



“Concentrate all your thoughts upon the work in hand. The sun’s rays do not burn until brought to a focus.”

—Alexander Graham Bell



# The broken foundations

The shocking numbers concerning the education sector of Jammu and Kashmir should concern anyone who cares about the future of education in the Union Territory. This is a system struggling with contradictions with thousands of government schools having almost no students on one hand while on the other, thousands of these schools lack even the most basic facilities that a learning environment should guarantee. Official data shows that 3192 schools across Jammu and Kashmir have reported less than ten or even zero enrolment since 2022. Yet more than 2500 teachers remain posted in these institutions. This raises a serious question about how efficiently the system is functioning. When schools have empty classrooms but teachers remain on payroll, the issue is not simply about numbers. It is about planning, management and the ability of the system to adapt to changing realities. Education is one of the largest areas of public spending. Salaries of teachers account for a major portion of that expenditure. When thousands of teachers are posted in schools where there are hardly any students it naturally leads to concerns about how resources are being used. The government has already merged or closed over 1700 schools since 2019. That may have been a necessary administrative step in some cases. But the larger issue remains unresolved. Low enrolment in such many schools reflects deeper problems. Families are often choosing to send their children elsewhere. In many areas private schools have become the preferred option. In others migration and declining population in rural pockets may have played a role. Whatever the reason the government must examine the causes carefully rather than only focusing on closures and mergers. Equally worrying is the condition of basic infrastructure in schools that continue to function. The data paints a troubling picture. Out of more than 18000 schools in Jammu and Kashmir over 9000 do not have boundary walls while over 10000 schools lack playgrounds where children can engage in physical activity. These are not minor shortcomings. Schools are meant to be safe spaces where students can learn, play and grow with dignity. Sanitation and drinking water facilities also remain a challenge. Around 2700 schools do not have boys’ toilets, while 57 schools are without toilets for girls, even as 78 schools lack drinking water facilities altogether. In an era when we speak of modern education and digital classrooms these are basic requirements that should never be missing from any institution meant for children. Education is not merely a sector. It is the foundation on which the future of Jammu and Kashmir will stand. The children sitting in our classrooms today will shape the region tomorrow. If their schools lack students, facilities or proper planning the consequences will not be limited to the education department alone. The government must therefore treat these figures as a call for urgent action. Empty classrooms and missing facilities should not become the defining story of education in Jammu and Kashmir. With thoughtful reforms and consistent effort, the system can still be strengthened. Our children deserve nothing less.

## India’s Ethanol Push

# FIRMS GAIN, FOOD & WATER LOSE

SHIVAJI SARKAR

Every crisis in India is fast becoming a pretext for profit masquerading as reform. The Strait of Hormuz oil crisis has now been repurposed to justify 20 per cent ethanol blending (E20)—pitched as green and strategic, but structurally unsound. It threatens food, water, and land security while enriching an industry.

Consumers pay twice: 8–10% lower mileage and costly retrofits—Rs 20,000–Rs70,000 for each of over 40 crore running vehicles—turning a supposed solution into a nationwide economic crisis.

The touted energy benefit is possibly a myth and drain on agricultural resources gigantic. To meet the target, the country will require about 1,016 crore litres of ethanol annually. Achieving this would require a shift from sugar and sugarcane—leading to a growing dependence on maize, broken rice and rice procured from Food Corporation of India. Estimates suggest that India will need to produce 11–12 million tonnes of grains, comprising maize and rice, 275 million tonnes of sugarcane, covering a land area equal to 7.1 million hectares of land.

Experts caution that while high yielding varieties can help meet the demand, it would also increase reliance on water, pesticides and fertilizers. According to Mumbai-based IndaSpend’s report, the E20 target may not significantly reduce emissions, may harm food security, and will provide only marginal energy security.

Further, the Institute for Energy Economics and Financial Analysis (IEEFA) argues that using food-based feedstocks for ethanol production may not be the best use of land in a country where hunger remains a pressing issue. In effect, fuel drives would bite into food-producing lands or forests, burdening the nation’s scarce resources

Not Carbon Neutral Equally alarming is the water footprint. Sugarcane in India alone uses ~50 per cent of irrigation water. Producing one litre of sugarcane-ethanol guzzles about 2,860 litres of water. That is nearly three cubic meters of water for a glass of fuel. In a water-stressed country, this is catastrophic. NITI Aayog warns that ethanol expansion could raise India’s annual irrigation demand by 50 billion cubic metres by 2070 – enough to quench Delhi’s thirst for 17 years. Most districts in India already face water scarcity. Redirecting scarce groundwater into fuel tanks undermines farms and drinking supplies alike.

Ethanol expansion in India will divert ~7–8 million hectare of cropland, sharply raise water use, and intensify food–fuel competition, risking higher food prices. Forcing crop-based fuels can increase overall greenhouse emissions – as seen in the US. More land clearing and fertilizer use raised carbon intensity of ethanol.

Lifecycle Emissions: Food Security Under Threat

India is already wrestling with food inflation and crop shortages. Retail food prices have been above the RBI’s comfort zone for years. In 2023 poor rains and heat knocked down yields of staples (wheat, rice, sugarcane). The government banned wheat and sugar exports and imposed minimum prices on rice to keep markets stable. Against this backdrop, turning food crops into fuel is per-

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ing E20 as “energy independence,” while effectively socialising environmental costs and privatising profits—leaving the public to bear higher food prices and water stress.

Backed by floor-ratio-production (FRP) hikes, mandates, subsidies and post-2022 ex-

and development. It must not succumb to global climate discourse – driven by Western carbon pressure. India’s per capita emissions remain far below the developed world’s, and its priority must be equitable growth and food security.

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Who Profits & Who Pays?

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port curbs, distilleries expand as citizens bear the burden on food, water and land. When export restrictions hit sugar in 2022, the sector pivoted to fuel. In states like Maharashtra and Uttar Pradesh, hundreds of proposals for new ethanol distilleries have sprung up, bolstered by tax breaks and subsidies.

The higher sugarcane FRP and ethanol purchase mandates distillery margins. Ethanol stands out as a classic crisis-with-opportunity: global carbon pressure and oil shocks give industry cover to expand, even as ordinary Indians pay with their food, water and land.

A False Energy Transition Biofuel blending offers only limited decarbonisation, as crop-based fuels still emit significant carbon and can worsen emissions through land-use change. It does little to reduce India’s 80–90% oil import dependence, given ethanol’s lower energy density.

Pushing food crops into fuel production under global climate pressure risks harming food security and growth priorities. India needs independent, context-driven energy strategies that balance emissions with equity

Towards Real Energy Security

India’s energy crisis reflects policy gaps, not resource scarcity. Priorities should include boosting energy efficiency to curb demand, scaling solar and wind as truly indigenous alternatives, and optimising transport via rail, buses and electric three-wheelers. Biofuel efforts must focus on waste-based and advanced technologies that avoid food and water stress. Additionally, green hydrogen from renewables offers a viable pathway for industry and heavy transport without burdening farmland.

Ethanol blending should remain marginal, not central; crop-based fuel risks national resources for limited gains. Policymakers must avoid short-term optics that create long-term economic and ecological costs.

India’s strategic goal should be securing energy and agriculture simultaneously, not sacrificing one for the other. By all means, use cleaner fuels – but not at the cost of starving our farms and drying our wells. The true path to energy independence lies in myopic promotion of ethanol. ---INFA

# From First Steps to Future Dreams: Reimagining Learning for Every Child

DHARMENDRA PRADHAN

Every year, when school gates open to a new academic session, India witnesses one of its most profound acts of collective resolve. Across mountains and coasts, in cities and remote villages, millions of children—sometimes in spite of challenging personal circumstances belying their young lives—step into their classrooms with fresh vigour, new aspirations and immense possibilities. It is a quiet yet powerful national moment. This year too nearly two crore children have enrolled into Class 1, which carries both hope and a shared national responsibility.

India’s school ecosystem is humungous. It encompasses over 14.7 lakh schools, nearly 25 crore enrolled students and more than one crore teachers. These numbers are not merely a measure of administrative scale. They herald a firm commitment to shaping the future of our nation through education. The National Education Policy (NEP) 2020 has placed curiosity, understanding and holistic development at the centre of learning and moving beyond rote memorisation. Every academic year is a meaningful step forward in realising that vision.

With the implementation of Balvatika, early childhood learning is now integrated into the formal school system ensuring children enter Grade

1 with better readiness and strong foundational skills. A child’s entry into school marks the beginning of a lifelong relationship with knowledge and society; schools must ensure this journey is rooted in joyful learning, well-being and a strong sense of belonging.

The Learners’ Journey: From First Steps to Finding Confidence

The first day of school is seldom uneventful. It carries a mix of hesitation and joys of new beginnings. Tiny hands hold big emotions and curious eyes capture a whole new world. When children feel safe and valued, they begin to open up. They participate more. Their curiosity begins to flourish. Confidence grows slowly, but steadily. The early years must centre on play, exploration, discovery and define the beginning of a lifelong journey.

Relationships matter deeply. A caring teacher can change a child’s path. A supportive classroom can turn silence into participation, and participation into confidence. When a child feels truly seen and heard, curiosity turns into courage. A child who feels a sense of belonging begins to find her voice.

At the heart of these early years lies a strong national commitment to foundational literacy and numeracy. Through the NIPUN Bharat Mission, India has set a clear goal: every child should be able to read with understanding and perform basic arithmetic by the end of Grade 2. The focus

shifts from memorising answers to understanding concepts. Classrooms must inspire children to ask questions, not just reproduce answers.

This vision goes beyond academics. Arts, sports and values are essential parts of the learning process. Education must shape the ‘whole child’—not just the mind, but also the body and the heart. Physical activity and nutrition is integral to everyday school life. A healthy child learns better, participates more and grows with a healthy sense of self.

Addressing Emerging Challenges

Globally, the lifestyles of children has shifted significantly. Changing dietary habits and reduced physical activity has become a concern across nations. India is responding proactively to this challenge. Measures such as mandatory physical education, ‘Oil Boards’ and ‘Sugar Boards’ in schools to address obesity and a strengthened PM-POSHAN scheme with a sharper focus on nutritional quality is reorienting schools toward health and active living. These efforts aim to build a generation that values health as central to overall development.

While technology is a powerful enabler for access and learning, growing exposure to social media raises concerns around screen time, attention and mental well-being. Again, this is a global concern and not unique to India. Schools and families must ensure it is used as a tool for learning, not distraction.

Equally central to this vision is the mental and emotional well-being of our children. School curriculum and pedagogy have integrated socio-emotional learning to support the child’s journey, in an age when children are navigating a more complex and stimulating world than any previous generation. Creating safe, stress-free environments requires a shared effort by schools, parents, teachers and communities.

The Role of Teachers

Reform does not reach children merely through policy documents; it is implemented through teachers. They are the true architects of educational transformation bridging the gap between vision and classroom reality. Teachers must teach in a multi-lingual setting and also ensure that a child’s mother tongue is respected and used as a powerful tool for learning. By valuing this, we ensure that the transition to formal education is seamless, confident, and rooted in their own identity.

I call upon our teachers to prioritise competency-based learning while respecting each child’s pace, personality and remaining attentive to the emotional and mental well-being of every student under their care.

The Role of Parents

Education does not begin or end at the school gate. The home is the first classroom, and parents are the first teachers. What children experience at home shapes how they learn in school.

Promoting reading habits and patient engagement with a child’s questions are subtle acts to nurture the quest for knowledge. I urge parents to ensure that children get balanced nutrition and adequate sleep; that they get enough daily physical activity and outdoor exposure. Parents must engage actively with the school and measure the child’s success not only in grades, but in confidence, kindness and a sustained interest in learning. The greatest gift the parents can give a child is the belief that learning itself is truly joyful.

A Shared National Commitment

Education is a shared responsibility. It belongs to governments, schools, teachers, parents and communities. Every stakeholder has a role to play.

Every child deserves to be seen, heard and gently guided in their learning journey. The true measure of our education system is not a few high achievers but whether every child regardless of background, learns with confidence and joy. Let us reaffirm our national commitment to building an education system that is inclusive, innovative and future-ready. Together, we can ensure that every classroom becomes a place where dreams take flight and where the leaders of tomorrow are shaped. The harbingers of a Viksit Bharat by 2047 are in our classrooms today. Let us give them the golden wings to soar.

(The author is the Union Minister of Education)