The ICE AGE cometh

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Extracted from *It Happened Tomorrow*
Published by The National Book Trust



"DADDY! Daddy! Get up, quick! Get up, quick! Look, there is so much snow outside.

It's so exciting."

Rajiv Shah, woken up from his deep morning sleep by this commotion from the kids, couldn't at first make out what it was all about. Why were Kavita and Pramod so excited?

"Dad, may we go down and play in the snow?" asked Kavita.

Snow? Here in Bombay? How is it posible? Rajiv got up quickly and looked out of the window. He stared in disbelief! Yes, it had snowed. And there was a white carpet stretching between houses. And suddenly he realised how abominably cold it was.

The kids had two pullovers on — that was all they could lay their hands on. Who in Bombay needs warm clothes anyway? When they had bought these in Ooty last year, little did they imagine that they would find use for them.

"No! Don't go down," replied Rajiv, shivering with cold. He however relented as he wrapped a shawl tightly around him. "We'll all go to the terrace, instead. But put your socks and shoes."

Pramod and Kavita ran ahead while Rajiv found a thicker shawl for himself. How he wished they had a heater, even a coal stove would have been welcome in bitterly cold room.

This snowfall had come as a climax to the changing climate of the last week. Normally, Bombay complains of a cold wave when the mercury dips to 15°C. Yesterday it had reached 5°C during daytime, touching zero at night.

This change of weather was totally unexpected. Even the *pundits* had been flummoxed. Where was this going to lead?

"Come on, Dad!" called Pramod from the head of the terrace stairs. They enjoyed the luxury of being owners of the apartment block and had the top floor and the terrace to themselves.

"I am coming. But for God's sake, take care. It may be slippery," Rajiv called back as he lumbered up the steps. How cold it must be at the top!

He overcame his concern as soon as he reached the top, so breathtaking was the view. He thought he was looking at a Christmas card scene of a European town rather than the sweltering heat of Bombay. Even the trees lining the avenues of the Hindu Colony were covered in white. The footpaths and streets were, however, a mess of black and white because of the traffic. The railway lines going past the Dadar station looked deserted.

"I bet the Central Railways have packed up. They don't need much of an excuse," he muttered to himself, "I wonder what the Western are doing!" As if in reply to his thoughts a local train went chugging past on the track towards Mahim.

Rajiv's thoughts went back to the bet that he had made five years ago. It had sounded such a safe bet then. "Would it snow in Bombay?" Vasant had asked.

He had replied, "Never".

And Vasant had argued confidently, "It will happen within ten years."

And now it had happened — within five years.

IT was at a party hosted by the Indian Ambassador in Washington that he had met Vasant (Professor Vasant Chitnis, that is) who had come on a lecture tour of the United States. The Ambassador had invited some leading scientists from Washington D.C., Maryland and Virginia besides a few journalists. Rajiv was there in the latter category.

Amidst the usual round of gossip, both scientific and political, Vasant sat quietly by himself. He was never one for parties and small talk. But...

"A message was just now received on the teleprinter. Vesuvius has erupted again," a correspondent rushed in excitedly.

"My God! This is the fourth volcano to come alive in three months. Looks like Mother Earth has an upset stomach," remarked Rajiv to Vasant.

"We should be worried more about her covering than her stomach," Vasant replied shortly.

"What do you mean?" asked Rajiv.

"Yes, Vasant! Come out with it," added a professor from the University of Maryland.

"Well! When a volcano erupts, not everything falls down on the earth. Some ejecta get into the atmosphere. It depends how much. For, beyond a certain limit it may upset the balance of nature. I fear that we are already close to that limit, if not beyond it," Vasant replied, gravely.

"Upset the balance of nature? What will the implications be?" an American reporter pulled out his pad, sensing a 'story'.

Looking him squarely in the eye, Vasant countered, "Suppose I say that you may have to shift your capital from Washington D.C. to Honolulu?"

"Why should that be necessary?" asked the reporter.

"Since you reporters don't like riddles, I will give the answer too," replied Vasant smilingly. "With a minor Ice Age coming up, you'll have to evacuate these northern cities like New York, Chicago, and even Washington."

Before he could elaborate further the discussion was interrupted by the arrival of a VIP from the State Department. The conversation became general but Rajiv wanted to probe Vasant further. At the next available opportunity he buttonholed him and came to the point. "You have the reputation of backing all your claims with solid proofs. But wasn't that remark about Ice Age somewhat farfetched? I am, of course, not in your field, but my impression was that we won't have another Ice Age for thousands of years. Unless, of course, the conventional wisdom..."

"Is wrong!" replied Vasant, helping himself to some *papadam*. "I can prove that with the delicate balance we find our present ecosystem in, the disaster can come within ten years. But Mr Shah, you don't have to worry .You are safe in Bombay.

Plus-minus, twenty degrees belt of latitude around the equator should be okay."

"If I have retained a few items from my heavily stuffed course of school geography, one of them is the latitude of Bombay — about nineteen degrees north. Pretty close to the limit of your belt."

"So we Bombayites would have to face a real cold wave, with snowfall and all that. I should say that we are being let off easily," chuckled Vasant.

"I can't believe it! Snowfall in Bombay within ten years? Impossible. Here... I'll bet this ten-dollar note against a dime from you that it won't happen. Surely these odds are generous?" Rajiv pulled out a ten-dollar note.

"I am afraid they are too generous in my favour. I don't accept bets on certainties, Mr Journalist! You will lose your ten dollars for sure. Let us exchange our cards instead. Here, I will write today's date on my card. You do likewise. If within ten years it snows in Bombay, you simply return this card to me with an admission that you lost. I will do likewise if I lose."

While they were exchanging their cards, the hostess announced, "Come and enjoy the special dessert prepared by our host."

A huge iced cake was brought to the central table where the buffet had been laid out. Rajiv and Vasant, both noted wryly that it was called 'The Arctic Surprise'.

"The real surprise is coming to us in ten years," muttered Vasant. "Only it will not be so pleasant."

A snowball thrown by Kavita hit Rajiv and brought him back to the present. Yes, he had lost the bet. He will mail the card. He descended the steps, But when he took out the card from his desk, the phone number on the card gave him a better idea. Yes, he will mail the card as per the agreement. But why not talk to him on the phone? He dialled the number.

"Dr Chitnis?" he asked, as the person at the other end responded.

"Vasant Chitnis speaking. May I know your name please?"

"I am Rajiv Shah. Do you remember..."

"Our bet! Yes, I was thinking of you today. So you are conceding the bet?" Rajiv could visualise Vasant smiling at the other end.

"Of course. But may I request half an hour's interview with you?"

"What for?"

"I would like to know the scientific basis of your prediction. I want to publicise your theory."

"Just like a journalist! But it won't be of any use whatsoever. Still, you are most welcome if you can make it to the institute by, say, eleven this morning."

Rajiv agreed. As he began to shave, he switched on the radio. A special bulletin was on: ...The whole of north India is reeling under unprecedented weather conditions. From west Rajasthan to the Bay of Bengal and from the Himalayas to the Sahyadri ranges, there have been snowfalls of varying intensities. It's simply impossible to estimate the number of casualties of men and cattle. Several thousands of

migratory birds were found dead as they were taken unaware by the rapid change in climate. Most of the crops are gone. The roads and rail tracks have become severely disrupted. The Prime Minister and the State Chief Minister made helicopter surveys of the local regions. The Prime Minister has announced a special fund for combating the ravages of snow. Everybody is invited to donate generously to the fund..."

Rajiv tried to switch on to another station, but that too carried the same bulletin.

"Daddy! Come and watch the TV... there are pictures of snow everywhere," called out Kavita.

The TV too carried special bulletins. There were pictures of snow from all over north India. At least technology was able to cope with the flow of information. Rajiv was reminded of the scenes in Russia from the movie *Dr Zhivago*. The TV also gave information of prevailing temperatures — Srinagar -20°C, Chandigarh -15°C, Delhi -12°C, Varanasi -10°C, Calcutta -3°C; only south of Bombay had the mercury above the psychological figure of 0°C. Madras 5°c, Bangalore 2°C, Trivandrum 7°C... appeared warmer by comparison.

Then came the news flash: 'The President has called an emergency meeting to be attended by the Vice-president, the Prime Minister and the Cabinet, the Services Chiefs, the Chief Justice of the Supreme Court and leaders of the opposition parties. At this meeting a decision will be taken on whether to shift the Nation's capital from Delhi to Bombay'.

'You may have to shift your capital from Washington to Honolulu' — Rajiv was reminded of Vasant's words spoken five years ago to the American reporter. If a warm country like India was facing this catastrophic situation, what must be happening in Europe or Russia? He switched on to the B.B.C. World Service to find out.

Yes, there were disasters and tragedies everywhere. Temperatures had fallen by twenty to thirty degrees. Canada, Europe and Russia were accustomed to cold weather and for them the change was not as much a shock as it was to India.

Suddenly Rajiv remembered his appointment. His watch showed the time as 9.05. The sun was discernible but was as pale as a planet or as the moon. Kavita and Pramod had taken if for granted that the school would be closed today. They were watching the TV comforted by the fact that their mother, who would be harassing them with daily chores and homework, was away in Pune for a wedding of her friend's daughter.

Rajiv hurriedly finished his breakfast and took out his car from the garage. The engine was cold and started after a great deal of coaxing. But the real difficulty came on the road. The car skidded on the slippery surface and only because Rajiv had driven under such conditions while abroad that he was able to control it. This was not so for the great majority of Bombay drivers as the abandoned or collided cars and buses all along the Ambedkar Road testified.

"We Indians start considering ourselves as skilled drivers as soon as we get to know where the brake and accelerator pedals are," muttered Rajiv to himself, as he carefully steered his Maruti through the mud and debris.

He realised that it was going to take him much longer to reach Colaba than the customary forty-five minutes, or the hour-and-a-half he had allowed for.

Come on, Mr Journalist! You are an hour late. Did you find another victim to interview on the way?" greeted Vasant as Rajiv entered his office.

"I apologise, Professor Chitnis. I would probably have arrived sooner had I walked instead of driving through this chaotic city." Rajiv lowered himself in an armchair while Vasant seated himself on his revolving executive chair facing him.

"But, first my congratulations, Professor. You sure hit the bull's eye with that prediction of yours. But we journalists are inquisitive, if nothing else. Please enlighten me on how you made the prediction. And why you said that publicising it won't be of any use." Your questions will find answers in this pile of papers," replied Vasant, dumping a file in front of Rajiv.

The file contained reprints of papers in international journals, typescripts and some handwritten notes. Rajiv, being a layman in the field, could not make much of it except for noting the titles and abstracts of the printed articles.

"My scientific theory of Ice Age prediction will be found more in the unpublished part than in the published one," Vasant remarked drily.

"Why so?"

"Because of the so-called objectivity, the peer review system and sense of fairness on which we scientists pride ourselves." Vasant's face carried fleeting shades of sarcasm and frustration before it became featureless again as he continued, "You people think of us as perfect scholars in search of knowledge for knowledge's sake, undeterred by jealousies and temptations. It's all bunkum. We scientists are human. We possess all the weaknesses of the human mind. If the establishment finds new discoveries unpalatable, those belonging to it will do everything to suppress them. I had to water down my hypotheses, blur my predictions in order to get some of my ideas in print. The rest — those in manuscript form — were considered too crazy or outlandish to be published."

"Pardon me, Professor Chitnis..:"

"Call me Vasant," interrupted the Professor.

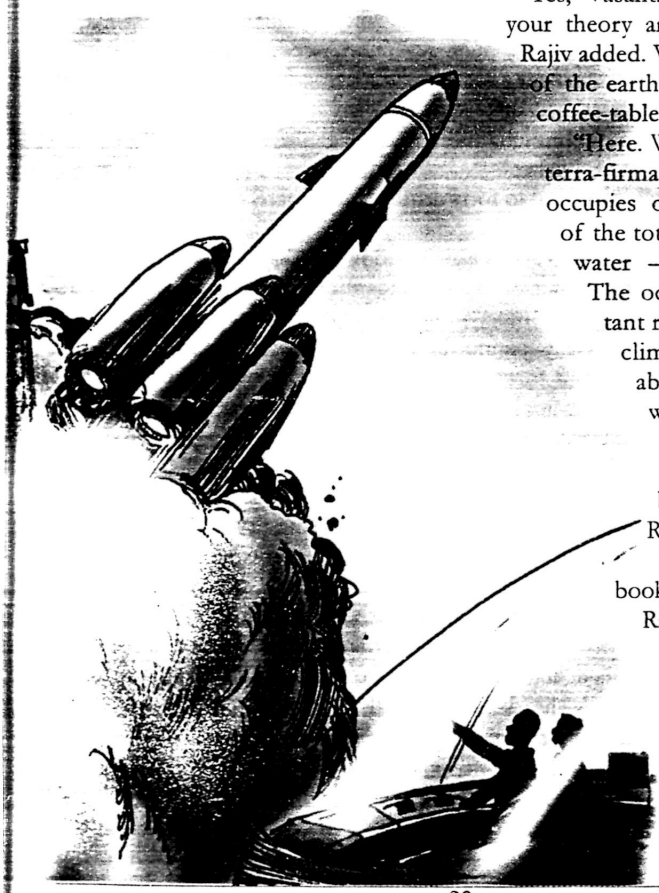
"Thank you, Vasant! But what you are saying bears a striking similarity to the days of Copernicus and Galileo. Copernicus, if I recollect correctly, found that the original preface of his book had been replaced by a milder version by the publisher...so that the book would not find resistance from the religious establishment." Rajiv had put the tape recorder on to record the interview.

Vasant marshalled his thoughts before replying, "Well, in those days they had the religious establishment. Today we have the scientific top brass, the wise men who decide what is publishable, what constitutes science, and what must

never see the light of the day. These are the Popes and Cardinals of science replacing their religious counterparts of five centuries ago...I am sorry if I sound so bitter about it."

"Vasant, you are no doubt passing a judgment on the system, such as it is, on your personal experience. But if I were to defend it, I could say that scientists come across hundreds of cranky half-baked ideas in the course of their career. Who has the time to examine them all? So, if they tend to shy away from any new, unconventional ideas..."

"Who is to blame them? Right? I agree. But if that unconventional idea is well reasoned and supported by factual evidence, should it not get a hearing? Surely it is not difficult to distinguish one such idea from hundred cranky, half-baked ones. Especially if the scientist proposing it has already established his credentials in the field...but, let's leave these generalities apart and come to my theory."



"Yes, Vasant. Let us hear about your theory and what it predicts," Rajiv added. Vasant took out a map of the earth and spread it on the coffee-table in front of Rajiv.

"Here. When you look at our terra-firma, you find that land occupies only about one-third of the total area. The rest is all water — seas and oceans. The oceans play an important role in controlling our climate. The hot air above them rises, mixes with the earth's atmosphere and spreads around before coming down. Right?"

"This much is textbook material in schools," Rajiv replied.

"But we always take it for granted that the oceans are warm and will remain so. To what extent is it correct? A few years ago I

measured the temperatures of the sea down to great depths and was shocked at what I found. The sea-water is warm in the upper layers and can be quite cold, down to freezing levels, deeper down. What came as a shock to me was the realisation that the upper warm layers on which we rely so much for our climate are quite thin. And over the years they are getting thinner."

"But what about the sun? Does it not provide heat to the oceans?" asked Rajiv.

" As a direct supplier of heat, the sun is very inefficient. There is bright sunlight on the poles summer, but how much ice does it melt? Rather, the ice reflects the sunlight, thereby not allowing it to carry its heat in. But, indirectly the sunlight can, and does, prove more effective... I will show you an experiment if you step in my lab." Vasant got up and led the way across the corridor to the laboratory.

A big glass vessel was standing on a work-table. Vasant switched on an apparatus and explained, "I am gradually cooling the air in the vessel. It has some humidity, that is, some water vapour. If I perform my operations carefully, the temperature should fall below zero without the vapour solidifying into ice."

The temperature indicator was dropping and it crossed the zero mark without any ice formation. Then Vasant sent a beam of light across the vessel. Seen at right angles, the inside of the vessel was quite dark.

"This is because light goes through this humid air," explained Vasant. "But, now let me lower the temperature further."

When the temperature dropped to forty degrees below zero, the vessel began to shine. The change was remarkable.

"It happens because the water in the air has now solidified. The ice particles scatter light, which the humid air did not. This is the key point," Vasant pointed out.

Returning to his office, Vasant continued, "This happens in polar regions. When the temperature drops to about forty degrees below zero, the so-called diamond dust forms. This is just the ice particles you saw in that experiment. As in the experiment, the dust scatters sunlight. We don't see this happen in other places because the temperature there hardly ever falls to such low levels."

Rajiv Shah was busy taking notes while Vasant's voice was getting recorded. But he was still very far from the answer he was seeking. Noting the puzzled frown on Rajiv's face, Vasant smiled and continued, "Now, to complete my reasoning. Suppose that the oceans are cooling and are not able to supply adequate heat to the atmosphere. This will lead to a drop in temperature everywhere and the formation of diamond dust in more places than just in the polar regions. What does the dust do? By scattering the sunlight it will prevent it from reaching the ground level. Imagine a dust screen partially shielding the earth from sunlight!"

The penny dropped, Rajiv completed the reasoning cycle excitedly, "And so, the earth will cool further, the oceans will be less warm and the diamond dust will grow and spread, preventing yet more sunlight from reaching the earth...and so we spiral towards the Ice Age. But if the oceans are warm enough this spiral will

not even start."

"Hold it!" said Vasant. "Ordinarily, the upper layers of the ocean are warm enough to keep the atmosphere stable against the threat of diamond dust. But if something happens to set off a chain of events which lower the ocean temperatures, then we've had it. For example, whenever a volcano erupts, the particles from it may find their way to the atmosphere. There they help absorb or scatter sunlight. So, if we have more than normal volcanic activity, we run into the danger of creating dust screens that prevent the sunlight from performing its warming operations....As I noted several years ago, the safety margin kept by nature was getting narrower and narrower."

Only now could Rajiv appreciate that bit of conversation carried out five years ago in Washington and why Vasant had been so worried at the news from Vesuvius.

What lay ahead, now that Vasant' s worst fears had been realised?

The Ice Age has arrived!' Predicted by an Indian Scientist' — this is how Rajiv's article was head lined. It got considerable publicity in India and later the foreign news agencies also picked it up and circulated it widely. Soon Vasant Chitnis became a celebrity. The fact that he had scientifically predicted the catastrophic change in the climate earned him respect from the masses and credibility amongst his scientific peers. And as a result, his prognostications about the future began to be taken seriously.

There were still a number of established scientists who did not agree that this was the onset of an Ice Age. They attributed this to a transient perturbation in the climate; no doubt larger in magnitude than usual, but transient nevertheless. They promised that the good old warm days would return within a few years once the balance was restored to the processes of heating and cooling of the oceans and the air above. It was however hard to convince the countries caught in the freeze out.

At a press conference attended by international reporters, Vasant warned against any complacency. "There may be some thaw in the summer but don't take it as the end of this Ice Age. For, a much colder winter will follow. There is a way of preventing it, which, we can try now before it is too late. It is still possible to reverse the trend, but, it will cost a lot of money. Please spend it."

But this warning proved to be of no avail. In April the spring arrived with a slight rise in temperature. The summer everywhere (in the Northern Hemisphere) was warm and sunny. Even the winter down south was nowhere as bitter as that in the north had been. So, the weathermen as well as the others began to predict that the thaw had set in.

The Wimbledon matches took place as usual. Although the players had to wear warm pullovers, everybody was happy that it did not rain. Australia recaptured the 'Ashes' and for once no one could blame the weather. The US Open Golf tournament was played, out in unprecedented balmy weather. Down in the tropics, the excessive heat was absent but the monsoons came to the Indian subcontinent

promptly and in adequate measure.

'We need not have panicked', thought all nations, great and small. For once the Indians thanked their red-taped bureaucracy which was still working out the modalities of shifting the capital from Delhi to Bombay. They now wound up their half-finished deliberations with the remark, "Decision postponed till further notice."

But Vasant Shitnis was getting increasingly worried. Just as a flame brightens before flickering out, the summer too was going to behave like that. He told this to others, but no one was in a mood to listen.

There was one exception, however. Rajiv Shah had implicit faith in Vasant's reasoning. One day, as he sat in his office, scrutinising the teleprinter news, Vasant dropped in. From his face Rajiv guessed that he had brought some news.

"Here, look at this telex." Vasant handed him a short message to read — 'As directed by you we have measured the ice cap in the Antarctica. We confirm that it has expanded and the water temperature has dropped by two degrees compared to what it was a year ago'.

"The message has come from the International Institute at the Antarctica," said Vasant. "I had expected this result but wanted it to be confirmed. And unfortunately, I was proved right."

"You mean that we are in for a winter more severe than that a year ago?"

"Yes, Rajiv! Who cares? We are all going to be frozen to death anyway." ,

"Come on, Vasant. Is it really that bad? Is there no way out of this ice spiral?" Rajiv asked.

"There is, but now my mouth is shut, until these wise men come and ask me for it. In the meantime, Rajiv take my friendly advice. Go as close to the equator as you possibly can. Perhaps life in Indonesia may be somewhat tolerable in the next few months. I am buying a ticket to Bandung."

And Vasant stalked out.

Man may claim to be the master of the earth but the best of his technology is no match to the scale on which nature can operate. .

On November 2 the people of Bombay saw a remarkable sight. Overhead were flying thousands and thousands of birds. All going in disciplined formations that air squadrons would proud of. Ornithologists came out to watch and wonder that many of these birds had not flown this way before.

Soon even the crows, sparrows and pigeons of Bombay joined them.

They were all heading south, Rajiv noted as he remembered Vasant' s parting words. These birds knew instinctively what man was yet to discover with all his advanced technology. They had common sense and they had learnt from their previous year's experience.

The discovery was made by all the geostationary satellites two days later. On November 4 came the warning: 'Atmospheric changes are taking place rapidly

and indicate heavy snowfalls in several parts of the earth within the next twenty-four hours'.

"This advance warning would not have come but for our advanced technology," the meteorologists proudly announced. The birds by then had reached the safe haven of the equator.

Unable to match their discipline, the humans panicked. The technologically advanced countries like Japan, Canada, the USA and Europe were complacent that having survived the previous winter they would be able to face any cold front. They were not prepared to find their big cities buried in the five-metre deep snow. In the ensuing chaos, only the fortunate few who ran to the nuclear war shelters survived. In the traditionally warmer countries the cold wave was less severe but it extracted as much a toll from their less prepared populations.

Rajiv Shah had moved in with a cousin in Madras which was barely habitable. Pramod and Kavita were no longer thrilled with the snow and were asking, like so many others, when would the good old warm days return. But no one, let alone any expert, could say anything with any confidence. Those experts who had taken the previous year's cold wave lightly had mostly perished under this one. One of them who had survived because he had moved down from Washington to Miami Beach was Richard Holmes, a member of the US Energy Board.

One day Rajiv was surprised to hear from him on the phone.

"Hi, Rajiv How are you? I bet you are warmer there in Madras than our freezing Miami here." Richard was trying to be humorous but Rajiv detected a hint of the underlying anxiety.

"Come on, Richard! I bet you have a centrally heated house there!" he bantered.

"Central heating in Miami? You must be kidding. But Rajiv, I called to find out where Vasant is...Vasant Chitnis, you know. Where has he vanished? No phones in Bombay or Delhi are working normally.

"As if they ever worked normally," muttered Rajiv. Aloud he gave Vasant's address and phone number in Bandung to Richard.

"I would like to know what he makes of all this. May be he has a way out of this mess," Richard said as he thanked Rajiv for the information.

Now, are the wise ready to talk, wondered Rajiv! A few months ago, the same Holmes had ridiculed Vasant' s doomsday forecast. Still, it was not too late even now. He only hoped that Vasant would in a mood to listen.

How is your Washington. doing, eh, Richard?" asked Vasant as they shook hands at the Bandung airport.

"There is not a soul left there... in fact, the birds were wiser than us. They left well in time," replied Holmes. He was considerably subdued compared to when they had last met. Not knowing how Vasant would react, he had brought Rajiv along. Silently they drove to Vasant's residence.

"You have chosen a nice corner for yourself, Vasant! You don't know the havoc

caused allover the world. Here, take a look at these telexes and faxes." Rajiv handed him some sheets of paper.

Vasant read what would have made alarming headlines in normal times but which had become routine now: 'The British government has announced the completion of its transfer programme of the surviving forty per cent of its population to Kenya. The programme took two months to complete'. 'Moscow and St. Petersburg have been evacuated, the Russian P.M. has declared'. 'We can survive for upto a year in our underground shelters-Israeli President'. 'All rivers in north India totally frozen, reports UNI'.

Vasant passed back sheet after sheet to Rajiv as he read the detailed messages, his face expressionless. When he had finished, he made a laconic comment, "Last year we got a glimpse, now we are getting it in full. Next year, I wonder if we would survive to see the aftermath!"

"Is it as bad as that?" asked Rajiv anxiously. "Can't it be prevented?" asked Richard.

"It is probably too late, but I may be wrong, Richard.

We can try; in any case what alternative have we? We should have done it last year." Vasant produced a typescript from his desk. It was labelled: 'Project: Invasion of Indra'.

Six months had elapsed since the Holmes-Chitnis encounter. Only the ten degree belt, north and of the equator, still retained the green and blue so well identified with the planet. Elsewhere the Ice Age had set in. And in this thin strip contained all that remained of the human civilisation and the efforts that the civilization was planning on to counter the ice invasion.

Last ditch efforts!

But Vasant was more optimistic now that the rocket was ready to be launched. As he stood beside the rocket launcher at the Vikram Sarabhai Space Centre (VSSC) at Thumba, he was impatient to begin.

"We are ready," said the Chief of Operations.

"Then fire!" ordered Vasant, who was never one to wait for an astrologically auspicious moment for beginning any project.

The Chief pressed a button and, after a moment of anxious waiting, everybody heaved a sigh of relief as the majestic rocket rose upwards. The invasion of Indra had begun!

The VSSC had previously launched rockets to get information about the atmosphere. Now this rocket was going to control it, if it and the other rockets being launched all along the equatorial belt would do what they were designed for.

Sriharikota, Sri Lanka, Sumatra, Kenya, Guatemala... there were having launch pads with similar rockets or satellites. Because Vasant had initiated the campaign plan, he was given the honour to preside over the first launch.

For the first time he smiled as he inspected the instrument on the panel in front.

He picked up a red phone and spoke into the receiver, "The invasion has begun successfully."

Rockets, satellites, balloons and high flying aircraft — all were pressed into the attack. These were the four components of the invading army. And mankind anxiously awaited reports sent by the geostationary satellite — the Sanjayas of this modern Mahabharata.

'In our mythology kings from the earth have successfully attacked Indra. Will this invasion succeed?' wrote Rajiv in his diary.

What was the invasion about?

It carried the ambitious plan of bombarding the atmosphere with tiny metallic particles. These particles would absorb the sun's heat and convey it to the earth down below. This was Vasant's plan. He expected that by now the ejecta of volcano that had settled in the atmosphere and reflected back the sun's rays away from the earth, would have percolated down. The hope was that the newly injected metallic particles would undo the damage done by them.

But this was not going to be enough. The diamond dust in the atmosphere had to be reduced immediately. This could be achieved on through explosive heating of the atmosphere. To achieve this Vasant had stipulated the use of weapon technology harnessed for constructive use rather destructive. Driven to the point of extinction, all countries came forward in the spirit of cooperation. And so those six months were used for devising ways of generating heat in the atmosphere through explosive release of energy. Still, at the end point of this collective effort was the question: 'Will it after all work?'

Came September question was answered affirmatively. The first hint came with the melting of snow and ice in the Gangetic plains. Soon thereafter the land stretching from California to Florida began to shed its piles of snow. From Miame, Richard Holmes called Vasant. "Vasant! Congratulations The Invasion of Indra has accomplished victory. The diamond dust is rapidly disappearing. And there is a global warming on the way. Vasant, you are a genius."

Vasant's face carried the satisfaction a scientist gets when, after many difficulties, his work is recognised by his peers. But underneath was a deep layer of anxiety and uncertainty.

They had won the battle but the war lay ahead. As it often happens, after fighting a fierce battle even the winner gets exhausted. Man may pause briefly to pat himself for his achievement. But great struggles lie ahead. The Ice Age had slashed the human population to less than half its original size. The invasion of Indra had drawn heavily on energy resources and other essential commodities. And now the melting snows were going to unleash heavy floods all over. Will their spirit of cooperation continue as men faced these problems? Vasant felt sweat accumulating on his brow.

These were the first drops of perspiration he felt in the last two years. ❖