

Introduction:

- My Research work primarily focuses on ZERO HUNGER & FOOD WASTAGE.
- India ranked 94 among 107 countries in the Global Hunger Index 2020 and is in the 'serious' hunger category with a score of 27.2
- India is the world's second-largest producer of fruits and vegetables, but also accounts for one of the biggest food loss and waste.
- Around 67 million tonnes of food is wasted in India every year which has been valued at around Rs 92,000 crores.
- One of the major reasons for this food waste and food loss is the lack of an efficient Cold Chain Infrastructure
- Mini cold storage at farms has the potential to change the nature of the game.

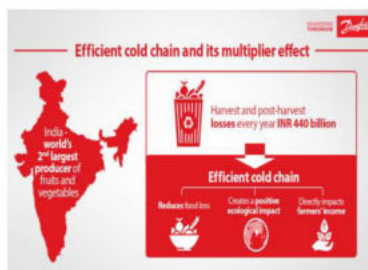


Figure 1. Cold Chain Impact

Literature:

- Firstly, let's analyse the current scenario in the world present around us.
- According to the 2019-2020 report published by the Ministry of Labour and Employment. "A large number of unorganized workers are home-based and all these workers suffered hunger due to the pandemic lockdown.
- The need for Sustainability is overlapped with human survival and existence. Today food is not in reach of millions of people.
- The pandemic has exposed that gains made to address hunger, good health and well-being may face serious setbacks, if they undermine the systems that enable humanity and the planet to survive and thrive.
- Sustainable Development Goals that will be vital for a truly sustainable recovery

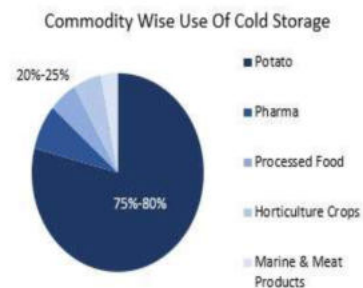
Methods:

- We can achieve zero hunger in India if we can establish a "Micro cold storage at farms"....
- We have solar-powered cold storages developed in India which are subsidized to farmers at affordable prices.
- Farmers can collaborate in sizes of 5-10 members and can set up cold storage at the desired location and can store their product (or) Farmers can lease these cold storages at affordable prices so that initial capital burden is not on them anymore.
- My cutting-edge research in food technology, coupled with data analytics, will help us define the quality and life of perishables better.



Analysis:

- India has around 6,300 cold storage with a capacity of 30.11 million metric tonnes, which contributes to only 20% of the agricultural revenue of which 70-80% is suitable only for Potatoes.
- Farmers can benefit from these cold storages in multiple ways.
- They can sell their product when there is a huge demand for their product and at times many farmers lose their product due to adverse effects at the final stages. In such cases, the crop can be harvested and stored in cold storage.
- These mini cold storages benefit the farmers, employ staff for production and in turn, benefit people suffering from malnutrition and hunger.



Results:

- A study on All India Cold-chain Infrastructure Capacity carried out by NABARD Consultancy Service assessed requirement of 350 lakh MT capacity of cold storage for perishable fruits and vegetables
- GHI- Growth hunger Index
- Zero hunger, vegetation cover, returning economy to normal state can all be achieved through this innovative Micro cold storage startup.

Table 1. A Food statistics 2018-2020

Year	GHI	Food grain production
2018	103	285 MT
2019	102	291 MT
2020	94	298 MT

Conclusions:

Sustainable development is about improving the lives of everyone, everywhere, and achieving all these together.

Important References:

- <http://transformationagenda.livemint.com/efficient-cold-chain.php>
- <https://indianexpress.com/article/india/global-health-index-2020-india-6757899/>
- <https://www.asianage.com/india/all-india/271217/indias-failed-food-system.html>
- <https://www.timesnownews.com/business-economy/industry/article/world-food-day-2020-how-food-waste-affects-the-economy/667896#:~:text=Food%20Wastage%20stats%3A,at%20around%20Rs%2092%2C000%20crores.&te xt=National%20Delhi%20also%20generates%20around,landfill%20located%20in%20East%20Delhi.>