

VEDHIK
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ANALYSIS

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FOREWORD

We, at Team Vedhik is happy to introduce a new initiative - "Daily Current Affairs_The Hindu" compilations to help you with UPSC Civil Services Examination preparation. We believe this initiative - "Daily Current Affairs_The Hindu" would help students, especially beginners save time and streamline their preparations with regard to Current Affairs. A content page and an Appendix has been added segregating and mapping the content to the syllabus.

It is an appreciable efforts by Vedhik IAS Academy helping aspirants of UPSC Civil Services Examinations. I would like to express my sincere gratitude to Dr. Babu Sebastian, former VC - MG University in extending all support to this endeavour. Finally I also extend my thanks to thank Ms. Shilpa Sasidharan and Mr. Shahul Hameed for their assistance in the preparing the compilations.

We welcome your valuable comments so that further improvement may be made in the forthcoming material. We look forward to feedback, comments and suggestions on how to improve and add value for students. Every care has been taken to avoid typing errors and if any reader comes across any such error, the authors shall feel obliged if they are informed at their Email ID.

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Paika rebellion to be in history textbooks

It was one of the beginnings of popular uprisings against the British: Minister

SPECIAL CORRESPONDENT
NEW DELHI

The 1817 Paika rebellion of Odisha could not be called the first war of Independence, but considering it as a beginning of a popular uprising against the British, it would be included as a case study in the Class 8 National Council of Educational Research and Training (NCERT) history textbook, the Union Culture Minister said on Thursday.

In response to a question by BJD MP Prashanta Nanda,



G. Kishan Reddy

Mr. Kishan Reddy informed the Rajya Sabha that the Culture Ministry had received a reference from the Odisha

Chief Minister asking that the Paika rebellion be declared the first war of Independence.

First War

He said the matter was examined in consultation with the Indian Council of Historical Research, under the Union Education Ministry, and according to the comments by the Indian Council of Historical Research, the Paika rebellion could not be called the first war of Independence.

“However, from a historical point of view, it can be said that the ‘Paika Bidroha’, which was set off in March 1817 and continued until May 1825, had set an example for the classes as well as the masses in India to follow later on. Accordingly, considering that this is one of the beginnings of popular uprisings against the British in India, it has been decided to include it as a ‘case-study’ in the Class VIII history textbook of NCERT...,” the Minister said in a written reply.

Births and rights

Laws on reproductive rights must recognise differences in orientation, relationship choices

A Bill that the government of the land intends to make law, cannot be exclusivist at the very outset; and at least, with the time of passage, it is imperative that it loses its biases. It cannot exclude certain categories of citizens from the benefits and rights that the law seeks to confer upon the people of the country. And, that is what the Assisted Reproductive Technology (Regulation) Bill, 2020, that was passed in the Lok Sabha on Wednesday, has done, by excluding two categories – LGBTQIA+ and single men. Undoubtedly, the time has indeed come for such a Bill; for government intervention to regulate the field of fertility treatments, and by seeking to establish a national registry and registration authority for all clinics and medical professionals in the segment, it will fill a vacuum. The Bill has provisions to protect the rights of the donors, the commissioning couple and the children born out of ART, to grant and withdraw licences for clinics and banks depending on performance factors. It proposes to make it impossible for outlaws to operate within the system and profit from it, while exploiting patients. It also plans to put an end to illegal trafficking in embryos, and mistreatment of the poor coerced by their circumstances into donating eggs or sperm.

It is unfathomable that a Bill, so progressive by its very nature, would glaringly exclude members of the LGBTQIA+ community and single men. As citizens, these groups too have the right to exercise reproductive rights. The omission is particularly baffling considering that the legislation has made provisions for single women too, apart from a commissioning heterosexual couple. The Union Health Minister said that several recommendations made by the Parliamentary Standing Committee had been considered. Unfortunately, despite expert recommendations to include both categories, the Committee recommended ‘it would not be appropriate to allow live-in couples and same sex couples to avail the facility of ART’ citing the best interest of the child born through ART. It also recorded that ‘given [the] Indian family structure and social milieu and norms, it will not be very easy to accept a child whose parents are together but not legally married’. While the law would do well to be cognisant of the sentiments of the people, its purpose is also to nudge retrograde social norms out of their freeze-frames towards broader acceptance of differences and preferences. Legislators have also pointed out that the Surrogacy Bill intrinsically connected with the ART Bill was pending in the Rajya Sabha, and that it would only be appropriate that both Bills be considered together before they are passed. The ball is now squarely in the court of the Upper House; legislators can still set right the omissions and introduce the spirit of justice in the letter of the law.

Should the state stop focusing on population control?

PARLEY

India has a large young population which needs access to contraception, not family planning

According to the recently released National Family Health Survey (NFHS)-5, India's Total Fertility Rate (TFR), which is the number of children a woman would have in the course of her life, is 2, a decrease from 2.2 in NFHS-4. Is this cause for cheer and should women be credited with stabilising the population? Poonam Muttreja and S. Irudaya Rajan discuss whether governments should stop focusing on population control in a conversation moderated by Serena Josephine M. Edited excerpts:

India launched its National Programme for Family Planning in 1952. What are the factors that have helped the country bring down its TFR?

Poonam Muttreja: Yes, it was good that India had an early start. But while India has the oldest family planning programme, it does not have the best or even an average programme. I'd first like to give credit to the women and their aspirations. The men have demonstrated that they are not responsible for family planning and rarely support women in family planning decisions. The decline is on expected lines. If you look at NFHS-4, women, on average, wanted 1.8 children. So, it's just that we have a huge unmet need for family planning. It was 13% in NFHS-4. In NFHS-5, it has come down to close to 10% on average in many States. There are 16.4 million abortions every year, which I think is an under-estimate and a proxy for contraception. So, there is determination in India in spite of men not participating. Having said that, I do want to say that in the last five or six years, we've had new methods introduced, though we need to do a lot better on numbers and we need more temporary methods. Another reason for women having or desiring fewer children is education. It is the best contraceptive pill, and better education means women will have fewer children. There are many factors for the drop in TFR, but I'd like to give maximum credit to women. Also, fertility has come down across religious lines.

S. Irudaya Rajan: Though I agree

that the programme was managed by women because the sterilisation rate among women is extremely high compared to that of men, the fertility decline is not the end of the story but the beginning of a new era. Most policymakers and journalists think that when you achieve a fertility rate of 2.1, the population policy is over. Unfortunately, the population policy is not just a fertility control policy. We have to educate our administrators and policymakers that population policy includes not just fertility but also mortality and migration. These are the three components of population growth. This is the beginning of the work that the government has to do in terms of child nutrition, child mortality and providing employment for the youth – what we call the demographic dividend. I don't think it is time to celebrate the NFHS-5 results.

Many view this drop in TFR as a sign of population stabilisation. Is that really so?

IR: I don't think it is a sign of population stability. Kerala, for instance, has almost the same replacement level of fertility for close to 30 years now. We have not stabilised; the population is still growing. Population momentum will set in right now and continue for perhaps a few years or a decade. Only then can we talk about population stabilisation. Basically, population momentum means that the population will continue to grow and it is not going to have a negative growth rate. Kerala still has a positive growth rate and we expect a negative growth rate may be after the 2031 to 2041 Census. It will take several decades for India to reach population stabilisation. This is the first point.

As I said earlier, this fertility decline is not going to end the story of India's human development. Even as we discuss the low fertility rate, according to the data, 23% of women were married before 18 years. The percentage of women aged 15 to 19 years who were already mothers/pregnant at the time of survey was 6.8. However, adolescent fertility rate for women aged 15 to 19 years was 43. This is only the beginning of



a new era in India's population policy. It is very important for us to wait and do more work than what we have done so that we have healthy women, healthy children and a healthy society.

At this point in time, does India need a population control law or drastic measures such as the two-child norm proposed by Uttar Pradesh and Assam? Do you think the country should move away from coercive measures for population control, keeping in mind the lessons learned from China's one-child policy that was scrapped a few years ago?

PM: If there's anything in the news in the NFHS, it is that it's taking the wind out of those who are saying India needs coercive population control measures. India needs to move away from not only the coercive measures it has, but shouldn't even think about population control measures. Let me explain why. First, Kerala, Tamil Nadu and other States that have achieved a TFR of 2 [have done so] without coercion. Second, we are going to have a balance in India as migrants from Bihar and U.P. are already moving to the southern parts. The country will balance its population even when we reach a minus growth rate. Let there be a secular decline, which is already happening. In fact, 70% of the population is going to be fuelled by population momentum as we have a very young population. We need to provide three or four things keeping them in mind. Our population policy needs to get more spacing methods, which are long lasting. A large percentage, if you look at pe-

Education is the best contraceptive pill, and better education means women will have fewer children.

POONAM MUTTREJA

ople's access to family planning, depends on where you live, what your wealth quintile is and what your age is. Younger girls have the least access to family planning services and so, there are high teenage pregnancies. We need to not only increase the age of marriage but keep girls in school and university for their own empowerment and growth. If we keep focusing on coercion, we will not focus on the right things. We are barely talking about ageing. Those who are talking about coercive policies in U.P. and Assam haven't thought about investing in ageing and improving the health systems. If we use coercive methods and use the population to create greater disharmony, if we victimise or demonise one particular population, we should remember the Emergency and the impact that forced sterilisations had. The biggest lesson from that is that we shouldn't be talking about population control or population in a coercive manner.

IR: We should not do policies with fertility. We should talk about the quality of family planning services, which is pathetic. Family planning programmes have been about following the women. They have the first child, then the second. In between they probably have one abortion as there was no method [of contraception]. And then sterilisation. We should change this and propagate temporary methods [of contraception] among men and women.

We need innovations in family planning programmes.

What do you think of incentives and disincentives in family planning?

PM: There is no evidence to show that linking incentives and disincentives to family planning and social schemes work globally. In India, we invest so much money in incentives for sterilisation. That's part of the problem why women are not able to have the number of children that they wish to have. They have more children than they wish to have and go through multiple abortions, which impacts their health. Abortion-related mortality is close to 8%.

IR: I am against providing incentives. I think people are addicted to the two-child family. We should think of new ideas of how to promote the quality of family planning services. Historically, if you look at India's family planning programme, we started with the 'cafeteria approach' where you can ask what they have and choose. Now, you will be told there is only sterilisation and not many are promoting other methods. Many couples are using abortion as a contraceptive method. This indicates that we have failed to promote temporary methods.

The use of contraceptives has improved, as per the latest NFHS, but male sterilisation continues to be low. What are the implications of the continued thrust on women with regard to family planning?

PM: Once again, NFHS-5 proves that women are taking more responsibility and men are taking less. How do we change men? There are myths about adopting contraception. I don't believe coercion is needed, but we need more communication on behavioural change. We have to change social norms, especially among the younger population, but we don't even have sex education. Much of our population momentum is going to come from the young. We should recognise that the overuse of female sterilisation has been adversely impacting women's health.

IR: We have to start educating women as well because some do not

want their husbands to be sterilised. Family planning should be converted into family welfare. A family includes men and women. We should recognise this in our data collection. I think we have to do more research on women and men. We should convert that into a family affair. Probably then we will succeed.

So, if not population control, what should be the focus areas?

PM: I think there's going to be the targeting of one minority community, which is the reason behind the population control push. As Professor Rajan said, we shouldn't do politics in population. Given that India has a strong preference for sons and an aversion for daughters, our sex ratios will get more skewed. I don't believe that on the whole, the population will decline faster. It will just distract us from all the good things that we are talking about doing such as expanding choice and social indicators like age at marriage.

IR: There are two important components. One, what we are celebrating is that in India people are living longer. Now, living longer is being celebrated because it gives you the human development index. But we are only adding years to the people, not a better quality of life for our senior citizens. Second, migration is going to play a major role in India. My estimate is that right now, 600 million people are internal migrants. But we don't have any policy on migration. We should look at population policy beyond fertility. We should include mortality decline, quality of life in old age and create a migration policy.

What is the way ahead in terms of population control, family planning and in men taking greater responsibility in adopting sterilisation?

PM: The family planning budget is only 6% of the health budget. Within that, we spend 2.5% on temporary methods of contraception. The money spent on incentives is 60% of the budget. This can instead be used on bringing about behavioural change. We have to recognise that India is going to keep growing because of a young population. And they don't need family planning, they need access to contraception.



Poonam Muttreja is the executive director of the Population Foundation of India



S. Irudaya Rajan is the chairman of the International Institute of Migration and Development



Scan the QR code to listen to the full interview online

Chinese firm signs energy deal with Male

Its project off Sri Lanka's Jaffna Peninsula was suspended after India objected

MEERA SRINIVASAN
COLOMBO

Chinese firm Sino Soar Hybrid Technology, whose energy project was suspended in Sri Lanka after India raised concern over its location close to the Tamil Nadu coast, recently signed a similar project in the Maldives.

PSM, the state broadcaster in the Maldives, reported that the country's Ministry of Environment, Climate Change and Technology signed a contract with the Chinese energy company for the "design, supply, installation and maintenance of grid-tied" solar PV-diesel hybrid power generation plants in all 12 inhabited islands of Thaa Atoll, south of

capital Male. "We are installing total of 2.5 MW of solar PV, 975 kW of Battery Energy Storage Systems and other related works in all the inhabited islands in Thaa Atoll – with this, we will reduce our emissions by 2,900 tonnes of CO2 and save approx mvr 12 million annually," a tweet from Shauna Aminath, Minister of Environment, Climate Change & Technology said on November 29.

It was in January this year that Sri Lanka's Cabinet cleared an energy project involving the same firm, in its northern islands of Nainativu, Delft or Neduntheevu, and Analaitivu, located off Jaffna Peninsula in the Palk Bay, some 50 km off Tamil

Nadu. The company had won the competitive bid to execute the project that was to be carried out with a loan from the Asian Development Bank.

India's concerns

However, New Delhi raised concern, offering to execute the project with a grant of \$12 million. While there has been no official announcement on the project since, sources told *The Hindu* that "discussions [on the India-backed project] are on". Sri Lanka's Tamil parties too objected to the Chinese project then, saying it posed a "security threat" to India.

Drawing attention to the development, the Chinese

Embassy in Colombo on Thursday tweeted: "Sino Soar Hybrid Technology, being suspended to build Hybrid Energy system in 3 northern islands in Sri Lanka due to 'security concern' from a third party, has inked a contract with Maldivian govt on 29 Nov to establish solar power plants at 12 islands in Maldives." According to the company's website, it won the project in a competitive bid in August.

Following news of Sri Lanka suspending the project in February, the Chinese firm issued a strongly worded statement objecting to "outrageous interference" by a "third party", referring to India.

Stop NATO expansion, Russia tells U.S.

Lavrov seeks legally binding promise that Ukraine would not be allowed to join the military alliance

AGENCE FRANCE-PRESSE
MOSCOW

Russian Foreign Minister Sergei Lavrov told U.S. Secretary of State Antony Blinken on Thursday that Moscow needed "long-term security guarantees" that would halt NATO's eastward expansion, Moscow said.

Mr. Lavrov and Mr. Blinken were in Stockholm for a meeting of the Organisation for Security and Cooperation in Europe, one of the few international dialogue forums to which both the United States and Russia belong.

During a bilateral meeting with Mr. Blinken, Mr. Lavrov told the U.S. diplomatic chief that Moscow wanted a legally binding promise that Ukraine would not be allowed to join NATO and that the bloc would stop its eastward expansion, Moscow said.

The top Russian diplomat warned Washington against



Face to face: U.S. Secretary of State Antony Blinken, left, with Russian Foreign Minister Sergei Lavrov on Thursday. • REUTERS

"drawing Ukraine into the geopolitical games of the United States", which he said "will force us to take retaliatory measures to straighten out the military-strategic balance," the Russian Foreign Ministry said in a statement.

Mr. Lavrov added that Russia needed "long-term security guarantees on our western borders, which

should be viewed as an imperative requirement".

'Direct threat'

The remarks by Mr. Lavrov came on a day the Kremlin said that Ukraine's stated goal of retaking Crimea – which Moscow seized in 2014 – amounted to a "direct threat" to Russia.

Ukrainian President Volodymyr Zelensky had said on Wednesday that Crimea was Ukrainian territory and Kiev's goal was to "liberate" it. He focused however on diplomatic solutions and made no mention of taking the peninsula by force.

"Speaking in Parliament, Zelensky said that ... the return of Crimea should be the main goal and philosophy of Ukraine," Kremlin spokesman Dmitry Peskov told reporters. "We see this as a direct threat to Russia. "Such wording of course means that the Kiev regime intends to use all available means – including force – in order to encroach on a Russian region. This is how we are leaning towards perceiving it."

Kiev and its Western allies have been sounding the alarm since last month over a fresh Russian troop buildup around Ukraine's borders and a possible winter invasion.

Striking a conciliatory note, Mr. Blinken said the U.S. was ready to "facilitate" the "full implementation" of the Minsk peace accords.

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Minsk deal

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Reached after the annexation of Crimea and aimed at resolving the conflict with pro-Russian separatists in eastern Ukraine but never enforced.

Limited gains

Increased vaccination, COVID-appropriate behaviour can cut the Omicron risk

If China was severely criticised for keeping the SARS-CoV-2 outbreak that began in November 2019 shrouded in secrecy and for sharing the genetic sequence on a public database only on January 12, 2020, countries that are transparent and quick in sharing vital information are not rewarded but are punished. After the first infection by a new variant – it has 32 mutations in the spike protein alone – was confirmed from a specimen collected on November 9, Botswana and South Africa diligently posted its genetic sequence on the public database, on November 23. Instead, the travel bans now imposed on South Africa and a few other African countries are not only incongruous but can actually be counterproductive. Such rash decisions disincentivise countries from promptly reporting and sharing vital data with huge public health implications, particularly during the pandemic. The demonstration by Botswana and South Africa of their capability to quickly detect new variants through superior surveillance via genomic sequencing needs to be rewarded through enhanced vaccine access to protect Africa and cut the risk of new variants. On November 30, the Netherlands reported that samples collected on November 19 and 23, before South Africa announced its findings and the travel bans went into effect, were of the Omicron variant. While it is unclear whether these people had also visited southern Africa, 14 of the 61 passengers returning from South Africa on November 26 and who tested positive for Omicron showed different strains. This suggests that the people were ‘very probably infected independently... from different sources and in different locations’.

Belgium and Germany too have reported the presence of the variant well before South Africa flagged it. Even if the Omicron variant did not emerge in Europe, the presence of the variant before South Africa notified it and the travel bans strongly suggests that the variant was already spreading in some European countries. It also reflects the relatively poor surveillance in place there when compared with the two African countries. This underscores the need to have systems in place that delay or reduce the spread of the new variant through testing prior to or upon arrival or the application of quarantine, as recommended by WHO. An indiscriminate travel ban is no solution. Several countries, including India, have already reported cases of the Omicron variant, said to pose a ‘very high’ global risk. Though disease severity in different categories of people still remains unclear, preliminary evidence suggests that the new variant increases the risk of reinfection and possesses a possible transmission advantage, as seen in the surge in Omicron cases in South Africa. It is time India increases the pace of vaccination and has better adherence to COVID-appropriate behaviour to cut the risk.

Doctor, South African national India's first cases of Omicron

Both detected in Karnataka; symptoms mild; Indian patient has no travel history

AFSHAN YASMEEN
JACOB KOSHY
BENGALURU/NEW DELHI

India has confirmed two cases of the Omicron variant of the novel coronavirus in Karnataka. One is a 66-year-old South African national and the second, a 46-year-old anaesthetist from a Government hospital in Bengaluru.

Both reportedly have "mild symptoms". Bruhat Bengaluru Mahanagara Palike Commissioner Gaurav Gupta said in Bengaluru that the Indian doctor had no travel history.

The announcement was made following confirmation from the Indian SARS-CoV-2 Genomics Consortium (INSACOG) that monitors the genomic variations of the pandemic.

The Indian developed fever and body ache on November 21 and underwent the RT-PCR test on November 22 when he tested positive for COVID-19.

5 contacts test positive

Karnataka Health and Medical Education Minister K. Sudhakar said the person was under home isolation till

Omicron alert | Omicron variant which was first discovered in South Africa has spread to 30 countries and a total of 375 cases have been reported, according to data shared by the Union Health Ministry



November 24 and was admitted to a hospital on November 25. He was discharged on November 27. "We have tested 13 of his primary and 205

secondary contacts. Three primary contacts and two secondary contacts have tested positive. Their samples have been sent for se-

quencing. Although all the six, including the doctor, are clinically stable, we have admitted them to a dedicated Government facility for further treatment and observation," the Minister said.

The South African national left for Dubai on November 27 after testing negative. He came to India on November 20, and was quarantined in a hotel. As many as 24 of his primary, and 240 secondary contacts were tested, and found to be negative. They were still under watch, the Minister said.

Genome sequencing experts, who declined to be identified, said it was a matter of concern that the Bengaluru resident had been infected with the Omicron variant without any travel history. Sources said he might have attended some conference where he would have come into contact with foreign returnees.

Mr. Sudhakar claimed that Karnataka had acted quickly to detect the new variant.

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ZyCoV-D to be launched in seven States

Bihar, Jharkhand, Maharashtra, Punjab, Tamil Nadu, U.P. and West Bengal to identify priority districts

SPECIAL CORRESPONDENT
NEW DELHI

Union Health Secretary Rajesh Bhushan on Thursday asked seven States to identify high-priority districts where the three-dose ZyCoV-D vaccine could be launched initially.

Following a review meeting with States, Mr. Bhushan stated that Bihar, Jharkhand, Maharashtra, Punjab, Tamil Nadu, Uttar Pradesh and West Bengal, will identify the districts with high numbers of people who have not received the first dose, for introduction of ZyCoV-D.

The Health Ministry said in a release that national training for administration of ZyCoV-D has been completed. Also, the selected States have been asked to plan sessions based on pharmacist injectors and identify vaccinators for training. Unlike some vaccines, ZyCoV-D



Pressing on: The Centre is pushing State governments to mop up first dose coverage and reach out to those who are overdue for their second dose. •SUSHIL KUMAR VERMA

needs a special applicator for administration.

The States have been told to ensure that all eligible beneficiaries of the first dose are covered and available

vaccines given timely and that no dose expires in both the Government and private facilities.

Around 12 crore people who have taken the first dose

are still due to take their second jab across the country, the Ministry said.

"The 'Har Ghar Dastak' nation-wide COVID-19 vaccination campaign has result-

ed in a hike of 5.9% in the first dose coverage [till November 30] and a jump of 11.7% in the second dose coverage has been registered during the campaign," Mr. Bhushan said.

Second dose coverage

At the review meeting, the Health Secretary urged the States to optimally utilise local influencers and community leaders to enhance the awareness among communities to come forward for the doses, especially the ones who are overdue for the second dose.

The cumulative number of vaccine doses administered in the country crossed 125 crore on Thursday. Out of this, 79.13 crore (84.3%) people have been vaccinated for the first dose and 45.82 crore (49%) received the second dose as per the provisional report.

A white touch to a refreshed green revolution

The Amul model, of a socio-economic enterprise, has immense potential to aid India's crop-growing farmers



ARUN MAIRA

November 26, 2021 was celebrated in Anand, Gujarat as the 100th birth anniversary of Verghese Kurien, the leader of India's 'white revolution', which increased the incomes and the wealth of millions of cattle-owning small farmers in India, many of them women. November 26, 2021 also marked one year from the day when thousands of crop-growing farmers, who have been the beneficiaries of the 'green revolution' which increased their incomes, began a non-violent protest to force the Indian government to withdraw the new laws it made to undo the policies of the green revolution. The Government's new policies intended to double incomes of small farmers, which have been languishing while stock markets are soaring. The protesting farmers feared the new policies would enable corporations to make more profits and marginalise farmers further. The Government must now go back to the drawing board to find better ways to increase farmers' incomes.

Revolutions, varied purposes

The contrast between the two revolutions provides valuable insights. Their purposes were different. The purpose of the green revolution was to increase the output of agriculture to prevent shortages of food. The purpose of the white revolution was to increase the incomes of small farmers in Gujarat, not the output of milk. The green revolution was largely a technocratic enterprise driven by science and the principles of efficiency. Whereas, the white revolution was a socio-economic enterprise driven by political leaders

and principles of equity. Sardar Vallabhbhai Patel and Tribhuvandas Kishibhai Patel had a vision of a cooperative movement of Gujarati farmers for increasing their incomes. Verghese Kurien recounts in his autobiography, *I Too Had a Dream*, how they enrolled him in their visionary enterprise and how he became a servant of the farmers for whose sake the enterprise was created, and amongst whom he lived.

Amul has become one of India's most loved brands, and is respected internationally too for the quality of its products and the efficiency of its management. It has successfully competed with the world's largest corporations and their well-established brands. The fledgling, farmer-owned, Indian enterprise the two Patels sponsored had many technological problems to solve. That is why they enrolled Kurien, who had studied engineering in the United States (on a Government of India scholarship). Kurien and his engineering compatriots in the organisation were compelled to develop solutions indigenously when Indian policy makers, influenced by foreign experts, said Indians could not make it.

Equity was key

Kurien's accounts of the political battles he fought for 'Make in India', and of the 'can-do' spirit and innovation of Indian engineers, are inspiring. However, as he repeatedly emphasises, the enterprise achieved its outcome of empowering farmers because the governance of the enterprise to achieve equity was always kept in the foreground, with the efficiency of its production processes in the background as a means to the outcome.

The green revolution's aim was to increase outputs by applying scientific breakthroughs with methods of management to obtain economies through scale. It required inputs, like chemical fertil-



K. MADHURI KUMAR

izers, to be produced on scale and at low cost. Therefore, large fertilizer factories were set up for the green revolution. And large dams and irrigation systems were also required to feed water on a large scale. Monocropping on fields was necessary to apply all appropriate inputs – seeds, fertilizer, water, etc., on scale. Focus on only one or two crops at a time enabled their outputs to be increased by avoiding diversion of land use to other "non-essential" crops. Monocropping increased the efficiency in application of inputs. Thus, farms became like large, dedicated engineering factories designed to produce large volumes efficiently. Diversity in the products and processes of large factories creates complexity. Therefore, diversity is weeded out to keep the factories well-focused on the outputs they are designed for. Similarly, in large-scale farms and plantations, any plants other than those the farm is designed to produce on scale are weeds.

On productivity

In large, modern factories, workers are only a means for producing outputs. Workers are replaced by machines whenever possible to increase outputs more efficiently. Thus, 'productivity', when defined as output per worker, can be increased by eliminating workers. This may be an acceptable way to measure and increase productivity when the purpose of the enterprise is to increase profits of investors in the enterprise. It is a wrong approach to productivity when the purpose of the enterprise is to enable more workers to increase

their incomes, which must be the aim of any policy to increase small farmers' incomes.

The need for new solutions to increase farmers' incomes has become imperative. Moreover, fundamental changes in economics and management sciences are necessary to reverse the degradation of the planet's natural environment that has taken place with the application of modern technological solutions and management methods for the pursuit of economic growth. IRMA, or the Institute of Rural Management Anand, which Kurien had founded to develop a new breed of manager for increasing the well-being of farmers, convened a workshop to celebrate his 100th birth anniversary to discover what can be learned from the white revolution to re-green the green one. Leaders of on-the-ground movements, who are applying the principles of cooperative management in "natural (environmentally suitable) farming" around India, assembled to distil insights for better economic policies and better management methods to increase inclusion and improve environmental sustainability.

The guidelines

The first insight is: inclusion and equity in governance must be hardwired into the design of the enterprise. Increase in the incomes and wealth of the workers and small asset owners in the enterprise must be the purpose of the enterprise, rather than production of better returns for investors.

The second: the 'social' side of the enterprise is as important as its 'business' side. Therefore, new metrics of performance must be used, and many 'non-corporate' methods of management learned and applied to strengthen its social fabric.

The third: solutions must be 'local systems' solutions, rather than 'global (or national) scale' solu-

tions. The resources in the local environment (including local workers) must be the principal resources of the enterprise. The enterprise must be embedded in the local community from whom it gets its environmental resources, and whose well-being it must nourish by its operations.

The fourth: science must be practical and useable by the people on the ground rather than a science developed by experts to convince other experts. Moreover, people on the ground are often better scientists from whom scientists in universities can learn useful science.

The fifth: sustainable transformations are brought about by a steady process of evolution, not by drastic revolution. Like strong drugs to treat specific ailments, large-scale transformations imposed from the top can have strong side-effects too. They slowly weaken the patient's health, as the scientific managerial solutions of the green revolution have harmed the soil and water resources of northern India.

Large-scale farming using modern scientific methods was the approach in the Soviet Union to improve agricultural outputs, as it is in the United States, and it achieved equally spectacular results. However, it wiped out peasants in the Soviet Union and has swept off small farmers in the U.S. Kurien told Premier of the USSR Aleksey Kosygin who visited him in Anand that top-down ownership of enterprises, whether by the state (in the Soviet model), or by remote investors (in the capitalist model) was the wrong solution. The essence of democratic economic governance is that an enterprise must be of the people, for the people, and governed by the people too.

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Breathing fresh air into the NCR's pollution control

Revisiting the UN Environment Programme's review of China's strategy provides useful lessons for policymakers



MUKUL SANWAL

Experts frame environmental concerns in technical terms – pollutants, their monitoring and penalties – whereas air pollution in cities is driven by urban form and transport infrastructure; solutions depend on the stage of development.

The National Green Tribunal (NGT) had begun the process of taking a new look at an old problem by asking the Government to list its causes. For example, there is a report that the NGT directed the Ministry of Environment, Forest and Climate Change to modify the National Clean Air Programme (NCAP) which proposes 20%-30% reduction of air pollution by 2024. But the NCAP with its 'collaborative and participatory approach', monitoring, targets, emergency measures and even role for international organisations has still to make an impact.

Just a day ago, on December 2, the Supreme Court of India asked pertinent questions: despite the compliance reports, why are the results on the ground negligible and what is the Commission for Air Quality Management in the National Capital Region doing? At a hearing where the Court gave the Centre and Delhi government 24 hours to come out with suggestions to control air pollution, the Solicitor General's response was that the Commission's power structure needed reworking, to which an exasperated Court asked

for 'creativity'. This exchange raises the fundamental question about the role of the Commission, what it should be doing – and not just what it has done – as it has not been responding to interdependent causes driven by complex urban problems. Urban transformation is a social process (people, services, lifestyles) rather than a physical problem (congestion, technology, regulation). Therefore, the focus of the Commission has to be on how cities are organised, which in turn requires collaboration between multiple stakeholders. The challenge is to move away from solutions that merely require coordination between discrete administrative units, and enforcement taking the matter to the courts.

Lessons from Beijing

The UN Environment Programme's review of Beijing's control of air pollution provides useful lessons for policymakers. The population size of both cities, Beijing and Delhi, is comparable. Delhi also shares with Beijing, and other cities, the three stages in dealing with urban air pollution as a long-term task. It starts with end-of-pipe air pollution control gradually moving to integrated measures targeting primary pollutants (SO₂, NO₂, PM₁₀, and CO), with the Government playing the main role. Later, secondary pollutants, or particulate matter leading to smog, primarily PM_{2.5}, become the main focus for control with a regional coordination mechanism. The similarity ends there.

The review by the UN points to a management system characterised by systematic planning, strong monitoring capacity, local standards, specific enforcement



R.M. MORTYTH

mechanism and public awareness.

First, the key result area is a new model of network operation and quality control to provide early warning to effectively reduce the level of pollution under adverse weather conditions. In case of forecasted heavy pollution, warnings are issued at least 24 hours in advance through the media, in addition to daily air quality reports and forecasts.

The technical system combines high-resolution satellite remote sensing and laser radar, an integrated network combining 'airland' data for quality monitoring with greater analytical capacity and over 1,000 PM_{2.5} sensors throughout the city to accurately identify high-emission areas and periods.

Approach to urbanisation

Second, in Beijing what really made a difference was not shutting down polluting units, restricting car ownership and travel, and improved fuel standards but the approach to urbanisation. 'Smart cities' such as New York, London and Beijing provide more space for public transport and mixed land use spatial planning minimising travel. The problems of Beijing and Delhi, as transit centres with no peak-hour traffic, require additional measures. Beijing's 7th Ring Road to ease congestion is 1,000

kilometres long, and even before buildings came up, the metro link was operational.

Beijing already has more than 550 km of metro, more than one-and-half times that of the Delhi Metro; the plans are to have 1,000 km of metro rail. The bus transport system has 30,000 low floor buses, more than eight times the number with the Delhi Transport Corporation. In China, 72% of travel is completed by public transport compared with 37% in Japan, 17% in Europe and 10% in the U.S.

Vehicle policy

Third, when it comes to air pollution, particulate matter is the most difficult to control, leads to smog and serious health issues, and is largely caused by vehicle emissions. Traffic has been identified as a distinct and growing challenge. Systematic study on PM_{2.5} source apportionment in Beijing has found that local emissions constituted two-thirds of this, of which vehicle emissions were nearly half the main source. Regional transport contributes to pollution on heavily polluted days. On-road diesel vehicles formed the largest part of mobile sources, and the policy focus gradually changed from gasoline vehicle emissions to heavy-duty diesel vehicle emissions. Phasing out older vehicles made the most significant contribution. Beijing plans to have 48 lakh charging points by 2022 to push the use of electric vehicles. Delhi has nearly two times the number of registered vehicles than Beijing, increasing at a faster pace and source apportionment is still being debated.

Fourth, innovative implementation steps were instituted in Bei-

ing. Local regulation targeted controlling both the concentration and total emission amount leading to transforming and upgrading the industrial structure production processes and equipment. Economic incentives were tailored to the specific problem, with attractive levels of subsidies to high-polluting enterprises to close their production and differentiated fees charged according to the concentration of waste gas emissions for those who chose to remain in production. Enforcement at the municipal and State levels is coordinated, with each level having different responsibilities and a mechanism for cooperation. Municipal environmental enforcement teams do specific inspections and hotspot grid supervision based on a detailed emission inventory for each source, passing on serious cases to the State level.

Lastly, independent evaluations review the air quality management system, conduct quantitative assessments of the pollution reduction effects in selected areas, analyse new challenges, and provide recommendations for enabling further improvement in air quality and building public support.

The problem in the NCR is not the peculiar mix of administrative levels. It is their common approach to air pollution with cosmetic steps, unverified claims, statistical compliance and shifting responsibility which the powerful Commission has failed to override with a joint plan to modify trends.

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General Studies Paper I	
A	History of Indian culture will cover the salient aspects of art forms, literature and architecture from ancient to modern times;
B	Modern Indian history from about the middle of the eighteenth century until the present-significant events, personalities, issues;
C	Freedom struggle-its various stages and important contributors / contributions from different parts of the country;
D	Post-independence consolidation and reorganization within the country;
E	History of the world will include events from 18 th century such as industrial revolution, world wars, re-drawal of national boundaries, colonization, decolonization,
F	Political philosophies like communism, capitalism, socialism etc.-their forms and effect on the society
G	Salient features of Indian Society, Diversity of India;
H	Effects of globalization on Indian society;
I	Role of women and women's organization;
J	Social empowerment, communalism, regionalism & secularism
K	Salient features of world's physical geography;
L	Geographical features and their location- changes in critical geographical features (including water bodies and ice-caps) and in flora and fauna and the effects of such changes;
M	Important Geophysical phenomena such as earthquakes, Tsunami, Volcanic activity, cyclone etc.
N	Distribution of key natural resources across the world (including South Asia and the Indian subcontinent);
O	Factors responsible for the location of primary, secondary, and tertiary sector industries in various parts of the world (including India);
P	Population and associated issues;
Q	Urbanization, their problems and their remedies
General Studies Paper II	
A	India and its neighbourhood- relations;
B	Important International institutions, agencies and fora- their structure, mandate;
C	Effect of policies and politics of developed and developing countries on India's interests;
D	Bilateral, regional and global groupings and agreements involving India and/or affecting India's interests.
E	Indian Constitution, historical underpinnings, evolution, features, amendments, significant provisions and basic structure;
F	Comparison of the Indian Constitutional scheme with other countries;
G	Functions and responsibilities of the Union and the States, issues and challenges pertaining to the federal structure, devolution of powers and finances up to local levels and challenges therein; Inclusive growth and issues arising from it;
H	Parliament and State Legislatures - structure, functioning, conduct of business, powers & privileges and issues arising out of these;
I	Structure, organization and functioning of the executive and the judiciary, Ministries and Departments;

J	Separation of powers between various organs dispute redressal mechanisms and institutions;
K	Appointment to various Constitutional posts, powers, functions and responsibilities of various Constitutional bodies;
L	Statutory, regulatory and various quasi-judicial bodies;
M	Mechanisms, laws, institutions and bodies constituted for the protection and betterment of these vulnerable sections;
N	Salient features of the Representation of People's Act;
O	Important aspects of governance, transparency and accountability, e-governance- applications, models, successes, limitations, and potential;
P	Citizens charters, transparency & accountability and institutional and other measures;
Q	Issues relating to poverty and hunger,
R	Welfare schemes for vulnerable sections of the population by the Centre and States, Performance of these schemes;
S	Issues relating to development and management of social sector / services relating to education and human resources;
T	Issues relating to development and management of social sector / services relating to health
General Studies Paper III	
A	Indian Economy and issues relating to planning, mobilization of resources, growth, development and employment;
B	Effects of liberalization on the economy, changes in industrial policy and their effects on industrial growth;
C	Inclusive growth and issues arising from it;
D	Infrastructure Energy, Ports, Roads, Airports, Railways etc. Government budgeting;
E	Land reforms in India
F	Major crops, cropping patterns in various parts of the country, different types of irrigation and irrigation systems;
G	Storage, transport and marketing of agricultural produce and issues and related constraints;
H	e-technology in the aid of farmers; Technology Missions; Economics of Animal-Rearing.
I	Issues of buffer stocks and food security, Public Distribution System- objectives, functioning, limitations, revamping;
J	Food processing and related industries in India – scope and significance, location, upstream and downstream requirements, supply chain management;
K	Issues related to direct and indirect farm subsidies and minimum support prices
L	Awareness in the fields of IT, Space, Computers, robotics, nano-technology, bio-technology;
M	Indigenization of technology and developing new technology;
N	Developments and their applications and effects in everyday life;
O	Issues relating to intellectual property rights
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Q	Disaster and disaster management
R	Challenges to internal security through communication networks, role of media and social networking sites in internal security challenges, basics of cyber security;
S	Money-laundering and its prevention;

T	Various forces and their mandate;
U	Security challenges and their management in border areas;
V	Linkages of organized crime with terrorism;
W	Role of external state and non-state actors in creating challenges to internal security;
X	Linkages between development and spread of extremism.
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A	Ethics and Human Interface: Essence, determinants and consequences of Ethics in human actions;
B	Dimensions of ethics;
C	Ethics in private and public relationships. Human Values - lessons from the lives and teachings of great leaders, reformers and administrators;
D	Role of family, society and educational institutions in inculcating values.
E	Attitude: Content, structure, function; its influence and relation with thought and behaviour;
F	Moral and political attitudes;
G	Social influence and persuasion.
H	Aptitude and foundational values for Civil Service , integrity, impartiality and non-partisanship, objectivity, dedication to public service, empathy, tolerance and compassion towards the weaker sections.
I	Emotional intelligence-concepts, and their utilities and application in administration and governance.
J	Contributions of moral thinkers and philosophers from India and world.
K	Public/Civil service values and Ethics in Public administration: Status and problems;
L	Ethical concerns and dilemmas in government and private institutions;
M	Laws, rules, regulations and conscience as
N	sources of ethical guidance;
O	Accountability and ethical governance; strengthening of ethical and moral values in governance; ethical issues in international relations and funding;
P	Corporate governance.
Q	Probity in Governance: Concept of public service;
R	Philosophical basis of governance and probity;
S	Information sharing and transparency in government, Right to Information, Codes of Ethics, Codes of Conduct, Citizen's Charters, Work culture, Quality of service delivery, Utilization of public funds, challenges of corruption.
T	Case Studies on above issues.