

BusinessLine

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Mulling over mustard

GM varieties should be promoted in a responsible way

After close to two decades of research, essentially by government bodies in the case of genetically modified mustard, the Genetic Engineering Appraisal Committee (GEAC) attached to the ministry of environment has recommended commercialisation of the crop. If Environment Minister Anil Dave gives the green signal and the Supreme Court too approves (it has stayed the commercialisation of GM mustard), mustard will be the first GM food crop to be grown in India. The RSS-affiliated Swadeshi Jagaran Manch and anti-GMO activists have already voiced their disapproval, possibly exerting pressure on the minister to do what the UPA's Jairam Ramesh did seven years ago in the case of Bt brinjal (in which the *bacillus thuringiensis* gene is introduced): impose a moratorium on its release. The only GM plant to be grown in India is Bt cotton, since 2002. In its hearing last October, the Supreme Court had asked the Centre to seek public opinion on GM mustard before going ahead. If the apex court does lift its stay, it could clear the way for the spread of Bt brinjal and other transgenic varieties. Farmers and scientists would welcome the move for the improvements in yield, even as concerns over the health and environmental consequences of GM technology, perhaps a trifle overblown, refuse to die away.

However, the Centre must allay apprehensions that surfaced in the case of the Bt brinjal trials. A body of scientific opinion had then said that the GEAC had not observed due process in carrying out the tests, prompting Ramesh to reverse the committee's decision. It was also argued that the agency developing the plant variety should not be involved in the field trials. An independent body, with multiple stakeholders, should take a call on issues related to GM. The fact that Europe has by and large shut its doors on GM foods, even as the US and Latin American countries have accepted them, only shows that public opinion remains divided and confused on this subject. All the more reason, then, to have an open regulatory regime that demystifies the technology and is transparent in its functioning.

GM foods promise a way out of a potential Malthusian trap, arguably with less pesticide use in the short run than existing varieties. After decades of heated debate, it would seem that the truth lies somewhere between the claims of the evangelists and the naysayers. In the case of GM mustard, where yields are expected to rise by up to 30 per cent, it is also worth looking at other ways to achieve a similar result. Above all, the right institutions are required to move ahead with an open mind.

Macron's foreign policy, a grey area

That includes how France will approach India, even as continuity rather than change is on the cards



VIDYA RAM
EUROSCOPE

While a good deal is known about the domestic and European ambitions of French president-elect Emmanuel Macron, the same cannot be said of his goals for France's connections with the rest of the world. With a few exceptions — such as criticism of Russia over alleged interference in the presidential elections and his commitment to reinforcing alliances such as Nato — much of his campaign focused on the social and economic reforms he hopes will help revive France's fortunes, as well as the strengthening of the European project he hopes to champion (dependent of course on other partners, not least Germany).

His election "programme" (manifesto) makes just a few mentions of other nations or regions beyond Europe, including China, Russia and the US (which he highlights as competitors who France is better able to stand up to as part of Europe) and Africa (towards which he pledges a new policy approach). While there is no mention of India, it is possible to get a sense of what will lie ahead for France-India relations from the trajectory of his strategy to date.

Reading the signs

The initial signs are that relations will follow the same track they have under past presidencies, which has seen a gradual strengthening of ties following the 1998 strategic dia-

logue, which led to strategic partnerships in areas such as space, defence and civil nuclear cooperation.

"On core foreign policy issues such as security and defence, the fight against terrorism, we are not likely to see much change," says Jean Luc Racine, senior CNRS fellow at the Centre for South Asian Studies (EHESS) in Paris. He noted the particularly warm reception to Macron's election from President Pranab Mukherjee who in a statement this week hailed the "decisive mandate" for his leadership and vision, and highlighted India's "multi-faceted strategic partnership" with the country. Prime Minister Narendra Modi who also congratulated Macron for his "emphatic victory" is due to meet him at the G-20 summit in Hamburg in July this year, though Racine believes it will take longer for new parameters of the bilateral relationship to become apparent.

Asian ties

The continuance of strong ties with India were likely to be supported by the decision of Jean-Yves Le Drian, the defence minister under President Francois Hollande who was key to furthering France's strategic partnerships across Asia, to support Macron, who has been warmly welcomed into his camp, says Françoise Godement, director of the Asia Programme at the European Council on Foreign Relations. "I think we have a somewhat contradictory picture of (Macron) — on the one hand he is someone who has met and created a network with hundreds of people who advise him but he is also known to be someone who makes his decisions within a tight circle so he is presumably someone who learns a lot but makes his own decisions," he added.

India and France maintained a



The next president Unlikely to be hurried along, but will be willing AFP

close relationship during Hollande's presidency: with Modi visiting France in early 2015 (his first visit as prime minister to a European nation), followed by a visit later that year to attend the UN climate change conference in Paris. Hollande visited India in January 2016, during which a number of commercial and economic agreements were reached, as well as those relating to defence, space, railways, and the purchase of 36 Rafale aircraft by India.

While defence and strategic co-operation has been strong, a Macron presidency could spur greater cooperation in the areas of business and economy, says Godement, noting Macron's overall emphasis on strengthening the French economy, which has seen tepid growth rates in recent years, and tackling high levels of unemployment, as well as the enthusiasm with which he welcomed foreign investment to the country (particularly from China) while economy minister in the Hollande administration. His adherence to free trade and open border principles were reiterated strongly during his electoral campaign including during a visit to a

factory in his home town of Amiens where he very publicly debated with Marine Le Pen supporters, arguing that closing borders and protectionist measures would not help save French jobs and the economy in the long run. Bilateral trade between India and France has grown steadily (from €5.13 billion in 2006 to €8.5 billion in 2015). France is the ninth largest foreign investor in India, while around 75 Indian companies operate in France, employing around 7,000 people.

Welcoming stance

Godement noted that while Macron's clearest stances on immigration had centred around EU citizens, his overall economic ambitions — particularly to spur innovation in the French economy — would likely include an approach that welcomed skilled talent from countries such as India. "His views have tended to emerge through the economic lens and that is likely to be true of his foreign policy approach," he said. Racine added Macron's approach would also likely emphasise an openness to international students for higher education or doctorate-level study, given

his focus on innovation and education. Much of the potential for strengthening the bilateral relationship will of course depend on external factors such as Macron's ability to secure the closer European relationship that he has been seeking, which he argues will be key to the region's and France's success. While this will of course depend on the cooperation of European partners (not least Germany), Macron's ability to carry out reforms domestically will depend on the structure of the legislative assembly (and who becomes the next prime minister), which will be decided in elections that follow next month.

Much will depend on the success of his La République en Marche candidates as well as those of other parties: a strong performance by either the La France Insoumise (Rebellious France) camp of leftwing Jean Luc Melenchon (which is strongly against many of Macron's policy proposals, including reforms to the labour market) or the protectionist, anti-immigrant National Front could make his reform ambitions harder to realise. This will be less so when it comes to foreign policy, though, notes Godement who points to the greater freedom given constitutionally to the president on issues of foreign policy and defence, requiring the prime minister to work for and with the president, even when they came from opposing political camps.

Still, Godement believes that in contrast to some past presidencies, Macron's was likely to focus on longer-term economic issues — domestically and internationally — rather than becoming immersed in big ticket geopolitical issues and interventionism that had weighed on past presidencies. "He cannot avoid these but is likely to attempt a different approach," he says.

If warding off asteroids costs money, so be it

How do we put a price on the priceless: the value of the human race? Asteroids undoubtedly pose an existential risk

BRYAN WALSH

When the asteroid named 2014 J025 passed by Earth in April, it came within 1.1 million miles of the planet — a close shave by cosmic standards and the nearest in more than a decade. At nearly a mile across, it could have killed tens of millions if it had hit a heavily populated area. While its path was a matter of astronomy, J025's discovery was largely a matter of luck. NASA is currently required by Congress to focus on locating near-Earth objects (NEOs) that are much smaller than J025, starting with ones bigger than a football field. But the agency has located less than a third of the more than 10,000 that are estimated to be out there, and there's little chance of finding them all by its 2020 deadline.

Those figures are a reminder of the incomprehensible mission of the Near-Earth Object Program. Yet its budget is a mere \$50 million per year, having just survived an attempt by the Trump administration to cancel plans for a manned mission that would explore redirecting asteroids headed for Earth. To un-

derstand why that's a pittance, you need to understand a very, very big idea: existential risk.

Humans at risk

An existential risk is an event that could end the human race. There is no coming back from existential risks; the loss is essentially infinite. We know that asteroids are an existential risk because they have the track record. Sixty-six million years ago, a six-mile-wide asteroid slammed into what is now the Yucatan Peninsula — and ended the dinosaurs. With thousands of large NEOs out there, one will end up on a collision course with Earth sooner or later.

Timing is everything. If scientists knew that a large asteroid was almost certainly going to hit Earth over the next decade, or even over the next century, money would be no object. It almost certainly won't, though. In 2001, a UK task force estimated that an asteroid large enough to kill at least 1.5 billion people has just a one-in-250,000 chance of hitting Earth in a given year.

So why worry about asteroids at all? The odds are small, President Obama's science adviser John Hold-



What if Sounding an alert MURATART/SHUTTERSTOCK.COM

ren told Congress in 2013, after a small asteroid broke up over the Russian city of Chelyabinsk. But the potential consequences of such an event are so large, it makes sense to take the risk seriously.

To begin to get a sense of how much we should be spending to avert an asteroid strike, we need to try to put a price on the priceless: the value of the human race. In his book, *Catastrophe: Risk and Response*, the polymath jurist and economist Richard Posner tried to do just that, valuing a human life at \$2 million. (The US government, in judging the impact of regulations, has estimated a single American life at upwards of \$9.1 million.) By those

figures, an asteroid strike that killed 1.5 billion people would cost \$3 quadrillion, or 3 million billion, which, with a one-in-250,000 yearly probability, works out to an annualised cost of asteroid strikes of \$12 billion.

Pretty low figures

That's anything but a precise figure. Because asteroid strikes are so rare, our estimates about the probability of a collision are necessarily imperfect. Then again, it could well turn out that the collisions are more likely than we think now, which would make that annual cost even higher. But Posner's calculations still make a strong argument that while we may not know exactly how much we should reasonably budget on asteroid defence, spending \$50 million a year to protect ourselves from an event that could cost \$12 billion annually is much too low.

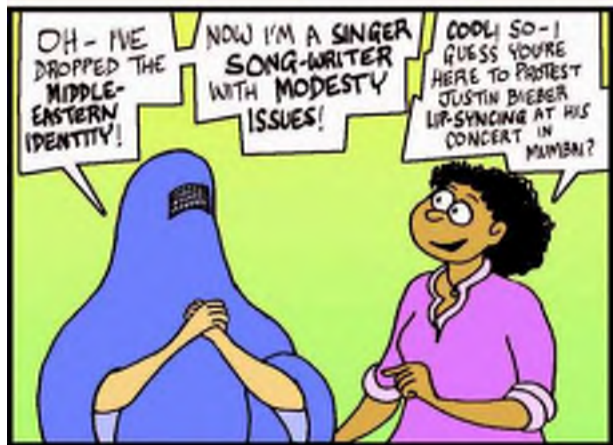
Posner's book brought attention to the issue. But there is still much more to prepare ourselves, without breaking the budget. At the cost of \$500 to \$750 million, NASA could put an infrared-sensing telescope in a Venus-like orbit, which would help identify asteroids that can't currently be spotted because they

are obscured by the sun's glare. A National Academy of Sciences report pegged the cost of an optimal asteroid search programme at about \$100 million a year, which would have the added benefit of providing more reliable estimates about how often an asteroid might hit Earth, which in turn would help us refine the calculation of how much we should be spending on defence. And with work, we'll learn to defend ourselves.

The spending bill reached by Congress on April 30 ignored the White House's request to cancel the Obama administration's plan to send a robotic craft to a near-Earth asteroid, followed later by astronauts, which would enable the agency to test out strategies to deflect an incoming object. The deal even increases funding for NASA by more than a half billion dollars and allows some of that money to be used on the planned asteroid mission. It's a good step, even if the money doesn't yet come close to matching the risk we face. A large asteroid hitting Earth would be a natural disaster like no other — but as with any other natural disaster, the least we can do is buy a decent insurance policy. BLOOMBERG

SUKIYAKI

MANJULA PADMANABHAN



LETTERS TO THE EDITOR

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Remaining marginalised

According to the Indian Exclusion Report (IXR) released by the Centre for Enquiry Studies (CES), dalits, adivasis and muslims continue to be the most excluded communities, from pension for the elderly, digital access, agriculture land and legal aid for the undertrials. This paints a grim picture of India.

On the landholdings front, the CES study has found no change in the feudal system. The alienation of adivasis from their land occurred largely due to "developmental activities". Land reforms remain on paper. As many as 1.063 billion Indians don't have access to the internet. The elderly from these marginalised communities are left to fend for themselves. Impoverishment and lack of political clout explain why undertrials from these communities languish in jail indefinitely.

Cosmetic measures such as de-

monetisation and bank accounts cannot in themselves mitigate poverty. The patriotism of the privileged has to be measured by what they do to improve the lot of the impoverished.

G David Milton
Maruthancode, Tamil Nadu

Rescue the sector

This is with reference to 'Nightmare on IT St: thousands to be sacked' by Agarwal, Ganesh and Kurmanath (May 9). The situation calls for urgent action by the IT industry, and the Government.

Management could offer a package deal: reduce working hours and salaries to 33 per cent for six months, offer retraining and reskilling programmes within 6 months to be paid for by the employer (from savings of up to 33 per cent of employees' salary), with the Government allowing tax deductions for the cost of retraining and reskilling.

Senior management should also share the pain and accept a temporary reduction in remuneration.

Germany used a flexible working hours programme to get over the economic downturn in 2008 in the manufacturing sector. We need to think bold. What is Nascos doing? The situation exposes the lack of strategic planning by senior management. They should have anticipated the developments and planned how to deal with them instead of simply laying off employees.

Bhaskar Balakrishnan
Greater Noida, Uttar Pradesh

It augurs well that the Nifty and Sensex are galloping to new heights; however the IT industries trimming their workforce is cause for concern. Jobs disappearing in the IT sector will have a cascading effect on other sectors. The behemoths of bellwether companies

have to explore ways to grapple with the situation.

HP Murali
Bengaluru

Carry a bag

This is with reference to 'Misguided view of Swachh Bharat' by Jinoy Jose (From the Viewroom, May 12). Segregating and composting organic waste at source — household/community level — is one of the best solutions. That would leave only non-biodegradable wastes to be collected and these can be recycled for road-laying or oil generation.

It makes ecological sense to carry our own cloth/jute bags to shops; else, return the plastic bags to the shop after emptying the contents at home. The local kirana shopwala rues that he incurs a useless expenditure of ₹3,600/month on plastic packaging and carry bags for customers with zero ROI either in the form of a plastic-fee

or the bags being returned. Plastic packaging wasterot collected back by companies, contributes to mountains of trash. American writer Vance Packard had said long ago in his thought-provoking book, *The Waste Makers*, that "Prodigality is the spirit of the era. Historians, I suspect, may allude to this as the Throwaway Age."

Thankfully, over the decades, the lacuna is being redressed by the humble ragpicker eking out a livelihood from garbage salvaging. But will the onus of the 'take-back' mechanism penalise the producer by adding to his costs in a cut-throat market? As the economist, Raja Chelliah said: "A producer can respond to the rise in the unit cost by reducing the level of output or/and substituting an eco-friendly input for the polluting input. Either of these choices will reduce the pollution load."

CV Krishna Manoj
Hyderabad