.

Recycling is negligible and limited to melting-remoulding or extraction of precious items. The garbage is piling up in land and water.

### Rapid innovation - good technology turning bad

One major driver of waste generation is the rapid pace of innovation. We are innovating so many products and so fast that people are discarding their goods much before their full useful life. The rate of wastage is getting faster and faster as we are innovating newer and newer products faster.

For example: mobile phones of any brand can easily last for 5-7 years but we are throwing them in 2-3 years. If we assume that a billion people throw their phones before their full life, then collectively we may be throwing 200-300 million phones every year.

How many companies are focusing on creating long lasting phones and how many are encouraging their customers to use those phones for their full useful life.

Another example: now a days we just have to throw away many products that run on batteries. When the battery fails, there is no option to replace the battery alone but the entire gadget.

**Shrinking forests**

Natural resources have the ability to replenish themselves. Meaning they can regrow. Forests are one such natural resource. However, currently, they are depleting at such a high rate that their regrowth is looking impossible. The forests are shrinking at the rate of 10 million hectares per year (Read: The State of The World's Forests 2024).

The quantity of land on earth is limited (finite) but the population is rising very fast – putting pressure on forests.

The forest land is getting converted into agricultural land, commercial or residential land. Once the forest land has been converted to other use, it's recovery to forest is almost impossible.

**The oxygen problem**

Humans need oxygen to breath. Without oxygen, humans will not be able to survive.

Whenever we burn anything, oxygen is burnt. We are burning 100 million tonnes of coal every day, and all sorts of other things such as petroleum, agriculture residue, garbage etc.

The oxygen comes from trees and we are already losing 31million trees each day.

We are not wondering if we are going to run out of oxygen one day? When? If we want to rely on our nose to tell us that we are running out of oxygen, it will be too late and we would have run out of time to restore its supply.

**Contamination of air**

The air on earth is getting contaminated excessively but this is not clearly visible. When we think of air contamination, it is the air pollution that comes to our minds. The air pollution is visible in the form of smoke, foul smell etc. The contamination of air is a much bigger problem and may not be perceivable by human senses.

Another aspect of air contamination is that does not remain confined to a particular location i.e., the place of origin. It gets spread throughout the world.

One more aspect of air contamination is that we do not have much of a choice in which air to breathe and which to not – something we get in our food or water.

Global Warming and Climate Change is one good example. People cannot see global warming with their senses. It is the scientists who explain it to the world. The impact of climate change is spread throughout the earth, irrespective of the location of the source.

**Contamination of earth**

Air, water and land are getting contaminated at extremely fast rates. Also, they are depleting so fast that they are not able to replenish themselves.

If **we are planning to bring minerals from other planets, then it is going to contaminate the earth further.**

The Earth's temperature is rising fast, melting earth's ice deposits and glaciers. This is going to affect rivers and oceans.

The ground water is depleting. More and more industries, cities are discharging their effluents in rivers contaminating waterbodies, rivers and oceans. The cost of cleaning the water is falling on the shoulders of governments. We now need well-planned drainage systems that work not just at the city level but at the country level.

**Sophistication and automation of jobs**

The jobs (the work we do in offices) are getting more and more complicated (sophisticated) and expertise based. This needs employees to possess very high level of skills or knowledge. This is making/leaving people with normal skills unfit or expensive for many jobs.

Also, the jobs with basic and intermediary skills are getting automated. Non-organised sector such as farming is also getting more and more mechanised and automated; leaving farm labour and small farmers jobless.

What is ironical is that the population is rising and automation is also rising. This is going to push unemployment higher and higher.

**Rising population**

The world population is now growing at an ever-higher rate – 80million per year. Meaning we are adding 1billion new people every 13 years.

The rising population accelerates the demand for everything; such as – more food(agriculture), more land (for housing, business), more jobs, healthcare and infrastructure.

In last century, rising population was a cause of concern for many governments and world leaders. But, in this century people are completely ignoring the population problem.

**Changing democracy**

Despite rising income levels all across the world; more and more people/countries are choosing leaders that are giving more subsidies.

People are also preferring leaders that are more focused on solving day to day problems. There seems to be less emphasis on long-term thinking and equitable development of the country.

More and more population in several countries is getting discontent with their governments. The reason could be that the policies are getting complex. Or, the people are not spending time observing/understanding governments' work.

With rising discontentment, people are creating parallel systems, lobbies and networks. These systems may not be very robust and treat everyone equally. But currently they seem to be working well.

**Failing country finances**

Many governments are funding subsidies by borrowing (debt) or by printing money; rising risk of economic crashes and asset inflation.

They are also succeeding in raising debt for funding infrastructure projects that are only marginally productive. This means that it will be difficult for them to recover the project investments. No one seems bothered as to how are they going to pay back?

Some governments are giving direct grants to people; even when they do not have sufficient funds or tax collection.

What is surprising is that nobody seems to be observing these changes. No one seems to be worried that how will their country repay these debts and also remain financially strong.

**Failing financial/banking system**

We need a strong financial system to run businesses and the countries smoothly. International business is possible due to a strong banking system. Large factories (such as aeroplanes) and infrastructure (railways, road networks) that need too much money are possible only because of a good financial system. Banks also perform various other functions that allows easy transactions and money flow. (Read: What is Economics?)

We need Commercial Banks to keep our money safe. Banks do not charge for savings and in-fact give us interest on deposits. The banks earn by lending credit and charging interest. If these banks give away too much credit which fails; it may collapse the whole bank and we may lose our savings. So, in order to create trust and encourage people to use the banking system, governments give guarantees and regulators create rules to maintaining their good health.

Similarly, Central Banks can create as much money as they want and fund the government; but they do not do it. This is because they want to create trust in the international markets. If they keep printing money, its value (currency price) falls in the currency market and no one wants to hold such currency. In worst cases international businesses may refuse to take payments in such currency for trading their goods or technology.

However, one thing to note that the world has changed. The total supply of money is many-many times higher than what was at the time of creation of banking system. The financial system, particularly the banking system and credit creation system, needs thorough review and redesign. The credit creation system was created centuries ago, when the total availability of money (liquidity) was very low. We also need to monitor liquidity (Read: Why do we need to monitor liquidity) that is reaching exponential levels in many countries.

Banks are on a spree to give more and more loans. Work related loans are good for productivity, consumption loans are not. **In the previous century, the governments that tried to restrain banks, failed.** Today, most of the people, including many governments, do

not understand the need of financial regulators (Central Banks). Many people consider them as unnecessary road-blocks and want to create a regulation-free money system.

As consumption is on a rise, banks' business is on the rise. However, many banks are failing to understand that their loans may go bad, if the consumption declines or the government grants to the public/poor stop. The demand for money is so high that governments are weaking and financial regulators are losing control.

## How current management systems are failing

Historically, it has been the governments' (kings in earlier times) responsibility to protect the resources and determine their rate of consumption. However, with the advent of democracy and industrialisation, people started frowning at the government controls.

### Direct government control

Most of the problems discussed here are not new. In last century, these problems were the focus of many governments and leaders. They tried to protect resources and control their supply and prices. They developed licensing system to stop bad innovations and penalties to curb pollution. They setup conventions and international monitoring agencies such as United Nations.

However, it seems that the public did not like so many restraints and started favouring market-based systems driven by demand-price-supply. **These governments (direct control) failed to survive; and in some cases, were eliminated by the public**.

Ironically, the new governments of this century are moving in a new direction. Instead of restraining minerals, they are increasing supply. They are exploring and opening new and new mines in order to control mineral prices (and inflation). This together with rising incomes is boosting consumption and depleting resources at a much faster rate.

### Demand-price-supply system for managing minerals

People currently use the market-based system for determining prices for various things. It says that the rise in demand leads to rise in prices and rise in supply leads to fall in prices. The suppliers and consumers can look at the market prices and appropriately adjust their supply and demand.

While this approach is widely acceptable, it has some defects. Where it is failing is, it lacks the long-term perspective. For example: traditional economics says that – when the total quantity of minerals on earth (supply) is fixed, any rise in demand should lead to rise in prices. The fixed (total) quantity of minerals in the mines is not getting reflected in the prices. Instead of incorporating the total availability of minerals on the earth, it is only looking at the current availability in the market (short-term supply). It seems that the pricing may not be able to reflect the total supply until too late; until the mines have depleted and maintaining supply gets difficult.

Hence, if everything is left to the market forces: the balance may skew in favour of lower prices or short-term factors.

We have left many economic systems to the hands of market equilibriums that may have defects. We need to keep reviewing them regularly; figuring out the defects and informing the markets so that the equilibriums can clear their defects. (Read: Defects in Market Equilibrium Pricing).

One example is the healthcare sector where the market-based system has not been able to bring down prices. The healthcare costs keep rising even when the supply of healthcare facilities is on a rise.

**Licensing vs. market-decide approach at approving innovation**

There is another market-based system that people are using to decide what is good and what is bad. The products are launched in the markets and the demand decides what the people want.

The pace of innovation is so high that no one is able to determine which innovation is good or bad. What should be encouraged and what should be discouraged. Many governments in the previous century tried to put checks and balances (licences) for approving only good products and minimising side-effects. But today many people think that no one can foresee which innovations will turn into gamechangers. They think that the government intervention is unnecessary and the market/consumer should decide which product stays in the market. Economists also approve of the approach– “let the markets decide”.

In the current century, markets have been very decisive in adopting new innovations and discarding old ones even if they were good. Many companies with very good products went out of the market as people quickly shifted to new innovations.

The problem with the market decides approach is that the market works on a very short-term basis. It takes time and multiple usage before the market starts to figure out bad products. Instead of worrying about the long-term impacts on earth, people buy what appeals to them and fits their budget. Markets means common people, who do not have the ability to foresee the long-term impacts of each product.

Also, the markets can be managed to some extent. People can be influenced with marketing in short-term. The companies keep figuring out ways to keep bad information away. The difficulty in determining which innovation is bad puts pressure on governments to ease regulation/approvals.

Consumer markets are biased in favour of low prices. If the prices are low, people may ask much less questions before buying or discarding the products. Companies keep lobbying for mineral subsidies, tax breaks and grants; and markets fail to stop them. This helps in reducing the prices of the products and faster adoption.

The market decides approach is wasteful. People have to buy the products first. Many products in the markets are now just – use and throw.

One such example is CFL (Compact Fluorescent Light) lighting. In just few years of its launch, when it became pervasive, CFL started getting replaced by LED lighting (Light Emitting Diode).

What markets cannot see that the fast pace of innovation increases household expenses; as newer and newer products lead to higher consumption. The governments need to disburse more money to support the poor. The definition of poverty line may need regular upgrades.

One example: earlier it used to be one phone (landline) for the whole family; now every person in the family, whether rich or poor, needs a separate mobile phone. The expenditure does not end with the purchase of phone, the usage/network charges are significant too. The usage charges are recurring (monthly) and have been rising because companies are trying to subsidise internet charges. This is how the essential consumption is rising and the traditional definition of the minimum expense for a family (poverty line) is falling short.

Many countries are shifting to consumption-based economy. Higer consumption creates a market-based system. As the consumption rise, number of shops rise, leading to more factories and more jobs. These entities also start consuming as their incomes rise due to good business; creating a virtuous cycle of economic growth; higher consumption – higher incomes – higher jobs. What we fail to understand is, that the poor need to be supported with government grants or their consumption fails. The prices of goods also need to be kept in check or the wages and grants have to be increased in proportion. Or, this reverses the cycle and creates depression; low consumption – less factories – less income. While higher consumption increases tax collection; it is only marginal and not sufficient to support consumption grants. How does the government fund these grants? What will happen when the grants stop? What if people start importing because of free-trade?

So, what is happening is – first the government is subsidising innovation, then it is subsidising minerals and then it is giving more money to people to support new consumption. Markets are failing to understand this collective picture, the direction where everything is going. They are failing to control wastage and the speed of innovation. They are failing to prevent the depletion of resources and changing the direction of innovation. For example, they have been ineffective in solving the oxygen question or preventing the shrinking of forests. In fact, they have fuelled the harvesting of forests by creating a borderless, regulation-free, international market.

Leaving governance to the hands of the market is going to create significant problems.

**Root cause of the problem – brain drain**

No one knows, what are world problems and who is responsible for solving these problems. No one sees harm in consumption; in-fact it is being encouraged. Protecting resources is becoming difficult than ever. If it is left to the government, then it is going into subsidising everything. The governments are getting weaker as the pressure from various lobbies are increasing. Everyone is asking for subsidies – while poor are asking direct grants, rich are seeking indirect business subsidies. Many people think that if they monitor governments' work, they may be interfering with politics. Nowadays more and more people want to steer clear of politics.

**Nobody is interested in world problems; what they do not understand is, that they are not someone else's problems but our own problems on a collective scale.**

We are getting more and more focused and immersed in our jobs that we are losing sight of what is happening around us. As the jobs are getting more demanding, our focus is shifting away from all other things such as how our countries are manging themselves.

While putting more time in jobs gets us paid more, putting time in governance does not.

The talent pool of leaders who can govern is also shrinking. Candidates with good understanding of governance/country economics are choosing private sector jobs, instead of

working with governments. The governance sector does not pay well as other jobs. It also lacks long-term job security. This is reducing the availability of good leaders for governing the countries.

The challenge is how wider population spends more time understanding governments' work. How more talent moves to the government sector and makes it simple.

**Where are we heading?**

If business is good, everything is good? – No.

We need to understand what happens collectively and also what happens in the long-term. If business is good today it is not necessary that our collective future will be good as well.

No matter how rich we get, how much money we accumulate; we are going to have to breath the same air as anyone else – rich or poor.

What kind of a future do we want to leave for our kids – millions in pockets but on a depleted, contaminated Earth.

Even if we think that current levels of consumption are okay, we need to understand that it is rising continually. Sooner or later, we will have to decide how long those mines should last and hence, what should be the pace of consumption.

**Solutions of these problems are not easy**

A handful of leaders appointed for solving these problems or making restrictive laws are going to fail, as the governments of the past century. These problems need widespread understanding and more participation. They need to be simplified for common understanding. A better approach is that more and more people read, develop long-term perspective and become aware of the situation.

It may also need that the difference between rich and poor shrinks, so that no one has to point fingers at each other's consumption. In democracy, everyone is equal, whether rich or poor and in many countries the resources belong to the government (i.e. everyone).

The world is getting divided into meritious and non-meritious people. The meritious people are well educated, have good jobs and accept government regulation. The non-mertious do not read much and find government's work complex. This demands that the government work is simplified and gets more participation from all segments/ everyone.

In today's times, when our consumption is higher than ever, it looks unlikely that any effort in restraining minerals will work. Instead of controlling consumption, we can focus on recycling. Recycling will work for most of the minerals except energy minerals (fossil fuels). Energy minerals cannot be recycled and they are required everywhere; in manufacturing of products, running of products and recycling of products. For energy minerals, we need to shift to renewable energy.

----------Ends----------