TOPIC OF THE WEEK

JULY'19 (04 to 10 Jul)

Week: 4th to 10th July 2019

Health Crisis

Ecosystem is the natural system made of diverse species in its physical environment. The natural ecosystem is highly diverse and complex in nature. The toxic chemicals in the atmosphere spread widely throughout the ecosystem. It affects the soil, plants and other organisms, both directly and indirectly. With growth in population and rapid spread of industrialization pollution has become a global issue. The awareness for the need to protect environment from pollution has developed among the people. As a result of it right now we are experiencing new problems almost in every sphere of our life. Same is the story in case of our health sector. For decades, experts have been warning about the emergence of new diseases. The Earth's melting polar ice caps get a lot of attention, but most of the focus is on rising sea levels. That could change in a hurry if a long-lost virus — something locked for millennia in the arctic permafrost — reemerges. Researchers have already turned up the DNA of a 30,000-year old "giant" virus in the Siberian ice. "Special environments such as deep ocean sediments and permafrost are very good preservers of microbes and viruses because they are

cold, anoxic, and in the dark," explains Chantal Abergel, PhD, director of research at France's Structural and Genomic Information Laboratory and coauthor of that Siberia study.

Today we see ourselves living in domination over rather than in relation with other people and with the natural world. In the process of pursuing more realistic technological nature, we are becoming increasingly alienated from the real thing, growing to accept a digital substitute for engagement with the wild, and compromising our fundamental affiliation for the environment in the process. We are a technological species—we've always been one. But for hundreds of thousands of years our technologies were rudimentary. When our minds evolved from Paleolithic to Neolithic to now, our technologies did, too. We're drawn to technologies not only because they are foisted on us by corporations, but also because the impetus for them lies within the architecture of our very being. But, even though we are a technological species, we are now out of balance.

Recently there was shocking headline where we came to know that a person Abul Bajandar, 28, had begged doctors to cut off his hands to get rid of the bark-like

growths. He is also known as “tree man”. Abul Bajandar has had 25 operations since 2016 to remove the warts, caused by a rare genetic condition .But the growths have only continued to spread and get larger, the 28-year-old says."I cannot bear the pain anymore, I can't sleep at night,” he told the *Agence France Presse* news agency. “I asked the doctors to cut off my hands so I can at least get some relief.”The father-of-one suffers with epidermodysplasia verruciformis, a skin condition which has been reported in fewer than a dozen people. Epidermodysplasia verruciformis (EV) is a rare inherited skin disorder characterized by chronic infection with human papillomavirus (HPV).The exact number of people suffering with the condition is unknown, but around 200 cases have been reported so far. It usually manifests during infancy, childhood or puberty with a development of wart-like pimples, irregular reddish brown rash, and a fungal-like infection that causes small patches of skin to become scaly and discolored. They usually appear on the trunk, neck, face, hands and feet. Those with the condition are more likely to develop skin cancer, especially squarmous cell carcinomas, in their 40s and 50s.Although a permanent cure has not been achieved, therapies can include cryotherapy, topical wart-creams,

and surgical removal. Preventive measures, in particular sun exposure avoidance, are crucial.

Along with that Legality -in the disclosure of infectious diseases and the necessity to ensure other parties are aware of the issue is often a gray area with states and across the nation. This may depend on the specific incident, type of disease and if exposure requires a quarantine or other measures to restrict the movement of the infection. One of the complications in disclosing information about an infectious disease is the patient confidentiality clause with a doctor and another patient. If he or she suffers from a contagious and infectious illness, the doctor usually must keep his or her confidence in the matter or face legal issues later. The problem usually occurs through the problem in other patients in the immediate area catching the disease. Some states may impose laws that require medical professionals and staff members to explain the matter to anyone that could face immediate exposure. Other states may leave the matter up to the doctor or nurses attending the matter in the facility. Ethical issues surrounding public health policy and practice aimed at disease prevention and control often involve conflicting rights and values. Such conflicts partly arise from

tension between individual and community interests or tension involving cultural beliefs and practices.

The modern practice of genetic engineering goes beyond cross-breeding different species to create a new outcome. Scientists take the DNA from an unrelated plant or animal and insert it into the DNA of another organism. This process makes it possible to create stronger plants, healthier animals, and reduce the effects of disease. Genetic engineering may create stronger, healthier plants and animals. It may also create more plants and animals with mutations or birth defects that can harm the species. We have already seen in humans that gene therapies can lead to additional genetic conditions, even if the targeted condition is improved. Cells are responsible for several different characteristics, so the complete isolation of a cell for a specific trait is difficult to do. This may be improved with new technologies or practices in the future that do not exist now.

We currently have laws and treaties in place to prevent genetic engineering abuse. That doesn't mean it won't ever happen. The reality of genetic engineering is that DNA insertion could be used to create severe problems for certain groups of people. Imagine that someone is

allergic to shellfish. Someone could insert shellfish DNA into a regular crop, like corn. The person with the allergy would eat the corn and potentially have an allergic reaction trigger because of it. Over time, we could also take the approach we have to altering plants and animals to altering humans. If done, the consequences to our society would be numerous and unpredictable.

Although genetic engineering seems like it would increase diversity, it actually decreases it. That is because one preferred product becomes the focus of the industry when it performs well. This has been seen numerous times. There are hundreds of banana types, but only Cavendish bananas tend to be shipped to global markets. There are many different orange species as well, but navel oranges use grafting and cutting techniques for growth, so there has been no change in the product for over 200 years.

The disadvantages of genetic engineering show us that we must carefully manage the science of this process for it to be beneficial. It is not a process that we should rush into with the hopes of quick profits or fast results. Being able to support a growing population in a changing world is important. By taking a responsible approach to limit the potential for a negative outcome, we'll have the best

change to have this science do amazing things for us in the future.

For reference:-

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Additional Readings:-

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