



MISSION
SUSTAINABILITY
POPULATION v/s PLANET
CONCLAVE



ACKNOWLEDGEMENT



Zee Media Corporation Limited (formerly Zee News Ltd.) is part of the multi-billion-dollar Essel Group. The network is one of India's largest News networks established with 14 news channels in 8 different languages touching more than 325 million viewers. The list of channels includes brands WION, ZEE News, ZEE Hindustan, ZEE Business, and more. The network also has a bouquet of category-dominating digital properties like Zeenews.com, dnaindia.com, india.com, and others. In terms of news gathering, the company has one of the largest networks of news bureaus and correspondents with a PAN India presence. The company is equipped with updated technology in content creation, packaging, and broadcasting.



MOBIUS
FOUNDATION





WION is the **First Global English News Channel** from India with 35 bureaus worldwide and correspondents in USA, Russia, UK, Israel, UAE, Lebanon, South Africa. Established in 2017 and headquartered in New Delhi, WION is beaming across 190+ countries in APAC, Americas, Africa, Europe, MENA region and enjoys a global stature and presents content that is appealing across audience profiles.

Our CEO and Editor in Chief, Sudhir Chaudhury is at the helm of affairs. The primetime property, Gravitas is led by renowned journalist and Managing Editor, Palki Sharma Upadhyay who provides intelligent coverage of international events and analyzes global stories with relevant perspectives. WION also owns a bouquet of thought leadership IPs like the WION Global Summit, WION Climate Summit and Global Leadership Series which bring together global leaders on the stage to discuss and deliberate on key issues impacting the world.

The channel with its distinct content continues to make new strides, win audiences, and top viewership charts. In India, the channel currently enjoys the number one position among English News Channels in terms of Time Spent. It is also the leading Global English news brand on YouTube with a massive 352 million video views. This is an indicator of how our viewers are glued on to the content and turn to us for daily Global updates, Analysis of International events, and an in-depth understanding of current affairs.



MOBIUS FOUNDATION

The Mobius Foundation is a non-profit sustainability think tank, working towards the promotion of sustainability through education and empowerment using various approaches, tools, and technologies for a safe and secure planet. The Foundation was set up in 2015 with a view to mobilize individuals and communities including a diverse range of International and National Agencies, civil society partners, NGOs and institutions, to contribute towards the achievement of sustainable development goals (SDGs) specifically goal related to education (Goal 4) and other environment and population goals. The vision is to create a green and peaceful living where the people believe in the power of change and education for sustainability.

With a mission to pave a green and sustainable path towards a bright future where we leave the planet in a better state than we were born in. Below are the details on the major projects and work taken-up under the leadership of Mr. Pradip Burman by Mobius Foundation.



INDEX

	<u>Page</u>
EXECUTIVE SUMMARY	3
INTRODUCTION	
A Brief History of Population Growth	10
Why is Over Population a Problem?	12
Causes of Population Explosion	13
Population of India Year 1800 – 2020	15
Indian Population Control Policies	16
The National Population Policy 2000	18
Uttar Pradesh State Population Policy 2020	19
Why the Campaign: Population vs Planet?	20
Research Methodology and Execution	21
 THE CAMPAIGN	
The Launch	22
Population and Climate Change	29
People, Biodiversity and Natural Resources	31
Population and Energy Crisis	33
Education & Empowerment – Key to Population Stabilization	35
Out of Breath: Population and Air Pollution	37
Running Dry: Population and Water Crisis	40
Food for Thought	42
Population, Over-Consumption, and Waste	44
Waste Warriors	46
Housing, Jobs and Migration	48
Project Aakar	51
 CONCLUSION	53
 ANNEXURE	
Network Reach	54
Website for Mission Sustainability	54
Air-Time Chart	55
Survey Questions	56

EXECUTIVE SUMMARY

The earth has limited resources. The world only has so much food and clean water at a time. There is duress on the planet and an increase in populations implies that there are more mouths to feed. We are already tearing down wilderness to make way for homes and farming lands. If the population continues to grow, we won't have resources left. We can take steps to limit the amount of procreation in the world. This was the central theme for Mobius Foundation to partner with Zee Media; and launch a nation-wide campaign of engaging with stakeholders' and audiences and the like.

Mobius Foundation with this campaign is working to put the spotlight back on human population growth. Programme is titled "MISSION SUSTAINABILITY- POPULATION VS. PLANET" for English audience on WION Channel and संभलना ज़रूरी है - जनसंख्या बनाम प्रकृति" for Hindi and regional audience on Zee News and its regional network. Under this campaign, topics on how over population is responsible for exerting pressure in the areas of Climate Change, Biodiversity and Natural Resources, Energy Crisis, Air Pollution, Jobs and Housing, Water Pollution, Depletion of Non-Renewable Resources, Education and Empowerment, Waste Generation, Education, Over Consumption Patterns etc. This 15-month long campaign gave an insight into the current Population scenario under the backdrop of effects of over-population on planetary resources and offered solutions for Sustainability.

LAUNCH:

The campaign commenced with a two-hour-long Thought Leadership Conclave on February 20, 2021. The launch was graced by Dr. Harsh Vardhan, Union Minister for Health and Family Welfare and Amitabh Kanth, CEO, NITI AAYOG.

Expressing his satisfaction at the timely importance of holding the event, Dr. Harsh Vardhan said, "More people require more resources, and as the population increases, the earth's resources deplete. The population boom has been affecting the planet and the human race in many adverse ways. People in developing countries like India, feel the impact of environmental problems more acutely." – Quoted (indiaeducationdiary.in)

On this occasion, Amitabh Kanth, CEO, NITI AAYOG said that "Family Planning" is considered the smartest development investment. For India to realise its sustainable development goals and economic aspirations, it is important to ensure that people have informed access to contraception and quality family planning services."

The launch had visionaries and dignitaries on board from across the country, and from different fields. Mr Rameshwar Prasad Gupta, Sec. Ministry of Environment Forest and Climate Change, Dr Madhavan Nair, Sec. Ministry of Earth Science India, Ms Poonam Muttreja, Executive Director, Population Foundation of India (PFI), Ms Shailaja Chandra, Former Secretary to the Government of India and Former Chief Secretary, Delhi, Mr Manu Gaur, President, Taxpayers Association of Bharat (TAXAB), Kartikeya Vikram Sarabhai, Founder and Director, CEE, Prof. Saroj Yadav Dean (Academic) NCERT, K.S. James, Director, International Institute for Population Sciences (IIPS) were part of the launch.

The complete 2-hour launch was divided in two three robust segments, each setting up the contest of the year-long awareness programme. The three segments were:

SESSION 1: POPULATION VS PLANET: SUSTAINING THE BALANCE

SESSION 2: POPULATION STABILISATION: THE ROAD MAP

SESSION 3: EDUCATION AND AWARENESS

There was an exclusive one-on-one fireside chat with the Chairman of Mobius Foundation, Mr. Pradip Burman, where he mentioned that the “Mobius Foundation is focusing on two main objectives EDUCATION and POPULATION STABILISATION and emphasised that two solutions which can be implemented right away are RECYCLING and RENEWABLE ENERGY. If we can attain 100% of these two things, then our problem is solved.”

Dr Ram Boojh, CEO, Mobius Foundation along with other panellists shed light on why we should focus on education and awareness around ‘Population Stabilisation’. Points brought in focus were ‘education leads to lower birth rates and slows population growth. This makes it easier for countries to develop. A more-educated workforce also makes poverty eradication and economic growth easier to achieve. The literacy rate is directly proportional to the fertility rate. Lack of formal education on matters related to population, like family planning, sexual education, reproductive behaviour, cultural and social values, and contraception is missing from the educational structure. This should not be a controversial subject, rather taken to the younger generation and young couples openly.

FOCUSED EPISODES

Under the umbrella campaign had released 10 focused episodes bringing out the impact of population on respective areas.



Our planet is home to more than 7.8 billion people. With the global population continuing to grow by more than 80 million people annually, it is progressively getting more crowded. The human population is projected to cross 9 billion by 2050. However, it cannot continue to grow indefinitely considering the limitations of the life-sustaining resources that Earth can provide us with. In other words, our planet's carrying capacity for the human species can soon tire out. No other species has had a negative impact on our planet's existence as compared to us humans. Our unsustainable population growth, combined with overconsumption and overexploitation of natural resources is threatening our future, and that of the planet we call home.

Greenhouse gases, whether natural or human-produced, contribute to the warming of the planet. When carbon dioxide and other heat-trapping emissions are released into the air, they act like a blanket, holding heat in our atmosphere and warming the planet.

According to World Meteorological Organisation, the past six years have been recorded as the warmest years on record since 1880 with the year 2020 topping the list with a temperature increase of 1.2°C since the pre-industrial period.

Rapid urbanisation has led to two interlinked factors contributing heavily towards the degradation of our environment - Overpopulation & climate change.

Overpopulation is a common adversary faced by almost every country in the world, becoming a major driver of global warming. With increasing temperatures around the world, the possibility of natural disasters & calamities has increased manifolds. Fatal heat waves, melting ice caps, retreating glaciers, cataclysmic floods, droughts, rising sea levels are among the few alarming effects of global warming. Polar ice caps are melting because of increase in the global warming. Arctic sea ice is lost at a rate of almost 13% per decade, and as per experts, the oldest and thickest ice in the Arctic has declined by a whopping 95%.

Studies also suggest that if the current trend of emissions continues, the Arctic could be ice-free by the year 2040. With the melting Arctic ice and its permafrost, a large amount of stored methane, a greenhouse gas and contributor to global warming is being released into the environment. Antarctica alone has lost almost more than 4 million metric tons of its ice shelves since the mid-1990s because of the rapid increase in global warming. The worldwide melting glaciers & ice sheets contribute to yet another calamity – The Rising Sea Levels. Since the 1880s the global sea levels have risen to about 6 to 8 inches and as per experts considering the current trends of global warming, the sea levels can rise from 1 to 8 feet by 2100. The rising sea levels increase the risk of disastrous floods along the coastlines around the world.

Apart from floods, the increasing levels also worsen the damages caused by hurricanes. India, currently with a population of more than 1.3 billion, is projected to overtake China becoming the second most populous country in the world by 2026.

PEOPLE, BIODIVERSITY AND NATURAL RESOURCES

2nd focused documentary of the series released on 29th May 2021

Biodiversity – A term used to describe the variety of all life forms on Earth including their habitats and the biological balance created by them in our ecological systems.

Biodiversity enhances the productivity of ecosystems where all species, no matter how small or big play an important role. Large number of plants species ensure a greater variety of crops. Greater species diversity safeguards natural sustainability for all life forms. Also, healthy ecosystems can better endure & recover from a disaster.

The planet's biodiversity is under threat and the main offender is the one who ironically depends on it the most – the human species. Slowing down the biodiversity loss is one of humanity's greatest challenges today.

Amid the modern advancements & urbanisation, we have neglected the health of our planet by overexploiting the natural resources, ignoring the fact that a healthy planet is important to support the functioning of all life forms.

While the population of our planet continues to grow exponentially, the land mass remains constant. Numerous forests across the globe have been levelled to accommodate the increasing population, also leading to over exploitation of natural resources, disrupting the ecosystems around us, and causing tremendous loss to biodiversity. The dependency of our increasing population on the forests is considered as a direct cause of deforestation. According to Food and Agriculture Organisation of The United Nations, agriculture accounts up to 80% of the global deforestation and is the number one cause for deforestation. This includes clearing forests for production of crops like rice, maize, cotton, sugarcane, and catering to needs of livestock. As the global demand for meat is rising, the quantity of livestock is also increasing to fulfil this demand. Hence, millions of acres of forest covers are cleared to create grazing pastures for these animals.

Logging is attributed to be one of the front-line drivers for deforestation. The increased demand for wooden products is leading to increased logging for timber and teak for creation of furniture & other household items. Many smaller trees are chopped off to produce charcoal, used as fuel by many people.

Yet another human activity that is destroying our forest cover is mining. Mineral fuel like Oil, precious resources like gold, copper & diamonds are found in forests around the world. The relentless demand of these natural resources leads to clearing of forest covers in order to mine these resources from below the forest bed. In addition to the loss of forest covers, the poisonous chemicals used in the process of mining degrade the quality of the soil and end up in the rivers and water bodies polluting them and harming the ecosystem of the rivers.

Such unsustainable human activities are destroying and degrading the forests worldwide. As per World Resources Institute we have lost almost 10% of global tree cover since the beginning of this century. In 2020, our planet lost about 4.2 million hectares of forest cover, equivalent to the size of Netherlands. The loss of global forest cover in 2020 indicates a 12% increase as compared to 2019. Human beings have only existed for around 200,000 years in the 4.5 billion years of our planet's existence. Yet we have had a greater impact on our planet's health as compared to any other species. We have relentlessly used our natural resources, cut down trees and wiped out forest covers globally, choked our water bodies and by doing so we are driving many animal and bird species towards extinction.

A 2019 report presented by United Nations suggests that an average of almost 25 percent or around one million species in both the animal & plant kingdom face a threat to extinction, many within decades, if there is nothing done to reduce the biodiversity loss.

Marine biodiversity is a critical aspect of all 3 sustainable development pillars – economic, social & environmental. Our oceans constitute over 90% of the habitable space on the planet containing about 250,000 known species and many more to be discovered. The oceans and the life forms they accommodate are extremely critical to a healthy functioning of our planet as they provide us with almost half of the oxygen that we breathe and absorb about 26 per cent of the carbon dioxide emitted into the atmosphere by us. Today, about 60% of the world's major marine ecosystems that support livelihoods have been degraded & are being exploited unsustainably. If these trends continue, then by the year 2100 more than half of the world's marine life forms may face extinction.

Fishing is one of the major drivers for the degrading of marine ecosystems. The world's increasing population has resulted in an unsustainable demand for fish, leading to overfishing and illegal fishing. Overfishing affects the entire marine ecosystems as it creates an imbalance that impacts the food chain when too many fish are taken out of the ocean leading to loss of other important marine life forms such as sea turtles and the corals.

Apart from overfishing, the marine life form is perishing due to the poison of plastic pollution. As per the United Nations, at least 800 marine species are affected by marine debris with almost 80% that debris being plastic. Our planet is drowning in plastic pollution, and more humans mean more plastic! Plastic waste is estimated to kill around a million seabirds in a year. Many dead seabirds have been found with their stomachs full of plastic waste. Oil Spills is yet another human activity polluting the oceans and adversely impacting the marine life. Oil spills caused by damaged tankers, leaked pipelines and offshore oil rigs can cause long term damages to the marine ecosystem lasting for decades. Oil spills wreak life threatening damages to the marine ecosystems. Sea birds, marine mammals, fish & many other marine organisms are either instantly killed or face life threatening conditions. Otters & seals get vulnerable to hypothermia once covered with oil as the oil coats their fur.

Fishing, plastic pollution, and Oil spills do take a deadly toll on the marine ecosystem, however the most barbaric human activity causing threat to a variety of species of shark is shark finning. Shark fins holds a high monetary value as they are used in a popular dish called the shark fin soup, a delicacy in Chinese culture. Approximately one hundred million sharks are brutally tortured to death during the gruesome act of shark finning. After being captured, the fins are chopped off and the sharks are thrown

back into the ocean. Still alive and unable to swim, the sharks either drown or bleed to death. It's important to remember that without biodiversity, there's no future for humanity. In 2020, the World Environment Day focused on biodiversity, calling upon governments to save at least 30 per cent of our planet's land and oceans by 2030. To reach the goal of protecting such a large swathe of the surface area of our planet, nations and citizens need to collaborate. No one wants to imagine Earth without the all the thousands of amazing life forms that make up our ecosystems. However, mass extinction of a variety of species is a very real threat. Sustainable living, sustainable development and a sustainable population growth are the only ways to combat this threat.

POPULATION AND ENERGY CRISIS

3rd focused documentary of the series released on 11th July 2021

In the world we live in today, energy is required for almost everything. From powering your car to keeping the lights on in your home, energy is needed not only for your daily needs but also for producing everything that humans consume. As the population soars unsustainably, so does the energy demand. The demand in global energy consumption is expected to grow significantly in the coming decades – let's look at some figures.

With the global population expected to increase by 2 billion in the next 2 decades, electricity generation is estimated to increase by almost 49% by the year 2040. For 2021, the International Energy Agency – IEA estimates a growth of 4.6%, with more than two-thirds of the current increase in demand coming from developing economies and emerging markets, with a significant increase in the demand for fossil fuels. Reports also suggest that the demand for coal alone is projected to increase by almost 60% more than all renewable energy sources combined, leading to a rise of almost 5% in global emissions. All forms of electricity generation have an environmental impact on our air, water, and land. Governments need to invest in improving the efficiency of energy use to reduce the environmental impact of our energy consumption. This will require us to transition from contemporary technologies to renewables. The challenge will be the hardest for developing countries like India, where the high rate of population growth is coupled with high pressures on economic and environmental resources.

The energy problem we face today can threaten human wellbeing in pervasive ways. The truth is that most of the world's population does not have access to sufficient energy to meet even the most basic human needs – this is unfair. And meeting the ever-growing demand for energy worldwide, that too in a sustainable manner, is a key challenge that needs to be overcome.

In today's era of increasing urbanization, tackling climate change, preserving biodiversity and working to achieve sustainable development models have become a global agenda, and one way the world looks at achieving this is by transforming from non-renewable sources of energy to renewable sources of energy or clean and green energy. The demand and consumption of energy in India have been growing at one of the fastest rates in the world considering its increasing population and economic development.

India has been exploring various opportunities and facing challenges on its path to develop and provide economical and sustainable energy to its growing population. Coal and Oil are currently the main resources to meet India's energy demands, with coal being a primary contributor, with a share of almost 57%.

However, modern renewable sources of energy such as solar and wind power are also gaining ground rapidly in the country. According to the International Energy Agency, India is on the edge of entering a solar power revolution which could replace coal as its major source for producing energy.

Currently, with an installed capacity of 38 Gigawatts, India has the 5th largest installed solar power capacity globally and targets to achieve about 450 Gigawatts of renewable energy production by 2030, with 280 Gigawatts coming from solar power.

In 2020, India opened the world's largest solar power plant in Rajasthan's Jodhpur district. The Bhadla Solar Park covers 5700 hectares of the desert with a maximum capacity of 2,245 Megawatts. Currently, Rajasthan produces over 5 Gigawatts of Solar power per year. The fact is that population growth is driving all our resource problems, including energy. Slowing the population growth will automatically reduce the energy demand. But there is hope – the world is witnessing a transition from non-renewable sources to renewable sources. Renewable resources like solar energy & wind power are among the fastest emerging energy sources that are being adopted at a rapid pace worldwide. Their integration is essential in decarbonising the power sector, for the population to evolve sustainably, while avoiding environmental destruction and pollution. Supportive policies, increased availability, and lower costs will go a long way in popularising renewable energy sources in the next few decades.



EDUCATION & EMPOWERMENT- KEY TO POPULATION STABILIZATION

4th focused documentary of the series released on 23rd October 2021

Overpopulation continues to be a pressing issue globally, deteriorating the health of our planet and impacting our own well-being. As per experts, the global population grows by more than 80 million people every year. Today there are more than 7.8 billion people living on our planet and the population is projected to exceed 9 billion by 2050.

Our ever-increasing population is pushing the planet to the limit, by depleting natural resources, and generating too much waste - leaving behind wide-spread wastelands and polluted waterbodies. The impact of our growing numbers on the natural environment, non-renewable resources and environmental degradation has multiplied to unsustainable levels. These consumption patterns can soon surpass our planet's carrying capacity and ability to regenerate.

Many account overpopulation as an effect of high birth rates and low mortality rates due to advancements in medical facilities and technology leading to longer life spans.

However, there are many more interrelated factors that lead to overpopulation such as progress in food production, increased migration of people to urban areas, lack of family planning consciousness and services, and the most pressing cause of all – a lack of education and awareness among females.

India is projected to surpass China and be the most populous nation as early as 2027. With a current population of more than 1.39 billion, India's population is booming – and its ripple effects can be felt in every part of the country.

Poverty and illiteracy have been the two major drivers of overpopulation in India.

Impoverished families or families living below the poverty line often believe in the idea that the more family members they have, the greater their chances are of earning a better living. They tend to overlook education as a key to improved living standards.

Another issue adding to the overpopulation problem, is the early marriage of girls. The idea of early marriage still prevails in many parts of the country - leading to girls having a longer reproductive life span and bearing more children.

We have now seen a number of issues with overpopulation, and how they can be dealt with in order to stabilise the population growth in rapidly growing regions. Ground interventions in hard to reach rural communities and districts where the fertility rates are the highest like project aakar's engagement and counselling drives, and government initiatives like the up population policy 2021-2030 are of high importance for a sustainable development in the country. The special emphasis on youth empowerment and education on family planning can go a long way in creating a viable and sustainable future for all.

RUNNING DRY: POPULATION AND WATER CRISIS

5th focused documentary of the series released on 28th November 2021

Water is one of the most important natural resources for the existence of life. Almost 70% of the Earth is covered with water, but only 2.5 percent of it is fresh. The unsustainable growth of the human population has increased the demand for fresh water, and the planet is running out of freshwater.

Today, one in three people do not have access to safe drinking water. Currently, the global human population stands at more than 7.0 billion. What will happen when it crosses the 9 billion marks by 2050?

The demand for fresh water is set to increase at an exponential rate as our society grows, and if strict measures are not taken to preserve water today, water scarcity can become one of the biggest threats we face in the future.

Fulfilling the water requirements of the human population is driving our existing water resources towards depletion. The Sustainability Development Goal 6 (SDG 6) targets the availability and sustainable management of water and sanitation for all by 2030. However, the latest UN – Water 2021 report is alarming.

Human activities that negatively impact water resources. Currently, agriculture accounts for 70 percent of all freshwater withdrawals globally. It is also one of the major causes of water pollution, as large quantities of agrochemicals, drug residues, and organic matter are drained into nearby water bodies from farms.

As human populations grow, declining water quality has become a global issue.

Water pollution has many sources. The most polluting of them are sewage and industrial waste discharged into the rivers. The impact of personal care products and pharmaceuticals is also an emerging water quality concern.

The United Nations recently said that drought is a hidden global crisis that risks becoming "the next pandemic". Increased deforestation, soil degradation, over pumping, and unsustainable water use are some human activities that can lead to severe droughts.

As much as 20% of the world's groundwater wells may run dry, potentially depriving billions of people of fresh water. What can countries do to fight this?

Home to almost 16% of the world's population, India has only 4% of the world's fresh water resources. Less than 50 per cent of the population has access to safe drinking water.

If we are to ensure the preservation of our water resources and a continuous supply of fresh water in the decades to come, the importance of adapting to sustainable practices and stabilising the human population cannot be overstated. The world must wake up before it is too late.

OUT OF BREATH: POPULATION AND AIR POLLUTION

6th focused documentary of the series released on 8th January 2022

Air is important for the survival of all beings. We can survive days without food and water however, without air we cannot survive for more than a few minutes. The quality of life we live depends a lot on the quality of the air we breathe in. However, access to clean air has become a global issue as air pollution is now considered to be one of the largest threats to environmental and human health.

The World Health Organisation (WHO) estimates that globally, around 7 million people die every year from indoor and outdoor air pollution. Almost 99 per cent of the world's population breathes air containing high levels of pollutants that exceed the WHO guidelines.

A rapid increase in the human population, industrialisation, deforestation, economic growth, and vehicular emissions have been attributed as major drivers for the continuous deterioration of air quality.

Increased industrialisation leads to environmental degradation in terms of industrial pollution. High emission levels of pollutants like smoke, fumes, and toxic gases from industries not only degrade the air quality but are also causing severe damage to our ecology and health.

Considering a large number of vehicles available at our disposal today, vehicular pollution is one of the major causes of air pollution across the globe. Due to an increase in urbanisation and a rise in purchasing power, more people can afford vehicles which leads to a surge in vehicular emissions that deteriorate air quality.

Our ever-growing population accelerates the greenhouse gas emissions which is deeply impacting the quality of the air we breathe. As per the World Health Organisation, globally, nine out of ten people breathe polluted air, as air pollution levels are dangerously high in many parts of the world.

The effects of air pollution on human health are serious. Diseases like asthma, lung cancer, pulmonary illnesses, and heart diseases can all be associated with air pollution and the poor air quality we inhale.

Most vulnerable to the adverse effects of air pollution are children as their lungs are growing and because children are active, they breathe in a great amount of air. Several studies suggest that polluted air can harm children even when they are in the womb. Exposure to air pollutants during the early months of pregnancy can severely impact birth outcomes, as children can be born with defects in the respiratory system, and defects of the brain and spine.

According to a report by WHO in 2016, almost 6,00,000 children died globally because of acute lower respiratory infections caused by air pollution. A recent study by WHO reveals that around 93 per cent of children worldwide under the age of 15 breathe in air that is so toxic that it severely impacts their health.

India is home to almost 1.39 billion people and is set to overtake China as the most populous country by 2027. The impact of the country's growing population on air quality is clear... India is ranked third on the global index when it comes to worst air quality... The 'World Air Report, 2020' reveals that India caters to 22 out of the world's 30 most polluted cities, with New Delhi being ranked as the world's most polluted capital.

Air pollution and declining air quality are global issues. Though all regions of the world are affected, populations in low-income cities are the most impacted. It is in large, populous cities where we typically experience the worst air quality - population density has a direct bearing on air pollution. All of us know that the most basic solution for air pollution is to move away from fossil fuels, replacing them with alternative energies like solar and wind. But it's equally important to reduce our consumption of energy – this can be done by adopting more responsible habits, including adopting sustainable agriculture measures to prevent stubble burning and stabilising the human population.

POPULATION, OVER-CONSUMPTION, AND WASTE And WASTE WARRIORs

7th focused documentary of the series released on 12th February 2022 and 8th focused documentary of the series released on 12th March respectively

The human population continues to grow relentlessly and so does the generation of waste. A never-ending urge to fulfil our mechanised lifestyles has led to unsustainable consumption patterns resulting in the generation of a humongous amount of waste across the globe...

Did you know that the world generates about 2.01 billion TONS of municipal solid waste annually? Considering the human population growth and overconsumption trends, it is estimated that the global waste generation could cross the three billion ton mark by the year 2050. Alarming, isn't it?

Ineffective waste management systems have become a global menace, causing harm to our planet in many ways... Contamination of oceans, regular occurrences of floods in cities due to clogging of drains, transmission of various diseases, an increase in respiratory diseases due to burning of waste, and adverse effect on economies, are some of the many detrimental effects...

The amount of waste produced is driven through the economic strength, consumption patterns, and the population growth of a nation. While developed nations produce the larger amount of waste, it is the developing and less developed nations that are facing the brunt of unsustainably managed waste. As per studies, more than 90% of waste in less developed countries is disposed in landfills or is burned, causing serious health issues and damage to our environment.

The population growth is affecting the carrying capacity of the environment. The earth is home to more than 7.9 billion people who are consuming more than the planet can provide... A single person added to our population is a new consumer adding to the demand...As per experts, at the current pace, humans are using the resources of 1.7 Earths, and if these trends continue, we would need 3 Earths to survive by 2050

As our population continues to grow, the rate of consumption increases, resulting in pressure on existing natural resources, overconsumption, and waste generation.

India is facing a massive waste management challenge. The second most populated country in the world produces around 65 million TONS of waste every year. Uncontrolled urbanisation has left India's megacities bursting at the seams and they are struggling to manage their waste.

The relationship between population growth, resource consumption, and environmental degradation is all too evident...and it forms the basis of some of the most pressing issues the human race is facing in the 21st century...there is a direct link between overconsumption and waste generation. It is, however, our responsibility to reduce our consumption, recycle waste, and reuse goods to minimise waste generation. Adopting sustainable consumption and production patterns will go a long way in securing a promising future for all.

FOOD FOR THOUGHT
9th focused documentary of the series released on 26th March

Our planet is getting more and more crowded with each passing day. The world's population is expected to grow to almost 10 billion by 2050 - more people means more mouths to feed, more land being used for agricultural practices, and more pesticides being used to increase yield. The extensive use of pesticides is polluting groundwater sources, disrupting natural ecosystems, and causing long-term damage to human health. If that wasn't bad enough, clearing of forested land for food production is reducing the biodiversity of the natural world along with climate change and soil erosion.

The United Nations sustainable development goal number two states: "end hunger, achieve food security and improved nutrition and promote sustainable agriculture." This is a collective responsibility that all governments need to work towards to ensure no one goes hungry.

Modern agriculture, food production, and distribution are major contributors to greenhouse gases. Agriculture is directly responsible for over 10 per cent of total greenhouse gas emissions. Emitting more greenhouse gases than all vehicles combined? Farming is the thirstiest user of our freshwater supplies and a major polluter.

Modern agriculture and food production has many complex challenges. In the developing world, an alarming number of people are starving and continue to face food insecurities.

Roughly one-third of the food produced in the world for human consumption every year — approximately 1.3 billion tonnes — gets lost or wasted. According to the food and agricultural organization of the United Nations, in India, an estimated 40 percent of the food produced is wasted.

The food waste index report 2021(page 65) estimates that 50 kilograms of food is thrown away per person per year in India, and the wasted food often ends up in landfills, leading to dire environmental implications. Reducing food losses and waste is essential in a world where the number of people affected by hunger has been slowly on the rise.

Although there is a marginal improvement in two key indicators of undernutrition among children under five years — stunting and wasting — a lot more needs to be done. The report also flagged a concerning trend: anaemia is increasing across age groups, particularly among children and women.

On the other hand, obesity too is a growing challenge. The number of overweight children increased from 2.1 per cent in the national family health survey to 3.4 per cent in the more recent one. This is attributed to better incomes, unhealthy food choices, and a lack of physical activity.

For a country like India, the cultivation of seaweed is advantageous since it doesn't use up valuable land, freshwater, or fertilizer. In 2019, the global seaweed production market was worth around \$12 billion. India is aiming to scale up production too — from the current 30,000 tonnes to more than one million tonnes by 2025. In fact, the government has announced 85 million dollars in subsidies for these farming initiatives.

Whenever humans have needed to produce more food, they have simply cut down forests to make more farms. This is no longer viable. Countries must adopt ways of achieving high yields while also dramatically reducing the environmental impacts of conventional farming. Stabilising the world's population and a rethinking of governance and food systems is crucial for meeting both current and future challenges.

HOUSING, JOBS and MIGRATION
10th focused documentary of the series released on 16 April 2022

India is going through rapid urbanisation due to a growing population and lack of employment in the rural areas. When youngsters migrate to the cities for better opportunities – the rural areas are left behind without a workforce, while the urban areas keep getting overpopulated. The aftermath of this, can be seen in the cities that are bursting at the seams – adversely impacting the very opportunities for its inhabitants.

The total employment in India has grown by 4.5 crores from 2004-2005 to 2017-2018, where 4.2 crores of those jobs happened in urban areas. In rural India, the jobs are few and far in between, and job growth has either contracted or stagnated in the same period. When we put this number in perspective and compare it with the percentage-wise growth of jobs, it is only 0.8% growth, while the population grew at 1.7% for the same period.

The glaring statistics show that people migrate to cities in search of better job opportunities, if they cannot find prospects in their native land.

Now is the time, more than ever before, to redefine the ‘new jobs’ that are being created. As more sectors transition to low-carbon models, a visible shift toward greener jobs can be seen. In the last half a decade, the ratio between oil/gas jobs and renewable/environment jobs has changed drastically in favour of sustainability. If this trend continues, renewable jobs could even surpass oil and gas jobs by as early as 2023.

Over the next decade, we may see millions of green jobs being created as there is growing awareness from political leaders to meet carbon emission goals, and an increasing corporate social responsibility to become more sustainable. This is valid for fields like renewables or environment jobs, fashion, manufacturing, transport, and even Finance.

According to R.S. Sodhi, MD at Amul, Rural India will create 12 million jobs in dairy-related activities over the next decade. This would create livelihoods and food security for a large number of Indians living in the countryside, and while neighbouring countries face milk shortages, this sector in India can do well for the next half a century. In rural India, the digital literacy rate is around 25%, while it is over 60% in urban areas. Empowering the residents of rural India into digital literacy is an important steppingstone to make them employable and more sought after in the jobs market, and Amul in collaboration with SAP is placing a lot of emphasis enabling a skilled workforce in Gujarat.

Sustainable job creation is on the rise, and some states are betting big on homestay tourism. In Uttarakhand, 3600 registered home stays are helping stop the migration of workers to the cities by creating around 8000 employment opportunities for local residents. The government has also created a scheme in which loans of up to INR 10 Lakh can be taken up in order to build up to 6 rooms to host tourists in homestays. Not just this, the Ministry of Tourism, has plans to implement reliefs, exemptions, and financial assistance for those who want to invest setting up a homestay business.

From 2010 to 2020, India’s degree of urbanization has increased from 30.93% to 34.93%. As the crowded mega-cities of India are bursting at the seams, the infrastructures in the cities often struggle to meet the demand. Adverse effects of this, can be seen across the country - such as hazardous air pollution levels, unsustainable waste management, over-burdened infrastructure, and a lack of fresh water to sustain rapid growth.

Every new building constructed today needs to be built in an eco-friendly manner, taking into consideration the impact of the environment. Perhaps, the best place to begin this, is at an educational setup - inspiring tomorrow’s future with green values every day. To provide everyone with adequate

housing and meaningful employment, while at the same time not exceeding the earth's carrying capacity, we must follow the UN's Sustainable Development Goals. Stabilizing the human population will go a long way in achieving the goals and creating a sustainable future for one and all.

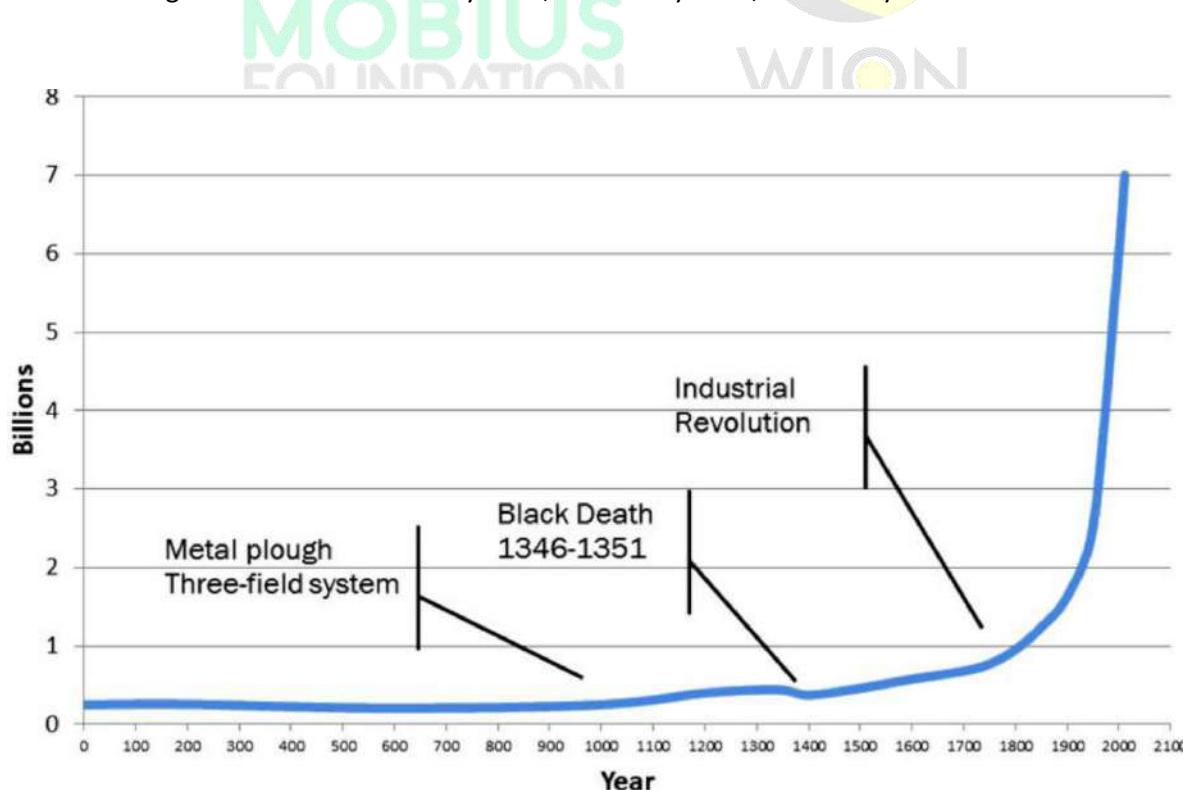
A BRIEF HISTORY OF POPULATION GROWTH

To be sustainable, the long-term growth rate of the population should not differ much from 0%. That is because a growth rate exceeding 0% has exponential implications. In simple terms: if a combination of birth and growth figures only appears to cause a modest population growth initially, then this seems to imply an explosive growth in the longer term.

Thomas R. Malthus already acquired this point of view by the end of the 18th century. In his famous "Essay on the Principle of Population" (first edition in 1789), Malthus argues justly that in time the growth of the population will inevitably slow down, either by an increase of the death rate or by a decrease of the birth rate. On a local scale, migration also plays an important role.

It is no coincidence that Malthus' essay appeared in England at the end of the 18th century. After all, the population there had started to grow at a historically unseen rate. More specifically the proletariat had grown immensely and that worried the intellectuals and the elite. Year after year, new demographic growth records were recorded.

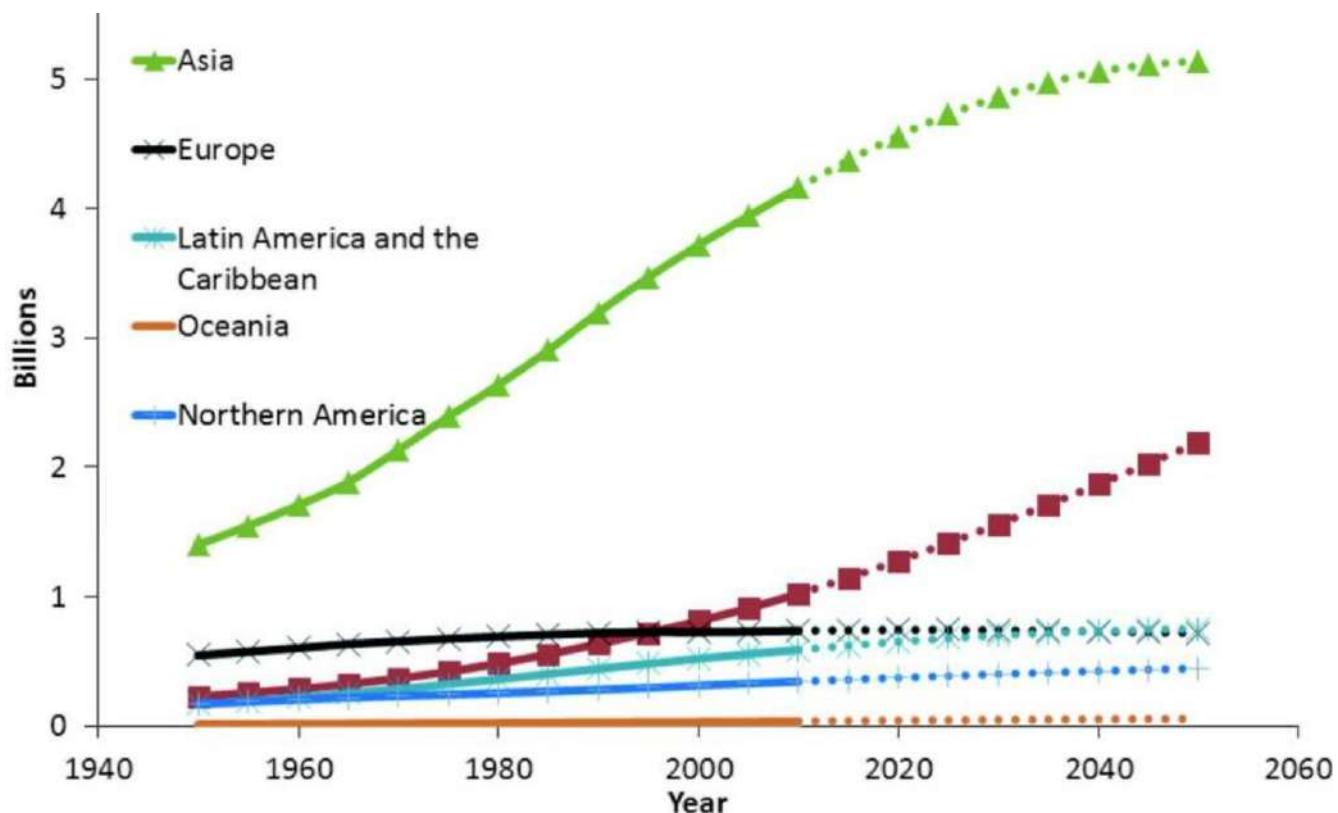
At the beginning of the 19th century, the number of 1 billion people was exceeded for the first time in history. Subsequently growth accelerated and the number of 2 billion people was already surpassed around 1920. By 1960, another billion had been added, in 40 instead of 120 years' time. And it continued to go even faster: 4 billion by 1974, 5 billion by 1987, 6 billion by 1999 and 7 billion in 2011.



This will certainly not stop at the current 7 billion. According to the most recent projections by the United Nations, the number of 8 billion will probably be exceeded by 2025, and around 2045 there will be more than 9 billion people. The further one looks into the future, the more uncertain these figures

become, and with demography on a world scale one must always consider a margin of error of a couple of tens of millions. But according to all plausible scenarios, the number of 9 billion will be exceeded by 2050.

Demographic growth was and is not equally distributed around the globe. The population explosion first occurred on a small scale and with a relatively moderate intensity in Europe and America, between 1750 and 1950. From 1950 on, a much more substantial and intensive population explosion started to take place in Asia, Latin America, and Africa. Asia already represented over 55% of the world population in 1950 with its 1.4 billion citizens and by the year 2010 this had increased to 4.2 billion people or 60%. Of those people, more than 1.3 billion live in China and 1.2 billion in India, together accounting for more than one third of the world population.



In the future, the proportion of Asia will come down and that of Africa will increase. Africa was populated by some 230 million people around 1950, or 9% of the world population. In 2010 there were already more than 1 billion Africans or 15% of the world population. According to UN projections, Africa will continue to grow at a spectacular rate up to 2.2 billion inhabitants in 2050 or 24% of the world population. The proportion of Europe, on the other hand, is evolving in the opposite direction: from 22% of the world population in 1950, over 11% in 2010 to an expected mere 8% in 2050. The population of Latin America has grown and is growing rapidly in absolute terms, but because of the strong growth in Asia and especially Africa, the relative proportion of the Latin American population is hardly increasing (at most from 6 to 8%). The proportion of the population in North America, finally, has decreased slightly from 7 to 5% of the world population.

The growth of the world population goes hand in hand with global urbanisation: while around the year 1950 less than 30% of people lived in the cities, this proportion has increased to more than 50%. It is expected that this proportion will continue to grow to two thirds around 2050.

WHY IS OVER POPULATION A PROBLEM?

Overpopulation of a species is the term used when the numbers of that species start to exceed the resources available to sustain them. This can be caused by an increase in the number of babies being born and, also by the population living longer lives.

Modern medical advances mean that people in developed countries are now living much longer lives than in the past. There are around 80 million births each year globally and, together with lower death rates, this means that the human population has been growing by another billion people roughly every 12 years. This increase is dramatically faster than it was even 100 years ago.

At the beginning of the nineteenth century, the total world population crossed the threshold of 1 billion people for the first time in the history of the homo sapiens. Since then, growth rates have been increasing exponentially, reaching staggeringly high peaks in the 20th century, and slowing down a bit thereafter. Total world population reached 7 billion just after 2010 and is expected to count 9 billion by 2045.

As the number of people increases, so does the demand for food, water, and other resources. Techniques developed to farm food and produce items that people want to use, from clothes and cars to computers, mean that the Earth's resources are rapidly being used up. The harmful emissions produced by factories and vehicles cause environmental damage, such as climate change.

In a particular place, over population can also be caused by an influx of people forced into the area due to war, famine or other disasters making their previous home uninhabitable. Climate Change is causing an increase in the number of hurricanes and floods and is likely to cause many more people to become displaced in the future. Overcrowding leads to further demand for limited resources and this, in turn, can lead to more conflict and warfare.

As humans seek out more resources, they take over land that was once the habitat of other species leading to huge biodiversity loss. Present extinction rates may be as high as 140,000 species lost every year due to humans over-fishing and taking over large areas of land (such as tropical rainforests) to use for farming food and fuel crops.

Sir David Attenborough has stated that the level of human population has a knock-on effect on all other environmental problems. In 2013, he called humanity "a plague on the Earth" and suggested that limiting population growth would be necessary to control it.

World Population in 2022 is estimated to be 7.89 billion, is the total people lived on the earth, Out of which China population constitutes to 18.5%, secondly India Population by 17.9%, United States Population by 4.3%, Indonesia by 3.5% and Brazil by 2.8%. Scientists predict the total human history was 200,000 to 300,000 years, i.e, Humans were early traced between 198,000 B.C - 298,000 B.C. In Continent wise Asia dominates currently with 4.4 billion, Africa with 1.2 billion, Europe with 738 million and North-South America and others by 1.4 billion, Population of the world in 2021 is 7.87 billion.

As per UN, the global population aged 60 years or over with an estimated of 962 million in year 2017, It is more than twice as large as in 1980 when there were 382 million older persons worldwide. The older population of the developing regions is growing much faster than in the developed regions. The number is expected to double again by 2050, and it is projected to reach nearly 2.1 billion old age people. Over the coming decades, the number of older persons is expected to grow fastest in Africa, where the population aged 60 or over is projected to increase Africa has 68.7 million, 549 million in Asia, 183 million in Europe, 78 and 76 million in North and Latin America. Japan population is shrinking due to low fertility rates and society and cultural infrastructure, the aging population is rapidly

increasing, and Tokyo is the most populous city in the world, Taiwan, is another with low birth rates. The population of Canada is 38 million, UK is 68.8 million, Germany population is 83.1 million and Australia is 25.7 million. Finland is a Nordic country in Northern Europe.

How many people are in the world?



The term People or Population refers to humans, The total number of human beings on earth or inhabitants located regionally or by Country. The number of living beings live together geographically by terrain or region. Population Growth is the increase of number of human beings in a population. Currently the world population is increasing at the rate of 1.2 in 2018 down from 2.1 in 1963.

100 years ago, there were less than one billion humans living on earth. Today, according to UN calculations there are over 7 billion and projected in 2100 it will be around 11 billion with the growth rate of 2.1. At 1 BC the population expected to be 188 million, and at 10000 BC the expected population to be 2.4 million as per Oxford researcher.

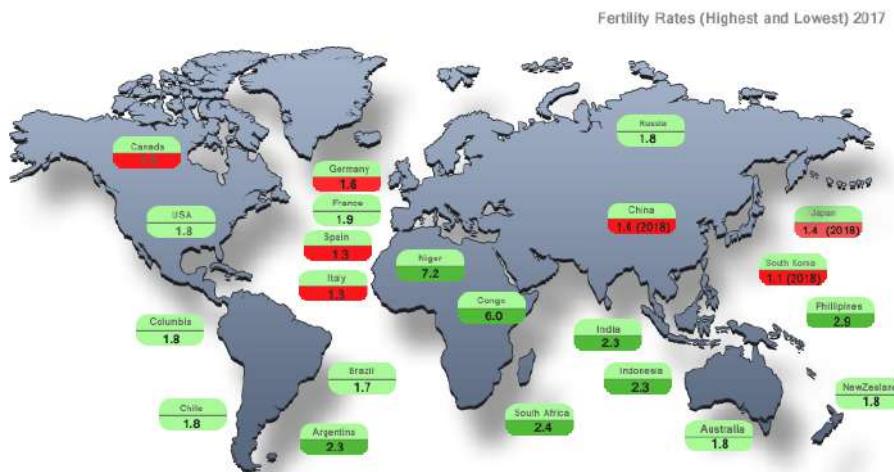
Year	Thousands	Year	Million	Year	Million
20000 BC	100	10,000 BC	2.4	1 CE	188
19000 BC	160	9000 BC	3.5	1000	270
18000 BC	220	8000 BC	5	1500	500
17000 BC	290	7000 BC	7.5	1600	553
16000 BC	380	6000 BC	11	1700	603
15000 BC	500	5000 BC	18	1800	989
14000 BC	610	4000 BC	28	1900	1650
13000 BC	800	3000 BC	44	1,950	2500
12000 BC	1100	2000 BC	72	2000	6000
11000 BC	1600	1000 BC	115	2019	7400

According to UN, earth population forecasts between 2020 and 2100. Below is the World Population by Continent:

Region	2020	2021	2022	2023	2024	2025	2030	2040
WORLD	77,94,799	78,78,657	79,63,012	80,47,799	81,32,972	82,18,501	86,51,761	95,53,186
Geographic Regions								
Africa	13,40,598	13,75,228	14,11,075	14,48,133	14,86,402	15,25,889	17,42,280	22,79,591
Asia	46,41,055	46,81,524	47,21,423	47,60,709	47,99,348	48,37,315	50,16,762	53,21,851
Europe	7,47,636	7,47,517	7,47,240	7,46,817	7,46,258	7,45,573	7,40,549	7,25,023
Latin America and the Caribbean	6,53,962	6,60,102	6,66,230	6,72,335	6,78,405	6,84,426	7,13,384	7,63,009
Northern America	3,68,870	3,71,055	3,73,255	3,75,456	3,77,646	3,79,819	3,90,451	4,09,569
Oceania	42,678	43,231	43,789	44,350	44,913	45,480	48,337	54,142

African Continent has a population of 1 Billion as estimated on 2017, With the annual rate of 2.7 compared to more developed regions, Eastern Europe and central Asia(0.9), Arab states or Middle east region has a population of 359 million and growing quickly with annual average rate of 2.1 when compared to Africa, the rate of change is 1.5 times more than the world annual rate of 1.2. Rapid population growth keeps poor countries poor; this may happen to some of the African Nations and Asian countries due to weaker policies, on the other side it may be reverse for Arab States as they may get much richer by having a good annual rate.

Top 15 Countries and their Population Fertility Rate



South Korea has the lowest world fertility rate with 1.1 by 2018, followed by Japan with 1.4, Spain and Italy with 1.3 each. China is ranking 1 in terms of population by 2019 with 1.41 billion people but the population rate is declining to 1.6 due to rapid population control from 1980 to 2000, Guangdong and Shandong provinces are with 109 and 100 million people, Shanghai and Beijing are the highest populated cities with 24 and 23 million, and rank 2 is India with 1.36 billion with 2.3 fertility rate and will surpass China in 2026.

Countries	Total Population In millions(2021)	Total Fertility Rate per woman(2021)	Life expectancy at Birth	
			MALE (2021)	FEMALE (2021)
China	1,444.20	1.7	75	80
India	1,393.40	2.2	69	71
United States of America	332.9	1.8	76	82
Indonesia	276.4	2.2	70	74
Pakistan	225.2	3.3	67	69
Brazil	214	1.7	73	80
Nigeria	211.4	5.2	54	56
Bangladesh	166.3	2	71	75
Russia	145.9	1.8	67	78
Mexico	130.3	2.1	72	78
Japan	126.1	1.4	82	88
Ethiopia	117.9	4	65	69
Philippines	111	2.5	68	76
Egypt	104.3	3.2	70	75
Viet Nam	98.2	2	72	80

Data: Calculations of population projection based on UN stats and the population formula, Life expectancy at Birth as per the countries.

EARTH CARRYING CAPACITY

Several hundred years ago Thomas Malthus, a British scholar, convinced English nobility that civilization had surpassed the Earth's carrying capacity and that famine was imminent. Since this first declaration that the world may have a limited capacity to support its growing population, there have been episodes of recurring concern that the world has approached and, by some estimates, far exceeded its carrying capacity.

Carrying capacity is "the maximum population of a given species that can survive indefinitely in a given environment."¹ The maximum population of earth depends on several factors, many of which surround the use—and exploitation—of limited non-renewable resources that create "pinch points."

Over time, the world has faced many challenges related to resource scarcity and we have responded with innovative approaches to sustain the present and future population.

Transportation continues to play an integral role in expanding the world's carrying capacity. Imports and exports of food and yield-enhancing technologies have become increasingly important as the world population has grown. In this model of global transportation, however, food prices are linked to the price of the fossil fuels required for transportation, which has led to significant food price fluctuations over time.

Depending on the metrics used, estimates of the earth's carrying capacity can range from as small as a half a billion people to as large as 14 billion people.^{8,9} Why the dramatic disparity? Some estimates don't account for resources and innovations that have become staples in today's world. For example, the "organic" carrying capacity, meaning without the use of chemical fertilizer, is estimated to be about 2.4 billion people.^{10,11} The expansion of our global food supply and carrying capacity has been inextricably linked to the mining and fabrication of three fertilizers: nitrogen, phosphorous and potassium. However, due to finite supply and environmental ramifications, we may not be able to rely forever upon the bounty that these fertilizers enable (more on this topic below). The high estimates of the earth's carrying capacity, on the other hand, reflect an optimistic view of humans' ability to resolve challenges of scarcity and environmental factors through technological innovation.

Ultimately, the earth's overall carrying capacity is a function of many factors, including quality of life (social carrying capacity).

POPULATION DIVIDEND OR DISASTER

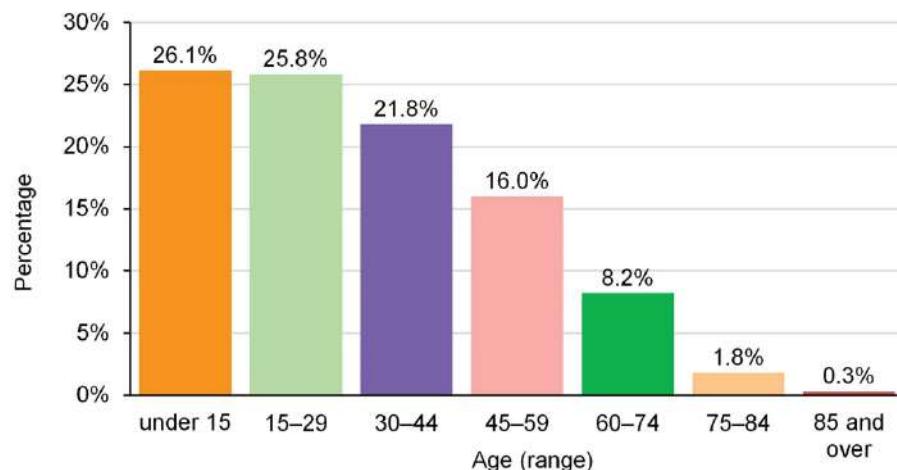
The population of a country can be divided into 'working' and 'dependent' categories. Those in the age of 15 to 65 are in the working category. They are generally able to earn their own livelihood and support some dependents. Children below 15 years of age and elders above 65 years of age are dependent. The ratio of the dependent persons to working persons is called "dependency ratio." High dependency ratio means dependents are more than working persons and vice versa.

$$\text{Dependency Ratio} = \frac{\text{Number of Dependents or Non-Working Age Group}}{\text{Population aged between 15 to 64 Years}}$$

Advances in medical sciences and better nutrition and living conditions led to an expansion of population in the previous century. Children stopped dying of diseases and malnutrition. The result was that the population of those below 15 increased rapidly. The same working population had to support larger number of dependents. The dependency ratio increased. The working persons could not make savings because most of the income was used in supporting the young dependents.

They could not invest much in education of the young either because their income was used in arranging for the food and clothing of the larger numbers of children. These large numbers of children started entering the working population in the nineties. Thus, before, say, 1991, the dependency ratio was high. The number of dependent persons was large while the number of working persons was relatively less.

India age breakdown (2020)

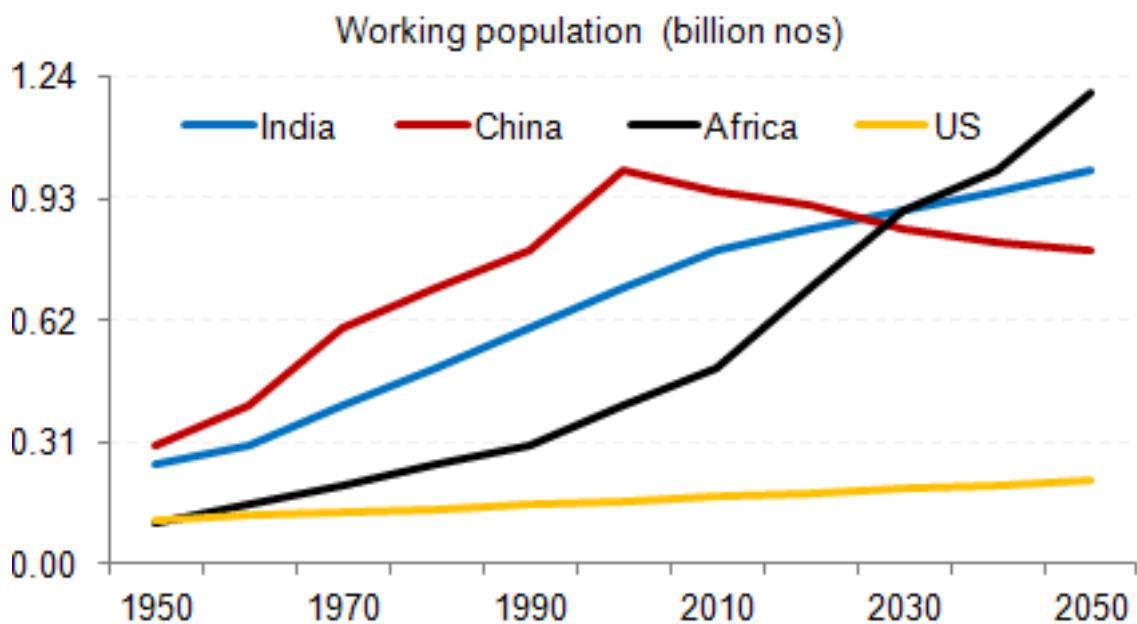


© Encyclopædia Britannica, Inc.

We became conscious of the need to control population in the eighties. The number of births per woman gradually reduced. This meant that the numbers of children reduced. At the same time, as explained above, the numbers of working persons increased because the large numbers of children born earlier became adults. Thus, the dependency ratio declined. The income earned by the working person was now available for savings or investment in the education of the children.

After another 50 years or so in the future, the present large numbers of working persons will become old while the numbers of working persons will be less because of the present low birth rate. The numbers of elderly dependents will increase while the working persons will remain unchanged. Once again, the dependency ratio will increase. Countries like Japan find themselves in this situation at present. The population dynamics, therefore, moves like a wave. In the beginning the dependency ratio increases as the number of children increases. Then the dependency ratio decreases as the birth rate declines and the large number of children become adults. A "demographic dividend" is reaped at this stage because we have large numbers of working persons and less numbers of dependents. This fortuitous circumstance occurs only rarely when the high birth rate declines.

India is entering this stage now. In the third stage, the dependency ratio increases again because we have large numbers of elderly dependents. Lastly, the situation becomes "normal" when the large number of elderly dies. There are many benefits of the demographic dividend. One, the large numbers of working persons produce more than what they consume. They add to the GDP of the country. Two, entry of large number of youths into the work force increases the supply of labour. This leads to reduced wages and to lower cost of production for our businesses. Three, the working persons can save larger share of their incomes. A working person with one child is likely to save more than a working person with three children.



This leads to an increase in investment. Fourth, the working persons are able to invest more in education of the children. A working person with one child can afford to send the child to a college while one with three children may not be able to afford this. This leads to the increase in the availability of skilled workers or in the "human capital." These benefits of demographic dividend are lost and the "dividend" becomes a "disaster" if the persons of working age are unemployed during the period of low dependency ratio. In that case, they become "forced dependents."

CAUSES OF POPULATION EXPLOSION

Today the Earth is home to more than 7.8 billion people. By 2100 the population is on track to hit 10.8 billion, according to the United Nations — and that's assuming steady fertility declines in many countries. Interestingly, if extra progress is made in women's reproductive self-determination, and fertility falls more than the United Nations assumes is likely, the population in 2100 might be a relatively smaller 7.3 billion.

For now, the world's population is still increasing in huge annual increments (about 80 million per year), and our supply of vital non-renewable resources are being exhausted. Many factors contribute to these unsustainable trends, including Total Fertility Rates, Lower Death Rate, Early Marriage, Social and Religious Reasons, Poverty, and Illiteracy.

Total Fertility Rate

The total fertility rate in a specific year is defined as the total number of children that would be born to each woman if she were to live to the end of her child-bearing years and give birth to children in alignment with the prevailing age-specific fertility rates. It is calculated by totalling the age-specific fertility rates as defined over five-year intervals. Assuming no net migration and unchanged mortality, a total fertility rate of 2.1 children per woman ensures a broadly stable population. Together with mortality and migration, fertility is an element of population growth, reflecting both the causes and effects of economic and social developments. The reasons for the dramatic decline in birth rates during the past few decades include postponed family formation and childbearing and a decrease in desired family sizes. This indicator is measured in children per woman.

Low Death Rate

The phenomenal fall in the death rate in recent years is another important factor that has contributed to the rapid increase in population. The infant mortality rate has decreased globally, with 4.1 million infant deaths in 2017 compared to 8.8 million in 1990, according to the World Health Organization (WHO). This is welcome public health news, of course. The death rate in India is about 8.5 per thousand in 2001.

At the same time, lifespans are increasing around the world. Those of us who are alive today will likely live much longer than most of our ancestors. Global average life expectancy has more than doubled since 1900, thanks to advancements in medicine, technology, and general hygiene. Falling mortality rates are certainly nothing to complain about either, but widespread longevity does contribute to the mathematics of increasing population numbers.

Early Marriage

Estimates suggest that each year, at least 1.5 million girls under 18 get married in India, which makes it home to the largest number of child brides in the world - accounting for a third of the global total. Nearly 16 per cent adolescent girls aged 15-19 are currently married.

At a national level, child marriage contributes to population growth by increasing fertility. The report estimates that a girl marrying at 13 will have on average 26% more children over her lifetime than if she had married at 18 or later. This has a national impact by placing an increased burden on basic services.

Social and Religious Reasons

The role of religion in explaining fertility differences is often overlooked in demographic studies, particularly in Western Europe, where there has been a substantial decline in institutional forms of religious adherence.

In India, every person must marry because marriage is a compulsory institution as per social norms. In joint family system, nobody feels individual responsibility, and everybody has access to equal level of consumption. Therefore, people do not hesitate to increase the size of the family. Most of the people think that at least one male child should be born in the family. In the expectation of getting a male child, they go on increasing the family size.

Faith and religious authority can influence TFR at individual and country levels. For instance, at the UN population conference in Cairo 1994, Vatican and Muslim leaders opposed aspects of family planning, especially abortion and women's autonomy. Increased faith has accompanied population growth in parts of the world. Based on the World Values Survey, Norris & Inglehart ranked 73 countries as "most secular", "moderate", or "most religious". Mean TFR 1970–1975 for the most secular countries was 2.8 children, for moderate 3.3 and for most religious 5.4. The corresponding values 2000–2005 were 1.8, 1.7 and 2.8. Several other studies also suggest that religiosity favours high TFR.

Poverty

Population trends and dynamics can have an enormous effect on prospects for poverty reduction and sustainable development. Poverty is influenced by – and influences – population dynamics, including population growth, age structure, and rural-urban distribution. All of this has a critical impact on a country's development prospects and prospects for raising living standards for the poor. Investments in better health, including reproductive health, are essential for individual security and for reducing mortality and morbidity, which in turn improve a country's productivity and development prospects. Access to sexual and reproductive health, including family planning, can affect population dynamics through voluntary fertility reduction and reductions in infant and maternal mortality. Improved reproductive health also helps individuals, particularly young women, break out of intergenerational cycles of poverty. When women and couples are empowered to plan whether and when to have children, women are better enabled to complete their education; women's autonomy within their households is increased; and their earning power is improved. This strengthens their economic security and well-being and that of their families. Cumulatively, this contributes to development progress and poverty reduction.

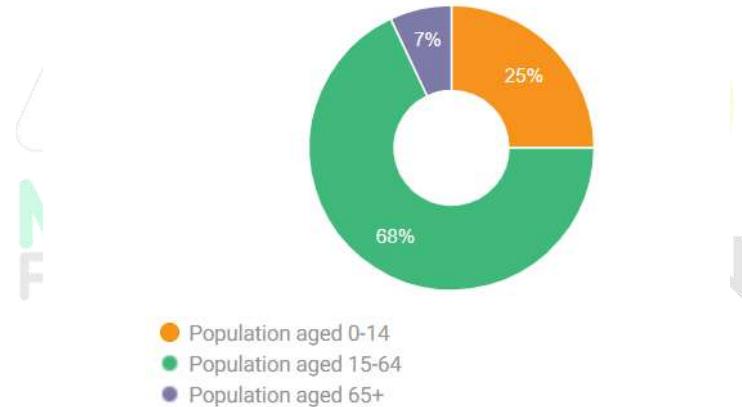
Illiteracy

Illiterate people are a cause of overpopulation. They fail to understand the issues and problems that are caused by the increasing population rate. Mostly uneducated people are also unaware of family planning. Education has an important role to play in the improvement of the economic and social status of women. It influences the number and spacing of children desired and eventually attained. At the aggregate level, countries with higher literacy rates and overall educational attainment have lower total fertility rates (TFRs) than countries whose population have lower education levels. The effect of a country's overall level of education on its TFR exists in both developing and developed countries. A major part of the population (about 60%) in India is either illiterate or has the minimum education. This leads them to accept minimal work in which they cannot even support themselves. Unemployment and under-employment further lead to poverty. Moreover, due to the prevalence of higher rate of illiteracy, there is widespread ignorance in the form of social customs and beliefs like early marriage and preference for a male child. As a result, there is high rate of population growth in the country.

POPULATION OF INDIA

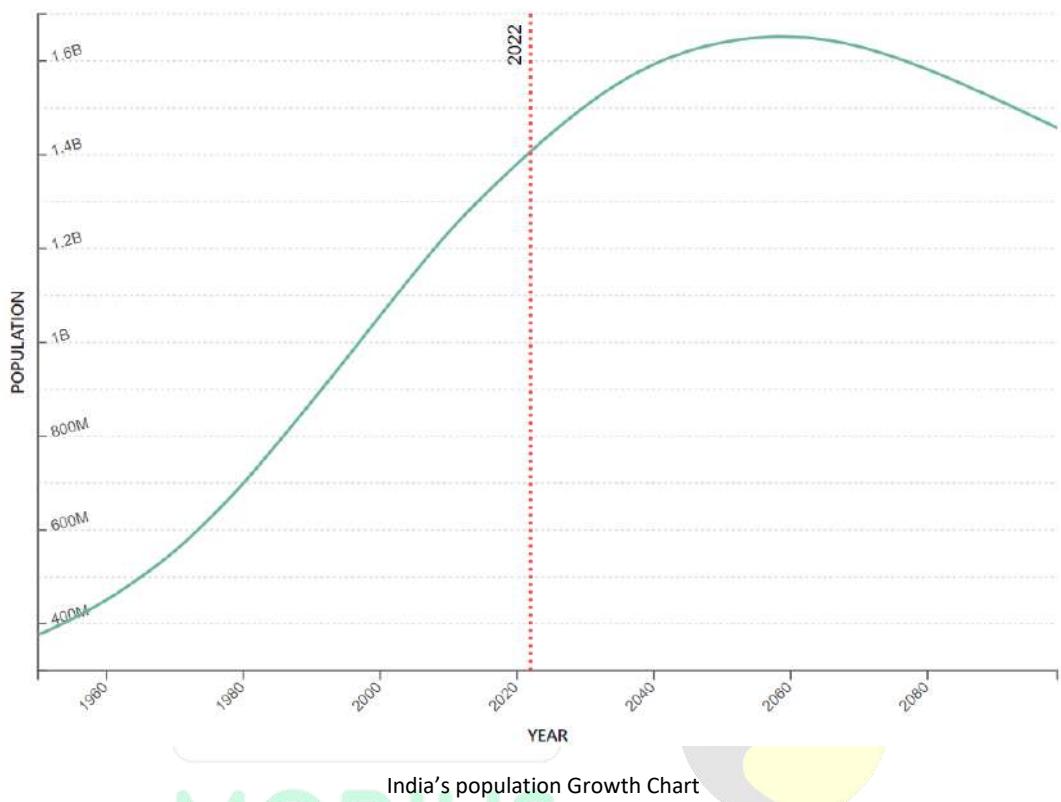
In 1800, the population of the region of present-day India was approximately 169 million. The population would grow gradually throughout the 19th century, rising to over 240 million by 1900. Population growth would begin to increase in the 1920s, because of falling mortality rates, due to improvements in health, sanitation, and infrastructure. However, the population of India would see its largest rate of growth in the years following the country's independence from the British Empire in 1948, where the population would rise from 358 million to over one billion by the turn of the century, making India the second country to pass the billion-person milestone. While the rate of growth has slowed somewhat as India begins a demographics shift, the country's population has continued to grow dramatically throughout the 21st century, and in 2020, India is estimated to have a population of just under 1.4 billion, well over a billion more people than one century previously. Today, approximately 18% of the Earth's population lives in India, and it is estimated that India will overtake China to become the most populous country in the world within the next five years.

Population, by age group, per cent

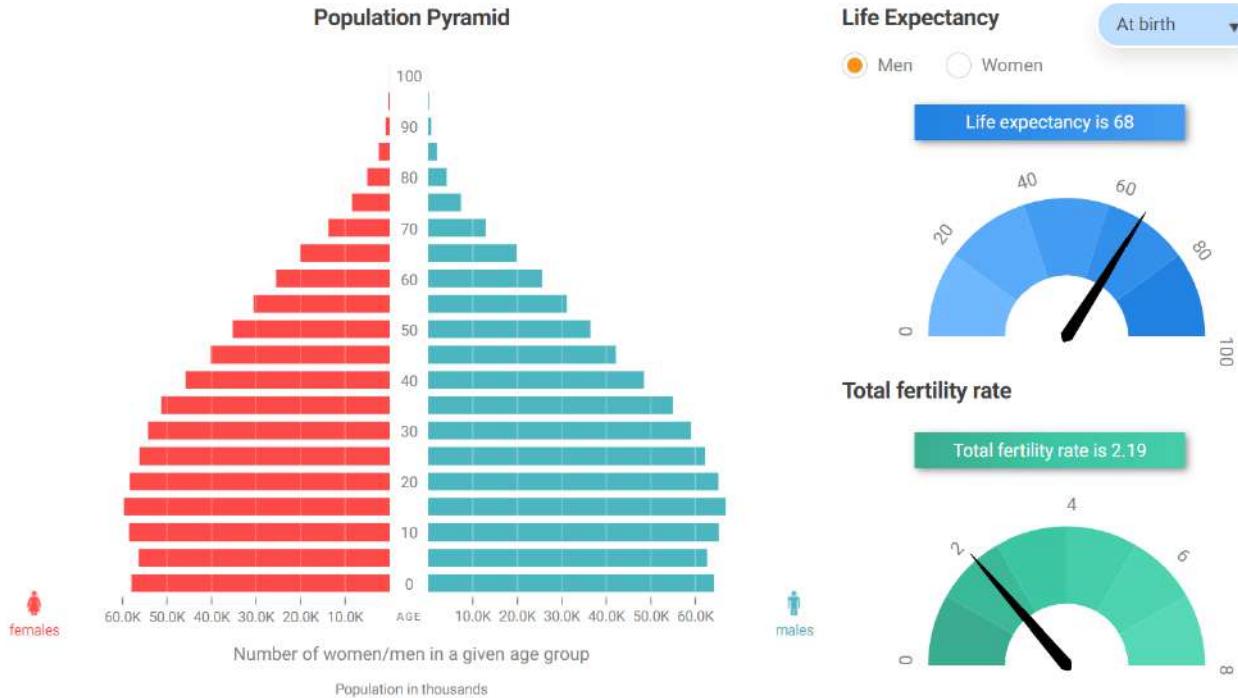


Although its fertility rate has declined from about 3.6 to 2.4 children in the last three decades, India is projected to become the world's most populous nation by 2028, with a population of some 1.45 billion. Now a middle-income country, India has seen significant improvements in health and education, but wide inequalities persist.

India's population continues to grow steadily as the years progress. Most notably, the population is growing faster than China's. India is expected to surpass China as the world's most populous country around 2024, but like China, the growth is expected to stagnate and eventually decrease in the latter half of the 21st century.



Maternal mortality and gender discrimination remain high. Early marriage and pregnancy contribute to excessive maternal death among women under 24. The low status of women is a factor as well, one that is reflected in an extremely skewed ratio of girls to boys.



INDIAN POPULATION CONTROL POLICIES

India is the first country in the world to begin a population control programme in 1952. It emphasized the use of natural devices for family planning.

Work was done in the direction of education and research and the clinical approach was encouraged.

In 1965, the sterilization technique for both men and women were adopted under this plan. The technique of copper- T was also adopted. An independent department called the Family Planning Department was set up.

All kinds of birth control methods (conventional and modern) were encouraged.

Under this plan the National Population Policy was announced on 16 April 1976. In this policy, the minimum age for marriage determined by the Sharda Act, 1929 was increased. It increased the age for boys from 18 to 21 years and for girls from 14 to 18 years. The number of MPs and MLAs was fixed till the year 2001 based on the census 1971. Under this Plan, forced sterilization was permitted which was later given up. In 1977, the Janata Party government changed the name of Family Planning Department to Family Welfare Department.

Efforts were done to control population by determining long-term demographic aims.

In 1993, the government had established an expert group under the chairmanship of M.S. Swaminathan for formulating national population policy. Though this group had prepared the draft of the new population policy in 1994, it was reviewed in 1999 by the Family Welfare Department and was passed by the Parliament in 2000. The Central Government formulated the 'new national population policy' in February 2000. This policy has three main objectives:

Objectives of Ninth Five Year Plan

1. Temporary objective: The easy supply of birth control devices was included in it. Besides, the development of health protection framework and recruitment of health workers were also made a part of it.
2. Middle-term objective: Under it, the total fertility rate (TFR) had to bring down to the replacement level of 2.1 by 2010.
3. Long-term objective: Under it, the Objective of population stabilization by 2045 is to be achieved.

The population must be stabilised at that level which must be harmonious from the points of view of economic and social development and environmental protection.

It has been announced in the new population policy to keep the composition of the Lok Sabha unchanged by 2026 so that the states could co-operate without any fear. Under current provisions, the number of MPs in different states by 2001 has been determined based on the census 1971. It was to be changed in 2001 based on the new census report (2001). But it might be harmful to those states which had taken part in the population control programme with great fervour. Those states which had not laid proper attention on population control could get more shares in the Lok Sabha resulting in wrong effect on the population control programme. So, the Lok Sabha would not have more than 553 elected seats till 2026 and the number of Lok Sabha seats of each state would remain the same as it is at present. While announcing this new policy, the Central Health Minister said that the people living below poverty line would be rewarded properly if they would marry after 21 years, adopt the standard of two children and undergo sterilisation after two children.

The following major Objectives had been set in the National Population Policy till the year 2010:

1. The 'total fertility rate' to be reduced to 2.1.
2. The high-class birth control services had to be made available publicly so that the standard of two children could be adopted.
3. The infant mortality rate had to be reduced to 30 per thousand.
4. The mother mortality rate had also to be reduced to below 100 per one lakh.
5. The late marriage of girls had to be encouraged.

STATES WITH A TWO-CHILD NORM

A dozen states have introduced laws that offer it as an incentive for population control

HIMACHAL PRADESH

● 2000

- People with more than two children were barred from contesting panchayat polls; revoked in 2005

HARYANA

● 1994

- No person with more than two children could contest the panchayat/ zila parishad poll; revoked in 2006

RAJASTHAN

● 1994

- Anyone with more than two children, cannot contest panchayat election; Compulsory retirement for government employees on the birth of their third child—this provision revoked in 2018

GUJARAT

● 2005

- Disqualifies anyone with more than two children from contesting local body elections

MAHARASHTRA

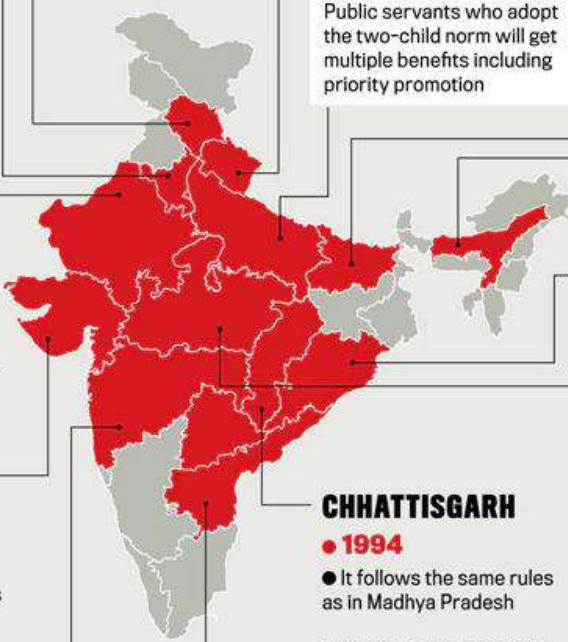
● 2003

- Disqualifies people with more than two children from contesting local body elections, holding a job in the state government and accessing PDS benefits

UTTARAKHAND

● 2002

- Bars people with more than two children from contesting local body elections; applicable after July 2019



UTTAR PRADESH

● 2021 (draft stage)

- Anyone with more than two children will be debarred from contesting local bodies polls, applying for government jobs, getting promotions and receiving any kind of subsidy. Public servants who adopt the two-child norm will get multiple benefits including priority promotion

BIHAR

● 2007

- Any individual having more than two children cannot contest urban local body elections

ASSAM

● 2017

- People with more than two children cannot contest civic polls, hold govt. jobs and avail benefits of govt. schemes; not yet implemented

ODISHA

● 1993

- Bars individuals with more than two children from contesting civic body elections

MADHYA PRADESH

● 2000

- If the third child was born on or after January 26, 2001, one becomes ineligible for government jobs. In 2005, the two-child norm for candidates of local body elections was revoked

A high level 100-membered National Population Commission has been set up under the chairmanship of the Prime Minister on 11 May 2000 to supervise and analyse the implementation of this new population policy.

The National Population Policy 2000 — released on Feb. 15 — aims to bring the total fertility rate (TFR) to replacement level by 2010 and to achieve a stable population by 2045, at a level consistent with sustainable economic growth, social development, and environmental protection.

Addressing unmet needs for basic reproductive and child health services, supplies, and infrastructure is foremost among the policy's goals. Other goals are keeping girls in school longer, raising the age at which girls marry to 18 or 20, reducing infant and maternal mortality, and achieving universal immunization of children against vaccine-preventable diseases.

One well-publicized aspect of the National Population Policy 2000 concerns the allocation of seats in the Indian parliament. The policy recommends freezing the current number of seats for another 25 years to avoid penalizing states that have complied with previous population policies. The last allocation of seats to states and union territories was undertaken based on the 1971 census and was

due to be revised following the 2001 census. But if it were revised then, according to one estimate, the number of seats allocated to the state of Tamil Nadu, which has reduced fertility, would have gone down from 39 to 33. Meanwhile, the number of seats allocated to the state of Uttar Pradesh, which has failed to curb its growth rate, would have risen from 85 to 120.

The success of the population policy, if it is implemented, will depend on a judicious mixing of the roles of males and females. It is well known that women in India generally do not decide their reproductive behaviour. Although most contraceptive methods are for women, many women have no say in limiting their family size or in adopting a particular preventive method. The proposed policy would focus information and education campaigns on men to promote small families and to raise awareness of the benefits of birth spacing, better health and nutrition, and better education.

THE NATIONAL FAMILY HEALTH SURVEY 2019-21 (NFHS-5)

The National Family Health Survey 2019-21 (NFHS-5), the fifth in the NFHS series, provides information on population, health, and nutrition for India, each state/union territory (UT), and for 707 districts as on March 31st 2017. All five NFHS surveys have been conducted under the stewardship of the Ministry of Health and Family Welfare (MoHFW), Government of India. MoHFW designated the International Institute for Population Sciences (IIPS), Mumbai, as the nodal agency for all the rounds of NFHS. Funding for NFHS-5 was provided by the MoHFW, Government of India. ICF, USA provided technical assistance through the Demographic and Health Surveys (DHS) Program, which is funded by USAID. Assistance for the Dried Blood Sample (DBS) component of the survey was provided by the Indian Council of Medical Research (ICMR) and the National AIDS Research Institute (NARI), Pune. NFHS-5 fieldwork for India was conducted in two phases— Phase-I from 17 June 2019 to 30 January 2020 covering 17 states and 5 UTs and Phase-II from 2 January 2020 to 30 April 2021 covering 11 states and 3 UTs — by 17 Field Agencies and gathered information from 636,699 households, 724,115 women, and 101,839 men.

The first NFHS was conducted in 1992-93 and covered all states except Sikkim. NFHS-2 was conducted in 1998- 99 in all states with similar content and methods to those in NFHS-1. In addition, NFHS-2 provided information on reproductive health, women's autonomy, and domestic violence, women's and children's nutrition, anaemia, and salt iodization. NFHS-3 built on the strengths and successes of NFHS-1 and NFHS-2 by maintaining continuity in content and methods with an additional component of community-based HIV testing in the country. It also included a men's interview for the first time.

With additional components of CAB (clinical, anthropometric, and biochemical testing), NFHS-4 has contents like NFHS-3, maintaining the continuity and comparability in information. However, NFHS-4 provided information at the district level through increasing the sample size by nearly fivefold as compared with NFHS 3. NFHS-4 used a modular approach, where the last four sections of woman's questionnaire, interviews with men, and HIV testing were done only for the households included in the state module, and the information is provided only at the state level for those indicators.

SURVEY OBJECTIVES

The primary objective of the 2019-21 round of National Family Health Surveys is to provide essential data on health and family welfare, as well as data on emerging issues in these areas, such as levels of fertility, infant and child mortality, maternal and child health, and other health and family welfare indicators by background T 2 characteristics at the national and state levels. Like NFHS-4, NFHS-5 also provides information on several emerging issues including perinatal mortality, high-risk sexual behaviour, safe injections, tuberculosis, noncommunicable diseases, and the use of emergency contraception. The information collected through NFHS-5 is intended to assist policymakers and programme managers in setting benchmarks and examining progress over time in India's health sector. Besides providing evidence on the effectiveness of ongoing programmes, NFHS-5 data will help to identify the need for new programmes in specific health areas. The clinical, anthropometric, and biochemical (CAB) component of NFHS-5 is designed to provide vital estimates of the prevalence of malnutrition, anaemia, hypertension, high blood glucose levels, and waist and hip circumference, Vitamin D3, HbA1c, and malaria parasites through a series of biomarker tests and measurements.



UTTAR PRADESH STATE POPULATION POLICY 2020

On 7 July 2021, the Law Commission of Uttar Pradesh, a state in northern India, released a draft bill on population control. The Uttar Pradesh Population (Control, Stabilisation and Welfare) Bill, 2021, pursuant to the 2022 elections in the state, is purported to be a draconian draft to control the population of the State. The Bill did not come as a surprise as many believed it was long overdue that some measures were required to control the fast-growing population. The Uttar Pradesh Government, led by the ‘path-breaking leader and lawmaker’ Chief Minister Yogi Adityanath, went in for a strong-arm tactic instead of a non-coercive measure to achieve this objective to control the population. The poorly drafted Bill is also being criticized for being discriminatory, unconstitutional, dangerous, and a bundle of threats to many.

The goal of the Bill is to reduce the state’s fertility rate to 2.1 per thousand population by 2026 and 1.9 by 2030. Uttar Pradesh’s current fertility rate is 2.7 per thousand population. It is proposed to help improve the overall welfare of the people of the state, which would lead to sustainable economic development. However, it is noticed that the Bill, though introduced for a noble objective, has a great potential to lead to a political and demographic disaster. The makers were reckless while framing the Bill as they didn’t take into account the negative consequences it could potentially induce on the society at large, after its enactment.

Uttar Pradesh is not the first state to adopt such a regressive policy in India. Other states like Assam, Madhya Pradesh, Haryana, Rajasthan, and Odisha had also tried this population control technique wherein it was noted that such a two-child policy increased sex-selective and unsafe abortions, giving children up for adoption and men divorcing and deserting their spouse to avoid disqualification. The policy seems to be gender-blind, disproportionately impacting women and also the poor and marginalized sector of society.

ISSUES WITH THE BILL

The Bill can be said to divide the population into two groups: first, encouraging individuals along with their spouse to go for “voluntary” sterilization after their two children with government jobs, promotions, education, and increments; and second, debarring individuals with more than two children from applying to government jobs, promotions, subsidies. This makes it hard to ignore whether the sterilization is more “voluntary” or mandatory in nature to avail the opportunities provided. The objectives of the bill are not being realized by incentivizing sterilization and in fact are in violation of Article 14 of the Indian Constitution.

One of the disincentives mentioned in the Bill is the “bar on the application of government jobs”, and “bar on receiving any kind of government subsidy” for procreating more than two children. In Uttar Pradesh, where almost 32.8% of its population falls below the poverty line and in the current COVID pandemic situation where several people have lost their jobs or are being underpaid, the state government has proposed to debar such people from availing government facilities. The government seems to disentitle the state’s population relying on government subsidies and government job opportunities. These incentives and disincentives seem to be dividing individuals by making reservations based on “voluntary” sterilization in government jobs and promotion opportunities, which renders it in violation of Article 16 of the Indian Constitution. Therefore, the classification of individuals based on sterilization can render this Bill unconstitutional.

In a state like Uttar Pradesh, where patriarchy and misogyny are common and treatment of women is not commonplace, the Bill can have disastrous consequences on women and their personal health. In such a society it will not be wrong to assume that the majority burden will be borne by women to undergo sterilization operations risking her life. The data released by NFHS-4 claiming female sterilization as the most popular modern contraceptive (36%) amongst married women between the ages of 15 – 49 age portrays the unfortunate burden on the females. This data also shows that male participation in the sterilization process has decreased from 4% to 0.3% since NFHS-1 (1992-1993).

Undergoing the sterilization procedure is not the only problem; it would lead to other major consequences as well. The substandard health infrastructure in India and the poor hygiene of the government hospitals will have a severe effect on the individual's health whose likelihood of being a woman is exponentially high. The proposed Bill is likely to deteriorate women's health and their reproductive rights thus becoming unconstitutional since it violates the Right to Equality. To avail of the benefits and incentives in the Bill, one has to undergo a sterilization operation. Execution of this would mean that a sterilization certificate would be necessary to ensure access to these government benefits. This would result in two children being born in quick succession, which would only have an ill effect on the health of the mother.

The harsh reality of society leads us to believe that such a two-child norm would either leave us with a gender-biased policy or an exponential growth in female feticide, unsafe abortions, abandoning girl child, or even the husband deserting his wife along with the girl child. In a 2017 case, an Indian Netball player was asked for a divorce from her husband because she gave birth to a girl child; this case is not one of a kind. It shows the unfortunate reality of our country. If the woman is pressured into undergoing sterilization after the birth of one child, in the case, the child being a female or in the case of the child losing its life, there is every probability of the woman being divorced. In a society like ours, it would be acceptable for a man to lead a normal life and marry again. However, it would be the women who would have to face with an extremely uncertain future because of sterilization. This is not an exaggerated assumption. There are innumerable cases of women facing domestic violence, divorce, and death because they have only given birth to girls.

The Bill appears to have discouraged adoption culture in the state. Section 14 of the Bill shall apply to individuals having no child or one child born out of the marriage, subsequently having more than two children because of adoption. The outcome of the execution of the Bill may discourage adoption whilst increasing the abandonment of children. The Bill also precludes individuals governed by personal laws practicing polygamous and polyandrous marriages. They will be in contravention of the policy if they have more than two children from different marital relationships and will be exempt from these incentives under Section 19 – 21 of the Bill. Hence, making the policy discriminatory. It also provides an exception to be able to have a third child in case of a disability of the first or the second child according to Section 15 of the proposed Bill, which gives an impression of non-inclusion of children born with a disability and makes this policy prejudiced on that basis under Article 14 of the Indian Constitution. This selective relaxation in the policy would lead to increased atrocities against children, which is socially discouraged.

WHY THE CAMPAIGN: Population vs Planet?

"Population explosion will cause many problems for our future generations. But there is a vigilant section of public which stops to think, before bringing a child to the world, whether they can do justice to the child, give them all that she or he wants. They have a small family and express their patriotism to the country. Let's learn from them. There is need for social awareness." s

- Shri Narendra Modi, Prime Minister, India

Taking the vision of the Indian government forward, WION, in partnership with Mobius Foundation, launched a one-year-long social initiative called 'Mission Sustainability - Population v/s Planet'. The campaign was launched with a two-hour-long Thought Leadership Conclave in February 2021.

Technology has advanced in the last 100 years to give us television, satellites, space exploration, instant communication through apps etc. But today, the earth's resources are putting a limit to our growth. There is an urgency to act, in the short and long term, for the survival of civilization as we know it. Although the general population is aware that the future looks bleak, the causes are not immediately apparent to the common person. If we are to sustain our lifestyle, the people need to be made aware that the difficulty can be attributed to a single cause, namely overpopulation, nor is the solution (mitigation) apparent.

Human overpopulation is among the most pressing environmental issues, silently aggravating the forces behind global warming, environmental pollution, habitat loss, consumption of finite natural resources, such as fresh water, arable land, and fossil fuels, at speeds faster than the rate of regeneration. However, ecological issues are just the beginning. Overpopulation also has an impact on things like Housing, Poverty, Employment Opportunities and Education Index.

This Campaign on WION seeks to trigger an informed and engaging debate around the dynamics of population and its bearing on economic growth and our resource-scarce planet.

The Campaign was heavily promoted through Television and Digital platforms. The yearlong campaign included 12 featured documentaries covering different aspects of the population crises that the world faces, short format content (news stories), a survey and a culmination event.

Every month a new featured documentary episode aired which was focused on topics like Climate Change, Biodiversity & Natural Resources, Energy & Non-Renewables, Education & Women Empowerment, Water Resources, Air, Food & Agriculture and Jobs Housing & Infrastructure.

DATA COLLECTION METHOD (Sample Size 153)

Survey Cities: Districts of Kharkhoda, Sonipat, Pipli, Jharoth, Jindh, Kanhai, Panipat, Hisar, Sirsa districts and Mega cities: Delhi, Mumbai, Noida, Bengaluru.

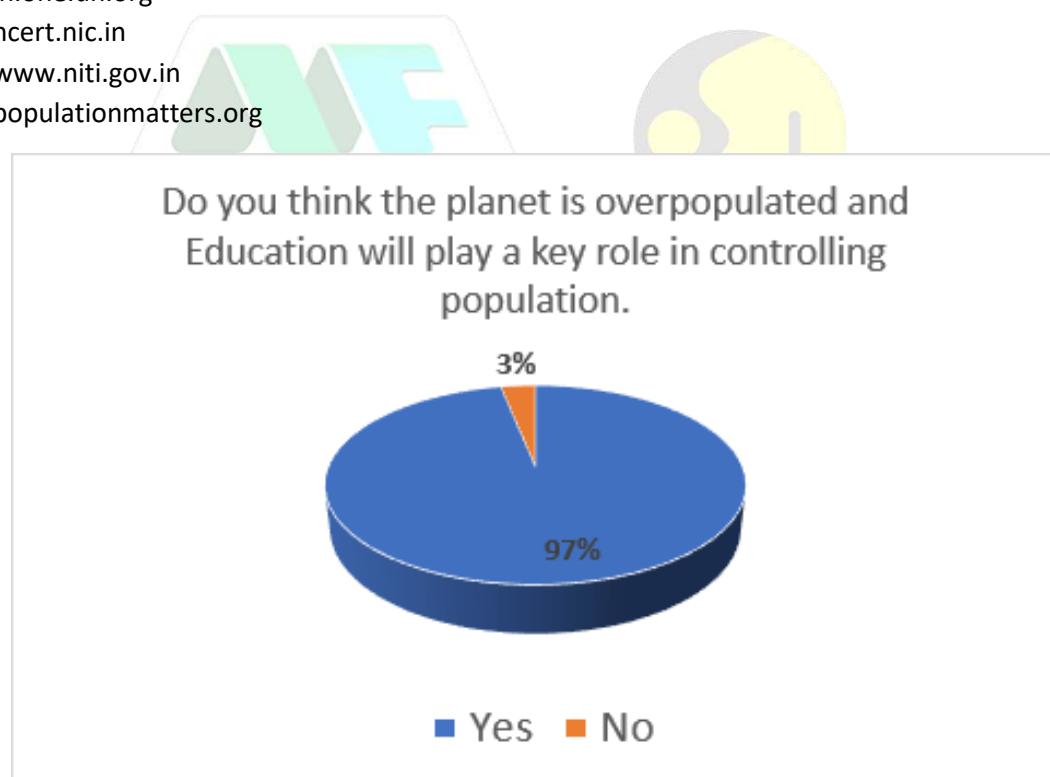
- Age Group: 15-55 years
- Gender: Male: Female 60:40
- Urban: Rural: 50:50

Primary Data Collection Method

- Interview (Unstructured & Semi Structured)
- Focus Group & Group Interview
- Observation
- Document & Records
- Case Study

Secondary Data Collection Method

- www.mobiusfoundation.in
- in.one.un.org
- ncert.nic.in
- www.niti.gov.in
- populationmatters.org



Findings:

All demographics across Urban & Rural India are aware about over population and all are in consensus about what education can do to slow down the harmful effects of this menace. 97% of the respondents agree that the planet and the environment face a serious threat from over population and that it leads to more waste, depleted natural resources and biodiversity which will in turn adversely affect their own lives or the lives of their future generations. They agreed that family planning measures need to adopt across every household and each of them are doing their bit to contribute to the cause.

THE LAUNCH

MISSION SUSTAINABILITY: Population Vs Planet

Launch Time: 1700 Hours- 1900 Hours

Channel: WION

Date: 20th Feb 2021

Hashtags: #MissionSustainabilityConclave #PopulationVsPlanet

The Launch was framed to put the spotlight back on human population growth and related problems. There are more than 7.8 billion people on earth right now. The world's population may be growing, but the natural resources are finite. The human race is fulfilling its material needs selfishly, unsustainably. The planet is bearing the brunt of our actions. Climate change, depleting natural resources, air-water-and-land pollution, hunger and poverty, are all intrinsically linked to population growth.

Started with the Audio Visual which included Honourable Prime Ministers Message on Increasing Population: “Population Explosion can cause numerous new problems for us and our future generations, but there is a vigilant section of public that is aware of this issue”

Keeping in line with the Government of India initiative to stabilize population Project Aakar is aimed at tackling the problem of increasing population in India. The program is designed to burst age-old myths, changing mindset and promoting the use of modern contraceptives among couples. Piloted in Uttar Pradesh, the program educates young couples on the importance of reproductive health and family planning in district Barabanki and Bahraich.

Dr. Harsh Vardhan, Health Minister expressed his appreciation on launching this year long awareness campaign. He further said that “population boom has been affecting the planet and the human race in many ways, people in developing countries like India feel the impact of environmental problems more acutely.”

Launch session was divided in to three segments

SESSION 1: POPULATION VS PLANET: SUSTAINING THE BALANCE

Anchor: Akanksha Swaroop

Panellist:

- Mr. Rameshwar Prasad Gupta,
Sec. Ministry of Environment Forest and Climate Change
- Dr. Madhavan Nair Rajeevan,
Sec. Ministry of Earth Science India
- Mr. Pradip Burman,
Chairman Mobius Foundation

Questions Addressed during the session were

- 1. What are the biggest sustainability challenges we are facing today and how are they linked to overpopulation?**
 - a. Climate change and Air Pollution is the direct visible problem which is resulting due to over population, and the more people increase in number more climate related problems will become apparent in no time. – *Pradip Burman*
- 2. What is the biggest impact of climate change in India?**
 - a. Disruptive climate pattern, more intense rainfall, more floods, dry spells, landslides, tropical cyclones, heat waves and much more. Sea level is rising due to increase in CO2 level. - *Dr. Madhavan Nair Rajeevan*
- 3. Over population is the real reason for global warming?**
 - a. Over population will become a problem when our lifestyle is such that we are exploiting the earth resources and our consumption pattern is increasing, and we are not recycling the resources. People should be urged to switch to sustainable lifestyle. - *Rameshwar Prasad Gupta*
- 4. Global consumption of fossil fuels has gone up by 78% in last 3 decades, what is the impact of that?**
 - a. Due to increase in CO2 level in the atmosphere there is lot of pressure on US to cut down the consumption of fossil fuels and earth natural resources and move towards green energy. India is progressing in a much faster way towards green and sustainable energy solutions. CO2 is uniformly distributed gas only a particular country cannot be blamed. All of us should take the necessary actions including developed and developing countries. -*Dr. Madhavan Nair Rajeevan*
- 5. Rapidly expanding urban culture has taken a huge toll on its rivers and have generated the problem of water crisis? Are the steps and reforms enough to tackle this problem?**
 - a. India is water starved country, urban area produces around 75,000 MN Litre. sewage a day, whereas our capacity to treat sewage water is 30,000 MN Litre per day and actual operation of treatment is around 20,000 MN Litre per day. Govt is working on increasing the capacity to treat sewage water to fill this gap. - *Rameshwar Prasad Gupta*
- 6. Is climate change fear mongering?**
 - a. 90% of people and scientist believe in climate change we need not worry about the 1% of people who are being sceptical about it. Govt. of all countries should take strong stand to act against climate change. – *Pradip Burman*

7. How is the population crisis affecting Indian in particular in terms of ecological changes?

- a. The main cause of global warming is total emissions, and more population will add up to more consumption of resource, more greenhouse gas emissions. Even though our lifestyle is not as big as US and Europe but due to numbers we are levelling up to the same level of emissions generated by these countries. - *Dr. Madhavan Nair Rajeevan*

8. Impact of overpopulation on biodiversity?

- a. Due to overpopulation and urban expansions species of birds and animals are getting extinct. When once species die out other species take over which is not good for the local biodiversity. Human population is generating so much of waste, which is not attended and taken care of thus affecting biodiversity - *Rameshwar Prasad Gupta*

Urgency of Paris agreement should be emphasised, and message should be brought forwards that we are not doing enough for our next generation to survive.

WAY FORWARD: EDUCATION IS THE KEY to avert climate change and population control. Population control s the need of the hour and we cannot run away from it.

FIRE SIDE CHAT WITH MR. PRADIP BURMAN, CHAIRMAN, MOBIUS FOUNDATION

1. Mission of the foundation:

- a. It is for the survival of the planet and to revive the planet in whatever best way possible Mobius Foundation was launched in 2015. Mobius is focusing on two main objectives EDUCATION and POPULATION STABILISATION

2. What needs to be done right now to ensure earth's finite resources don't run out?

- a. Two solutions can be implemented right away RECYCLING and RENEWABLE ENERGY. If we can attain 100% of these two things, then our problem is solved.

3. Indian is on the right tract when it comes to population Strategy?

1. First, we must stabilise the population and then work upon reducing the population. We cannot enjoy the current lifestyle with even a population being one half of what it is today. Earth's resources put a limit to our growth.

4. Do you think the country needs a law to check the exponential growth of population?

- a. Having a law will absolutely be the wrong way of approaching the whole thing. The fact that PM has taken notice is a big thing. Population Control should be addressed through a Mission rather than having a law for it to be successful. Govt. cannot do everything it can just inspire people to do, and NGOs and individuals should play their respective roles to control population and fill in the gaps.

5. Vision of campaign Mission Sustainability: Population Vs Planet

- a. Try and garner the youth and get the youth to involve in the sustainability efforts as many hands will make less work

SESSION 2: POPULATION STABILISATION: THE ROAD MAP

Anchor: Ms. Priyank Sharma

Panellist:

- Dr. Ram Boojh, CEO Mobius Foundation
- Ms. Poonam Muttreja,
Executive Director of the Population Foundation of India (PFI)
- Ms. Shailaja Chandra,
Former secretary to the government of India and former chief secretary, Delhi
- Mr. Manu Gaur,
President, Taxpayers Association of Bharat (TAXAB)

Questions Addressed during the session were

1. **Drawing the context on Indian being the second most populous country in the world.**
 - a. Rise in population can be termed as population momentum. India needs to focus on sustainability issues. Prevailing inequalities and resilience between gender, societies, communities should be tackled in a systematic way. – *Dr. Ram Boojh*
2. **Are family planning schemes lacking in any respect with respect to govt. initiatives?**
 - a. Population should be seen in terms of TRF (Total Fertility Rate). Except for Bihar and Uttar Pradesh TFR is under control in India. We have the huge population dividend. Education and good health are imperative for young work force. We need to increase investments to provide quality family planning to women and men of reproductive age. Family planning budget which should have been significantly increased got decreased in the latest budget. Women should also be empowered to understand their rights. Investing in human capital and family planning can increase the GDP by 13% and is the key to achieve population stabilisation. - *Shailaja Chandra*
3. **How effective do you think these government policies have been in planning families?**
 - a. Country requires a responsible parenthood Act, which will tell couples that if small family norms are being followed that what all benefits will be at their disposal - *Poonam Muttreja*

SESSION 3: EDUCATION AND AWARENESS

Anchor: Ms. Palki Sharma Upadhyay

Panellist:

- Dr. Ram Boojh,
CEO Mobius Foundation
- Kartikeya Vikram Sarabhai,
Founder and director, CEE
- Prof. Saroj Yadav,
Dean (Academic) NCERT
- K.S. James,
Director, International Institute for Population Sciences (IIPS)

Questions Addressed during the session were

- 1. Is there still lack of education and awareness around population stabilisation? – Addressed to Dr. Ram Boojh**
 - a. Education leads to lower birth rates and slows population growth. This makes it easier for countries to develop. A more-educated workforce also makes poverty eradication and economic growth easier to achieve.
 - b. Literacy rate is directly proportional to fertility rate.
 - c. Lack of formal education on matters related to population, like family planning, sexual education, reproductive behaviour, cultural and social values, contraception is missing from educational structure
 - d. This should not be a controversial subject, rather taken to younger generation and young couples openly
- 2. Link between Education and Population, should men be equally driven to participate in family planning? – Addressed to Kartikeya Vikram Sarabhai**
 - a. It's not about reproductive education but in general 'Female literacy rate'. Female education should be the area of focus, empowerment will bring the desired result in population control. But in addition, there a lot of stigma attached to male population control measures and this can only be changed through a major education campaign specifically for male participation in family planning. Also, with female education there should be some earning possibilities as-well.
- 3. Why does gender disparity continue to exist in India? What effect does it have on population growth? Addressed to Prof. Saroj Yadav**
 - a. Indian education majorly focuses on IC Education "Intercultural competence", We should also focus on behavioural education to bring about attitude change towards male and female child preference and family planning. Irrespective of right to education act, the negative attitude of parents, poverty, accessibility of schools and educational centers, lack of adequate facilities, regional variations etc. also play a major role in gender disparity.
- 4. Population challenges of phase 1 of survey 5 by " National Family Health Survey (NFHS)" ? – Addressed to K.S. James**
 - a. There has been substantial progress in the population front also in the health front over the last five years. TFR has also reached the replacement level in the past decade i.e. 2.1 on an average. But there is heterogeneity across states which should be taken into consideration. Like UP and Bihar have TFR of 3.2 whereas states like Sikkim and Kerala has TRF of 1.1 and 1.8 respectively
 - b. It is not only education as a whole that matters and affects population, rather the kind of information given and society attitude towards women and family planning also play a key role in making a difference.
 - c. Right information should be imparted through various means rather than just the formal structure of education and that's perhaps the best way for the country to move forward
- 5. How do we overcome taboos associated with family planning? Addressed to Dr. Ram Boojh**
 - a. Major taboos that prevail are, male sterilisation, preference for male child, thus to overcome these taboos attitude shift is required and that will only come through right information dissemination and focussed education.

6. Is government doing enough through education to tackle this particular topic? - Addressed to K.S. James

- a. NISHTHA is a capacity building programme for "Improving Quality of School Education through Integrated Teacher Training". This programme consists of special module that will focus on population control.
- b. Apart from this Govt. is taking route of experiential learning, where children will learn through participatory mode which will help change attitude and behaviours of children. Role play, case studies, Value clarification approach will be the mode of learning.

SPECIAL MESSAGE BY AMITABH KANTH, CEO, NITI AAYOG

The population Explosion is a burning issue before every nation of the world. It is also a global problem, a social problem and economic problem. There is a greater need for discussion and awareness on population problem. The National Population Policy (NPP) finally came into force in 2000. The Policy states that the "immediate objective of the NPP 2000 is to address the unmet needs for contraception, healthcare infrastructure, and health personnel, and to provide integrated service delivery for basic reproductive and child healthcare.

Family planning is considered universally as the smartest development investment For India to realize its sustainable development goals and economic aspirations, it is important to ensure that people have informed access to contraception and quality family planning services

Solutions Brought Out:



- Curbing unsustainable population growth
- Reduction of Environmental Degradation
- Reduce carbon footprint
- Increase in rate of carbon capturing techniques
- Controlled use of Natural resources
- Education on being water wise
- Using electric vehicles as an alternative to petrol and diesel vehicles
- Using more public transport when available



POPULATION AND CLIMATE CHANGE

Objective:

It is a scientifically established fact that human activity over the past century is a major contributing factor to climate change. To build a sustainable planet, it is important to reduce the long-lasting impact of industrial activity on earth. In recent years, the concept of the circular economy gained ground.

What is circularity? Nature thrives in it. In simple terms, it is what happens when a leaf falls. It goes back into the earth and becomes the fodder for more trees to grow. Nature has cracked the code on circular economy long ago. It is time for people to follow their lead.

A circular economy seeks to eliminate waste and use our planet's resources responsibly, mainly through reuse, sharing, repair, refurbishment, remanufacturing, and recycling.

The idea is to reduce the use of the earth's precious resources and cut the creation of waste which also leads to pollution and carbon emissions. The loop model of using resources involves waste material becoming inputs for other industrial processes.

With its upcoming International Centre for Sustainability Education (ICSE), Mobius Foundation is spearheading efforts to create awareness about a sustainable planet.

Issues Addressed:

The largest single threat to the ecology and biodiversity of the planet in the decades to come will be global climate disruption due to the build-up of human-generated greenhouse gases in the atmosphere. As per the statistics released by the Indian Meteorological Department (IMD), average temperature in India has increased by about 0.6° Celsius between 1901 and 2018. This increase in the temperature is largely due to the atmospheric warming induced by greenhouse gas emissions. India has been facing the consequences & the wrath of climate change frequently.

Experts part of the Episode:

Mr Pradip Burman

Founder, Mobius Foundation

Key Message:

Climate Change is already visible to us in the number of Cyclones, Hurricanes and Melting of Glaciers. It is right now possible for us to slow down the effects of Climate Change but once we reach the tipping point, then there is no turning back. We need to be Water-wise, Drive Less and use public transport and have smaller families to reduce our individual footprint. Small Acts done by individual can collectively lead to a big change. As modern lifestyles are adding immensely to our carbon footprint, we need to make conscious lifestyle changes.

Dr Mrutyunjay Mohapatra

Director General of Meteorology, India Meteorological Department, Government of India

Key Message:

Director General of Meteorology, India Meteorological Department, Government of India
In the recent years, whatever change we see in the rising temperatures on the surface of the earth is due to Human Activities. The Heatwaves across several parts of India have been increasing in frequency over the years. Increase in population leads to increased Global Warming.

Ms Karuna Singh

Regional Director ASIA, Earth Day Network

Key Message:

Climate Change Crisis is very severe but there is also hope that it can be reversed. Climate Change is not affecting just the heat, water and resources but will also affect Political Boundaries, Peace and Health. Climate Change is not only depleting water on the planet but we are faced with also a greater demand for water which will lead to water-wars in drought struck areas.

Prof K S Rao

Professor & Head, Department of Botany, Delhi University

Key Message:

Since we are not able to control population, we are rapidly using up natural resources and also increasing carbon emissions. Along-with curbing population growth and judicious use of natural resources, we need to increase the rate of Carbon Capturing Techniques and decrease the rate of Carbon emissions. Increase in temperatures is increasing the acidity of Sea-Water which harms the marine biodiversity. Destruction of coastal vegetation also leads to more cyclones.

Mr Laxman Singh

Water Conservationist

**Key Message:**

Everyone should participate collectively and work towards progress and peace. He invented the Chauka System for water conservation in the drought hit regions of the state of Rajasthan. The system works by reuse of water through linked systems and also ensuring afforestation in the process. They executed the project 40 years ago and wish to expand his efforts. Through their work the ecosystem of his village and 58 adjoining villages has improved tremendously.

Solutions Brought Out:

India is the only major country to be on track to achieve its targets set out in the landmark Paris climate agreement, according to the UN Environment Program's Emission Gap Report. For instance, India plans to reduce the emissions intensity of GDP — the volume of carbon emissions emitted for every unit of GDP — by around 35% by 2030 from 2005 levels.

"India has achieved its voluntary target of reducing emissions intensity of its GDP by 21% over 2005 levels by 2020," the country's environment minister said last November.

The country is also nearing its 2015 goal of achieving about 40% share of non-fossil fuel-based electricity generating capacity, which the government expects will be achieved by 2023 — seven years ahead of schedule. People around the world are beginning to address the problem by reducing their carbon footprint through less consumption and better technology. But unsustainable human population growth can overwhelm those efforts, leading us to conclude that we not only need smaller footprints, but fewer feet.

PEOPLE, BIODIVERSITY AND NATURAL RESOURCES

Objective:

Our planet's biodiversity is under threat and ironically, we humans are the main offenders - the same species that depend the most on it, is behind the destruction. Slowing down biodiversity loss is perhaps one of humanity's greatest challenges today.

The age of our planet is estimated to be 4.5 billion years, of which human beings have only existed for 200,000 years, i.e., for not even 0.5 per cent of the time and yet compared to any other species, we have had a far greater impact on our planet's health.

In recent years, the human population has grown exponentially, yet the landmass available to us remains the same.

By some estimates in the last 50 years itself, our species population has doubled. The growing number of humans has led to a growing demand for resources, which has led to overexploitation of the earth's natural resources. Our demands have mostly been achieved at the expense of forests, wetlands & marine ecosystems worldwide.

Numerous forests have been levelled to accommodate our species' growing population, disrupting ecosystems, and causing tremendous loss to biodiversity.

One of the primary demands, food, is behind the largest negative impact. To meet the growing demands, agricultural expansion happened, terrestrial land use was changed. Almost 50 per cent of the global land area is used for agriculture, causing an estimated 80 per cent extinction threat to animal and bird species. According to the Food and Agriculture Organisation of The United Nations, agriculture accounts for up to 80 per cent of global deforestation and is the number one cause of deforestation.

Issues Addressed:

The world's population has more than tripled in the 20th Century, and continued growth is assured over the next 50 years, especially in the developing countries. Humankind's burgeoning numbers have an increasingly voracious appetite: people use or destroy about 40 percent of the net primary productivity of terrestrial and aquatic plants. Population growth and increasing resource consumption affect biodiversity in two ways: they create pressure to convert wildlife habitat into agricultural and urban land, and they produce wastes that pollute habitat and poison wildlife.

Experts part of the Episode:

Mr Pradip Burman

Founder, Mobius Foundation

Key Message:

Space on earth is limited and as we cut the forests animals have less place to live resulting in biodiversity loss. In Haryana we have coordinated with the student community and village communities to plant more trees. Almost 60% of the trees planted survived. Also, in Coorg we are planting endangered trees as well as normal trees.

Dr Ram Boojh
CEO, Mobius Foundation

Key Message:

Forests are being lost at a rapid pace. The loss is mainly because of conversion of forest land into non forest land specially into agriculture land. Also, forest are also being lost because of forest fires which are more dangerous in mountain areas because of pine trees which burn fast and damage the whole forest.

Mr Anish Andheria
President, Wildlife Conservation Trust

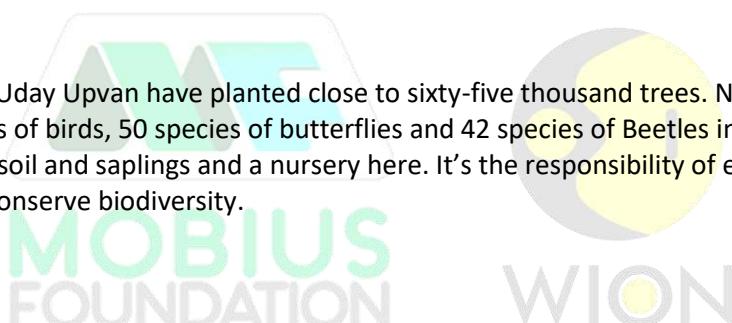
Key Message:

Nearly one fifth of the Amazon rainforest has been degraded in the last 15 years and the rate of degradation is going up now. The oceans are also polluted as toxic waste, chemicals and garbage is being dumped in oceans in developing countries.

Swami Prem Parivartan (Peepal Baba)
Environmentalist, Give Me Trees Trust

Key Message:

We under Uday Upvan have planted close to sixty-five thousand trees. Now we have close to 150 species of birds, 50 species of butterflies and 42 species of Beetles in this area. We have water and soil and saplings and a nursery here. It's the responsibility of everyone on the planet to conserve biodiversity.



Dr V B Mathur
Chairperson, National Biodiversity Authority (NBA)

Key Message:

Illegal wildlife trade is a big issue nowadays. Magnitude of the trade is from anywhere between 7 million US Dollars to 23 billion US Dollars. Therefore, it is very important to control the same. Diseases like Covid also originate from countries like China where wild animal meat and domestic animal meat is sold in wet markets. The blood and tissue mixes and diseases from animals go to humans.

Prof Saroj Kanta Barik
Director, CSIR - National Botanical Research Institute, Lucknow

Key Message:

Lot of expansion of agriculture land into forest area is being done without taking care of biodiversity specially plant biodiversity because of which many species are being lost.

Solutions Brought Out:

It's important to remember that without biodiversity, there's no future for humanity. In 2020, the World Environment Day focused on biodiversity, calling upon governments to save at least 30 per cent of our planet's land and oceans by 2030. In order to reach the goal of protecting such a large swathe of the surface area of our planet, nations and citizens need to collaborate. No one wants to imagine Earth without all the thousands of amazing life forms that make up our ecosystems. However, mass extinction of a variety of species is a very real threat. Sustainable living, sustainable development and a sustainable population growth are the only ways to combat this threat and these trends can be offset by stabilizing populations, using resources more efficiently, recycling, and controlling pollution.

POPULATION AND ENERGY CRISIS

Objective:

In the world we live in today, energy is required for almost everything. From powering your car to keeping the lights on in your home, energy is needed not only for your daily needs but also for producing everything that humans consume. As the population soars unsustainably, so does the energy demand.

The demand in global energy consumption is expected to grow significantly in the coming decades – let's look at some figures.

With the global population expected to increase by 2 billion in the next 2 decades, electricity generation is estimated to increase by almost 49% by the year 2040.

For 2021, the International Energy Agency – IEA estimates a growth of 4.6%, with more than two-thirds of the current increase in demand coming from developing economies and emerging markets, with a significant increase in the demand for fossil fuels.

Reports also suggest that the demand for coal alone is projected to increase by almost 60% more than all renewable energy sources combined, leading to a rise of almost 5% in global emissions.

Issues Addressed:

In the world we live in today, energy is required for almost everything. From powering your car to keeping the lights on in your home, energy is needed not only for your daily needs but also for producing everything that humans consume. As the population soars unsustainably, so does the energy demand. The demand in global energy consumption is expected to grow significantly in the coming decades – let's look at some figures. With the global population expected to increase by 2 billion in the next 2 decades, electricity generation is estimated to increase by almost 49% by the year 2040.

For 2021, the International Energy Agency – IEA estimates a growth of 4.6%, with more than two-thirds of the current increase in demand coming from developing economies and emerging markets, with a significant increase in the demand for fossil fuels. Reports also suggest that the demand for coal alone is projected to increase by almost 60% more than all renewable energy sources combined, leading to a rise of almost 5% in global emissions.

All forms of electricity generation have an environmental impact on our air, water, and land. Governments need to invest in improving the efficiency of energy use to reduce the environmental

impact of our energy consumption. This will require us to transition from contemporary technologies to renewables. The challenge will be the hardest for developing countries like India, where the high rate of population growth is coupled with high pressures on economic and environmental resources.

The energy problem we face today can threaten human wellbeing in pervasive ways. The truth is that most of the world's population does not have access to sufficient energy to meet even the most basic human needs – this is unfair. And meeting the ever-growing demand for energy worldwide, that too in a sustainable manner, is a key challenge that needs to be overcome.

Experts part of the Episode:

Mr Pradip Burman

Founder, Mobius Foundation

Key Message:

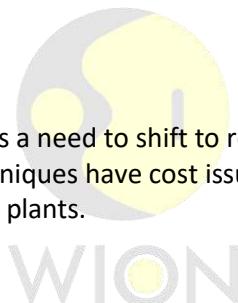
Any increase in population means more increase in demand for energy. We will soon have to shift to renewable sources of energy. We should conserve natural resources as much as we can.

Dr Ram Boojh

CEO, Mobius Foundation

Key Message:

India is currently dependent on coal and gas. There is a need to shift to renewable energy like wind and solar. Issue is modern sustainable techniques have cost issues. Wind and solar plants cost 4 to 5 times more than coal based power plants.



Ms Vibha Dhawan

Director General, TERI

Key Message:

We can't afford for temperature to go above 2 degrees over normal. Fossil fuels usage must be stopped. Smoke from firewood also causes a lot of harmful effects to humans. We need to move to sources like biogas which is clean fuel for people. If we move in the right direction with green energy, then we will surely succeed.

Mr Chandra Mohan Jain

President, Power & Energy Consultants

Key Message:

Solar energy is the cheapest form of energy but can only be derived 9 to 11 hours a day. Wind energy is the second-best form of energy available. India has a target of 175 GW of renewable energy by 2022. We have already achieved 75 GW by Mar 2021 and another 30 GW will be installed by 2022 end. India is 70% on aim and there is some slowdown because of pandemic.

Solutions Brought Out:

The fact is that population growth is driving all of our resource problems, including energy. Slowing the population growth will automatically reduce the energy demand. But there is hope – the world is witnessing a transition from non-renewable sources to renewable sources. Renewable resources like solar energy & wind power are among the fastest emerging energy sources that are being adopted at a rapid pace worldwide. Their integration is essential in decarbonising the power sector, for the population to evolve sustainably, while avoiding environmental destruction and pollution. Supportive policies, increased availability, and lower costs will go a long way in popularising renewable energy sources in the next few decades.

EDUCATION & EMPOWERMENT- KEY TO POPULATION STABILIZATION

Objective:

Today there are more than 7.8 billion people living on our planet and the population is projected to exceed 9 billion by 2050.

Our ever-increasing population is pushing the planet to the limit, by depleting natural resources, and generating too much waste - leaving behind wide-spread wastelands and polluted waterbodies. The impact of our growing numbers on the natural environment, non-renewable resources and environmental degradation has multiplied to unsustainable levels. These consumption patterns can soon surpass our planet's carrying capacity and ability to regenerate. However, there are many more interrelated factors that lead to overpopulation such as progress in food production, increased migration of people to urban areas, lack of family planning consciousness and services, and the most pressing cause of all – a lack of education and awareness among females.

Poverty and illiteracy have been the two major drivers of overpopulation in India. Impoverished families or families living below the poverty line often believe in the idea that the more family members they have, the greater their chances are of earning a better living. They tend to overlook education as a key to improved living standards.

Another issue adding to the overpopulation problem, is the early marriage of girls. The idea of early marriage still prevails in many parts of the country - leading to girls having a longer reproductive life span and bearing more children.

Issues Addressed:

For any society to develop, women need to play a central role. Their voices and participation are crucial to overcome patriarchal mindsets, and the road to development requires both men and women to get an education. The positive relationship between education and women's empowerment can reduce child labour, child marriage, illiteracy and female feticides and other evil norms. Without education women will have less opportunities for making a change. Poverty, unemployment and inequality are problems that cannot be solved by man alone and requires women's participation in an active and equal way.

Also, when it comes to women's empowerment, the men's participation in the training is also important, as they also need to be aware of decisions that their family will take, be on board with choosing to use birth control, to have children later in life, and choosing to have a smaller family. Having men participate in the learning can change their mindset, strengthen the family bond, and understand the bigger picture, empowering women to take decisions with them on board.

Experts part of the Episode:

Mr Pradip Burman

Founder, Mobius Foundation

Key Message:

Project Aakar is on education and stabilising population for sustainability of the planet. In Brabanki and Bairich there is high TFRS. We have to create awareness between young couples about only having two children.

Dr Ram Boojh

CEO, Mobius Foundation

Key Message:

Project Aakar is on shaping size of family and the objective is to frontend population control through education and empowerment. We counsel women, distribute contraceptives and education leading to empowerment.

Ms Shilpa Nair

Population Foundation India

Key Message:

We need more education about family planning. Community mobilisation is important to delay first pregnancy in adolescent couples. Prioritise couples who want to adopt family planning methods and make sure they get quality services around the same.

Ms Huma Masood

Senior Gender Expert, UNESCO

**Key Message:**

Women are equal contributors and should be part of work force. Through education families will realise that early marriage is detrimental for the woman. If women get good education and nutrition, they will be part of the inclusive growth of the country.

Mr Argentina Matavel Piccin

Representative, United Nations Population Fund, India & Country Director, Unfpa, Bhutan

Key Message:

I would like women to have a choice about why and if and spacing between children. They need education about family planning and contraceptives not too far from their home. Women will make the right choices if they are educated about modern techniques of contraceptives. Education level of couples is very important and more so for the woman.

Dr Ramji Verma

Chief Medical Officer, Barabanki, Uttar Pradesh

Key Message:

India population is close to 135 Cr and population adversely effects all kinds of development in a country. UP has 25.6 birthrate in 1000 people and Barabanki has 26.4 in 1000 people. We have undertaken new policies and a decline in population has been seen in this area in last 3 years. We also require assistance of institutions for remote villages.

Dr Satish Kumar Singh

Chief Medical Officer, Bahraich, Uttar Pradesh

Key Message:

Mobius has taken over 100 villages and managed to counsel 28000 couples about family planning

Solutions Brought Out:

The series was released to understand more about the state of overpopulation and family planning efforts in one of India's most populous states 'Uttar Pradesh' and to find out what Mobius Foundation's Project "Aakar" is doing on the ground. The project aiming to tackle the problem of overpopulation in India while keeping in line with the government's plans to stabilize population, is also aiming to bust old myths, and change mindsets of young people. The work carried out by on-ground volunteers, ASHA workers and coordinators, involves promotion of modern contraceptives among couples, educating youngsters on reproductive health, and also family planning and its importance.



Objective:

Air is important for the survival of all beings. The quality of life we live depends a great deal on the quality of the air we breathe in; while we can survive days without food or water, we cannot survive for more than a few minutes without air. However, air pollution has become one of the largest threats to environmental and human health, making access to clean air a global issue.

A rapid increase in the human population, industrialisation, deforestation, economic growth, and vehicular emissions have been attributed as major drivers for the continuous deterioration of air quality. The ever-growing global population accelerates greenhouse gas emissions, resulting in a negative impact on air quality.

The World Health Organization (WHO) estimates that globally, around 7 million people die every year from indoor and outdoor air pollution. Around 92 per cent of the world's population breathes air with high levels of pollutants exceeding WHO guidelines. Effects of air pollution on human health are serious. Diseases like asthma, lung cancer, pulmonary illnesses, and heart diseases can all be associated with air pollution and the poor air quality we inhale.

Issues Addressed:

Air is important for the survival of all beings. We can survive days without food and water however, without air we cannot survive for more than a few minutes. The quality of life we live depends a lot on the quality of the air we breathe in. However, access to clean air has become a global issue as air pollution is now considered to be one of the largest threats to environmental and human health. The World Health Organisation (WHO) estimates that globally, around 7 million people die every year from indoor and outdoor air pollution. Almost 99 per cent of the world's population breathes air containing high levels of pollutants that exceed the WHO guidelines.

Increased industrialisation leads to environmental degradation in terms of industrial pollution. High emission levels of pollutants like smoke, fumes, and toxic gases from industries not only degrade the air quality but are also causing severe damage to our ecology and health. The effects of air pollution

on human health are serious. Diseases like asthma, lung cancer, pulmonary illnesses, and heart diseases can all be associated with air pollution and the poor air quality we inhale.

More than one in every four deaths of children under 5 years of age is directly or indirectly related to environmental risks. Both ambient air pollution and household air pollution contribute to respiratory tract infections that resulted in 543 000 deaths in children under the age of 5 years in 2016.

Experts part of the Episode:

Mr Pradip Burman

Founder, Mobius Foundation

Key Message:

Delhi is the most polluted city on Earth and the major cause of this is huge population and vehicular pollution. The other reason is the amount of energy used per person and this amounts to increased amount of coal dust in the air. The most effective way to curb this will be phasing out the use of coal and replacing this with renewable sources of energy. Along with this we need to clean industrial emissions by precipitation process so that only clean air is released after combustion.

Dr Ram Boojh

CEO, Mobius Foundation

Key Message:

Access to clean air is a Global challenge due to rapid industrialization, urbanization, and lifestyle changes. Nine out of ten people in the world are exposed to bad air quality. The United Nations Secretary General has stated that there is an urgent need to clean air quality across the globe. The worst hit by air-pollution are the metro cities due to rising population and rapid development. Adjoining rural areas are also madly affected due to ancillary industries such as brick kilns.

Ms. Anumita Roy Chowdhury

Executive Director, Centre for Science & Environment

Key Message:

Growing Economy and use of fossil fuels is rapidly deteriorating air quality. According to WHO, number of children below five years of age, dying due to air pollution is rapidly growing and children today are being born with smaller lungs which makes them vulnerable to a host of diseases once they become adults. Despite Delhi taking a number of measures to control pollution, efforts still need to go up by 60% to meet air quality benchmarks and more regulations need to be in place.

Mr. Awkash Kumar

Founder, Sage

Key Message:

Particulate matter and hazardous gases are what deteriorate the air quality in cities and these need to be removed by treating the emissions. Continuous deterioration of air quality harms the human body in several ways, hence prevention of release of such gases in the air is of utmost importance.

Dr Shikha Jindal Gupta

Pulmonologist

Key Message:

Cities are worst affected due to widespread industrialization, development and deforestation associated with this. Particulate matter in air causes irritation in eyes, skin and respiratory systems of Human Beings and also causes exacerbation of other diseases. Unborn Children in the womb and new-borns are the most vulnerable as it retards their lung development in early years. More and more younger people and non-smokers are also reporting lung cancer.

Mr. Barun Aggarwal

Founder & CEO, Breathe Easy Consultants

Key Message:

Taking cue from their work done for Paharpur Business Centre, Delhi that was certified as 'Delhi's Healthiest Building', Breathe Easy are applying air-purifying techniques and designing spaces in such a way so as to minimise the effect of air pollution. Using air-purifying plants indoors and creating a Greenhouse like surrounding enhances thinking ability and physical well-being. They aim to impact at-least a hundred million people through their work and one way to do this is to bring down technology costs that are applied for air-purification.

Mr. Anwar Ali

Sr Environmental Engineer, Delhi Pollution Control Committee

Key Message:

Occurrence of air-pollution and smog in Delhi is a menace every year and the committee has installed two air-purifying towers in the city at strategic locations. These towers are equipped with five thousand filters each to ensure they filter our particulate matter and smoke in the area. These filter out thousand cubic metres of air per second.

Solutions Brought Out:

The latest global air quality guidelines from the World Health Organisation (WHO) aim to curb the prevailing air pollution globally and in turn save millions of lives. As per the WHO guidelines, 80 per cent of deaths related to Particulate Matter 2.5 (PM 2.5) could be avoided, provided that all countries reduce their current air pollution levels to the levels mentioned in the guidelines. Air pollution is a silent killer. But it can be curbed with a strong commitment and effective planning. A strong emphasis on expanding renewable energy, promoting electric vehicles, and supplying LPG cooking fuel to millions of households are some examples of the actions India is taking to combat air pollution. The air pollution crisis will require innovative, collaborative solutions from public, private, and civil society stakeholders. Institutions, governments, philanthropies, it is time to tap into the power of a multi-stakeholder framework to hurdle this challenge.

RUNNING DRY – POPULATION & WATER CRISIS

Objective:

Water is an extremely valuable natural resource that is essential to life on earth. Although nearly 70 per cent of the Earth's surface is covered by water, only 2.5 per cent of it is fresh. As a result of unsustainable population growth, freshwater is in short supply on the planet.

There are currently over 7 billion people on earth, and still, about one-third of the world's population lacks access to clean drinking water, what will happen when that number reaches 9 billion by 2050? Freshwater demand will grow exponentially as society grows, and if precautions are not taken today to conserve water, its scarcity will without a doubt become one of the biggest threats in the future. Quite predictably, due to the human population's water requirements, our existing water resources are depleting. Addressing the issue of Water pollution and scarcity of fresh water.

Issues Addressed:

Water is one of the most important natural resources for the existence of life. Almost 70% of the Earth is covered with water, but only 2.5 percent of it is fresh. The unsustainable growth of the human population has increased the demand for fresh water, and the planet is running out of fresh water. Today, one in three people do not have access to safe drinking water. Currently, the global human population stands at more than 7.0 billion. What will happen when it crosses the 9 billion marks by 2050? Fulfilling the water requirements of the human population is driving our existing water resources towards depletion. The Sustainability Development Goal 6 (SDG 6) targets the availability and sustainable management of water and sanitation for all by 2030. However, the latest UN – Water 2021 report is alarming.

Experts part of the Episode:

Mr Pradip Burman

Founder, Mobius Foundation

Key Message:

Water is going to be a major stress for the world as we are wasting water. Also chemicals in agriculture is polluting ground water. We need to recycle water and reuse it.

Dr Ram Boojh

CEO, Mobius Foundation

Key Message:

Water situation is in crisis mode. Worse in climate change impacted areas. Third world war could be fought over water.

Mr G Asok Kumar

Mission Director, National Water Mission

Key Message:

Water is the most important source and is required in all activities in industrial use also. Water is a raw material for many products. Quantity of rainfall is same, but frequency has gone down. India also extracts 25 % of water in the world

Mr Heera Lal
IAS, Amd-Nhm, Uttar Pradesh

Key Message:

Rainwater excess is being wasted and can be utilised if stored in ponds etc. we can save this excess rain water to replenish ground water and also use this for irrigation. We need to change our focus to water conservation.

Mr Rajendra Singh
Water Conservationist

Key Message:

Conservation and disciplined use of water is the need of the hour. We need to educate people of the same otherwise we could be soon facing a climate refugee situation.

Mr Bharat Lal
Additional Secretary, Jal Jeevan Mission

Key Message:

Under Jal Jeevan mission we are educating, creating awareness, empowering and training people about water conservation, sanitisation and maintenance. Almost 22 billion dollars has been provided to panchayats for water sanitisation and hygiene. Our aim is to improve quality of life. In last 26 months 55 million households have been provided tap water connection

Dr V C Goyal
Scientist – GM & Head, Research Management and Outreach Division (RMOD) National Institute of Hydrology



Key Message:

We work on aspects like rain water harvesting and using harvested water for ground water recharge. We work on techniques under project saaf paani to recharge of ground water by surface water such as river water and then use that recharged water for drinking purposes.

Solutions Brought Out:

Natural and human systems have an ability to adapt to change to a certain extent with the existing knowledge and technology. These are called autonomous adaptations. Farmers, e.g., can adjust their crop mix and planting dates over time to allow for changes in quantity and timing of precipitation. Other adaptations require greater investment and institutional changes. Meeting this challenge is going to require changes in the way that the necessary water, food, energy, and other goods and services are provided and beneficially consumed. It is going to require changes in the ways we produce products, and, in the ways, we recycle and dispose of by-products. It is going to require changes in the consumption habits, especially of our most affluent. In short it is going to require all of us as society to identify, through research, develop, through engineering and science, and implement through governance, the technological, economic, political, and social measures that will set a course toward the achievement of a desirable and more sustainable and secure future.

FOOD FOR THOUGHT

Objective:

Our planet is getting more and more crowded with each passing day. The world's population is expected to grow to almost 10 billion by 2050 - more people mean more mouths to feed, more land being used for agricultural practices, and more pesticides being used to increase yield. The extensive use of pesticides is polluting groundwater sources, disrupting natural ecosystems, and causing long-term damage to human health. If that wasn't bad enough, clearing of forested land for food production is reducing the biodiversity of the natural world along with climate change and soil erosion.

Issues Addresses:

Agriculture is facing an unprecedented challenge. There is a huge shortfall between the amount of food we produce today, and the amount needed to feed everyone. Our planet is getting more and more crowded with each passing day. The world's population is expected to grow to almost 10 billion by 2050 - more people mean more mouths to feed, more land being used for agricultural practices, and more pesticides being used to increase yield. The extensive use of pesticides is polluting groundwater sources, disrupting natural ecosystems, and causing long-term damage to human health. If that wasn't bad enough, clearing of forested land for food production is reducing the biodiversity of the natural world along with climate change and soil erosion.

The United Nations sustainable development goal number two states: "end hunger, achieve food security and improved nutrition and promote sustainable agriculture." This is a collective responsibility that all governments need to work towards to ensure no one goes hungry.

Experts part of the Episode:

Mr Pradip Burman

Founder, Mobius Foundation

Key Message:

There is bound to be a shortfall of food because of the exponential increase in population. Agricultural land is urbanized, hence reduced. We need to stabilize the population. Instead of Chemical Fertilizers, we need to use compost and organic fertilizers and increase productivity to meet the excess demand. One solution is using Green Technology such as Hydroponics that uses less resources.

Dr Avik Mukherjee

Dean, CIT

Key Message:

Theoretically hunger should not be a problem as the World is producing enough food to feed 2000 calories to each individual, only the distribution of this food and the accessibility is uneven

Dr Santosh Kumar
Assistant Professor CIT

Key Message:

At the Institute they are trying to reduce Food Wastage in a sustainable way and they have produced films and formulations using Biopolymers which can increase the shelf life of food by upto three weeks.

Mr Vijay Pratap Singh
Business Head, Alternative Green Energy Solutions

Key Message:

AGES was established to suggest sustainable solutions to Agriculture Management through Hydroponics Technology that requires less land. Since resources are depleting and water levels are also going down there had to be an innovative solution for farming and Livestock Management. Conventional Farming may take 20-25 days to harvest a crop but using Hydroponics the same crop can be harvested in 8 days. This will create an environmentally viable farming system.

Solutions Brought Out:

Whenever humans have needed to produce more food, they have simply cut down forests to make more farms. This is no longer viable. Countries must adopt ways of achieving high yields while also dramatically reducing the environmental impacts of conventional farming. Stabilising the world's population and a rethinking of governance and food systems is crucial for meeting both current and future challenges. Several initiatives have been taken in India to improve the resilience of agriculture to climatic variations and to make agriculture more adaptive reported PIB. In the course of these attempts are made to cut down the carbon emissions. Here, the major initiatives involve crop diversification program under Rashtriya Krishi Vikas Yojana (RKVY), Bringing Green Revolution to Eastern India (BGREI), National Food Security Mission (NFSM). According to PIB report, under one of the eight National Action Plan for Climatic Change (NAPCC) missions, the National Mission for Sustainable Agriculture (NMSA), many supporting programs including Paramparagat Krishi Vikas Yojana (PKVY), Rainfed Area Development (RAD), Soil Health Card (SHC), Mission Organic for Value Chain Development for Northeast (MOVCD), National Bamboo Mission (NBM), Sub-Mission on Agroforestry (SMAF) are being implemented.

POPULATION, OVERCONSUMPTION AND WASTE

Objective:

The human population continues to grow relentlessly and so does the generation of waste. A never-ending urge to fulfil our mechanised lifestyles has led to unsustainable consumption patterns resulting in the generation of a humongous amount of waste across the globe.

Did you know that the world generates about 2.01 billion TONS of municipal solid waste annually? Considering the human population growth and overconsumption trends, it is estimated that the global waste generation could cross the three-billion-ton mark by the year 2050. Alarming, isn't it?

Ineffective waste management systems have become a global menace, causing harm to our planet in many ways... Contamination of oceans, regular occurrences of floods in cities due to clogging of drains, transmission of various diseases, an increase in respiratory diseases due to burning of waste, and adverse effect on economies, are some of the many detrimental effects

Issues Addresses:

Waste generation has increased massively around the world in recent decades, and there are no signs of it slowing down. By 2050, worldwide municipal solid waste generation is expected to have increased by roughly 70 percent to 3.4 billion metric tons. This is due to a number of factors, such as population growth, urbanization, and economic growth, as well as consumer shopping habits. Every year, humans produce millions of tons of waste, and this is increasingly becoming a major issue worldwide. With such immense volumes of waste arising, the need for authorities to provide adequate waste treatment and disposal services has become ever more important. However, less than 20 percent of waste is recycled each year, with huge quantities still sent to landfill sites. Waste is also often disposed of at hazardous open dump sites, especially in developing nations. Richer countries produce more waste than poorer countries, but typically have better waste management to help deal with these issues.

Experts part of the Episode:

Mr Pradip Burman

Founder, Mobius Foundation

Key Message:

Over-consumption of resources needs to be curbed and this leads to a specific change in lifestyle choices. This means that we do with fewer things, and this will contribute to All waste must be recycled, if it is not, it will pollute the air and the surroundings and negatively impact human health.

Dr Ram Boojh
CEO, Mobius Foundation

Key Message:

Use of Chemicals in Agriculture and many other by-products that we produce are thrown away unplanned and untreated. It is estimated that only five percent of the hazardous waste is collected and treated responsibly. Waste needs to be segregated at all levels and also converted into useful matter. We need to figure out ways of sustainable waste management to avoid further damage to the planet. Project Pass On Plastics was started in two localities of Delhi where communities were organized through RWEs and asked them to collect plastic by segregation and this was then collected from them through this initiative. Circular Economy is the most effective way of reducing waste.

Mr Mewa Lal
Secretary, Muskan Jyoti Samiti

Key Message:

The organization has designed a self-sustained system to recycle solid waste. The model uses Aerobic technology to treat waste and convert it into reusable matter such as compost. This system in Mewari is not only helping in waste segregation and recycling but has also generated jobs for the unskilled workforce in the village.

Mr Pradeep Sangwan
Founder, Healing Himalayas

Key Message:

Indian Economy is rising and so is the GDP and spending power of the middle class. We are spending a lot of money on E-Commerce which involves heavy use of plastic in packaging, As the income of the masses rises, natural resources will get depleted at a rapid pace. Carrying Capacity of the planet will also decrease simultaneously. Waste Segregation is the biggest challenge, and we need to engage more communities and make them the stakeholders in the process. Food waste needs to be converted within each society itself and not transferred to Municipal Corporations.

Ms Bharati Chaturvedi
Founder & Director, Chintan Environmental Research & Action Group

Key Message:

There are several factors that contribute to waste generation and the major role is played by over-consumption at every level. However, we are Counting our waste better now through Data Collection and Monitoring. Plastics have penetrated deeply in rural areas as well and one reason is because there is lack of incentives and innovation to move to other packaging material. Consumption must be reduced in urban India at middle and Upper-middle class levels.

Solutions Brought Out:

Reduce, Recycle & Reuse: – Recycling not only saves energy but also prevents the materials from going to landfills & incineration, and provides raw materials for new products. Installing more bins for collecting recyclables like paper, glass, plastics, etc., and then recycling them can be a huge step.

Also, reuse products wherever possible like reusing plastic bottles instead of simply disposing of them. The more you reuse, the more you contribute to keep these items away from the garbage can. Further, try to minimize the use of products especially that can't be recycled or reused. Like, use paper glasses for your house parties instead of using plastic ones.

The biggest challenge in the direction of Effective Waste Management is to educate and aware of the masses because in a country with a huge population, the waste management issues can't be resolved without the proper contribution of its population. Some of the possible measures in this direction could be establishing a proper awareness system, developing policies related to the throwing of waste, etc.

WASTE WARRIORS

Objective:

Fuelled by a rapid population growth and Urbanization, Waste generation has increased massively around the world in recent decades. Societies are drowning in a tidal wave of waste generation due to over-consumption, a lack of solutions, and perhaps even the will, to deal with the waste crisis.

India is the world's second most populous country and one of the fastest growing large economies in the world. The landfills in the country's megacities are filled to the brim. Thankfully, many waste warriors are doing their bit to solve the waste crisis.

However, when it comes to managing waste, some Indian cities are paving the way. Indore, situated in Madhya Pradesh, has been ranked India's cleanest city for the fifth year in a row by Swachh Survekshan 2021, the central government's annual cleanliness survey to promote sanitation in urban centres under the Swachh Bharat mission. Amazingly, Indore managed to become India's cleanest city in only one year, by segregating all waste at source.

Issues Addressed:

Waste generation has increased massively around the world in recent decades, and there are no signs of it slowing down. By 2050, worldwide municipal solid waste generation is expected to have increased by roughly 70 percent to 3.4 billion metric tons. This is due to a number of factors, such as population growth, urbanization, and economic growth, as well as consumer shopping habits. Every year, humans produce millions of tons of waste, and this is increasingly becoming a major issue worldwide. With such immense volumes of waste arising, the need for authorities to provide adequate waste treatment and disposal services has become ever more important. However, less than 20 percent of waste is recycled each year, with huge quantities still sent to landfill sites. Waste is also often disposed of at hazardous open dump sites, especially in developing nations. Richer countries produce more waste than poorer countries, but typically have better waste management to help deal with these issues.

Experts part of the Episode:

Mr Pradip Burman
Founder, Mobius Foundation

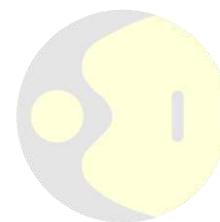
Key Message:

There is bound to be a shortfall of food because of the exponential increase in population. Agricultural land is urbanized, hence reduced. We need to stabilize the population. Instead of Chemical Fertilizers, we need to use compost and organic fertilizers and increase productivity to meet the excess demand. One solution is using Green Technology such as Hydroponics that uses less resources.

Ms Bharati Chaturvedi
Founder & Director, Chintan Environmental Research & Action Group

Key Message:

There are several factors that contribute to waste generation and the major role is played by over-consumption at every level. However, we are Counting our waste better now through Data Collection and Monitoring. Plastics have penetrated deeply in rural areas as well and one reason is because there is lack of incentives and innovation to move to other packaging material. Consumption must be reduced in urban India at middle and Upper-middle class levels.



Mr Mewa Lal
Secretary, Muskan Jyoti Samiti



Key Message:

The organization has designed a self-sustained system to recycle solid waste. The model uses Aerobic technology to treat waste and convert it into reusable matter such as compost. This system in Mewari is not only helping in waste segregation and recycling but has also generated jobs for the unskilled workforce in the village.

Solutions Brought Out:

Reduce, Recycle & Reuse: – Recycling not only saves energy but also prevents the materials from going to landfills & incineration, and provides raw materials for new products. Installing more bins for collecting recyclables like paper, glass, plastics, etc., and then recycling them can be a huge step.

Also, reuse products wherever possible like reusing plastic bottles instead of simply disposing of them. The more you reuse, the more you contribute to keep these items away from the garbage can. Further, try to minimize the use of products especially that can't be recycled or reused. Like, use paper glasses for your house parties instead of using plastic ones.

The biggest challenge in the direction of Effective Waste Management is to educate and aware of the masses because in a country with a huge population, the waste management issues can't be resolved without the proper contribution of its population. Some of the possible measures in this direction could be establishing a proper awareness system, developing policies related to the throwing of waste, etc.

Objective:

India is going through rapid urbanisation due to a growing population and lack of employment in the rural areas. When youngsters migrate to the cities for better opportunities – the rural areas are left behind without a workforce, while the urban areas keep getting overpopulated. The aftermath of this, can be seen in the cities that are bursting at the seams – adversely impacting the very opportunities for its inhabitants.

The total employment in India has grown by 4.5 crores from 2004-2005 to 2017-2018, where 4.2 crores of those jobs happened in urban areas. In rural India, the jobs are few and far in between, and job growth has either contracted or stagnated in the same period. When we put this number in perspective and compare it with the percentage-wise growth of jobs, it is only 0.8% growth, while the population grew at 1.7% for the same period.

Now is the time, more than ever before, to redefine the ‘new jobs’ that are being created. As more sectors transition to low-carbon models, a visible shift toward greener jobs can be seen. In the last half a decade, the ratio between oil/gas jobs and renewable/environment jobs has changed drastically in favour of sustainability. If this trend continues, renewable jobs could even surpass oil and gas jobs by as early as 2023.



Issues Addresses:

India is going through rapid urbanisation due to a growing population and lack of employment in the rural areas. When youngsters migrate to the cities for better opportunities – the rural areas are left behind without a workforce, while the urban areas keep getting overpopulated. The aftermath of this, can be seen in the cities that are bursting at the seams – adversely impacting the very opportunities for its inhabitants. The total employment in India has grown by 4.5 crores from 2004-2005 to 2017-2018, where 4.2 crores of those jobs happened in urban areas. In rural India, the jobs are few and far in between, and job growth has either contracted or stagnated in the same period. When we put this number in perspective and compare it with the percentage-wise growth of jobs, it is only 0.8% growth, while the population grew at 1.7% for the same period. The glaring statistics show that people migrate to cities in search of better job opportunities, if they cannot find prospects in their native land.

Experts part of the Episode:

Mr Pradip Burman

Founder, Mobius Foundation

Key Message:

As the population grows, we need new jobs, and we need to find a solution to where we are going to accommodate all these people who migrate. More Housing will be required or else there will be more slums. Digital Technology and Green Technology will create many new jobs. There are also several Unicorns that have come up and these can be a part of the solution. Education on Sustainability is of utmost importance for us to find solutions together.

Dr Ram Boojh
CEO, Mobius Foundation

Key Message:

Over Population is a Global Menace and it also forces people to migrate to other places which creates pressure to create more jobs and housing. Migrants from rural to urban cities are unskilled and are under-paid, hence they reside in slums. India has been focussing on the Creative Economy which creates sustainable job opportunities. Infrastructure sector, Green Building and Ancillary sectors for Housing Industry can create more jobs. Sustainable Development of Rural Areas is a must for overall development of the nation. Sustainable Farming will become a great phenomenon and will spur a chain of jobs and services. There are many new initiatives being taken up to create affordable housing that are also sustainable and resilient.

Mr Sanjay Seth
CEO, GRIHA

Key Message:

Green Rating is a tool that evaluates sustainability of infrastructure and certification of Green Buildings. This involves providing rating based on site planning, material, energy consumption, water consumption and waste management. Griha Rating system is based on local Climatic conditions and local construction practices. A green Building costs more once the construction is underway, these costs can be eliminated if sustainability can be incorporated right from the design phase of a building.

Mr K N Singh Yadava
General Secretary, University of Patanjali



Key Message:

Because of increasing opportunities of Education, we are falling short of job opportunities in rural areas, hence more and more people are migrating to towns and cities. Migration patterns are changing. Initially in the 50s and 60s, migration involved unskilled labourers, however more skilled labourers are moving to cities to look for jobs. This leads to housing problems in Urban Areas.

Ms Poonam Singh Minhas
Principal, Gyan Anant Vidyalaya

Key Message:

It is the first certified Green School in the city. It was established to provide the same facilities to rural children that the children from Urban schools have and is based on sustainability. The building has water sewage treatment plant, it has solar panels and a rainwater-harvesting system. The furniture is of recyclable quality and the uniform is made from recycled pet bottles and cotton. They strongly believe that SDGs need to be adopted by all and are part of the curriculum.

Solutions Brought Out:

Now is the time to redefine the ‘new jobs’ that are being created. As more sectors transition to low-carbon models, a visible shift toward greener jobs can be seen. In the last half a decade, the ratio between oil/gas jobs and renewable/environment jobs has changed drastically in favour of sustainability. If this trend continues, renewable jobs could even surpass oil and gas jobs by as early as 2023. Over the next decade, we may see millions of green jobs being created as there is growing awareness from political leaders to meet carbon emission goals, and an increasing corporate social responsibility to become more sustainable. This is valid for fields like renewables or environment jobs, fashion, manufacturing, transport, and even Finance.



PROJECT AAKAR

A society with happy families is a sustainable society. Population and poverty have a correlation, as overpopulated societies would find it difficult to share available natural resources, food, education, and health care, among other things. A sustainable society is one with a stable population. It will lead to equality and prosperity. India is committed to promoting population stabilisation as part of the sustainable development goals (SDGs) of the United Nations. In sync with the National Population policy and the family planning programs being conducted through National Health Mission, our project partner Mobius Foundation runs a project "AAKAR".

Project Aakar is about shaping the family size for stabilizing the population in the State of Uttar Pradesh. The project was initiated in 2018 covering 200 villages in the 2 highly populated districts of Uttar Pradesh, Bahraich and Barabanki focusing on building awareness and influencing attitudes towards Family Planning using various contraceptive measures. With Phase-I, the Mobius Foundation intended to support the efforts by Govt. of India towards FP2020 goals, population stabilisation and the "Beti Bachao Beti Padhao" campaign. Launched 'Aakar' phase II on 25 June 2019 in presence of Mr. Siddharth Nath Singh (then Health Minister, U.P.). The project focused majorly on counselling and reaching eligible couples at all relevant touchpoints and targeted lactating mothers seeking health services at government hospitals CHC and PHC centres. Mobius Foundation celebrates the Happy Family Day or Khushaal Parivar Diwas on the 21st of every month in sync with the U.P. government's initiative to promote Family Planning. Mobius Foundation has bagged Bronze Medal for its campaign 'Dampatti no 1' under 'Project Aakar' in the prestigious category of 'INTEGRATED & SOCIAL DEVELOPMENT CAMPAIGN OF THE YEAR' by Flame Awards Asia 2020.

Breaking the Barriers -Non-scalpel vasectomy campaign (NSV)

Foundation through its project Aakar participated in NSV campaign in 2 high TFR districts of Uttar Pradesh with a set of activities like Awareness through Nukkad Natak, display of short films through LED vans, Male/Female Counselling, Contraceptive distribution, and facilitation to motivated males during all stages starting from registration, consent form documentation, pre-clinical investigation, pre-cleaning before NSV procedures to post-procedure follow-ups. Motivated by our awareness campaign 19 males (8 from Bahraich and 11 from Barabanki) opted for NSV and underwent this procedure as permanent family planning. Such campaigns not only bring awareness about the new and easy contraceptive method but can also be utilized as a tool to break the barriers which keep on disbalancing the socio-economic structure by scapegoating females on the basis of existing preconceived notions due to lack of education and awareness.

AAKAR HIGHLIGHTS

"Community Sustainability Solutions Program"



POPULATION STABILISATION FOOTPRINTS

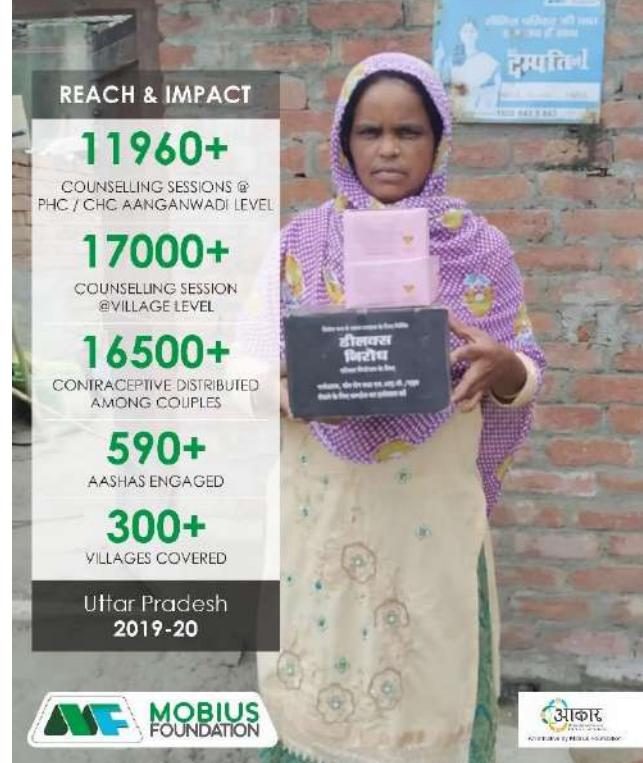
10392+	FAMILIES SEEKED BETTER ALTERNATIVES OF CONTRACEPTIVE
13282+	MOBILE ENGAGEMENTS
106510+	INFORMATION MATERIAL DISTRIBUTED
233+	AASHAS ENGAGED
200+	VILLAGES COVERED

Uttar Pradesh
March-December 2018-19

MOBIUS FOUNDATION

AAKAR HIGHLIGHTS

Phase II - 2019 - 2020



REACH & IMPACT

11960+	COUNSELLING SESSIONS @ PHC / CHC AANGANWADI LEVEL
17000+	COUNSELLING SESSION @VILLAGE LEVEL
16500+	CONTRACEPTIVE DISTRIBUTED AMONG COUPLES
590+	AASHAS ENGAGED
300+	VILLAGES COVERED

Uttar Pradesh
2019-20

MOBIUS FOUNDATION

AAKAR OUTREACH Phase II 2020- June 2021

REACH & IMPACT
MONTH ON MONTH BASIS

4150+	Contraceptive Distributed Among Couples
870+	ASHAs Engaged For Community Activities & Contraceptive Distribution
250+	Villages Communities Engaged
21750+	Beneficiary Couples
40800+	Beneficiaries Engaged Digitally Through Tele-counseling



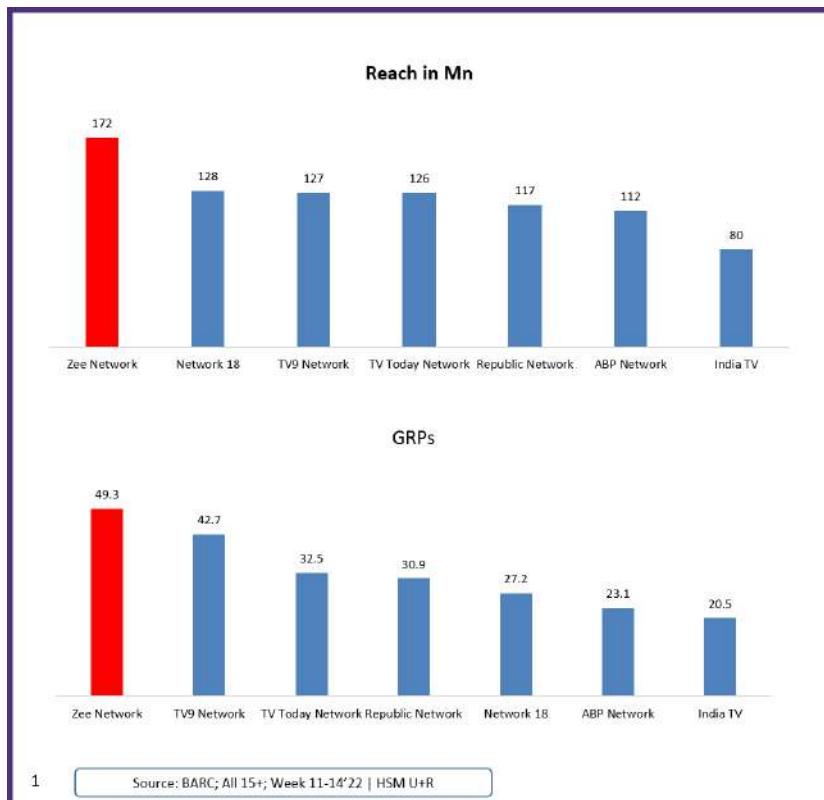
CONCLUSION

The world's success in achieving the Sustainable Development Goals (SDGs) will be largely contingent upon how well the needs of persons living in vulnerable situations are addressed. Rapid population growth, particularly in low-income countries, may hinder the realization of the pledge that no one will be left behind. A growing population magnifies the demand for resources and investments required to meet the needs of all people, especially the poor and the most vulnerable. Effective social protection schemes and policies, along with programmes to ensure universal access to education, health care, food security, housing, sanitation, and clean drinking water, are critical for reducing inequality, alleviating poverty, and supporting inclusive and sustainable growth. The report reviews the connections between population growth and key aspects of social and economic development, including poverty, hunger and malnutrition, health, education, gender equality, economic growth, and decent work. It also explores the contribution of global population increase to environmental degradation, including climate change.



ANNEXURE

ZEE MEDIA NETWORK REACH



ZMCL-THE NO.1 NEWS NETWORK

1

Source: BARC; All 15+; Week 11-14'22 | HSM U+R

MISSION SUSTAINABILITY WEBSITE (9.15Mn Page Views)

WION

VIDEOS IPL 2022 GRAVITAS WORLD INDIA SPORTS RUSSIA VS. UKRAINE ENTERTAINMENT SCIENCE PHOTOS MISSION SUSTAINABILITY

Out of breath: Population boom and its impact on air pollution

'Water is life': Global water crisis threatens life on planet

Nov 24, 2021, 03:47 PM (IST) | New Delhi, India

MOBIUS FOUNDATION
Launches Sanjeevani Project Phase 2 a mega plantation drive.

LIVE TV

SOCIAL MEDIA REACH

447.6K



1763.8K



396K



6.12M



AIR-TIME CHART

Channel	Campaign Promo	Documentary Episodes	Special Short Feature (Seconds)	Smart Stats (Seconds)	Event Episode	Event Promo	Post Event Vignette	Total Airtime	Event/ E-Conclave
WION	3150	15840	62400	1560	5280	1050	1260	90540	Launch Event and Culmination Event
Zee News	1050	12960	3120	780	4320			22230	
Zee MPCG			6810	780				6540	
Zee UP UK			6810	780				6540	
Zee PHH			6810	780				6540	
Zee Bihar/ Jharkhand			6810	780				6540	
Zee Rajasthan			6810	780				6540	
Zee 24 Ghante			6810	780				6540	
Zee Hindustan			6810	780				6540	

DIGITAL MEDIA COVERAGE

	PLATFORM	ACTIVITY
1	WEBSITE: THE POWER OF ZMCL PROPERTIES ONLINE WITH A FOCUS ON WION	Pre-Launch Article
		Episodic based articles per month
		Website notifications for latest articles and episodes
2	DEDICATED MICROSITE	One page that will outline and showcase the Collaboration (End to End)
		Showcase the Event, Guests, and Live coverage of the event
		Latest Episodes and articles to be linked back here
		Expert Opinions section
3	SOCIAL MEDIA - TWITTER, FACEBOOK	Teasers: Countdown to the Event launch
		Thematic and Episodic Creatives
		Short Videos to be cut from Broadcast
4	YOUTUBE	Well Curated episodes on Youtube Channel of WION

RADIO PROMOTION

Cities	Station	Seconds
Delhi	Radio Mirchi	2100
Amritsar	Radio Mirchi	2100
Jalandhar	Radio Mirchi	2100
Jaipur	Radio Mirchi	2100
Kanpur	Radio Mirchi	2100
Lucknow	Radio Mirchi	2100
Indore	Radio Mirchi	2100

SURVEY QUESTIONNAIRE

1. Do you think the planet is overpopulated?

- Yes
- No

2. Do you believe that overpopulation is a problem for our environment and standard of living?

- Definitely.
- Yes, but not significantly
- No, it's nothing to worry about.
- Unsure, time will tell.

3. Do you feel that you have noticed any impact on your own life due to overpopulation?

- Yes
- No

4. Do you think people should be having less children?

- Yes, definitely
- Possibly
- No, strongly disagree
- I'm uncertain



5. If any, what kind of population control policies do you feel should be in place?

- Paying people to become sterilised
- Higher taxes for larger families
- A one child policy
- Financial incentives for having one or no children
- None, the government should not intervene
- Educating people about the effects of overpopulation
- Other (please specify)

6. Do you currently do anything to reduce your impact on the environment? and if so, what? (For example: Recycling, consciously using resources, using less disposable plastic etc.)

- Yes
- No
- Recycling
- Consciously Using Resources
- Using Less Disposable Plastic

7. If given a choice, would you want to live on a highly overpopulated planet?

- Yes, the more people the better
- Maybe, depending on the effect overpopulation has
- No, there are already limited resources

8. With the planet set to reach a population of 9.8 billion by 2050, do you think the environment can sustain such an increase?

- Yes, there is plenty of room and enough resources for an increase
- Yes, but depending on new scientific developments
- No, the planet is already stretched for resources at 7 billion
- I'm uncertain

9. What is the main cause of overpopulation?

- Lack of education and poverty in developing countries, leading to a lack of family planning and huge families.
- Rich countries and their high standards of living have reduced mortality rates to an unsustainable number.
- Lack of awareness globally, the problem of overpopulation hasn't been exposed to the eyes of the global population enough.
- Other (please specify)

10. Will human rights have to be violated to stop overpopulation?

- Yes, human reproductive rights will have to be repressed to stop overpopulation.
- Maybe, it depends on how severe overpopulation becomes.
- No, overpopulation can be solved through other methods.

11. How big of a problem is overpopulation in developing countries?

- Huge, even bigger than food and water shortages
- Moderate, we should keep an eye on how fast the population grows
- Low, their main problems are more pressing than overpopulation
- None, overpopulation isn't happening

12. How big of a part should education play in solving overpopulation?

- Education should be used extensively to inform students about overpopulation
- Education should touch on the issue but not in detail
- Education is not needed to solve overpopulation

13. Will the environment be able to survive the larger human population in the future?

- Yes, the environment has enough resources to provide for more than 7 billion people.
- Maybe, we need to develop technology in the future to lessen the load on the environment.
- No, the environment is barely providing enough for the population now, even more people will push it over the limit.

14. Almost 2.5 billion people in the world don't have access to adequate sanitation in the present, how do you think overpopulation will change this number in the future?

- Overpopulation will increase this number exponentially
- Overpopulation will not affect this number at all
- Overpopulation will decrease this number
- Other (please specify)

15. Would you try to raise awareness about human overpopulation?

- No, it isn't a real problem to the world
- If yes, describe how.

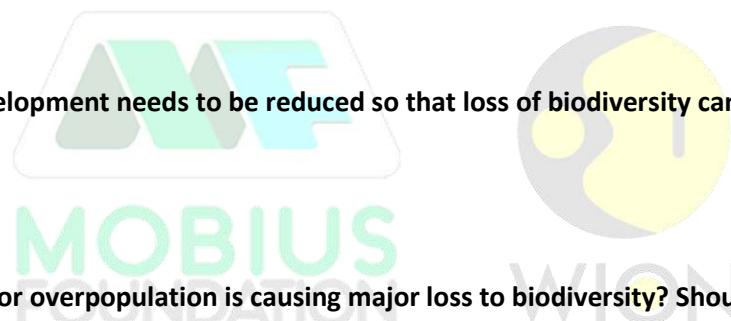
16. Did you know overpopulation is directly linked to climate change

- Yes
- No

17. Do you know that over population is causing damage to biodiversity and natural resources?

- Yes
- No

18. How have you personally faced biodiversity loss in your lifetime?



19. You think development needs to be reduced so that loss of biodiversity can be reduced?

- Yes
- No

20. Land needed for overpopulation is causing major loss to biodiversity? Should major steps be taken by govt to halt population and mining?

- Yes
- No

21. Should coal and fossil fuels be avoided for other new energy sources to come in place?

- Yes
- No

22. Do You know Solar Power will be the next big energy source?

- Yes
- No

23. Population is causing major loss of fresh water, what is the solution?

24. The air quality has deteriorated over the years causing diseases like lung disease, asthma, what do you think is the reason?

25. What changes in air quality have you faced in your lifetime?

26. Overpopulation is causing waste which is tough to manage now. Do you think this is a big issue?

- Yes
- No

27. Is burning waste which leads to pollution a better idea than creating landfills which will take big land spaces to fill. What is the solution according to you?

28. What is your profiling?

- Urban
- Rural

29. How are you aware of Mission Sustainability: Population vs Planet Campaign

- Regional News
- Hindi News
- English News
- Digital Platforms

