

PROCEEDINGS

of
TWO DAY DEVELOPMENT CONCLAVE

on

Transformation of Bharath

The Story of a Decade and Future Outlook

27 & 28 March, 2025 | Dharwad

Organised By



CENTRE FOR MULTI-DISCIPLINARY DEVELOPMENT RESEARCH (CMDR)

(A National Institute of Research, Teaching and Training Supported by Indian Council of Social Science Research (ICSSR), Ministry of Education, Govt. of India & Government of Karnataka)
Dharwad

With Knowledge Partner



CESS

CENTRE FOR EDUCATIONAL AND SOCIAL STUDIES (CESS)

(Recognised By ICSSR, Ministry of Education, New Delhi)
Bengaluru



CENTRE FOR MULTI-DISCIPLINARY DEVELOPMENT RESEARCH

Dr B. R. Ambedkar Nagar,
Near Yalakki Shettar Colony,
Dharwad - 580004

Phone No : +91 836-2460453

E-mail : director@cmdr.ac.in

Website : www.cmdr.ac.in



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A Two-Day Development Conclave

on

**“Transformation of Bharat: The
Story of a Decade and Future
Outlook”**

Organized by

**Centre For Multidisciplinary Development Research (CMDR)
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*(A National Institute of Research, Teaching and Training, supported by Indian Council of Social
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Centre For Educational And Social Studies (CESS), Bengaluru

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27 & 28 March, 2025



Chief Editor

Prof. Basavaprabhu Jirli
Director, CMDR, Dharwad

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Assistant Professor CMDR, Dharwad

Dattaniranjana

PhD Research Scholar, Karnatak University, Dharwad

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Mr. Somnath
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Contents

Sr.No	Titles	Page.no
1	Message from Chairman, CMDR, Dharwad	5
2	Message from President, CESS, Benagluru	6
3	Foreword by Director, CMDR	7
4	Preface	8
5	About the Conclave	8
6	Objectives of the Conclave	8
7	Structure of the Conclave	9
8	Recommendations	11
9	Executive Summary	14
10	The Talks	23
	a) Dr Vishal IAS	24
	b) Prof. Kailash Chandra Sharma	30
	c) Sri Parashuraman	33
	d) Prof Bhimaraya Metri	41
	e) Prof. Sandeep Shastri	52
	f) Prof. Manoj Dolli	54
	g) Prof. Charan Singh	56
	h) Prof Vishnukant Chatpalli	66
	i) Prof Pramod B Gai	68
	j) Prof. P.L. Patil	71
	k) Sri Ram Prasad	77
	l) Prof. Basutkar Jagadeswar Rao	80
	m) Prof. C. Raju	88
	n) The Panel Discussion	91
	o) The Valedictory Session	97
11	Gallery of the Conclave	100
12	Conclave in the Media	104
13	Various Committees of the Conclave	108

ABBREVIATIONS:

AI: Artificial Intelligence

CIA: Central Intelligence Agency

COVID: Coronavirus disease

FDI: Foreign Direct Investment

GDP: Gross Domestic Product

GOI: Government of India

GSDP: Gross State Domestic Product

IMF: International Monetary Fund

KSRDPR: Karnataka State Rural Development and Panchayat Raj University

MSME: Micro, Small, Medium Enterprises

NAAC: National Assessment and Accreditation Council

NBFC: Non-Banking Financial Corporations

NITI Aayog: National Institution for Transforming India Aayog

UNESCO: United Nations Educational, Scientific and Cultural Organization

FROM THE DESK OF CHAIRMAN, CMDR, DHARWAD

MESSAGE

I am pleased to learn that the proceedings of first CMDR Development Conclave is being brought out in the form of a beautiful publication. The efforts of CMDR and CESS, Bengaluru are commendable in successful organisation of first CMDR Development Conclave.

The topic of conclave was most apt for the current prevailing situation. “Transformation of Bharat: The story of a Decade and Future Outlook”, heralds the significant changes happened in a decade and paves the way and sets tone for coming decades. The development narrative, when understood by the primary stakeholders, the real development becomes imminent. As it was discussed elaborately in the conclave by eminent speakers, the “Peoples participation” is the key for development. How to ensure participation of all stakeholders including the ultimate beneficiary as a primary stakeholders is the responsibility of policy planners and executing agencies. The academicians are on the toes to provide the pragmatic solutions for the problems faced by society. But to ensure their reach to the ultimate users is the crux of development.

As it was evident in case of COVID management, wherein the Hon’ble Prime Minister himself took the lead and was at the helm of affairs. Each and every activity related to COVID management was being monitored by the supporting systems. The final authority to put seal on every practice and measure was the ultimate leadership. Even though the problem was biological in nature, the management of the problem is cent percent social science arena. Hence, it is essential to understand the role of each and everyone and ensuring the participation of each and every responsible stakeholders makes the job simple.

The conclave deliberated on the diverse issues beginning from policy framework, manufacturing, education, agriculture, environment, regional imbalance, international relations, diplomacy, and information technology. The panel discussion focussed on balanced growth and equitable distribution of resources and benefits of economic interventions.

As a head of the organising institution, I extend my sincere thanks to all the eminent speakers, who reached Dharwad from different corners of the country and enlightened the learned audience. The organising team deserves rich appreciation for making the event more meaningful with the participation of research scholars, researchers, academicians, development professionals, policy makers, administrators and so on.

The publication of proceedings has lot of social implications from the point of view of policy makers and execution of policy for the benefit of common man. Hope the competent authorities take the note of relevant content for their domain and frame/modify the policies for societal benefits.

My best wishes to all the delegates and organisers.

Prof. Kailash Chandra Sharma
Chairman, CMDR, Dharwad

FROM THE DESK OF PRESIDENT, CESS

MESSAGE

It is heartening to see that CMDR is bringing forth the proceedings of the First CMDR Development Conclave, “Transformation of Bharat: The Story of a Decade and Future Outlook”. The conclave, organised in collaboration with the Centre for Educational and Social Studies (CESS), Bengaluru, as the Knowledge Partner, brings together diverse perspectives on the socio-economic transformations of the past decade and the evolving development narrative of the country.

Collaboration brings strength to organisations and yields better outputs and outcomes. Over the last couple of years, CMDR and CESS have been working together on various research projects and events in a collaborative mode, and this conclave is the latest feather in the cap of both institutions.

The very theme of the conclave captures the essence of a decade marked by transformative public interventions through initiatives such as the PM Jan Dhan Yojana, Swachh Bharat Mission, PM Kisan Samman Nidhi and the PM Fasal Bima Yojana, among others. These initiatives have not only targeted critical socio-economic issues but have also brought about tangible improvements in the lives of millions. They have laid the foundation for a new aspiration among citizens, an aspiration for sustained progress, inclusion and dignity.

I extend my appreciation to the organisers for curating a panel of resource persons representing a broad spectrum of domains - economics, governance, education, health, environment, rural development, industry and academia. Their insights and reflections added both depth and direction to the deliberations, offering invaluable perspectives to policy-makers and practitioners alike. Publishing these proceedings ensures that the learnings and ideas from the conclave are preserved and made accessible to future scholars, researchers and development thinkers.

The conclave, in many ways, marks not an end but a beginning, an ongoing dialogue between institutions committed to the nation’s development. I am confident that this will evolve into a sustained annual engagement, enriching our collective understanding and action toward the vision of a developed Bharat.

My heartfelt congratulations to the entire team at CMDR and CESS associated with this important initiative. I look forward to many more such intellectually vibrant and socially relevant engagements in the academic year ahead.

Prof. M K Sridhar
President, CESS

FOREWORD

The dream project of CMDR, to organise a Development Conclave to deliberate on the transformations that have happened and are happening in the country in the past decade. The core idea behind organizing the Conclave was that the things happened and are happening are not sufficient, but it should get a road map after discussing the transformations in different sectors. Hence, the initiative was planned with the collaboration of a knowledge partner, the Centre for Educational and Social Studies (CESS), Bengaluru.

Even though the planning of the conclave began with a brainstorming session in the month of October 2024, it could not progress much till January 2025. With the encouraging words from our learned Chairman, CMDR, Prof. Kailash Chandra Sharma ji, we started reworking on the project of organising the conclave. Getting the consent from the resource persons was a mammoth task. CEES, Bengaluru, took the lead in this aspect and, in consultation with the competent authorities, obtained the consent from the most befitting resource persons for the conclave.

Ensuring logistic support for the event is another project in itself. The task was shouldered by the Registrar, CMDR, and his team. The development conclave should have an academic appearance, but CMDR does not have the needed venue for presenting the conclave in a befitting manner. Team CMDR executed the task in such a way that every participant and resource person felt the best as far as logistic is concerned.

Organising the event by putting everything in its place was the next task. The team of faculty members of CMDR and Team CESS, Bengaluru jointly shouldered the task and planned every session, rapporteurs, session coordinators, etc, required for each session. The entire event took a proper shape as per the wish of the national leadership in a coordinated way, with the participation of all the stakeholders. Ensuring the participation of every stakeholder, may it be the resource person or supporting staff, everyone has a specific role to play and is responsible for the end result of the event. The things happened as desired and expected.

Coming to the conclave, the apt title, themes of the session, and befitting speakers with a lot of experience and academic content for delivery were the roots of the successful organisation of the event. Since there was a common understanding between the invited speakers and the organisers, the anticipated key points were discussed during the entire range of sessions. The participation of the audience needs rich appreciation. The enthusiastic audience comprising research scholars, faculty members, researchers, development professionals, policy makers, etc., were the active listeners. In every session, there were a number of questions with the apt analysis of situations and presentations marking the event.

Keeping in view the opinion of the executive council members and policymakers of CMDR, we are bringing out the publication for the benefit of policymakers and researchers in the future. Also, CMDR is planning to organise a series of Development Conclaves annually to focus on the current issues and future needs in the forthcoming year.

Hope this publication benefits the intended stakeholders as a reference resource material. Team CMDR will continue to shoulder such academic responsibilities for the benefit of researchers and policymakers.

Thanking one and all who helped and contributed to the successful organisation of the Development Conclave.

Basavaprabhu Jirli
Director, CMDR, Dharwad

PREAMBLE

India's development journey over the past decade has been remarkable, marked by major policy reforms, economic revitalization, and an unwavering commitment to inclusive and sustainable growth. The government has initiated transformative programs and implemented far-reaching policies that have repositioned India as a rising global power.

Structural reforms in governance, policy innovations, and large-scale initiatives such as Make in India, Digital India, Startup India, and the implementation of the National Education Policy (NEP) 2020 have redefined India's growth trajectory. These interventions have accelerated economic growth, strengthened the knowledge economy, empowered marginalized communities through inclusive policies, and enhanced India's stature in the global arena.

As India prepares for its centenary of independence, the national vision of Viksit Bharat @ 2047 offers a blueprint to overcome these challenges and transform India into a developed nation. It is a comprehensive roadmap aimed at transforming India into a developed nation by the centenary of its independence. This vision focuses on high and inclusive economic growth, social development, environmental sustainability and good governance. The realization of Viksit Bharat@2047 calls for innovative policy frameworks that ensure equitable development across regions,

In this context, the Centre for Multi-Disciplinary Development Research (CMDR), Dharwad, in collaboration with the Centre for Educational and Social Studies (CESS), Bengaluru, has organized a two-day Development Conclave on "Transformation of Bharat: The Story of a Decade and Future Outlook" on 27th and 28th March 2025 at Dharwad, Karnataka, India. The conclave examined the developmental journey of India over the past decade and deliberated on policy strategies required to realize the vision of Viksit Bharat @ 2047.

ABOUT THE CONCLAVE

The Development Conclave provided a platform for the stakeholders to engage in evidence-based discussions on India's transformation story and chart actionable pathways toward achieving Viksit Bharat@ 2047. The conclave's policy discussions will center on national priorities, regional strategies, and sectoral interventions.

The conclave reviewed India's transformative development over the past decade and explored strategic policy directions to achieve the Viksit Bharat @ 2047 vision. It seeks to stand in dialogue on inclusive growth, sustainability, and good governance, contributing to India's journey towards becoming a developed nation by 2047.

OBJECTIVES OF THE CONCLAVE

- To reflect on India's socio-economic transformation over the last decade and evaluate the impact of policy reforms.
- To facilitate collaborative dialogue among policymakers, academicians, industry experts, and civil society representatives on inclusive and sustainable development.
- To formulate region-specific strategies for North Karnataka that contribute to balanced national development.
- To develop actionable policy recommendations to support the realization of Viksit Bharat @ 2047.

Structure of Conclave

Session	Time	People
Day 1: March 27, 2025		
Inaugural Session	10:00 am – 11:30 am	<p>Presided by Prof. Kailash Chandra Sharma Chairman, CMDR, Dharwad</p> <p>Chief Guest Dr. Vishal R, I.A.S Secretary, Planning, Programme Monitoring & Statistics Department, GoK</p> <p>Introduction to Conclave Prof. Basavaprabhu Jirli Director, CMDR</p> <p>Introduction to Themes Dr. Gowrishha Director, CESS Bengaluru</p>
<p>Make in India Dialogue</p> <p>Strengthening India's Manufacturing Sector for Global Competitiveness</p>	11:45am – 1:15 pm	<p>Sri Parashuraman Executive Advisor, Toyota Group</p> <p>Prof. Bhimraya Metri Director, IIM Nagpur</p>
<p>Diplomatic Edge</p> <p>India's Foreign Policy and its Role in Economic Growth</p>	2.15 pm – 3.30 pm	<p>Prof. Sandeep Shastri Vice President, NITTE Education Trust; National Coordinator, Lokniti Network</p>
<p>Vision Talk</p> <p>Role of Banking and Financial Inclusion for Viksit Bharat</p>	3:45 pm – 5:00 pm	<p>Prof. Charan Singh Former RBI Chair Professor of Economics, IIM Bangalore; CEO and Founder Director, EGROW Foundation</p>
<p>Call for Action</p> <p>Unleashing the Potential – A Roadmap for North Karnataka</p>	5:30 pm – 7:00 pm	<p>Prof. Vishnukant S Chatpalli Former VC, KSRDRP University</p> <p>Prof. Pramod B. Gai Former Vice-Chancellor, Karnatak University; Director, KIDNAR</p>

Day 2: March 28, 2025		
<p>Focal Point</p> <p>Future Agriculture – Growth and Contribution</p> <p>-Environmental Sustainability – Policies and Initiatives for a Green Bharat</p>	<p>10 am to 11:30 am</p>	<p>Prof. P L Patil Hon'ble Vice-Chancellor, UAS, Dharwad</p> <p>Sri. Ramprasad V Co-Founder, Friends of Lakes</p>
<p>Knowledge Catalyst</p> <p>Knowledge Economy: Empowering Growth Drivers</p>	<p>11:45 am to 1:15 pm</p>	<p>Dr. B J Rao Vice-Chancellor, University of Hyderabad</p> <p>Prof. C Raju Visiting Professor Indian Institute of Management (IIM) Kozhikode</p>
<p>Panel Discussion</p> <p>Economic Growth & Competitiveness</p>	<p>2:15 pm to 3:45 pm</p>	<p>1) Dr. S R Keshava Professor, Department of Economics, Bangalore University</p> <p>2) Prof. M R Narayana Advisor, Fiscal Policy Institute, GoK</p> <p>3) Dr. Shreekant Deshpande Trustee, Deshpande Skilling, Deshpande Foundation</p> <p>4) Dr. S T Bagalkoti Registrar, Haveri University</p> <p>Moderator Prof. Basavaprabhu Jirli Director, CMDR</p>
<p>Valedictory</p>	<p>4:00 pm - 5:00 pm</p>	<p>Presided by Prof. Kailash Chandra Sharma Chairman, CMDR, Dharwad</p> <p>Chief Guest Prof. S. R. Mahadeva Prasanna Director, IIIT Dharwad</p> <p>Guest of Honour Dr. S Muralidhar Professor, GFGC, Kolar & Member, Executive Council, CESS</p>

RECOMMENDATIONS

from

First CMDR Development Conclave on

“Transformation of Bharat: The Story of a Decade and Future Outlook,”

Points emerged from the discussion for the consideration of the policymakers to prepare a befitting policy framework

1. Government institutions should involve researchers, industry leaders, academicians, representative end users, and civil society in shaping development policies.
2. Strengthen implementation and monitoring mechanisms of government policies, and establish frameworks to ensure consistent execution of policies and evaluate their impact at regular intervals. The authorities may nominate regional research institutions for regular monitoring of government programmes.
3. Regional Imbalance needs to be addressed by addressing backwardness, not just focusing on geographic disparities. Tackling systemic backwardness will be more meaningful than just addressing geographic disparities.
4. Adoption of a multidisciplinary approach in policymaking will help in evolving holistic, cross-sectoral strategies that integrate perspectives from economics, technology, education, and sustainability.
5. By promoting Panchayati Raj Institutions for rural development, we can strengthen decentralization efforts to empower grassroots governance. Initiatives of self-inspired individuals may also be considered to strengthen microlevel decentralized ingenuities.

Points emerged from the discussion for the consideration of the policymakers to ensure economic growth and industrial development

6. Incentivize the production sector to significantly enhance the contribution of the production/manufacturing Sector in national GDP. Encourage more participation in schemes like “Make in India”, “Digital India”, MUDRA Yojana, Standup India, Startup India, etc, to increase the manufacturing sector’s contribution to the extent of 50% in the next decade.
7. Encourage practically the industry-academia collaboration to create regional manufacturing clusters. These manufacturing clusters should be supported by academic institutions on a continuous basis to boost research-driven industrial growth.
8. Make MSMEs instrumental to achieve regional economic strength by promoting small-scale industries and entrepreneurial ventures, particularly in aspirational districts in general and North Karnataka, for balanced development.
9. Strengthen infrastructure to reduce the cost of logistics, which in turn will help in attracting more Foreign Direct Investment. Establishing a more efficient supply chain will help in reducing manufacturing costs.
10. As India is endowed with salubrious climatic conditions throughout the year, by encouraging renewable energy adoption in industrialization will ensure long-term economic resilience. Implementation of sustainability measures, including green energy solutions, for long-term fiscal pliability.

Points emerged from the discussion for the consideration of the policymakers for strengthening education, knowledge economy, and human capital development

11. For transforming an individual into a potential human resource, there is a need for promoting skill-based learning in education. The paradigm shift should ensure a swing from rote-based education to a system that emphasizes thinking, creativity, and problem-solving.
12. There is a need to establish sufficient regional institutions to reduce migration to urban centers and create respectable employment at the local level. The pre-requisite for such an ideal situation is the promotion of high-quality higher education in rural India.
13. Integration of Indian Knowledge Systems (IKS) in the curriculum, starting from primary to higher education at university, to leverage traditional wisdom to enrich scientific and technological advancements.
14. There is an emergent need for aligning university curricula with industry demands to ensure higher education institutions include practical skills content relevant to industry, with the objective of enhancing employability.
15. Educational institutions should be given freedom to introduce flexible education models with the objective of incorporating upskilling, reskilling, and lifelong learning initiatives. The overall objective should be to encourage continuous learning and reskilling. Educational systems should create “Subject Scholars” rather than “Technocrats”, who are essential for strengthening the development initiatives of the nation.

Points emerged from the discussion for the consideration of the policymakers for creating effective environment for innovation and digital transformation

16. There is a need to support customized innovations that solve location/situation specific problems. The incubation centres must be rooted in a cluster of villages/taluka/districts to encourage research and entrepreneurship to transform ideas into scalable solutions.
17. Cautious exploitation of the potential of Artificial Intelligence (AI) for productivity enhancement by preparing professionals and students to leverage AI and emerging technologies responsibly.
18. Expanding digital infrastructure for financial inclusion in underserved regions. Hence, there is a need to upgrade financial instruments with simplified accessibility to banking, including secured digital payment systems, and enhanced financial literacy for every potential investor.
19. Design schemes/programmes to attract “Talent Back to India” by internationalizing Indian education. The policies of the Government of India (GOI) should encourage overseas Indian students to return and contribute to domestic development.
20. Policy priority for safeguarding India’s indigenous knowledge, particularly in tribal medicine and traditional practices, by endorsing Intellectual Property Rights (IPR) for Indian Knowledge Systems.

Points emerged from the discussion for the consideration of the policymakers for improving the agricultural scenario, and ensuring environmental stability, and sustainability

21. Ensuring food and nutritional security by promoting and prioritizing organic farming

and sustainable agriculture is the need of the hour. The policy on agriculture should safeguard the relationship between Nature-Culture and Indian Agriculture.

22. Prepare and execute policy for scientific land management practices to sustain long-term agricultural productivity. Policy provisions for people's participation in soil, water, and biodiversity conservation in Indian agriculture.

23. Conserve, use, and re-use water resources. Restoration of traditional waterbodies should be introduced as a policy intervention for management and to ensure quality standards. The policy document should clearly spell out the guidelines for the utilisation of treated water to prevent soil degradation and salinity issues.

24. Policy intervention to ensure corporate accountability for environmental responsibilities. When the corporates/industrial units practice the norms of Extended Producer Responsibility (EPR), it becomes an instrument to curb environmental degradation.

25. In addition to centralised policies, there is a need to create localized policies tailored to address location/region-specific ecological challenges. Academic and research institutions, in association with other relevant stakeholders, should develop location-specific standard operating procedures (SOPs) for environmental sustainability.

Points emerged from the discussion for the consideration of the policymakers for public diplomacy and global competitiveness

26. Leverage India's demographic dividend for global leadership by addressing skill gaps and ensuring participation of youth in the technology-driven global economy.

27. India should strengthen soft power and cultural diplomacy in the international arena. The influence should continue through cultural and economic engagement.

28. Develop a policy framework for global collaboration in technology, education, and environmental initiatives for mutual growth.

Points emerged from the discussion for the consideration of the policymakers to ensure social and health development

29. Raising awareness on genetic disorders from consanguineous marriages should become a policy initiative. Education for early detection techniques to mitigate health risks can help in building healthy families/communities.

30. India should evolve an independent "Contentment and Human Development Index" by incorporating wellness, quality of life, and inclusive policies in national development strategies.

EXECUTIVE SUMMARY

Inauguration Session

The inaugural session of the conclave featured Dr. Vishal R IAS, Secretary of the Finance Department (FR), Government of Karnataka, as the Chief Guest, with Prof. Kailash Chandra Sharma, Chairman of CMDR, presiding over the event. The session emphasized the need for accurate development records and increased stakeholder participation in policymaking. Dr. Vishal highlighted Karnataka's evolving administrative framework and the importance of sustainable actions in tackling backwardness and resource utilization. Prof. Kailash Chandra Sharma underscored the transformative impact of NEP 2020 and the significance of Indian Knowledge Systems in fostering a knowledge-based society. The event also marked the release of the first edition of the 'CMDR Journal of Social Research' and felicitated the winners of the essay competition on 'Indian Knowledge Systems.' Distinguished academicians and members of the CMDR Governing Council, including vice-chancellors and professors from various universities, graced the occasion.

Key Highlights of the session:

- a) Need for more Policy participation by stakeholders for future development – Prof. Basavaprabhu Jirli.
- b) We need to focus on backwardness rather than regional imbalance. Understanding the story is necessary first, and then getting into the details. – Dr Vishal R
- c) The future of development is driven by experiential learning using NEP 2020. We must focus on Indian Knowledge Systems (IKS) and a multidisciplinary approach to bring youth development. – Prof. Kailash Chandra Sharma.

Session 1: Make in India dialogue

The session saw **Shri Parasuraman (Ex-Executive Advisor, Toyota Group)** speak on the potential of the Indian manufacturing sector and He highlighted certain achievements done in the manufacturing sector in the last decade and how India utilised emergencies like COVID-19 and the resulting global sentiments to its advantage. He also underscored the importance of digital efficiency achieved by India.

He also outlined the importance of a series of programmes viz., Make in India, Digital India, Youth India, Startup India, and PLI schemes, which would enable the contribution of the manufacturing sector to increase 30% by the next decade from the current contribution of 17%. He also outlined the challenges posed by Artificial Intelligence, especially Gen-AI, mainly in the field of education, but also stressed that being conversant with AI would drastically improve human productivity.

The Hub and Spokes model was suggested to be implemented to achieve an industry-academia collaboration and stressed the importance of MSMEs in making India a manufacturing hub. He then also highlighted the importance of Quality Circle and shared his personal experiences of working with Japanese companies and how that could be used to propel human development. In his address, he stressed the importance of work ethics by taking examples of eminent personalities like Swami Vivekananda and Poet Thirukkural. He then suggested the various conditions of quality which could be inculcated into our work culture to enhance our productivity.

Key Highlights of the session:

- a) Shri Parasuraman emphasized India's manufacturing sector growth, leveraging initiatives like Make in India, Digital India, and PLI to increase its contribution from 17% to 30% in the next decade.
- b) He discussed Gen-AI's challenges, particularly in education, while highlighting its potential to boost human productivity.
- c) He stressed the Hub and Spokes model for industry-academia collaboration, MSME importance, and work ethics inspired by Swami Vivekananda and Thirukkural for quality-driven productivity.

Prof. Bhimraya Metri (Director, IIM Nagpur) then shared his thoughts on India's potential for manufacturing since India has the advantage of a demographic dividend. He spoke on the global context and highlighted how the countries affected by ageing populations, such as China, Japan, Korea etc. presented India with a Golden opportunity due to the presence of the youth population. He highlighted how the China minus sentiment post Covid-19 was leveraged by India and how Make in India would be helpful in realising the vision of 'India to World'.

The importance of the Indian Knowledge Systems (IKS) and how the Indian-origin population has gained top positions in global corporations by leveraging the advantages of IKS. The significance of tradition and agriculture was outlined as an important principle of sustainability, which would also enable the young generations to continue the family business.

There was also a focus on the importance of small manufacturers and their collective effort in achieving the objective of Make in India. He also informed that one of the major qualities of Indians is sense predictors, which have enabled them to achieve high positions in global corporations.

He also highlighted how there was a need to respect the Indians rather than the Indian origins and the importance of inculcating tradition with technology. The link between spirituality and culture and long-term gains was also highlighted by the speaker. He also focused His talk on the importance of infrastructure and the importance of reducing the costs of logistics to attract FDI – a major catalyst of development.

The importance of renewable energy sources in future building was also highlighted by the speaker, and the significance of power supply in building manufacturing hubs was cited the examples of cities like Shenzhen to stress the importance. He also highlighted the importance of Skilling-upskilling-reskilling and the role of succession planning in nation-building.

Key Highlights of the session:

Prof. Bhimraya Metri emphasized India's demographic dividend, leveraging the China-minus sentiment and Make in India for global leadership.

He highlighted Indian Knowledge Systems, tradition-technology integration, infrastructure, logistics, renewable energy, and skills as key drivers for sustainable manufacturing growth and FDI attraction.

Session 2: Diplomatic Edge

In Session 2: Diplomatic Edge, **Prof. Sandeep Shastri** discussed “Foreign Policy and Its Role in Economic Growth,” emphasizing three key elements—attitude (Drishtikon), aspirations (Aakash), and approach (Maargh)—that have evolved in Indian policy over the past decade. He highlighted four major developments: equitable dialogue with all parties, increased global visibility, India’s recognized international voice, and growing credibility with stakeholders like the Pew Research Center. Shastri underscored a post-2014 shift in diplomacy, prioritizing economic and cultural dimensions, while raising concerns about managing India’s demographic dividend, with an estimated one billion Indians in the global workforce by 2050. He stressed the importance of internationalizing Indian education and noted that one-fourth of Indian students abroad wish to return, urging policymakers to create an environment for their reintegration. Shastri concluded by identifying three future priorities: managing the demographic dividend, fulfilling India’s rising aspirations, and fostering mental emancipation to achieve Atmanirbhar Bharat and the vision of becoming Vishwa Guru.

Key Highlights of the session:

India’s foreign policy has evolved, focusing on equitable dialogue, global visibility, and international recognition. Post-2014 diplomacy prioritizes economic and cultural aspects. Managing the demographic dividend and digital divide is a key challenge for India’s future success. – Prof. Sandeep Shastri

Session 3: Vision Talk

In his keynote address on “Viksit Bharat: Past, Present, and Future,” **Prof. Charan Singh** emphasized that India’s growth narrative is deeply rooted in history, having contributed approximately 33% to the world’s GDP for nearly three millennia before colonialism hindered its progress. He questioned whether India is mentally prepared to achieve the \$5 trillion economy target by 2024 and align with the Viksit Bharat 2047 vision, noting that key sectors like banking, education, and commerce are not fully synchronized with the government’s long-term goals. Highlighting Pokhran as a symbol of courage and economic resilience, he stressed the need for strategic preparation to manage the growing economic gap with global powers. The future of India’s development, he asserted, depends on MSMEs, agriculture, investments, and exports, which require reforms, inclusivity, and corruption control. He also underscored the careful integration of AI and the importance of managing net FDI while advancing the vision of a developed India with confidence and ambition.

Key highlights of the session:

India has substantial historical economic prominence, colonial setbacks, and current challenges in achieving Viksit Bharat 2047. There is a need for stakeholder alignment, strategic preparation, and focus on key sectors like MSMEs, agriculture, investments, and exports. Addressing corruption, selective AI integration, and FDI management are crucial for realizing India’s development vision. – Prof. Charan Singh

Session 4: Call for Action for North Karnataka

Prof. Vishnukant S. Chatpalli, Former Vice-Chancellor of KSRDPR University, Gadag, delivered a compelling address on “Unleashing the Potential – A Roadmap for North Karnataka,” urging a shift in perspective from the region’s perceived backwardness to its

vast potential. He emphasized that North Karnataka is the backbone of the state and highlighted the positive impact of initiatives like the central government's aspirational districts program and the Comprehensive

Composite Development Index (CCDI) by the Govind Rao Committee. Prof. Chatpalli stressed the transformative power of Panchayat Raj institutions, with 5,968 Gram Panchayats playing a crucial role in rural development. He also pointed to the untapped opportunities in the environment, industry, and manufacturing sectors, advocating for a targeted, multi-pronged approach to drive growth. He called for less dependence on government affiliations and greater public participation and cooperative efforts to unlock the region's true potential.

Prof. Pramod B. Gai, Former Vice-Chancellor of Karnatak University Dharwad and current Director of the Karnataka Institute for DNA Research (KIDNAR), delivered a address on the "Impact of Cultural Practices on Health Conditions of the North Karnataka Population." He highlighted how consanguineous marriages increase the frequency of genetic disorders and cancers in the region. The lecture covered fundamental genetic concepts, specific genetic conditions like haemophilia and cystic fibrosis, and the importance of early detection through prenatal diagnostic techniques such as amniocentesis and chorionic villus sampling. Professor Gai emphasized raising awareness about the genetic risks of consanguineous marriages and discussed the role of KIDNAR in researching and addressing these health challenges. The session underscored the need for preventive measures and the significance of scientific research in mitigating genetic disorders in North Karnataka.

Key highlights of the session:

North Karnataka is the backbone of Karnataka and has tremendous potential and opportunities. Panchayat Raj institutions can be instrumental in tapping this potential. We need a targeted, specific and multi-pronged approach to developing North Karnataka for the future. – Prof. Chatpalli

Prof. Gai's address explored how consanguineous marriages in North Karnataka impact genetic disorders, emphasizing increasing awareness, early detection and prevention through DNA research, which is the need of the hour.

DAY 2

Session 1: Focal Points: Future Agriculture – Growth and Contribution

Prof. P. L. Patil, in his address, emphasized the significance of quality food production and nutrition security, particularly through organic farming. He highlighted the importance of integrating modern agricultural methods and tools to enhance farming practices. According to him, organic farming, coupled with advanced techniques, ensures a sustainable and healthier food supply while maintaining ecological balance.

Prof. Patil stressed that modern farming requires continuous innovation and research for the adaptation of new technologies. He pointed out that background research plays a crucial role in helping farmers embrace and implement advanced agricultural techniques. By adopting innovative methods, farmers can improve the quality and nutritional value of their produce, ultimately contributing to better food security.

A key aspect of his discussion revolved around the significance of soil, water, land, and

biodiversity in agriculture. He underscored that effective management of these natural resources is essential for maintaining productivity and sustainability in farming. Sustainable agricultural practices ensure that these resources remain available for future generations while promoting environmental conservation.

Furthermore, Prof. Patil outlined three fundamental elements necessary for the future of agriculture: innovation, inclusivity, and sustainability. Innovation drives efficiency and quality improvement in farming, inclusivity ensures that all stakeholders, including small-scale farmers, benefit from advancements, and sustainability guarantees long-term environmental and economic viability. By focusing on these principles, the agricultural sector can enhance food production while maintaining ecological balance and fostering resilience against global challenges.

Key highlights of the session:

Prof. P. L. Patil emphasized organic farming using modern techniques for food and nutrition security. He stressed innovation and research for high-quality food production. The importance of soil, water, land, and biodiversity management was highlighted. Future agriculture must focus on innovation, inclusivity, and sustainability for better food quality.

Focal Points: Environmental sustainability

Sri Ramprasad highlighted the importance of environmental sustainability, stressing that while India has robust environmental laws, their weak implementation reduces their effectiveness. He addressed the critical issue of water management, explaining how the release of treated water into lakes has led to water quality deterioration, increasing salinity, and causing crop yield declines and flooding. He emphasized the need for extensive research on water quality standards, as no clear definition currently exists.

Additionally, he discussed the role of financial policies in shaping environmental programmes, pointing out how the credit system influences investments in sustainability efforts. He also shed light on corporate irresponsibility regarding EPR (Extended Producer Responsibility) norms, where large companies often evade waste management commitments.

To address these challenges, he advocated for participatory governance, integrating local needs into policy frameworks, and establishing standard operating procedures (SOPs) tailored to regional environmental concerns, ensuring a sustainable and effective approach to environmental management.

Key highlights of the session:

Sri Ramprasad emphasized India's environmental laws and their weak implementation. He highlighted issues from treated water release, rising salinity, and its impact on agriculture.

The need for water quality research, investment integration, and participatory governance was stressed. Local frameworks and SOPs were outlined as crucial for environmental sustainability.

Session 2: Knowledge Catalyst

In the session, **Prof. B.J. Rao** spoke about the invention of knowledge as the best thing that had happened to humankind. He outlined two aspects i.e., *Atmabodha* and a sense of curiosity, that had enabled human beings to know the basics of the world and gain knowledge, which has enabled humans to use nature to their advantage.

He pointed out that Bharat was at an interesting stage and solving the problems of Bharat would essentially solve the problems of the world. This quality of Bharat received a renewed push in the last 10-15 years. The uneven system of Bharat enabled Bharat to solve its problems.

India made a significant achievement of emerging from a struggling economy to a surplus economy by solving problems of food security, technology etc. He added that it was not just Higher education but high-quality higher education that was necessary at the ground level. This would eventually lead to an increase in the quality of the individual and also reduce the burden on big cities.

He advocated the Inversion model to prevent any further disastrous consequences of migration, and this could be possible by ensuring local high-quality education at the hinterland level and vernacular languages. He highlighted the importance of job creation and a conducive system that would ensure it.

He stressed the importance of education, lifestyle, value system, sense of feelings and belongingness to achieve the vision of Viksit Bharat and advocated a Hybrid Model to harness Human potential. Prof. B.J. Rao emphasized the importance of knowledge invention, Atmabodha, and curiosity in human progress. He advocated solving Bharat's problems to address global issues, stressing high-quality education at the local level to reduce urban migration. He also highlighted the need for job creation, education, and a Hybrid Model for Viksit Bharat.

Prof. C. Raju concluded the session by emphasizing the significance of contributing to society beyond economic growth. He identified key drivers of the economy: human capital, innovation and technology, and international collaboration. He highlighted the role of education, knowledge, skills, and experience in enhancing human capital, noting that understanding what to study, rather than why, can unlock an individual's creative potential.

Prof. Raju also focused on the productive use of a digital world and globalization to enhance trade and business, stressing the need for individuals and nations to adapt and innovate in this increasingly interconnected environment. His remarks underscored the importance of continuous learning and harnessing technology for societal and economic advancement.

Key highlights of the session

Prof. B.J. Rao emphasized knowledge invention, Atmabodha, and curiosity in human progress. He stressed solving Bharat's problems to address global issues, advocating high-quality local education to reduce urban migration. He also highlighted the need for job creation, education, and a Hybrid Model to achieve Viksit Bharat.

Prof. C. Raju emphasized societal contribution, human capital, innovation, education, and utilizing digitalization and globalization to enhance trade and business.

Panel discussion on “Economic Growth and Global Competitiveness”

The panelists:

1. **Dr. S R Keshava**, Professor, Department of Economics, Bangalore University
2. **Dr. Shreekant Deshpande**, Trustee, Deshpande Skilling, Deshpande Foundation
3. **Prof. M R Narayana**, Consultant (Academic & Research), Fiscal Policy Institute, Bengaluru (Present online)

4. **Dr. S T Bagalkoti**, Registrar, Haveri University
5. **Dr. Basavaprabhu Jirli**, Director, CMDR Dharwad, moderated the session.

The panel discussion began with a brief introduction of esteemed panellists, and the first question was posed to Dr. MR Narayan, on how India's position in the global competitiveness index has evolved over the past decade, and what key factors have contributed to this change?. In his introductory remarks and reply to the question, Prof. Narayan mentioned that to achieve Global Competitiveness, the key contributing factors include infrastructure efficiency, government efficiency, business efficiency, and pooled competitiveness supported by an enabling environment, market, and innovation.

Dr. Shrikant Deshpande in his initial remarks, addressed the pivotal issue of how India is addressing the skills gap to meet the demands of an increasingly technology-driven global economy. Gave a detailed account of Deshpande Educational Trust (DET), one of the three verticals of Deshpande Foundation, Hubballi. To date, DET has trained more than 20 thousand students in the remote villages on various skill sets, including life skills, communication skills, basic computing skills, accounting, and other basic software that can help the learner get a job. The average package the learners are getting is 4L/annum; this way, Deshpande Foundation is adding about 800 Crore rupees to the Indian economy.

Dr. ST Bagalkoti, in his initial remarks, focused on the strategies India should adopt to increase its export competitiveness beyond traditional sectors. His emphasis was on giving more support to small-scale industries, cottage industries so that every working/skilled hand will get an opportunity to generate income. The moderator added to the views of Prof. ST Bagalkoti that Gadhiji used to say "Production by masses instead of mass production", China has adopted the strategy and emerged as a global production house and economic leader.

Dr. SR Keshav emphasized policy reforms to improve India's ease of doing business rankings further. He explained ease of doing business is being replaced with "Business reform action plan". The policy, like investment in education, research, and development, should be to the extent of more than 2.5 per cent of GDP instead of the current investment of 0.7 per cent of GDP. The schemes like One District One Product are boosting the innovation, entrepreneurship, and global competitiveness of primary producers. Also, he mentioned that the IPR issues, like granting GI tags to the products, will help in global recognition and competitiveness in the international market.

The discussion on "Knowledge export" by Bharat, attracted the attention of everyone. There was a question from the audience that we are lagging behind in production, but leaders in the service sector. In this context, how can Bharat earn more in the international market by exporting knowledge? The knowledge managers of global giants are of Indian origin, which is also a kind of knowledge export. The economic growth of the nation will happen only when they roll back products and services to their motherland. There are numerous examples like Infosys, Deshpande Foundation etc. For achieving the holistic development of SDGs, Bharat should get the deserved dividends for its knowledge. Also, there was a common consensus on focusing on getting Intellectual Property Rights to Indian Knowledge Systems, especially in the sectors of Tribal Medicines.

There was an elaborate discussion on the "employability of passed out students from various educational institutions across the disciplines". The question of participants was when they have completed the required duration in achieving the certificate/degree/diploma, etc., even then, why is the industry not giving us the desired opportunity to get employed?

The requirements of the industry are different from the syllabus taught in 3/4 year degree programmes. Hence, the students have to undergo some more training, continuing education, or some other educational activities. The house opined that the demands of skill sets of the industry should reflect in the syllabus of UG and PG programmes, rather it should begin with school education.

There was consensus among the panellists regarding strengthening education systems, education with embedded skill components, entrepreneurship development among the budding minds, and policy support for redefined approaches.

Key highlights of the session

The panel discussion on “Economic Growth and Global Competitiveness” highlighted key factors such as infrastructure efficiency, government and business efficiency, and market innovation for global competitiveness. Dr. Shrikant Deshpande emphasized bridging the skills gap through Deshpande Foundation’s training programs. Dr. ST Bagalkoti advocated supporting small-scale industries to enhance export competitiveness. Dr. SR Keshava stressed policy reforms and increased investment in education and research. The panel discussed knowledge export, Intellectual Property Rights for Indian Knowledge Systems, and the need to align educational curricula with industry skill requirements to improve employability and foster entrepreneurship for holistic economic growth.

Validatory Session

This Session was presided over by Dr. Kailash Chandra Sharma, Chairman, CMDR, Dharwad. The challenge for education systems managers is how to prepare global citizens inculcated with Bharatiya value systems. The efforts should begin with the primary education and should continue till higher education so that it becomes a natural effect for every individual. He quoted the words of Prof. Bhimaraya Maitri, Director, IIM Nagpur, who categorically mentioned that there is no difference between “culture and spirituality”. Every cultural practice has a scientific and spiritual base. Adoption of a multidisciplinary approach for policy making makes it more holistic and moves towards more participation of stakeholders. Until and unless there is participation of stakeholders in policy interventions, it may not work for the benefit of society.

Dr. Mahadev Prasanna, Director, Indian Institute of Information Technology (IIIT), Dharwad, in his Chief Guest address delineated the role of information technology not only in the education sector, but in other sectors like production, marketing, fintech, supply chain management, and so on. To achieve the holistic and universal utilisation of information technology, the educational systems must have flexibility in the education process. The flexibility shall provide an opportunity to widen the mental horizon of the learner and help in the sustenance of passion for learning. Elaborated on the power of computing, which has reached the stage of artificial intelligence, a reality in today’s world. The bright minds of Bharat are playing a key role in the IT sector, which needs to be more nurtured and create opportunities in the form of a favourable ecosystem. On the contrary, Dr. Mahadev Prasanna emphasized that the educational systems managers should “Learn to learn, Learn to un-learn and Learn to re-learn”, then only the desirable changes can be brought into the society.

Dr. S Muralidhar, Professor, GFGC Kolar and Member, Executive Council, CESS, who as the guest of honour, deliberated on improving the rankings in the happiness index and Human resource development index. Dr. Basavaprabhu Jirli, Director, delivered the vote of thanks, and Dr. Jai Prabhakar presented the two-day Development Conclave report.

Call for Paper - CMDRJSR



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We look forward to your valuable contributions!

THE TALKS

Tackle backwardness instead of regional imbalance - Dr. Vishal.R



Dr. Vishal. R. IAS

Dr. Vishal. R. is Secretary, Finance Department, Government of Karnataka. He is an IAS officer of 2004 batch, Karnataka Cadre. He is a seasoned civil servant with over 19 years of academic experience and concurrently holds charges as Secretary, Planning Program, Monitoring and Statistics Department and Director of Fiscal Policy Institute. Throughout his career, he has held various key positions including Deputy Commissioner in multiple districts, Commissioner for Public Instruction, Commissioner for Rural Drinking Water and Sanitation and Additional Secretary to the Chief Minister of Karnataka. His expertise spans public finance, infrastructure, urban development and social sector governance. He also oversees externally assisted projects from World Bank, ADB, etc. and institutional finance from NABARD, NIB, NHB, etc. and infrastructure expenditure as well. His leadership focuses on policy reforms, citizen centric governance and administrative efficiency.

THE TALK

“Ladies and gentlemen, I work across policy. I work with academia, I work with the government, and I work with consultancies. Boston Consulting Group came to us, they are extremely expensive. But you give them a task, they deliver. So, I was looking at them, to give us policy inputs, strategic inputs and how things can get done. They were not only telling you what can be done, but how it can be and should be done. That becomes very critical for an administrator like me. So, I saw their quality and I said good. But who at your senior most level will give us a lot more rounded perspective? They said sir, we will share with you a book, kindly read that book and tell what are your thoughts. That book is called “Shocks, Crisis and False Alarms”. It is written by two of the senior most officials. The whole context of the books is like this. First understand the story, then get into details. If you only understand the story, you don’t understand the details. If you get into details, you don’t understand the story. Good example is the Indian cricket team. You may be focused on Virat Kohli - which is details. But if you do not know how the Indian cricket team performs in times of crisis, in times of pressure, in good times it performs, you will not know which is the best team to put in. This becomes a very critical input for policymakers.

I break my interaction with you into three parts. The evolution of India’s economy and Karnataka’s economy with it, which is the story. The second, how backwardness and

regional imbalance is influencing policy, a sort of detail in it. You have a story; you have a detail. The third part to this will be as an administrator, I have only two things I can focus on. The quality of expenditure and the quantum of expenditure. Quantum of expenditure is again two things. Absolute quantum, percentage of a bigger denominator. I will give you a concrete example and try to explain the relationship.

Last 30-40 years, there has been a structural change in the Indian economy from agriculture to something in industry. From industries directly to the services sector. Karnataka today has 68% of services. 20- 22% manufacturing, less than 10% agriculture which hovers between 9 and 10%. Second part to this, when you look at it, the 2022-23 numbers tell us, Telangana PCI (per capita income) is highest. If you leave Goa and Sikkim, they are smaller states. If you look at it now, our suspicion is that per capita income in Karnataka will be the highest in the country.

It is not a matter of pride. I am coming to the details in this. I gave you a story now. One Nandan Nilekani can make all our wealth go up. IT and IT enabled services contribute to our economy. But since they are zero-rated, we do not get all the benefits of it. Today, one good parameter to say actually whether we are doing well or not is the consumption. In the country, we are 10th place which is a matter of concern.

I am also the member secretary of high-powered committee headed by Prof. M. Govindrao. All of you must have read the Dr. D. M. Nanjundappa Committee report. After 20 years, we are bringing the new report called the Prof. M. Govindrao report. So, we do a lot of deep dives into numbers to actually see backwardness and regional imbalance. And we find backwardness has decreased but, in some places, backwardness has not decreased as much as it should. This is the story even in the country. In the country, there are certain states which have gone ahead faster. There are states where backwardness has decreased but not much. Southern states have reduced their backwardness but even within the southern states, there is a regional imbalance.

So, the question comes, what do we tackle? Do we tackle regional imbalance or do we tackle backwardness? My take on that is we tackle backwardness. Why? You will never be able to do away with the regional imbalance to the extent of 100%. It is a matter of natural resources, capital resources, human resources. No district, no state can have everything which some other state has. So, there will always be some amount of regional imbalances. So, for an administrator like me, a question comes. I am taking the core example of Karnataka. For every 100 rupees that I put into Bangalore, I get back 110 rupees. This is called the incremental capital output ratio, the cost benefit ratio, and the cost-effective ratio. These are three terms public finance individuals should always keep in mind i.e., ICOR, CBR, CER. These 110 rupees which I get, 5 rupees I reinvest back into Bangalore. The other 5 rupees I take and I invest it in Vijayapura or Dharwad. The question comes, sir, why can't you put 100 rupees in Dharwad or Vijayapura? I can definitely put 100 rupees here but you will also have to appreciate my return on 100 rupees is 80 rupees or 70 rupees in Dharwad and Vijayapura. Why? The place where you are putting that 100 rupees may be in irrigation where your returns are not there. There if you put it in a peripheral ring road and other similar infrastructure related activities it works. So, this becomes a continuous challenge for administrators like me. At one end you have a backward area. There is a regional imbalance. At the other end, my growth engine is Bangalore, Mysore, Hubli, Dharwad, etc.

Have you heard of something called the urban primacy index? Urban primacy is the biggest city's population to the next biggest city in the state. In Karnataka, if you take its 1.4 crores Bangalore to about 12 lakhs or 14 lakhs Mysore or Hubli-Dharwad. No other state has this variation. You have about 2 crores in Mumbai, you have 60-70 lakhs in Nagpur. You do not have 10 times the difference. So, for policy makers, they need to

look at particular states to understand backwardness and regional imbalance, the story and the details. Only when you do this, we come to the third thing. I have a vision of improving India's economy. My strategy is to invest in regional imbalance to some extent but backwardness to more. But what is my tactic? What is my logistics? The American army has a very, very important dialogue. This is what they believe in. Strategy is for amateurs. Professionals do logistics. We do logistics. If I need to recruit 10,000 teachers, you can say, oh, we are backward educationally, we are backward in the health sector, etc. But if I do not put my four infrastructures, either a classroom or a teacher or a teacher training or the methodology of appointing them, counselling them, etc. If I do not put the logistics, we will talk about big things, we will never do things.

If somebody ask me what is the greatest contribution in 21 years of service I have done, I say only one thing. I have worked across five districts as Dy. Commissioner, I have done elections, etc. I have recruited the highest number of teachers i.e. 13,000 teachers in nine months flat, 6,000 other recruitments in municipal administration, schools, etc. About 19-20,000 people, the point is if you recruit good quality people, train them well, your service delivery improves. Today whenever I go to Mysore, and visit Chamundi Betta, the health inspector comes and tells me, sir, you appointed me. In the search, we are doing this. This is how I went indoor, learnt and came back. So if you do not put your systems in place, people talk of three Fs which are Funds, Functions, Functionaries.

I have a different take on this. First, what is the goal you want to achieve? Look at your administrative structure, whether you are a part of the administrative structure and are you competent enough in the processes and procedures. If you know how to do this, you achieve things. This is the details. Your vision is education, your strategy is recruitment, but how you recruit, what you do, what are your C&R rules, what method is your tactical approach. This becomes important.

The next thing, as secretary planning, I always ask these questions. People say, sir, what do you think of the welfare schemes? Some of you may call it freebies. I use the word welfare schemes, guarantee schemes politically they are called. I say any scheme in government or anything should be sustainable. We have about 17 sustainable development parameter goals. Sustainability is again four things.

1. First, is it operationally sustainable? Can you implement it in a sustainable manner?
2. Is it financially sustainable? Do you have finances to take care of it?
3. Third, when you do that, will it affect the economy positively, externality or a negative externality? Is it economically sustainable?
4. And last, most important, is it environmentally sustainable?

Any decision making in government, there are four touchstones. When you take based on these four touchstones, you achieve better. That is where I listen to academic discussions, when I listen to Prof. Govind Rao, or read Prof. Charan Singh's books, such as "Debt Sustainability" which becomes very, very critical because Prof. Charan Singh rightly writes that if your debt is unsustainable, then you are not revenue surplus, you are revenue deficit. Then you are into a vicious cycle of a debt trap. That's how it goes. Hence, as an administrator, I listen to experts like you, youngsters who come and ask me questions. And then when we are doing policy, we advise, sir, maybe we need to do it like this. Sir, we will do it, but can we do it in this manner? Ultimately, it is a political decision, but as policy makers we will facilitate decision makers to take decisions, this is where we come in.

The last thing I would like to say, whenever anybody tells me a statement, I don't believe a statement, whoever it is. There is something called 'trust and verify' in

administration. I never do that. I will first verify and then only trust. Keep this in mind. If anybody gives you a statement, find out how correct the statement is. You will need to refer because sometimes the statement depends on the context. Ashwathama Vadhe. It is the context. So as good public finance, developmental economics, etc., don't go by any expert including me. Independently assess it, independently question it. And then if you are satisfied, get into more details as to why it happens like that.

In fact, it was always in my mind that we should do a debt sustainable study for Karnataka. Then I am worried politically about what will happen. So, I kept quiet on that. As fiscal policy institute director, we have done quietly on our own. I think the Madras School of Economics; the previous director has done. You need to know three, four terms in public finance. The debt GSDP or debt GDP, the fiscal deficit, the revenue deficit or revenue surplus and interest payment to revenue receipts ratio.

These are four parameters which you need to verify. But then again, why are these parameters important?. When you do a temperature check of 102 degree, is it important to ask if it is because of a heat stroke or an infection? So that is the second thing. So do a little wider reading on that.

Lastly I suggest you all to read Budget documents of Karnataka, available in the website, something called the medium-term fiscal plan, read a book by Prof. M. Govind Rao regarding public finances. So good developmental economists will understand public finance and then make better decisions and recommendations.”

SUSTAINABILITY OF WELFARE SCHEMES AND BACKWARDNESS CLASSIFICATION

“The five schemes. According to me, Annabagya, Grahalakshmi, etc. Excellent schemes. Fiscal impact is 52,000 crores. Now anything which is there, we need to find money and do it in a sustainable manner. There is pressure on the exchequer, but we need to find ways to overcome it.

One good thing about Karnataka, Maharashtra, Gujarat, some Telangana, etc. is, we are states where if we are a little bit prudent going ahead, we can manage the fiscal impact. If you go by the history of Karnataka, how Karnataka evolves, we are a consumption-based economy also, we are a forward looking economy. The fiscal thing we can manage provided we do not stretch ourselves more.

Second, I am getting a study done from CKDR (Cross Disciplinary Knowledge Data Research), from King's College London, Indus Action, Azim Premji University, independent study not funded by us except for CKDR to tell us how it is actually impacting. And you should see the response. By about June, July, we will be releasing the report. According to me, those are schemes where there is a benefit for a lot of men and women. But the question for a finance guy like me is, how do we manage the fiscal stress better? It's a challenge for us. We are revenue deficit, but we are looking forward to the year 2026-27 to become revenue surplus.

The only issue here is, you have to be careful what the signal is, behavioural economists amongst us must make a note of it. People respond to incentives. The moment you declare a taluk as backward; it will never want to be called forward. Because the more backward it is, the more funding it gets. So how and whether input replicates changes into outputs and outcomes. We are finding at many places, inputs have not fully got converted into expected outcomes. Slowly thought process has evolved over the last 20-25 years. Prof. M. Govindra, in fact we were in Dharwad only about one month back, we had gone to Belgaum. Prof. Bagalkoti who is coming tomorrow is a part of the committee, Prof.

Govindrao committee. You can ask him more. We are looking more at outcomes.

Whatever we invest now, I used three words. What were the three words? I used three abbreviations. So whenever you try to do an outcome-based thing, try to use these three (ICOR, CBR, CER).. Incremental capital output ratio, cost benefit ratio, cost effective ratio. So if you are able to plug this into your system in your further reports, you will get better results.”

ENVIRONMENT AS PRIORITY

“Last being the environmental system. But in the context, you know, I am a forester, retired 10 years back. I find in most of the developmental projects and proposals that the last thing we do is environmental sustainability. It is better to do environmental sustainability first and only take those elements which qualify from there and consider. Otherwise, what happens is at the end of the process, they will try to find some kind of, you know, narrow perspective for environmental. Yeah. And then find solutions to environmental sustainability and at the end of it, in 10 years’ time, we know the difficulties we really create. That’s my suggestion.”

HOW TO LOOK AT DEVELOPMENT

“The average per capita income in Karnataka, 10 districts was above the norm. Today, only three districts are above the norm, okay. Bangalore urban, Udupi, Mangalore. Chikka-Mangalore depending on coffee prices, okay. Gulbarga is at 1.7, 1.8 lakhs. Bangalore is at about 7 lakhs. See, this is what is happening. The per capita income is there, but if you look at it... See, these are details I gave you. Again, you have to see the story. Has Gulbarga improved? And what has been the improvement? And by what investment in Gulbarga will you increase its per capita income and other things? See, this is where exactly... Do not look at only one detail. Look at the story and do it.

Secondly, Let’s assume we invested in Gulbarga as you said, we can do that. But if you do not invest in Bangalore sufficiently, you will lose money to invest in Dharwad also. If you do not take care of your stronger person, you will be beaten up by the other people. So you have to understand, this is our thing. And now quality of expenditure, for example , All of us say, sir, bring up schools, recruit teachers. But, I am giving you statistics. 48,000 schools, 44,000 are primary schools, 4,500 are secondary schools. Approved number of posts is 2,20,000. Working teachers are 1,10,000. 40,000 teachers are guest teachers for me. To run my schools well, I require about 10,000 to 15,000 schools only. From pre-KG to 12th, if I am able to do my Karnataka public schools, PMSRI schools, etc end to end, I will give better quality. I will give education, I will give food, I will give sports, I will give other things.

Today, 500 schools have zero students because the population has crashed. There are 3,000 schools with less than 10 students and 13,000 schools with less than 30 students. We are not effectively utilising our resources. Within half a kilometre, there are schools which can be made more rational and teachers given or your food given better. This is where your quality of expenditure comes. Now, you know what, People say give 6% to education, 6% to health, we cannot give like that. We may give 3 to 4%, but how do you get the best out of it? That is our challenge. So, never ever just go by absolute numbers. Look at the qualitative thing also. By giving this more, am I able to do better? This is my way of looking at it, okay?”

POLITICAL PARTY INTERFERENCE IN POLICY MAKING

“I handle about 40-50 files a day, previously 100 files. 95% to 98% of files, nobody interferes. In the rest of the 2%, 1% of it is 50-50. What the political person says is also right, what I say is also right. In the 1% where he and I have that, we have ways to handle it.

Second, please do not be under the assumption that a political guy how he has been portrayed in TV and other mediums. He knows many ground realities much better than an officer. It is our capability, our skill set to convince him to educate him and say, sir, why don't you look at this? Have you become intelligent in one day? No, it has taken 10 years. So, when a political person comes, I have worked with stalwarts across political parties, okay? When you sit with them, they will educate you more on things.

As officers, we have our skill set. But believe me, there are exceptions to the rule. But the majority of politicians are quite reasonable many times. It is how you approach them and convince them and talk to them. This is important.”

GIVING ASSIGNMENTS TO FOREIGN BODIES

“During a recent discussion, I was informed that the insurance coverage is 20%, a fact I was previously unaware of despite my experience as a practitioner. I find it beneficial when knowledgeable individuals share insights with me. I strategically engage with professors and the Boston Consulting Group (BCG) for their expertise. My intention with the BCG group was simple: we paid them about 9 crores. My return on that was I will take 300 crores out of them.

We are currently implementing an initiative known as the Investment Infrastructure Trust (INVIIT). This strategy is projected to save the Karnataka Power Transmission Corporation Limited (KPTCL) 100 crores annually for a minimum of 20 years. Additionally, I have been able to optimize the operations of several health centers. We have also introduced the Prime Minister's salary package as part of our financial inclusion efforts. It is crucial to leverage the expertise of others, as the demands of daily operations may not always allow for ideation and strategic planning. So, it is up to you to get the best out of them, because sometimes in your day-to-day fight, you may not have the time to sit and do the ideation and do this.

So, get the best out of everybody and do. Do not say, he is bad, he is good. Try to get the best out of everybody and make it work.”

Bharat is moving ahead with a vision - Prof. Kailash Chandra Sharma



Prof. Kailash Chandra Sharma

Prof. Kailash Chandra Sharma, Chairman of CMDR, Dharwad and Chairperson of the Haryana State Higher Education Council. He is a former Vice-Chancellor of Kurukshetra University. Has over 35 years of teaching and research experience. Dr. Sharma has authored four books, published more than 75 research papers, and guided 21 PhD scholars. He has held key academic and administrative positions contributing to higher education policy, curriculum development, and research funding.

THE TALK

The title of the conclave, Transformation of Bharat: The Story of a Decade and Future Outlook, itself indicates that we are taking stock of developments. It refers to the various policies formulated by the Central and State Governments, their implementation, and their impact, both visible and actual, on society. It also reflects on how our country, Bharat, is perceived globally today after a decade of implementation of various policy interventions.

We have seen a significant change in economic policies during the 1990s, when the country adopted economic reform policies and liberalisation policies, and we witnessed several initiatives taking place. However, during the past decade, the policies in different sectors, which we are deliberating upon manufacturing, banking and financial inclusion, agriculture, foreign policy, economic growth, and competitiveness, have seen considerable development. Several policies have been drafted and implemented, and now we are witnessing the positive outputs and outcomes, I would say positive effects of these policies after their implementation.

Prof. Jirli has taken us to the historical background, and then he has raised certain questions. He has very importantly indicated that various debates have been taking place and are taking place in the country regarding the policies and their implications on various sectors. We need to introspect with regard to the policies that are being implemented and new policies that are coming up. So, what is our involvement? He asked and requested all the intellectuals, academicians, and other stakeholders of the society to deliberate upon these issues. This conclave is meant for these, I think, policy makings. I would say I am not an expert in financial and economic developments, etc. But listening to Dr. Vishalji, who is involved in policy making, and who has very rightly said that if policies are made not only on the basis of theories but also on the basis of expert advice, experiences, and learnings, then those policies will be effective, and the results will be seen on the ground

as well. We are happy to know that one of our states, Karnataka, has been categorized into different categories, such as consumption-based economies, and Karnataka is one of the states that he has defined as a forward-looking state of the country. So, can we say that during the last decade, with the policies of the country and the states, our country is heading towards becoming a forward-looking state, a forward-looking economy, instead of remaining a consumption-based economy? I think the visual effects indicate signs of this transformation.

Regarding various policies being implemented, since I am involved in academics, I am part of framing different academic policies at the state and national levels. One of the important policies framed and being implemented during the last decade is the National Education Policy, which was declared by the Union Government in July 2020. Now, after almost five years, most of the higher educational institutions, as well as institutions affiliated with NCERT at different levels, viz., the foundational, elementary, and secondary levels, are implementing this policy, and its importance and results are being seen. The ecosystem that Prof. Jirli and Dr. Gowrishya referred to as the start-up ecosystem has emerged as one of the significant policy outcomes, and it is gaining momentum due to the changes brought about by the education policy.

So the important change in the National Education Policy is the recommendation of a holistic and multidisciplinary education. So, if we go into the details of that, what is holistic? it means the overall development of a human being, the youth, not only for earning a livelihood, but the personality's overall development, the mind, heart, and hand development, and spiritual development. This is one of the key recommendations of the policy. And as part of that policy recommendation, the curricula should be revised, updated, and should have the best available research knowledge of the particular subject. It should include skills in the curriculum. When we say skills or vocational education, it should not be a part of only science; it should be embedded in social science, the arts subjects also. So the faculty members should discover those skills to embed in the curricula.

Secondly, whatever technological advancements are taking place, those should be part of the curriculum. Thirdly, experiential learning, the students, the stakeholders should be taken to industries, to corporations, and other levels. They should have first-hand information, they should have the experience of what they are being taught in the classes. So this experiential learning is an important part. It is advised that when you are designing or redesigning your curricula, you should involve the industries, the corporate, and the administrators, who understand the requirements of the society and the country.

Those recommendations are being implemented. And most importantly, every curriculum should have the Indian Knowledge System, the traditional wisdom of Bharat. What has been the contribution of Bharat to different subjects that should be an important part of the curricula. So that is how a multidisciplinary institution an institution that is not unitary, an institution which is having all the different disciplines with experiential learning and the Indian Knowledge System, technology, skills, and all that—that will prepare competent youth. The youth will be well-rounded, an integral human being, and a well-trained human being will come out of the campuses. And those human beings are the requirement to transform the country.

That is the idea and the target being set by our country, led by our Prime Minister, so that by 2047, we should be a superpower. Superpower not in terms of the economy and defense, but we should be a knowledge-based society. A knowledge-based society will complete all the requirements of the society of country. And I think we are heading towards that. That is one important policy I have seen. And these things are visible globally also. This education policy is being studied by many of countries. They have appreciated that such a unique policy has come, and this will be a tool to transform Bharat. Recently,

two days back, I was reading an article, and that article mentioned that the Raisina Dialogue is an initiative of Bharat, and it is a dialogue that has been taking place over the last decade. The 10th episode happened recently. In this dialogue, we have seen that 3,500 delegates from 130 countries attended, and it was jointly inaugurated by the Prime Minister of New Zealand and the Prime Minister of our country.

In that session, the idea of Bharat, “Vasudhaiva Kutumbakam,” was highlighted, along with the idea that this is not the time for wars or conflicts, but that issues should be resolved through dialogues. So, countries are now looking towards Bharat. They feel Bharat should lead, that Bharat should give ideas on how we can all prosper and move forward. I think this is clearly visible. And during this time, over the past 10 years, we have seen several economic, foreign policy, and other reforms being taken up both by the national and the state governments. We will be deliberating on these during different sessions.

I appreciate that the two centres, the Centre for Multidisciplinary Research here in Dharwad and the CESS, Bangalore, have jointly organised this conclave, and excellent speakers will be deliberating upon various parameters of this journey. I appreciate the efforts of the two Directors and their teams. I am sure that, with the presence of such eminent speakers and, from the level of the questions and answers we have already seen in this session, it is going to be a fruitful conclave. Thank you very much.”

Strengthening India's manufacturing sector for global competitiveness - Sri Parashuraman



Sri Parashuraman

Sri Parashuraman is former senior executive advisor to Toyota Industries. He was chairman of the student outcome committee for the NAAC in rolling out the maturity-based graded framework for the country, and was also working in the apex and core committee of NAAC.

THE TALK

“When I look at the manufacturing, I thought I would just pen the big picture of what is happening now. See, today when you look at India, many years back, whenever I used to travel abroad, people always used to ask me what is the future of India? Now, everybody says India is the future, which is a huge turning point. And be it two-wheelers or three-wheelers, I think with regard to two-wheelers, Bharat is the top country in the world, the maximum number of two-wheelers, including the Electronic Vehicles, two-wheeler population has increased tremendously. And the cars, we already surpassed Japan last year, we just clogged more than 4 million cars, 4.25 I think, we just crossed Japan's number. And as one of the fastest-growing economies, I think that is incredible India. Thanks to COVID, I think we have accelerated at least by 10-15 years on the digital economy. The rupee, one rupee payment, which is possible, is creating wonders for all our friends who participated in the G20 meet. How is it possible? One rupee payment by Rupay, I think that is the beauty, and most of us have forgotten the purses today.

Purse is not a normal usage commodity, I think that is the beauty. And the start-up ecosystem is flourishing very well. Of course, we have a long way to go, but a lot of good things are happening. So starting from 2014, when I look back at the last 10 years, a series of progressions happened. Starting from Make in India covering 14 important sectors, Digital India, Youth India, Start-up India, and then we had a series of pay-alized schemes to the tune of 1,98,000 crores, which really ignited the manufacturing economy to a newer destination. And we have now Viksit Bharat and Atmanirbhar, self-reliant India, towards the Amrit Kaal journey of 2047 has gained momentum.

And when I look at the future of manufacturing, today the GDP of Indian manufacturing stands at 17% of the total GDP. This number we see crossing 30% or so in the next decade. Once that transition happens, today we have around 6.8 crores MSMEs in the country, and

this number is likely to reach 13 to 14 crores of MSMEs. It is a huge, huge growth, and MSMEs are going to drive the foundation of the country. Today, they are contributing to 30-40% of the growth in terms of GDP from directly and indirectly, and they are going to be the growth engines of this country.

I was in Osaka last week for a couple of days, representing the Bangalore chambers at the invitation of the Osaka city government. I was surprised to see in the Osaka region, which is a part of Kansai prefecture amazed to learn that 95-97% is all driven by MSMEs, and this prefecture is contributing to a 1.1 trillion dollar economy, almost one-third of the country's economy. The Indian economy is coming from a small area. Japan itself is one-tenth of India, and Osaka and Kansai prefecture are one portion, a very small portion, but that is contributing 1.1 trillion dollars to Japan's economy. I think I realized there is a huge potential for Indian companies to grow, and this is the golden age. Therefore, once this transition happens in the manufacturing sector, the GDP most of the global economies, including China, Japan, and many parts of Western Europe, they clock 20-25% of GDP; India stands at 17%. So this transformation is going to bring a radical change, and whether we like it or not, India is not only going to be the huge manufacturing market for a captive India, but it is going to be the manufacturing hub of the world. Thanks to one more China, China plus geopolitical crisis and the huge demographic dividend that the earlier speakers talked about today morning, this is going to drive manufacturing to a newer destination.

And today India is dominated by a 60% service market, but the equation is going to change. Normally, when countries age, they migrate from manufacturing to service, but India is going to have a reverse process. We are going from service to manufacturing with a younger population at the age of 28-29 years. This is going to be the real Amrit Kaal for the country. And the Indian brains, all of us know, be it in Google or any part of the world, I think our engineers are wonderful. The biggest advantage of our engineers is that they are very adaptable, very flexible, very culturally oriented, and they pick up learning very, very fast. Even when I was in Japan, I could see a lot of Indians picking a Japanese. Indian students learn Japanese very quickly. And there is a huge aging population in Japan. So I was suggesting that a lot of Indian people can be trained in the Japanese language, culture, and we can export a huge number of engineers to Japan to support the growing economy.

I think many, many things are possible. Therefore, I said it is a great Amrit Kaal journey, the golden age of the country in terms of manufacturing. But having said that, our journey has a lot of challenges. Today, when I look at the future, I think Gen AI is changing the entire world. Every day, things are becoming obsolete. Even in the education sector, it is a real, real challenge for professors, faculty members. And today just a click of the button, you are able to get the whole world. I think I am wondering what is going to be the e-learning process. You ask Chat GPT, please teach me $E = MC^2$. It tells you what is $E = MC^2$. You tell me I am not a professor, I am only a four-stranded student. Please teach me $E = MC^2$. Then it will tell you, like a fourth-grade student, what $E = MC^2$. I think millions of combinations are possible. And I think with this kind of growth of Gen AI, I think there is a huge hope from where we stand. So we are able to see the new skies. So far, we were ignorant.

I think I always talk about the fourth quadrant of the Johari window. There are four quadrants. The first quadrant says I know that I know. That is self-confidence. Second quadrant, I know that I don't know. That is humility. Third quadrant, I don't know that I know. That is latent talent. And fourth quadrant, I don't know that I don't know. That is ignorance. I think the CHAT-GPT is opening out the third and fourth quadrants. I think especially the phase of ignorance, which is showing us a new world, a new horizon, new skies. That is why many people were worried that we are going to lose our jobs because of CHAT-GPT, Gen AI. Actually, people may lose their jobs not because of Gen AI, but because of not knowing Gen AI. I think that is a very important point. It is like Lord

Vinayaga circling one round and taking the sacred fruit. Gen AI, I feel that is a kind of a very powerful tool. We cannot be conversant with all technologies, but being conversant with such a kind of tool which is very powerful, that is why, for academia and research I am suggesting I think we should roll out Gen AI very, very fast. In a short two-three-day workshop, it can create a 40- 50% improvement in productivity levels. Therefore, I urge academia to come out with this kind of Gen AI faculty development program, which is going to really be the game changer.

So, when I look at the future skill sets, I could see 14 important areas of manufacturing which is going to change the phase of manufacturing. First of all, the manufacturing we should understand is going to become holistic and integrated. It is not going to be in silos. No longer is it a brick and mortar manufacturing. So all the technologies, be it IOT, machine learning, artificial intelligence, cyber security, big data, they are all going to get integrated to form a new paradigm in manufacturing. So when I look at those skill sets what we need in the next decade to manage this change starting with IOT, machine learning and artificial intelligence, cyber security, genomics, drones engineering, robotics and automation, AR VR augmented reality and virtual reality and digital twins, nanotechnologies, then we have the e-learning, shared services which is going to be the order of the day. Gen Y they are no longer interested in owning big assets, shared services. Today the autonomous vehicles are also becoming very popular. Autonomous vehicles, I was traveling in Sunnyvale. It is like feeling that I am traveling on a broad road. The traffic has no big reason. I think because all sensors are all over the body, we are able to navigate. I think that technology is going to be a reality. Today it has become a commercial fleet in many parts of the world. In Tokyo also it has also recently started. And big data, which is again driving the change. Then the digital blockchain chain, which is another very important thing, and lastly the 3D printing or the additive manufacturing. I call it additive manufacturing. You get addicted to that. Recently, a post office was printed in Bengaluru in less than 2 months by Larson and Tubro at a cost of less than 8 lakhs. Many houses are printed in China. So, look at the kind of growth of technology, and you can do 3D printing sitting in remote locations. In fact, in one of the factories in Sony, I was told operated by two people.

One is a human being and the other is a dog. The purpose of humans is to feed the dog, and the purpose of the dog is to ensure nobody enters the factory. So these kinds of autonomous factories are going to be the order of the day. See one side, we have increasing labor costs. India is no longer a cheap labor. Now we are competing with Indonesia, Thailand, China, Taiwan, and many parts of Asia. But labor costs are also increasing because of inflation. Therefore, I think it is very important to balance the automation, low-cost automation, then progressive automation, then full-fledged automation, like what is happening in many parts of Europe and Japan. I think this is going to be the natural transition. Therefore, these technologies are also going to play a very important role. So how do we develop our youth on these new skill sets? That is going to be the major challenge. So it is very, very important that a very close collaboration between academia, research, and the corporations for a common purpose.

A center of excellence should be created across the nation in various regional hubs. There should be a hub and spoke model for many companies to learn from this center of excellence, where they cannot afford to. And there should be a transition of human exchange between industry and academia. Unfortunately, I think this is quite weak in our country. whenever I visit the U.S., I see Berkeley, Stanford, and I see a lot of professors working very actively in the industry. Berkeley, a lot of Nobel laureates working there. I think that kind of industry connection, unfortunately, is not picked up in our country. We have been talking for quite some time. Therefore, it is the responsibility of both the corporate and academic sectors and the government to collaborate to make this happen. In India, the budgetary allocation on research with special reference to manufacturing technology is very, very minimal. So we need to really spend a lot of time and money

on research, take it to the industry on the new technologies, and make it commercially viable through the start-up ecosystem, through a lot of mentoring and entrepreneurship programs. Therefore, this is very important.

Secondly, the most important thing is human development. We lack the skilled people to manage the new transition. Today, when I look at the MSMEs, most of the people are all (70-80%) the first-generation. They are all retiring. Their children, unfortunately, are in Europe or in many parts of the U.S. Nobody to take up the responsibility of the industrial units. When COVID came, all of a sudden there was a big shock and many companies had to close down, not just because of financial problems but also because of takeover challenges. And I think it is very, very important. I urge academia also to come out very actively and program on MSME, management education, where the students can be trained on the management of MSMEs in four important areas – the manufacturing management, which is very weak, and then the human resource development. There are no formal human resource development systems in the MSMEs, be it the recruitment system, learning and development system, or a pay-out system, promotion system. All these things are super important for human development. Then financial management.

Back to the basics of what Dr. Visal talked about this morning. I think about how we grow new markets, new investments, new loan terms, you know, profitable business, how to convert a sick company into a profitable company, all those things. Yesterday I was listening to Prof. Charan Singh. He shared the experience of how we turned around the Sindh Punjab Bank, which was running into losses, into a very, very profitable bank, and reached the highest level of profitability in the year 2024. Great story to share. I think, how do we teach this to academia? And academia should teach this to the students.

And they should be able to take up these MSMEs, and these people can afford to pay a little higher salary also. So they also get attracted to managing this kind of business for the future. So this is my suggestion to academia. So human resource development is another very, very important thing. Even IRG quality circles, this is very weak in this country, though we have been talking in bits and pieces. I was the former chairman of the Quality Circle Forum of Karnataka. I put a logo many years back, one plus one is greater than two, which means two minds put together, the output is much, much greater. I think the synergy of putting two people. Many times, I jovially say one plus one is minus one. Two people are put, they fight each other, and we don't get the output. I think this is what I learned from Japanese. We used to sit in the meeting for eight, nine hours, continuous meetings, fight, and argue healthily. Once we come out of the meeting, the action goes like a bullet train. Eighty percent of the time is spent on discussion, planning, and twenty percent on execution. Many times we agree in no time, rest of our lives we keep fighting. I think many projects we see are struggling with timelines.

I think this is another great challenge that we should look at. So the second aspect that I was looking at is human development, which is very, very important for manufacturing. So this is a great thing that has to happen. Thirdly, I think, of course, it is also the first thing, infrastructure. Today, the infrastructure in the country, the biggest challenge for our competitiveness, logistics infrastructure competitiveness is very low. I think the supply chain is very, very complicated. Some of the products are going through multiple supply chains, manufactured in Bengaluru, sourced from Delhi or Haryana, then reprocessed in Chennai, then again going to Pune, then again coming back to Coimbatore, then finally the product is coming to Bengaluru.

You can imagine these kinds of complexities. Some supply chains are very complicated, even fourteen, fifteen, twenty steps. Therefore, the integration of the supply chain, I think, is very, very important for manufacturing competitiveness. The supply chain cannot stand in silos. It is now fragmented. The fragmented supply chain is our biggest

enemy. Therefore, how do we integrate the supply chain for a bigger purpose? This is possible through the digital infrastructure. Today, the purchase orders can be seamless. It can be integrated across the country, and the lead times can be saved. Therefore, this will also reduce the inventory in the pipeline. So this will bring a huge synergy and reduce obsolescence, and the time to delivery is much faster. Setup times also get reduced. So it is a chain reaction. Therefore, the supply chain integration is very key through digital infrastructure. So we should look at that. So I was just talking about quality circles.

I just tracked off. So quality circle. Can anybody tell me what is the purpose of quality circles? Two answers. One from the ladies, excellent, very good, “Continuous improvement”. Excellent, so what is the final purpose? Profit. What is the final goal of the quality circle? So what? Improvement, so what? What is the final expected outcome? I will put it in academic language. What is the program outcome? So what? I think profit, quality, customer satisfaction, and many other factors. See, actually speaking, the real purpose of a quality circle is human development. The profit or quality are all secondary outcomes because Swami Vivekananda said, “Give me one person who is pure, I will change the rest of the world”. I think about how we develop that kind of human development. I think quality circle, in fact, I was listening to Prof. Vathanabe San, former President of Toyota Motor Corporation, one of the quality circles in Nagoya. He said that through a quality circle you can learn five works. The first work, he said, is footwork. Footwork is not cricket. Footwork is going to the point of action where the problem happens. Understanding using all your five senses. That is footwork. I think in Tamil there is Tirukkural. I think somebody also quoted in the morning, it is a great verse. What he says, whatever you listen to, from anybody, anytime, is the most important thing to find the depth of truth in what is being said. Very, very powerful. In fact Toyota also, this is our fundamental DNA. We say Genji Genbutsu, going to the point of action where the problem occurs and using all your five senses to understand the problem by yourself. So this is the first work, footwork.

The second work is teamwork. Quality circle promotes teamwork. Some four or five people work for a common purpose. You learn from each other. You appreciate the good qualities of the other person. So this is a learning process. You also say, “How do we improve ourselves?”. We see a lot of potential improvement points. So this is the second work. The third work is headwork. We may have to do a hundred things at a time, but what is the most important, prioritized problem solving? What is the prioritized issue I should focus? So head work. Fourth is the network. By working in quality circles, you are able to work with people, teams, benchmark, and see new dimensions. So this is the network. And finally, the fifth work is hard work. Through quality circles, you achieve something. The sense of satisfaction is very high. So you put in hard work. That is enjoyable hard work. As Dr. Kalamji said, if you have to shine like a sun, you have to burn like a sun. So that is a very enjoyable hard work.

All these five works you learn, finally, the sixth work I realized, it is homework. When you do a quality circle, there is always a foot for the thought. What went well and how can I make it better tomorrow? So it is a PDCA, continuous. Many times, I jovially say PDCA means, Please Do not Change Anything. Nothing rotates. So, which means we are not rotating the PDCA. Therefore, I think all these things are very, very important for manufacturing competitiveness. In Japan today, the quality circle momentum is amazing. India, unfortunately, in fact we are also trying to drive it in education, in academia. We have also suggested introducing quality circles, you know, because unbelievable results can be achieved. The professors and students, and the administrative staff can work for a common purpose. In fact, I tried to introduce some of the quality circles in NIE, Mysore, and Christ College. I think we need to gather that momentum, and I think academia can play a very important role so that these students practice quality circles and they get ready for employment. The industry can adopt them very easily and happily. I think we can, in fact, the TVS motor, they have achieved close to 100 crores just by quality circles. They can

see the kind of power of quality circles. Therefore, this is another important movement that we should take in the country. So these kinds of activities are very important. And one more important thing I wanted to bring to academia.

See, it is very important to create a big picture. See today the critical thinking is lacking in the country. I think academia should play a very, very important role. We spend billions of dollars on poverty, penury, illiteracy, ignorance, epidemics, and diseases. But are we going to the root of the problem? I think this is a big challenge. What I mean is the big picture. You see the Earth from a horizontal distance. Somebody said the earth is rectangular or square, or round in shape, circular in shape. You look at the earth from 1000, 2000 kilometres above the sea level. You should be able to see a beautiful blue ball. You should be able to put it in your pocket. I think that kind of picture, I think every academician should drive it to the student. And this kind of critical thinking is very important. I recollect one of my experiences in Toyota, where I did an executive development program, which was for almost one year. The program itself was very simple. All I had to do was choose a problem around the workplace and make an A3 report, and finally present it to the management, any simple problem. I remember I had three presentations in our Bangkok office and two presentations in my Japan headquarters, and I had 48 revisions of that A3 paper with my managing director, Mr. Isashi Suzuki, several years back. If you ask me, I have completed my A3 report, but I don't think so. It is very easy to make a 1000-page report. Today, thanks to ChatGPT, even 2000 is possible. But the same 1000-page report if you have to make it in 100 pages, it is all the more difficult. You have to churn your brain many times. Same 100-page if you have to bring it in one single A3 paper, that is where the human development happens.

You have to churn your brain hundreds of times. We may have to do 1000s of things at a time, but what is the most important thing I should focus on today? That is the power of this A3. I think that kind of clarity, I think if you are able to drive that, see today the biggest challenge is people are all confused, they are hallucinating. They want to do many things, putting their hands on several things, but the focus is not, depth is not coming. Whenever I meet my Japanese friends, I can see the depth. They are so focused, their eyes are extremely focused. Maybe some cultural reason is also there. In India, I always say our ears are very strong because of many languages. We know what is happening next door. But our eyes are very weak. We don't look for the details, Chalta attitude. The Japanese because of the Kanji, Japanese language consists of Iragana, Katakana, and Kanji. While Iragana and Katakana are very simple like alphabets, Kanji is very pictorial. In the process of reading and learning Kanji, there are even 40 stroke Kanji you have to write in the same sequence, otherwise the computer also cannot recognize. Therefore, the eyes are extremely sharp. Because of one language, the ears are extremely weak. They cannot pick up languages. So this cultural difference I could also see. Therefore, this big picture, I think how we drive in academia is very, very important. So these are all the areas I wanted to touch upon.

Of course, there are a multitude of other things. In fact, the quality is my very favorite topic. See, today the biggest mindset for us is quality foundation. So I will just talk about the ten commandments of quality very, very quickly run through. The first quality commandment is to please treat rejections as treasure. When rejections happen, it is the greatest opportunity for improvement. Failure is the stepping stone for success. I don't want to expand, I will stop it here.

Second is thoroughly benchmarked. Don't think that what you do is the best. Open the window, you can see the multitude of new opportunities. Learn from others' benchmark, then set a new target, then improve, then you rotate the PDCA, go to the next step. Third is to stop the line. We are always focused on quantity, not on quality. Quantity without quality is like a flower without fragrance. There is no use. Therefore, if there is a problem,

you should stop the line immediately. Then the fourth commandment, please don't change the process condition, because the process condition affects safety and quality.

So, before changing a process condition, you should do a thorough analysis. The fifth commandment of quality, inspection, is not checking. The purpose of inspection is to give feedback to the earlier process. Inspection is the biggest waste. It's a mudha in Japanese. So the purpose of inspection is to check, give feedback on the earlier process. Sixth commandment of quality, please take countermeasures for processes that break down very frequently. You should put things in order, which is a difficult process where even a lot of problems can happen. I think we will always be allergic to the touch of that process. So I think that is where the top management support is required, drive is required to push and make that process thorough. Therefore, this is very, very important. That is where the chronic problems many times we don't solve them. And the seventh commandment of quality is, please do change point management for stable processes where statistical process capability is very good. Any change point affects safety and quality. What is change point management? In an organization, in a factory, man, machine, methods, process, management, they change continuously. I think it's very, very important to monitor them very closely, and before you make any change point, it's very important to observe them closely. Then make a change point. Then the eighth commandment of quality, don't do misirika and do real mirika. Both are Japanese words. Misirika is to show, show off. Typically, I say ISO, ISO audit, and I also say NAAC audit in academic parlance. So when the auditor comes, everything is so beautiful. Auditor goes, the mountain is back. JOVIRA I say ISO means I stay in the office on the previous day of the auditor. Auditor goes, again the scrap is back. So I think the whole idea of visualization, making things naked, the problem jumps.

The first and foremost thing that I see in all the Japanese companies is visualization. By visualization, you become very honest. Then people will participate, oh, this is the problem. Not understanding the problem is the biggest problem. Covering the problem is the biggest problem. That is our biggest problem. Therefore, make things naked. People participate, then there is a thorough introspection, there is a problem-solving process, and a brainstorming process. Then people go to the root cause of the problem. Then we put an occurrence countermeasure. I think that is where the huge breakthrough happens. Then, the ninth commandment of quality, please set a challenging target. We are very happy to tell I have achieved 70 percent, 80 percent. I think the eye for excellence is very, very important. That is where the quality foundation happens. In fact, I recollect reading the biography of Steve Jobs. People are asking that we never see you talking to the customer. How did you invent this great product iPad which changed the world, eliminated the world? Steve Jobs said that normally customers expect an organization's support. And normally, organizations think one or two levels above what the customer expects. At Apple, we go four or five levels above what a customer can imagine. And he calls it an epiphany. Epiphany is a cloud-busting of ideas.

That is where the creativity and innovation blossom. Once you reach those skies, you are the master, there is no competition for you. Invariably, even after two decades, Apple has been the master. iPads have stood the test of time. I think that is where, in fact, I was very, very surprised when I was there. Invariably, every fifth day in Apple is a free day. People can do whatever they want to do. And 80 percent of the innovations have come in the 20 percent of the time. So when you remove all the frills, the knowledge starts flowing. I was listening to Swami, he said an experimenter should experience an experience without an experimenter. Can you understand? For example, you watch a movie, and watching the movie is an experience, and you are the experimenter. Before watching the movie, somebody had told you the movie is useless. Already you have lost the experience. Your mind is already shut. Therefore, how do you develop that open mind where the knowledge is free? I think that is what is very, very important. And last commandment, please develop professional

men of quality.

I quoted Swami Vivekananda. Please give me one person who is pure, I will change the rest of the world, he said. I think it is very, very important not the number but the quality. One person, you make him a thorough professor, a thorough academician, he means what he does, he can implement the change, he can drive. I think that person will be in the pyramid, they will be able to drive that huge change down the line. I think all of us should spend our time on that kind of human development, which is very, very important for creating a solid quality foundation in this country. And finally, the change has to come from within. Don't expect my institution will bring the change, my government will bring the change, my country will bring the change. I think all of us have to start the change from ourselves. Like we said by Dr. Abdul Kalam, I finished my speech quoting his words, where there is virtuousness in our hearts, there is beauty in the character. When there is beauty in the character, there is harmony at home. When there is harmony at home, there is order in the nation. When there is order in the nation, there is peace in the world. Thank you, God bless, Jai Hind.

Thank you very much, sir, for briefing us about the importance of application and integration. As you say that you are working with industry, connecting industry and academia, and also briefing us about the challenges that the general AI is going to bring and how the entrepreneurs as well as the economy will cope with the challenges like COVID in the future. Thank you so much, sir.

Make in India can be achieved by understanding Spirituality and Culture - Prof Bhimaraya Metri



Prof. Bhimaraya Metri

Prof. Bhimaraya Metri is current Director of IIM Nagpur is a distinguished academician, renowned teacher, researcher, an astute administrator and institution builder. An outstanding leader of management education, he has performed key leadership roles at many premier management institutes and corporate in his remarkable career. Dr. Metri is the former Director of IIM Tiruchirappalli. Under his dynamic leadership, IIM Tiruchirappalli has catapulted among the league of top business schools in India. He has also contributed immensely as Dean at L& T Institute of Project Management Vadodara, IMI New Delhi, MDI Gurgaon and leading research programs at BITS Pilani.

THE TALK

First of all, I thank CMDR Dharwad and CESS for organizing a very interesting conclave on the transformation of Bharat. It is a need of the hour, and it is a golden period for India. The 21st century belongs to India, and if you observe the topic, I think Parashuramanji very nicely narrated the developments in manufacturing sector and what are the nuts and bolts of manufacturing to take it to the next level and to make India as a hub of manufacturing, what are the things we supposed to be doing. I think Japan did, and they succeeded. I think some of them can be incorporated in the Indian context, which is very nicely elaborated.

If you see the entire world, majority are aging nations, Japanese aging, average population of Japan, the average age of Japanese is 49. Look at the US and Canada, they are aging nations. Europe, while 37 is the average age of Indian's, which is a demographic dividend, as the morning speakers told about it, Bharat is a young nation. The average age of the working population is 28 is the demographic dividend. It talks about how many people are working and how many people are not working, and they are dependent on the working people. That shifts the economy.

Curious analysis of the countries all over the world reveals that, where there is a larger youth population, those countries have stood up in the crowd. It was in Japan, the 1980s super economy. It was in Korea. It was the golden days for Singapore and China since 2002, as a young nation. And now it is a term for India. India is at the center of the globe. When it comes to leadership, and when it comes to the expectations from the rest of

the countries, India has accepted the global leadership, and leadership is in transition from China to India for global leadership.

And after COVID, many countries declared a China minus strategy. Geopolitical situations indicate that India has already taken a center point and center place. As Parasuramanji talked about, the Government of India's policy concerning "Make in India", Start-up India, and ease of doing business, and even various schemes of the Government of India, are all favorable to set up manufacturing units and enhance the exports from India to the world. Till now, it was from the world to India, particularly from the west. America and Europe, we used to treat them as foreign, and from there anything that comes, it was most welcome and respected, and it is no more true here onwards. They are now looking towards India for goods and services coming from India or Asian countries are going to foreign countries. And for us, no more going to America is going to be foreign, so the narrative has changed.

If you look at the overall GDP and in the morning, the Director of CMDR was talking about more than 7% GDP for the last 10 years, it is not 10 years, it is the last 30 years. We are the only country in the world where the average GDP is more than 7%. Nobody else. And if you see the last two decades or even if you see last 10, 15 years, the country's growth trajectory, it took almost 60 years to become a one trillion economy. But if you look at the right from 2014, India was 2 trillion, in 2023 three trillion, and in 2024 touched 4 trillion and we are anticipating by the end of 2027, we are going to touch 5 trillion economy, one year ahead of IMF prediction and probably we may be declared as a third biggest economy after America and China.

So, this speaks a lot about the growth journey, geometric growth of India in terms of GDP, and then what will happen after 2026, 2027? Probably, there are predictions every year or two or three that India is going to add 1 trillion, and that journey will continue as long as India has its demographic dividend, and that will continue up to 2055-56. So 2005 to 2055-56 such a long period, India is going to have the maximum population of the age group of 25-30 years, India is going to remain a young nation, and during this period, India is going to grow faster than other parts of the world. The idea of Vicksit Bharat 2047 and to become a Vicksit Bharat, the per capita income of Indians, which is close to 3,000 US dollars today, must reach 15,000 to 18,000 US\$. And the economy of the nation, as we expect by 2026-27 to reach 5 trillion, should reach about 35 trillion.

Today, it looks impossible to achieve a 35 trillion economy. I am sure many of us may feel it is impossible, let us recall in 2018 when our Prime Minister announced through the Ministry of Commerce, which published a white paper revealing India is going to be a 5 trillion economy by 2027-28. Everybody thought it was impossible, but it is. India is already right there at 4 trillion. So I think leaders like Swami Vivekananda, a great saint of India, said that "a true leader is the one who thinks the unthinkable, who achieves the unachievable and who sees the invisible". Our Prime Minister and the leadership of the country were visible, they were saying that we are going to achieve 5 trillion, and we are going to be right there at our own prediction, not the IMF. Anyway IMF prediction will probably be wrong; we will achieve much ahead than the IMF prediction.

This speaks about India's growth journey, and all these parameters make this century an Indian century. Now, if you see the important thing, I was very happy to see this release of this journal and a special issue on Indian knowledge systems. So this issue today has released the Indian knowledge system and foundation for our manufacturing. Make in India is our culture. India's culture, Indian culture is going to play a very, very important role in the emergence as a global manufacturing hub. Now, if you see America, the Silicon Valley of America, the majority of billionaires belong to the Indian community. Indians are number one when it comes to billionaires in America. Then the second and third come

to Chinese and other countries, and the last one is the Americans. Indians, when they go to America they will become more Indian than they would have become Indians in India. When they go to America they are real Indians. Probably in India, we excuse many things, because we take everything as granted, whether we follow or don't follow our culture.

I'll give one example, one of my friends at Virginia Tech, whom I visited in 2015. I was staying in his house for three, four days. When I was in IIM, Trichy, he showed me the flat, it was a huge building of 100 flats, and of those 85 belonged to combined Andhra, and the other 15 were other Indians. Each flat had a five-bedroom kitchen and said kids study, read, write, and speak Telugu, even though they live in the heart of America. They said they have learned Bharatanatyam, Kuchipudi, and all the culture and traditions of Andhra. As an Indian, every cultural aspect is taught to them, and they have got the best Indian teachers for school, a teacher for Telugu, a teacher for dance, performing arts, etc. Probably, he said, if I had been in Hyderabad, my kids never would have studied Telugu, never studied all these things, because they would have been in the rat race of other students in their schools.

So, this speaks that as far as the culture and tradition are concerned, they have been kept intact. Probably, the parents who have not done it in India, after going to America, they given utmost importance to Indian culture and tradition and made every effort to teach their kids. Because of such interventions, if you see all the top schools, universities in America, they are full of Indians. All the toppers in those universities are Indians. Not only Google, not only Microsoft, top 25 companies are headed by Indians; none have gone down in revenue-wise. So this speaks a lot about our tradition and culture. If you want to build a manufacturing hub of the globe in India, we probably have to focus on IKS, that is what this journal brought about, Indian knowledge systems, our culture and tradition, we should respect. I will give an example if you see you might have heard about some time back, there was a Usha fan company, where is that company today? Nobody knows because the first generation builds, the second generation maintains, third generation destroys. That is a formula in the business.

The recent trend analysis reveals that the first generation builds and the second generation itself destroys the business. If you look at the many companies, they perish after second, third, fourth generation as they lose the connect with that business, and because of which they are unable to take the business to the next level. Hence, they come down or they lose everything, ultimately they come on the road. The only reason is, today is a highly connected world. We are connected through various platforms, may it be social media like WhatsApp, Facebook, LinkedIn, and through these platforms, you are connected, but we are getting disconnected with our family, our tradition, and our culture.

So, because of this disconnect, the first generation builds and treats the people as a partners. Second generation treats the people as servants, and hence the third generation loses the balance, and then automatically the company comes to an end, and that is how we can many companies enter into bankruptcy. It can be inferred that it is all because we are not following our tradition and culture. Taking up any profession by maintaining the tradition and culture is the number one foundation for any business.

If you look at the Tata, the seventh generation is going strong. Tata started its first startup from Nagpur with textile mills. Impressed with the success of cotton mills started from Nagpur when the British era was there, during the crisis, Tata came out with the first textile company, then went to Jamshedpur, and he built a big business empire. Seven generations are going strong because of the culture, because of the tradition. Look at the Godrej, look at some of the Birla companies not all and if you look at many companies they are all going great, those who are with the culture and with the tradition of India with the emphasis on IKS. Those business organisations/corporates who did not due emphasis

on IKS, those who thought we are high-fi are no longer surviving now. You know, people who think the West is best, they all suffered and they lost. So today, the West is no more the West, the West is Waste now. So we should not consider the West as the best.

It is for sure now that if you follow Indian culture and tradition, even in business interventions, then there is no point in losing anything; we probably lose everything by ignoring the tradition and culture in the long run. Therefore, tradition and culture are the number one principal foundation to make any business a great and sustainable business. That is what you know, our Principal Secretary, (Finance) GoK, today, talked about the sustainability. For sustainability, every generation needs to take the businesses to the next level.

When I was meeting the Vidarbha Industry Association in Nagpur, the MSME people, one person came and told me, Sir, I have built a business of a hundred crores as an MSME, but my son is no more interested in this business. Now, I have great difficulty with the next generation of businessmen. I am feeling very bad now, what to do with that, and he is the only son, and he wants to do the job, but doesn't want to get into my business. So these are the challenges. How to prepare the second generation to live with the culture and tradition and take the company to the next orbit. The next generation should understand what their forefathers have built. And this is what is needed of an hour, that is the challenge. The MSME sector is having said 6.8 crores units, which is a big jump overall.

Nano entrepreneurs are those who can work with 4 to 5 or fewer than 10 employees. Such a big nation 1.4 billion population wherein the rural economy is one of the thrust areas for the honorable prime minister. In the Indian context, the rural economy and MSME cannot be separated. MSMEs are always second, third tier, even third tier level, you know, industrial corporations of Karnataka, Maharashtra, are located in small places, and they create employment opportunities for the rural people. And they produce the product, which is going to be the biggest boost for our GDP growth. Small manufacturers are going to play a magic. They are big in number, and if you add their contribution, it is much more than all the companies we talk about. There are only a handful of companies that are big in number, but the employment is concerned MSMEs are giving great employment, and MSMEs are also stopping the migration.

It is extremely important country like India, where every migration is costly to the country. Because movement of people from rural to urban according to the KPMG report, 2.5 crore people migrate every year. Now, globally, if you want to see the migration report, there are the top 6 cities in the world. Tokyo, with 4.1 crore, and Bangalore, with 1.4 crore population, are exactly the reverse. So, if you look at the Tokyo and such top 6 cities in the world, they accommodate 10% of the global population, and the top 600 cities in the world accommodate 30% of the global population. When I was studying, 70% of the people made their livelihood from the rural economy or villages. More than 70% of people were dependent upon agriculture now it has come down to 58%.

If you look at the last 20-25 years, the percentage of people dependent on agriculture has come down to 58%, and farmers are migrating to urban areas. They are migrating and getting the jobs and employment and creating a slum city like Mumbai, Bangalore and all big cities. Therefore, smart cities are not going to remain smart unless we make smart agriculture and smart villages. If the migration is arrested, then only the cities will become smart cities, and there is no space for further expansion of cities like Bangalore and even Chennai, and Mumbai. How to stop the migration and how to create jobs in the manufacturing sector, how to move from urban to second-tier cities to third-tier cities, to the bigger villages. That should be the backend of this; many of the IT backend offices are going to the smaller districts and smaller cities.

The Govt. of India appointed the Krishnamurthy Committee when the honorable Manmohan Singh Ji was the Prime Minister. You know Krishnamurthy was the one such person who set up Maruti Suzuki. Maruti is a public sector company, Steel Authority of India, and BHEL Trichy. These big companies were set up by one person from Trichy, Krishnamurthy Ji, and under his leadership, a committee was appointed on how to enhance the manufacturing capability of India was only 14% at that time, and the target was to take it from 14% to 22%. The committee was set up, the report was submitted, but there was no execution because success comes after implementation and execution. Shri. Krishnamurthy was talking about 17-18%. Right now, the contribution of the manufacturing sector is 18%. If you observe the last 10 years and again the last 5-6 years, there is a big boost for manufacturing from the Government of India.

Hon'ble Railway Minister Shri. Aishwini Vaishnav ji has budgeted 10,000 billion US dollars for manufacturing, and last year, two semiconductors were established. India has been dependent on Taiwan for semiconductors to date. Now first time, two semiconductor units are in operation in India, one in Gujarat factories and one in Assam. The Prime Minister has inaugurated them, and there are going to be many such replications in different parts of the world. And they also identified 85 higher technical institutions so that they can be trained in to semiconductor and they can be employed straight away in the semiconductor industry. So there is a great connection between the industry and academia, so those are the plans already, and some of them have been implemented; it is the process of implementation.

And if you see this iPhone, earlier, it was produced earlier in China. Now, the highest number of iPhones is produced in India and moves from India to the world as a part of Make in India. This iPhone company employs more than 2 lakh people. It is not only for telephoning, not only for banking, not only for you to know your photography, but also for photography companies that were killed by this mobile. This one iPhone has transformed the way we used to do manufacturing, we used to do business, we used to do any service job; it has changed. So you see the transformation, if you talk about mobile, it was invented in 1986, there were 5 mobiles in the country. One was with Sunil Varti Mittal, who went into Airtel Varti Airtel, the other 3, 4, you can make out those industry leaders, and today, each one of us possesses a mobile.

So we have transformed too much, and Sunil Varti Mittal predicted in 1986. So this is what leadership is, I think our chairman, Sir, in his presidential address, said about development of deep understanding on a particular issue, unless we pick up one area we go deep into the selected area, and we make every effort to touch the truth. Probably you start nearing the truth when we go beyond knowing.

Beyond knowing and beyond understanding is we are entering to the journey of wisdom. The moment we enter into the journey of wisdom we realize that we know less on this. More and more you learn you realize you know less and less and that is the time you are entering into the period of in the journey of wisdom and there you start predicting well 3 year down the line what is going to happen in my industry, 5 year down the line how the industry is going to transform.

Today, Mr. Satya Nadella is considered the best sense maker in the world. A boy from Hyderabad studied in Karnataka, Manipal. He is the best predictor in the world, and currently he is the chairman of Microsoft. In 2014, when Microsoft was not doing well accidentally they picked him up, but then he is performing extremely well, and he is a global leader when it comes to predicting 3-year, 5-year down the line what will happen. We all Indians are obsessed with the Indian origin. We talk about Satya Nadella Hamara, Sundar Pichai is our man, but the reality is, they have already surrendered their passports and are American citizens. We are proud of them. They are doing extremely well in America. We

say Oh, you know, he is our person. So many people in America are doing a great job, and they are of Indian origin, but they are no more Indians. Now, the time has come we have to respect more Indians than people of Indian origin.

If you see when COVID happened, neither Sundar Pichai nor Satya Nadella gave a single pie in COVID relief, but Ratan Tata gave 1500 crore to support the nation. Therefore, in India, there are many great entrepreneurs, and there are many great companies like Tata, Godrej, and Birla, and so on. All these great companies are in India, and they are providing great employment opportunities for the nation and are also helping to build the nation. So now the time has come, you know, make in India means those who are in India and work for India and work for the growth of India and position India at a global level, those people are real Indians. I think we should change our perspective. Somebody is not doing anything and never claiming I am Indian, and we are saying you are Indian, which has no meaning.

So therefore now the time has come. In India, we have to respect our culture and our traditions. Tradition with technology is the only way to take our manufacturing to the next orbit and to stand up in the crowd. So you can't go only with tradition, you can't go only with technology, those who have gone with technology without tradition have failed, and those who used only tradition are also thrown out of the market. The 21st century belongs to those who adopt the technology, those who understand the technology. Therefore, it is extremely important to be with the technology and tradition so that that is the way we can sustain our businesses in manufacturing and take it to the next level.

If you want to get into a technology part and tradition, both you combine, both you marry, that is what Sh. Parashuraman Sir talked about AI, IoT, Internet of Things. If you use AI, you probably enhance your ability. You enhance your talent without trading. If you start using these two, your productivity goes up, and your talent level goes up without learning anything just by learning these two technologies. The moment your talent ability goes up, then your behavior will also change, you are more confident, you are more courageous, and you are a better decision maker because AI gives the pattern. The moment you see the pattern and without any mistake, you can take a correct decision, fact-based decision, pattern-based decision, therefore you are the right person to take the right decision if you use the technology. So we can't afford to give up the technology, but at the same time, you have to be with the tradition.

Therefore, we have to move from IoT to IOA (Internet of Ability). Your ability will go up if you use IoT, you will move to IOA, and once your ability goes up, then you will become IOB, which means Internet of Behavior; your behavior will be different. The moment something you know, your internal body chemical changes and you express your behavior very happily, I know it, that is a different kind of moment, somebody got a gold medal in the school, that person's behavior is different than others, and those who failed. Their behavior is also different. Therefore, it is important to use the technology, for example, 3D printing, that Sir was talking about. Now, many companies are into 3D printing, so we have to learn those things. Instead of constructing the house, you have to print the house. Instead of manufacturing a car, you have to print a car. You know that to make one car in the automobile industry, it takes 14,000 components. Now you don't need 14,000 components, you know, it needs few hardly 200 components or so, it is good enough to print a car.

The entire inventory system will change. The way you do the production will change. So, in this changing world, how to remain relevant to the present world, where it is continuously changing, is extremely important. So this is one aspect. Second aspect, I think Sir touched on the teamwork. The Japanese are best in the world when it comes to teamwork because if you want to succeed as a global leader, all manufacturing or otherwise,

we also have to be great team players. Somebody has made a study, Indians are extremely good, and the Japanese are also considered the best. They used to work when the Japanese economy was super, now our economy is going to be super. From 1980 to 1995, Japanese used to work 13 hours a day because there was a huge incentive scheme, and somebody has made a study, one Indian is equal to three Japanese.

Such capable, competent people we are as Indians. One Indian is equal to three Japanese, but when two Indians come together, our performance is half that of the Japanese. So half of the Japanese means minus one plus one, it is not two, it will become minus. Because we don't work in a team. I think working in a team is extremely important. How to work in a team, in a collaborative way, cooperative way, and as an Indian, cooperation has been our DNA; competition has come from the Western world. So that is another important aspect you have to look into.

So the next one is, I think, the Anu Sandhan, National Research Foundation, Government of India, has set up Anu Sandhan, because until and unless we are producers of the technology, we cannot become a global leader. Today, we are the biggest consumers in the world, technology consumers. Now, we have to change our identity from the consumer of the technology to a producer, and export the technology from India to the world. Our technology should go to every corner of the world.

Technology of Indian origin, UPI, records 17 billion transactions in one month. It was never heard, and when it comes to digital transformation, India is number one in the world. Concerning SLP (Service Location Protocol), you do not need to put mobile; you just go straight to it and it recognizes. So, digitalization we have done extremely well, and that will also be part of the United Nations' 17 sustainable development goals, which is going to help with manufacturing.

When it comes to government schemes, you know Anu Sandhan, Rs. 50,000 crore was allocated two years back by our hon'ble finance minister allocated for the National Research Foundation. Last year, again Rs.10,000 crores was added to the funds, a total of Rs. 60,000 crores has been allocated for Anu Sandhan National Research Foundation. Now, look at Rs. 60,000 crores for multidisciplinary research, the Government of India is investing in all higher education institutions. Whether private or government, there is no differentiation government is going to give because the priority is how to produce a technology product from India, and that will go to the industry and from India to the world.

Today we are using somebody's LinkedIn, somebody's Facebook and future belongs to Indian product and not only Indian product in India as a part of making India but entire world should use Indian product and that is where Anu Sandhan is a great initiative of a Government of India.

Spirituality and culture cannot be separated, and all the great leaders in any great company believe in spirituality, so that spirituality will make us think holistically about everything, it is not only a short-term but it is in a long-term perspective. So therefore how to inculcate spirituality in the workplace. Yoga has moved from India to the world, and the entire world is recognizing and people are getting the benefits of yoga, meditation all those things. So that is another important aspect, and when it comes to foreign direct investment, if you want to make a country a manufacturing hub, FDI is important. China became a manufacturing hub of the globe because it spent a huge amount of money on building infrastructure, and today, India is not less than China when it comes to infrastructure building. So our transportation and highway minister, Nithin Gadkari, has made a great impact on infrastructure everywhere, and PMGSOI Pradhanmani Gram Sahari Kiyojana, a lot of schemes have come, and great infrastructure is there. Even then, the logistic cost

today, people say exactly we don't know. I think Prof. Charan Singh ji will throw light on that. It is about 13-14% of our logistics cost. 1% we reduce the logistic cost. Today, you know that we have FASTAG.

Before FASTAG, we used to wait, and even vehicles used to run, and petrol used to burn, but still we used to pay the money in all those toll charges and all. Now FASTAG has come, it happens in less than 10-15 seconds, you can move on. So, lot of improvement in technology has been adopted in logistics, still we are about 13% and world record is 9%. Manufacturing and logistics are interconnected; you cannot separate them out, and unless you reduce the logistics cost, great FDI will not come to India, and today, out of 100% FDI, 3 states are leading states for foreign direct investment. Maharashtra is number one (28%). Karnataka is number two (27%) and Gujarat is 26%. All these states together are attracting more than 75% of FDI. I think Karnataka has a great opportunity next to Maharashtra and Gujarat, and Karnataka is neck to neck with FDI. So, unless foreign direct investment comes, global companies will not come and set up manufacturing. And I think when Ramakrishna Hegde was the chief minister at that time, you know, he made all attempts to convert Bengaluru into an electronic city. One of the biggest R&D labs was about to come to Bangalore, but they wanted 100% electricity supply 24x7, and at that time, the government could not assure that the R&D center would be moved to Taiwan; otherwise, you know, lakhs of people would have got employment. So, power is one of the important factors.

Powerful states are going to have a manufacturing hub where there is more power, not the political power, but electricity, I am talking about. Where there is more power, you know, Punjab is known as a 100% irrigated state, with 1600 units of electricity per capita consumption. Punjab is number one, with 1400 units of electricity consumption, Gujarat is number two, Maharashtra is consuming 1200 units per capita, and the country's average is about 1033-35 units per capita. But if you go to Bihar, Orissa, and other states, the per capita consumption comes to 300 and 350 units. So their industry will not come. So, to establish a manufacturing hub, the country has to take care of power., Today, solar is one of the important renewable energies, There are so many schemes under the umbrella of the Solar Energy Corporation of India. Therefore, how to make a state a powerful state or part as a powerful state to make this part a manufacturing hub of the globe. That is how Shanghai and all the coastal parts of China became a manufacturing hub because of the assured power to those foreign companies that are invested in that.

These are some of the aspects. If you take care and reduce logistic cost, we still have to do a lot in the areas like loading and unloading of goods, three hours are good enough in a port in China, but probably it takes much more, three to four times in India. So still, we have to reduce a lot cost of logistics from the current 13% to 8-9%, and the second one is power, and the third one is culture. So these are the three things that take India ahead of everybody, and irrespective of what India does in India, Indians are going to reach everywhere, every part of the world.

If a conditional environment is not there in India, some people have set up their factory in a different part of the world. In different parts of the world, Indians are there, they set up the company. So, more than 800 Indian companies are right there in China, and a large number of companies are there in Japan. So many parts of the country where people feel comfortable, they have set up the companies, and therefore it is a great opportunity, and the most important what is told about skilling, re-skilling, and up-skilling remains relevant to the present world, which is important. Learning to learn and unlearning old practices is extremely important.

Another important area is succession planning, You might have seen right from Infosys to many companies in Bangalore, many ups and downs because there is no proper

succession planning. People development, leadership development, that is another area I think India needs to take care of to attract foreign direct investment and to set up a manufacturing hub. I'm sure, I'm very positive and confident that India is going to make a mark and Make in India is not only a slogan but it is going to be the result for India and for the rest of the world. That is where in the national education policy, you have mentioned about global citizenship, and as our chairman, CMDR, said, in a real sense, in about 25-30 years, Amruth Kaal is going to be a golden field for India. Afterwards, probably the economy will move from India to Africa because that is going to be the engaged nation.

For a question on is achieving Vikasit Bharat is only the economic growth, or does it have any impact on economic development? Prof. Bhimaraya Metri responded as "It is not only about taking the economy to a higher level, but it is also about development. You see, development and economy go together. You can't separate, and that is where, if you see the IKS, if you talk about national education policy, you are the scholar, you must read the full document. It is a beautiful document. It is a gold standard. So, that document foundation is on IKS.

So, if you see our tradition, if you go back to your generation, 5-6 generations up, there was a joint family. We lived happily in spite of so many people living together, there was never a fight. They always believe in cooperation. They always believe in living together. They always believe that all together we can grow. That was there, and that is therefore in NEP 2020, if you see all the Indian ethos building a character and a holistic human being, not taking care of all human beings but also living beings, that is a noble cause in NEP. So, this is the real development. You see, the economy is for what?

If you look at the entire globe, the purpose is people development, and the economy is required to people development. Both will go hand in hand. It is not merely economic development that happened in America; they are coming down, which happened in Europe, they are coming down because that is not going to be sustainable if you focus only on materialistic goals. And holistic, you know, life is much bigger than a materialistic goal. How to lead a comfortable life is what is important. And for a comfortable life, what are the goals? Not only a materialistic goal, but also all other things. So, those are all taken care and therefore if you see the various schemes of government, even a scheme is there. It is not going to raise any money for anybody, but how to take the people, how to include, and how to support the people. So, socioeconomic development is a main theme, and through that we can take the country to the Vicksit Bharat. That is what the vision is there, the dream is there, and in that direction, work is going on. As to the current level of understanding in each of the fields and how to take this country to transform it into a real Vicksit Bharat."

Really is there any connection between or any cooperation between the Skill India, Make in India, Start-up India and Stand-up India. And really the Skill India mission addressing the demands of the Make in India or the Make in India only focusing on the manufacturing? As a sociology student I am thinking about the social security of the informal sector employees in the manufacturing companies or the MSMEs.

Technology, ChatGPT, and all these things, I feel there should be a caution also on whole society moving towards some kind of homogeneity and some kind of creativity. Otherwise, everybody uses the same ChatGPT and comes out with the same presentation, same contents, and maybe some three, four varieties would be there. But real creativity of the human brain, maybe some homogeneity is going to caution us, and heterogeneity must be encouraged. This is my suggestion to him. It is only a tool. Nothing can be superior to the human brain. I was in one of the conferences in Kyoto at a world conference on society and technology forum, where the topic of discussion was the substitution of the human brain. In my table, there were a lot of Nobel laureates from Stanford, Berkeley, and

all. I think we deliberated for nearly three hours. Finally, the conclusion was that we can't even reach 0.00001% of the human brain. But having said that, I think the ChatGPT, that hybrid orientation, is very, very important. See, today by learning a very, very small tool, you are able to see a new sky that was completely missing all these days. For example, a rural village student just through ChatGPT is able to access tons of knowledge and thousands of experts. For example, it is a medical report. For example, you put your brain scan in the chat GPT, take a photo, and put it in, and it gives you a ten-page report. You tell me, give me a page report, also, it tells. And the doctors are also very mesmerized, actually, because now they are also worried I am going to lose my job. So the challenge is not losing the job. Probably it takes us to a level from which we can see a new world.

I think to that extent, the knowledge platform, but definitely the cybersecurity reasons and other disadvantages are there in any technology. Back to basics, absolutely. The critical thinking. I think one thing is what you said is you know this is one side, but if you see the entire world is moving into technology. Suppose if you decide, I will not use the technology. Many times, ChatGPT, no, no. Many times, ChatGPT came, and many universities in America said We will not allow students to use ChatGPT. So you know, running away from this problem is not the solution. How to find the solution with the technology? If you see one of the Deloitte studies says there are 1200 human behaviors. We have 1200 behaviors. Out of that, 65 have already been incorporated into robots. Robots can work like a human being because now this AI is brain power of humans has gone to now machines. Earlier, automation was there. Now latest one is that our brain power is also taken by the robots. Now they are working with us as a core. AI or robots, they are co-partners in many generations, many creations of many of products.

So in this context, we have to be, that is why you know we have to be into the R&D, what you are saying. So basically we should get into protecting the diversity from you know going to one direction, any direction. So, for that purpose, India should promote R&D. That is where National Anushandhan and National Research Foundation have come. So, instead of a consumer of technology, it is what you are saying that is right. But if you are a producer of technology, we can get into all those areas, and they will also come. You see, many times something new comes.

There is a halla gula in the market. But after some time, there is an adjustment, readjustment, and things will change, and this is a part of it. But we have to be with the technology, but how to use it, and what you said, how to protect the diversity, and also how to bring that creativity and critical thinking into the minds of the people. For that, we also have to take care of it absolutely right, and also we have to be anything, everything we do, we should think out of the box.

AI and the chat GPT, R&D, you see in college also some professor whatever the chat GPT comes then it is difficult. Everybody can submit as assignment, people will give them or some faculty. But intelligent faculty, the best teacher they will make out. Not through turn it in software but what they do is they will give such a question, chat GPT will not give the answer.

They have to think, they can make use of it but it will not give the answer. So that is the way we have to be one step ahead. We have to go beyond the cloud so that we will not get affected by the rain. So that is the way I think we need to think and we need to go to protect the diversity, critical thinking as well as use the technology in ample quantity. I would like to know the challenges for the Indian manufacturing sector in the era of industry revolution 4.0. And how we can leverage our demographic dividend to achieve the competitiveness.

Only 10% of the graduates/post-graduates are employable. So that is the biggest

challenge. That is where the skilling, re-skilling, and up-skilling is going to play a very, very important role. So that is why we talk about vocational training in NEP. One of the biggest things is how we integrate industry and academia. And how do we focus and emphasize vocational training? And training and skilling for lifelong employment. So this kind of new value adds are coming, and it is being addressed through this national skill development corporation. Then the prime minister announced a new internship program for our youth. I think all these things are focusing on skilling up for a reason. See today so far what is happening was silo effect was there. Industry was doing something, academia was doing something. The integration was missing. I think the need of the hour is to work as one team for a common purpose. I think that is going to be the real solution. I think definitely we are also going to be innovative now. Like how do we create center of excellence on value-added skills, which is going to generate employment in the local area.

I think the hub and smoke model is where many companies and institutions cannot access. So you create a center of excellence in the regional hub or local hub, so that other companies or academia can access. All those things are innovative products, but I am sure this would really bring a breakthrough. Do you think this artificial intelligence is a threat to this custom tradition and religion? Faster, cheaper, and better. Anything you do, if you want to do it faster, cheaper, better, you have to use all those technologies. Otherwise, it will take you know how to use the “ghanton ka kaam minitome karna hai” to technology use karna hai. That is what AI is, you can you know probably even if you spend ten years, you could not have seen in one second, you see the entire thing through AI, and AI agents will help. So this is how the technology will introduce you know cloud computing, the new field has come. So, probably you could have spent a hundred years trying to solve but now cloud computing solved the matter in a few seconds. So this is how in this world to make use of technology to achieve faster, cheaper, better, so that your productivity can go up.

At the same time, you need more time for your spirituality, your meditation, your yoga, so that you see a healthy body and, healthy mind is extremely important, and for that, technology helps you. And even for example today technology I think anything you know even digital thing if you buy the new equipment how equipment will perform in lifetime and what is its economic cost all those things in business this digital twin it will help and you can sitting here as sir told you can repair your tractor through your control room. So those are all impossible things that are becoming possible because of technology. We should make full use of those technologies.

I think in a lighter note, madam, our intelligence is artificial only. I am not the mind, I am not the body, I am not you know, so we have a false hallucination. The IKS brings out our real intelligence and removes us from hallucination. So I think you know, you can see a new world, inner engineering is the biggest challenge today. I think in one line, IKS, you know those who get into IKS, probably you know in India we believe in context. Our decisions are based on context. In America, everything we follow BCG (Boston Consulting Group) model. This model, that model, you know, so many frameworks we use to solve the problem to give a decision in India, it is a context. Emergency ho gaya, nothing, something happened, you know if a snake comes in the bathroom, what model you use? What model do you use? We decide without thinking anything you either beat with the stick or we run away, is it not? So that is what we are a contextual, and that is where all over the world Indians are known as contextual leaders because of IKS.

Therefore, tradition and all IKS a supreme over all; therefore, all leaders in America or any part of the world are successful because of the context. Americans are failing because they believe in a model irrespective of the context. Bangalore context is different, Calcutta context is different, Bombay context is different. They apply the same model, and it will not give the best result. And we are contextual, and therefore, the IKS and spirituality play an important role.

Foreign Policy Role In Economic Growth : Prof. Sandeep Shastri



Prof. Sandeep Shastri

Prof. Sandeep Shastri is the national coordinator for Lok Niti and has made significant contributions in the field of policy making. He served as the chairman of the drafting committee for the Karnataka Youth Policy. Additionally, Prof. Shastri has been a consultant to numerous prestigious organizations, including the United Nations (UNO) programs, the World Bank, and the Forum for Federation. He has spoken at universities in over 50 countries. Dr. Shastri describes himself as a teacher by instinct, a researcher by choice, a trainer by passion, and above all, a lifelong learner.

THE TALK

I should speak with a louder voice so that people don't go to sleep. So please keep looking at your name tags. By chance, if your neighbour falls asleep, please wake them up. That's the connection between domestic policy and foreign policy. Domestically, please remain awake, and in foreign policy, keep your neighbour engaged. This is the commitment I'm requesting from everyone present here today.

I will at least try to make it a bit colourful so that you can keep looking at something, even though Manoj Sir is very colorful on the stage. I may not be as colorful, but that's something you can watch and focus on. The topic that SES and CMDR have given me today is to look at India's foreign policy in the last decade and its role in economic growth. As a teacher, we generally try to use catchy words and phrases that people remember. I have been teaching for the last 43 years, and during this time, I have learned more from my students than I think I have taught them. Over these years, 25,000 students have allowed me to learn with them in their classes. So, what I am sharing with you today is what I have learned from all of them.

If I were to look at foreign policy, economic growth, and the transformation of Bharat over the past ten years, I would describe it using three "A"s, Attitude, Aspiration, and Approach. These three things have changed: attitudes have changed, aspirations have changed, and approaches have changed. Since we are talking about Bharat, I would like to use an Indian language as well, not just talk about A. I would use three terms in Hindi (which can also be used in Kannada) that form the acronym "Dham." Aaj Bharat mein Dham hain, and what is that Dham? The "Dha" of that Dham is Drishti-Kun, which is the attitude. The "A" of Dham is Akanksha, our aspirations, and the "Ma" of Dham is the approach. These three words will be the focus of what I am going to talk about.

The lens through which I will look at foreign policy is economic growth, particularly through the process of globalization that we are experiencing around the world. To give you a broad outline of how I am going to discuss things, Manoj, please let me know when half an hour is over, because I do not want to speak for more than half an hour. I want to leave more time for questions and answers. First, I will provide the wider context. When preparing for this session, I came across a famous quote from the Bhagavad Gita, where Lord Krishna advised Arjuna: “Whatever happened was good. Whatever is happening is also good, and whatever will happen in the future will also be good.” For me, this quote reflects the transformation of Bharat—about the past, the present, and the future. This is the wider context—the connection between diplomacy, economics, and the economy.

I am a survey researcher, and my research focuses on understanding people’s perceptions. Let me start by discussing what I see as four important observations. I am not going to read the statements, as they are simple to understand, but I will share them briefly. Prime Minister Modi made an important point when he said that today, India dialogues with other countries as equals on the world stage. There is no high or low; we dialogue with everyone as equals.

If you look at what our foreign minister, Jaishankar ji, said, he pointed out that India is now visible in the global pecking order. He stated that India is alive to the challenges that contemporary nations face, and today, India is visible. This visibility is because India is actively engaging with the world and addressing global challenges. Furthermore, our defence minister recently made an important statement. He said that the voice of India is now taken more seriously across the world. It is clear that India’s voice on the global stage is now significant.

I didn’t just want to quote Indian leaders. According to a study by the PEW Research Center, India ranks fourth among the most visible nations globally, with 28% of respondents recognizing India’s global standing. While we can debate the rankings (with China at first, Russia second, and the United States third), the fact that India is in the top four is an important indication of India’s rising global prominence.

Now, when I think of the dialogue around India’s foreign policy, I approach it from the ground level, not from a top-down perspective. I call this a bottom-up approach. How do the people of India perceive their country? I stopped using the term “common people” because, in reality, no one is common—each Indian is unique. The Indian is unlike any other. When I speak about popular perception, I am referring to the image of India that people have. I remember when I first travelled abroad in 1992, I often heard the question, “Does India have a future?” It was asked as a question mark. However, just two weeks ago, when I was in Australia, I heard the same sentence, but this time it was not a question. It was an exclamation: “India has a future!”

This, for me, reflects the mood over the last decade. If I take the importance of foreign policy into account, I see a shift where India is now using its diaspora more effectively to bolster its image. This was not done much in the past. Leveraging the presence of people of Indian origin abroad has helped enhance India’s reputation and global presence.

The content of our foreign policy is defined by the context of the situation. For instance, when I was in Australia recently, I met someone who said, “I am working for an Indian company.” This was not something I would have heard in the 1990s, but now it is very common. People abroad are now working for Indian multinationals like Infosys, Wipro, Tata, Amritrajans, Adani, and Birla. The presence of these Indian companies abroad plays a key role in strengthening our foreign policy.

Let me now discuss the crux of what I want to focus on: the relationship between diplomacy and the economy. In the last ten years, we have seen a visible shift, which I would call a paradigm shift. Before 2014, diplomacy was primarily about politics. After 2014, diplomacy has become about the economy and culture. This shift is seen in the government's focus on "Bharat First," and even the Foreign Service officers are being specially trained in economics and culture.

We have often discussed India's foreign policy in terms of its demographic dividend. India has a young population, with the average age of an Indian today being 28.8 years, and by 2050, 40% of the global workforce will be from India. This demographic shift represents an opportunity for India, but we must ask if we are preparing ourselves for this future. The Prime Minister's emphasis on moving from "what to learn" to "how to learn" is crucial for ensuring that our young people can adapt and contribute to the global workforce. We must prepare them to learn independently, without always needing answers from the classroom.

Lastly, when it comes to Bharat on the global stage, there is no doubt that India has made significant progress. In the last decade, I have observed Indian professors' names appearing more frequently in foreign universities, and I have seen Indian cultural references like yoga classes and meditation programs being offered internationally. India's presence is being increasingly acknowledged globally.

To conclude, when we look at foreign policy today, four things are important: leadership, domestic compulsions, the importance of soft power, and the role of Indian multinationals. India's foreign policy today reflects a balance of all these elements, and this approach is helping to shape Bharat's future on the global stage.



Prof. Manoj Dolli

Prof. Manoj Dolli, Professor of Economics from Karnatak University. Before coming to Karnatak University. He was a director at Vijayanagara Krishnadevaraya University, Ballari, and was a nodal officer for Sakala and published more than 30 papers, and attended more than 40 Seminars and Conferences.

THE TALK

I am very thankful to the CMDR and the CESS for giving me the opportunity to share the dais with such an eminent person. Many times I have heard his speech, and now, for the first time, I am sitting with him and listening. I think I am passionate enough, so special thanks to both institutions, and also thanks to all of you, because, as Sir said, whether we were sleeping or not, there was no sound, which was a good part of the session. It was indeed a wonderful session. Sir began with a very important concept, the three A's. As we could see from the Hindi or Kannada translation, India indeed has the "Dham." India can certainly say that we have it. If we look into the Indian foreign trade policy, initially, there was no specific policy until 1992. Before that, foreign trade was controlled by various things, but a specific policy was lacking. However, in 1992, we introduced the foreign trade policy, and especially since 2014, we have observed a shift in India's approach towards trade.

In the beginning, in the 1950s, India emphasized reducing imports, a strategy that gradually transitioned into import substitution. Later, the focus shifted to export promotion, and now, the government is working towards building a robust ecosystem. What kind of ecosystem, you might ask? If you look at the policies being talked about, such as "Made

in India” and several other initiatives, the goal is clear: India wants to be like China. As we’ve heard, China has become a manufacturing hub globally, and its success is largely due to improvements in its mercantile practices. Now, India is aiming to replicate that success.

Transformation of Bharat is only possible when we improve merchandized exports and imports. Foreign trade policy is focusing on building this ecosystem, encouraging manufacturing, and driving economic growth. This is crucial for India to develop into a leading global player. As Sir mentioned, diplomacy is not just about political negotiations but also economic diplomacy, and India is trying to assert itself in this domain, aiming to be a global leader in economic matters, including trade negotiations. Another key aspect is Foreign Direct Investment (FDI), which is essential for a developing country like India. There are numerous areas where FDI can contribute significantly to the nation’s growth. This leads to the third point I would like to highlight: India is targeting a \$5 trillion economy. A proper plan and careful nurturing can make this goal achievable. It is estimated that nearly \$2 trillion of this \$5 trillion economy can be generated through international trade alone. Specifically, \$1 trillion is expected to come from merchandise, while another \$1 trillion can be sourced from the service sector. This clearly shows the immense potential in these areas.

India’s push for transformation is aligned with the idea of “Indianization,” which Sir rightly pointed out. We must think globally, but act locally. This is the path India is on, and we are slowly making progress, especially through initiatives like “Made in India.” As we look towards 2047, from a perspective in 2025, we can see that India has the potential to grow significantly. The foreign trade policy will play a pivotal role in this transformation, and the potential for India to reach new heights is immense. Thank you, everyone.

Viksit Bharat: Past, Present And Future: Prof. Charan Singh



Prof. Charan Singh

Prof. Charan Singh is the chief executive officer of the Foundation of Economic Growth, EGRO Foundation. Previously, he has held the position of RBI chairperson at IIM Bangalore, specializing in comparative monetary policy and policy issues. His international experience includes serving as a senior economist at the Independent Evaluation Office of the IMF in Washington, DC. At the Reserve Bank of India, he has held several leadership positions, including research director in economic policy and debt management. During his tenure from 1984 to 2009, Prof. Singh earned his PhD in Economics from the University of New South Wales, Australia, and was a visiting scholar at both Harvard University and Stanford University. He has also taught at the Anderson School of Management, UCLA. His governance role includes directorship at the National Housing Bank and NABARD Financial Services Limited. He is the honorary fellow at the SKOCH Development Foundation and a member of the IMF's informal advisory group on housing sector issues. A profile writer on public policy, banking, and fiscal matters. Dr. Singh has published extensively in reputed journals. He is the author of *Debt Management in India* and editor of *Public Debt Management*. He is currently documenting the history of Indian banks over a century.

THE TALK

Thank you all for getting me over CESS and CMDR. It's an honor and a privilege to be here with all of you. I was really happy in the morning when I saw the inaugural program, and I saw friends from Bangalore from the Ministry of Finance come and speak. So that's I think a very good start to an excellent conclave on development issues. I'm going to speak to you on Viksit Bharat and why I want to speak to you about Viksit Bharat is because I've been working on it and I should tell you the background. Probably that will explain my emotional connect with this topic. The Prime Minister started speaking about Viksit Bharat about two years ago. But at T. Group Foundation we were very fortunate that we were given this assignment by Niti Ayog about five years ago. We started looking at India in 2047. So we were told, can you think about India at 2047? Now you know that five years ago, the whole economy and the whole world were in a very shaky situation. We could not even predict what will happen next year. And now, to imagine what will happen in 2047 is not a joke. So we discussed with Niti Ayog, and then we said we can do one thing. We can discuss India in 2036, 10 years or 15 years, and then project it to 2047. So we did

that exercise for NITI Aayog. I'm very impressed with the way this Prime Minister works.

While we, as an academic institution, a think tank, worked for India at 2036 and 2047, he just did not leave it at that. He asked the bureaucrats at the secretary level and the Government of India Committee to also think about India at 2047. So while we were doing an academic exercise, they were also doing an exercise on India at 2047. And therein, many people were involved in the government. With us, many academicians were involved, about 15 best economists in the country were involved with us, and with them, the secretaries. When the Prime Minister realized that this was not just a naive idea, but rather a serious proposal, he began discussing it. Right now, this is something very important. The discussion on India or Viksith Bharat @ 2047 is not being done in thin air. There's lots of activity, research, public policy before it was even brought into the public domain. Something which we need to celebrate. Today morning there was a question on the politicians. So let me tell you, we cannot discount the politicians, especially the Prime Minister, who has run a state, a very fast-forward growing state, for a number of years before taking over as the Prime Minister. So politicians also think and plan, and sometimes they come out with a visionary objective which we, as trained economists or trained professionals, may be shy of. So therefore that question in the morning was a very good question, but I thought I also must share that politicians should not be taken with a discount.

The other issue that I want to start my presentation is my own experience with a Japanese professor. Just before lunch we had a speaker who extensively quoted from Japan because he was associated with a Japanese auto firm Twitter. I'm referring to Mr. Parshuraman. In 2016 or so, I was a professor on the RBI chair at IIM Bangalore, and I got an invite from CII Delhi that there was a Japanese delegation visiting us. Can you please come and be part of that deliberation? So I was very surprised. They said I'm in Bangalore and just to come for one meeting with a Japanese delegation, which will be for 90 minutes or 2 hours. Why do you want me to fly in and out just for that one single meeting? They said we want you to come because with the Japanese delegation, there is a professor. So long story short, I went for that meeting. I was around 54 at that time. The Japanese professor who visited them was around 84. Very experienced, very knowledgeable. The deliberations happened, rich discussions, CII and India delegates and then the Japanese professor spoke, and he addressed me and said, Professor Singh, are you ready for a 5 trillion dollar economy? I had joined IIM Bangalore after working at the IMF in Washington as a senior economist. Obviously, I was ready, and I said, 'Of course I'm ready'. And he said no. He looked at my eyes and he said, 'No', you are not ready. And he said Why do you say that? I'm ready. Why do you say a 5 trillion? I'm ready for a 10 trillion dollar economy. So he said no. Professor Singh, people who are ready for a 5 trillion dollar economy or a 10 trillion dollar economy, their style of talk, their conduct, their confidence is totally different. You are not. And then of course, a lengthy discussion took place. Walking out of that meeting all the way till Bangalore, I was stunned. The Prime Minister of the country is saying he wants a 5 trillion dollar economy, and we are not ready. The Japanese professor told me that I'm referring to the Japanese professor, because the Japanese were challenging the Americans in 1980.

As students of public policy and economics, you would know of the lost decade Japan had and the next lost decade Japan had and to know those lost decades, you would probably Google and see Louvre Accord, where when Japanese were challenging the Americans to be almost as big an economy, the Americans went to the Europeans to say save us. We are not in a position to handle this. So they signed accord after accord and look up the Louvre Accord, you will know. So the Japanese professor was speaking out of experience, and he told me, Professor Singh, the Indian economy will become a 5 trillion dollar economy first in the minds of the professors. Then, in the minds of university PhD scholars, they will write on it, they will think about it, they will talk about monitorable targets about it, it will become a debate, it will be a newspaper item and then everyone in the economy will be talking about a 5 trillion dollar economy. Confidence in the step will

be different from what you are walking now and all the way back from Delhi to Bangalore, I was stunned.

The Prime Minister of the country, the political authority, is giving you a license, and no academic university has taken up the challenge. It has been nearly 8 years since he has been talking about it, and now, very few institutions have started organizing enclaves like this. So congratulations to you that you have taken up that challenge and starting to talk about it. Just imagine there is a marriage in the family, the whole family is excited, there is planning, the whole town comes to know there is going to be a marriage in this family and now imagine you are graduating from a poor economy to an advanced economy and you have a target of 25 years, is there any celebration, is there any talk, any discussion? We put our child in an engineering college for a 4-year degree, and as he gets admission, our anticipation, our planning, our thinking of his future plans, of their other things, the job starts just 4 years in advance, and only in a single family. Here we are talking of a country. Have we thought about whether India has to become *Vikasit Bharat*, and what will be the position of the states?

Have you seen a plan for any state? *Vikasit Punjab*, *Vikasit Jharkhand*, *Vikasit Bihar*. To become a *Vikasit India*, the steel industry, the iron, the cement, and the manufacturing activities, each one of them will have to play a bigger role. Has anybody thought about how much cement will be required if we have to be a *Vikasit Bharat*? Anybody? Any study that you have seen which says this is my cement production today, this is my cement production in 2030, in 36, in 41, in 47. You can't produce cement overnight. Steel, chemicals, fertilizers, anything. Have you thought about the electricity that will be required to power India at 2047? Do we have that installed capacity? Do we have plans to install that capacity? I haven't seen. Who will fund India when you will be a developed country? Who will fund India? Banking? Have you seen any bank plan for the next 20 years? Any bank? Has the State Bank of India, the biggest bank in the country, come out with its plan, State Bank of India, 36, 41, 47, NBFCs, private banks, anybody? No. And we are talking of a great, great leap, and I am going to show you some data in this. Finally, before I start my prepared Power Point, I want to tell you the story that I had to face and the great moral in it.

My lunch with Richard Cooper. I was, at that time, around 43 years. Richard Cooper, at that time, was around 80. Prof. Richard Cooper was the advisor to President Nixon. All of you will know who Nixon is, but you can Google and see that President Nixon was President of America long, long, long time. And Prof. Richard Cooper was a professor, advisor, professor at Harvard and advisor to President Nixon. I was doing my post-doctoral studies at Harvard. I am relating to the story of September 2003. When he came to know that I work in the Reserve Bank of India, and I was already a GM over there, he invited me for a sumptuous lunch, and I say sumptuous lunch because it was at the Harvard Club out of an out-of-this-world, fantastic place. And over lunch, as we sat for lunch, please remember, September 2003, as we sat for lunch, Prof. Cooper asked me, so, Dr. Charan, why do Americans respect Indians? Even if that question is asked today, you will be perplexed. But I was asked that question, sitting across the table with Prof. Cooper, and I was surprised. I thought he said it wrong. I have come all the way from India to study here. And he is asking me the other way around. Why do Americans respect Indians? So I asked Prof. Cooper, Can you repeat your question? So he said, yes, yes, yes. I mean, why do Americans respect Indians? So then I told him many things, told him we know English, we know computers, we are good at information technology (IT). He kept looking at me and saying, No, Dr. Charan, 'No.' Finally, time for dessert. And I told him, Professor Cooper, I am sorry, you tell me. And he told me it was Pokhran. One Pokhran, we had the CIA on you, we had the satellites on you, we were watching every step of yours. How could you do Pokhran? How could you do Pokhran? Right? What is Pokhran? Pokhran is simply a test of your courage. You will know sanctions will come. You knew people were spying on you. You knew that it was an impossible task. But you had the courage to do it. The

world respects courage. You respect a tiger because the tiger has courage. And it was the strategy. Despite the CIA sitting on your head, it was the strategy. You had the courage, you had the conviction, you had an objective, and you achieved it. That is exactly what the world respects.

Now, we are where we are. But we have the courage to think big. And that is my PowerPoint about. And while navigating through it, I will share many more thoughts with you. Here is India. As you can see, the pre-colonial era. What was the pre-colonial era? The richest country on the planet. Richest country. Today, America accounts for 25% of the world's GDP. India accounted for 33% of the world GDP. America became a powerful country of wealth. It became the largest economy equivalent to the UK, the British economy, which they had the commonwealth from around 1900. But the British were not conceding, so world wars happened, and after the Second World War, America took over as the biggest economy in the world. About 75 years ago. India was the largest economy, accounting for 33% of world GDP for 1000 years. Not 75 years. Not 100 years. Before that, England, the United Kingdom, was the biggest power, highest GDP in the world for about 150 years. America, so far, 75, and you have seen what is happening. China is already nudging it. Japan has already challenged it. We are not far behind.

India was the largest economy, accounting for about 33% of world GDP for 1000 years. And then people from all across the planet came searching for India. Sometimes they'll reach some other place and call it some other India. Our decline in world GDP started, but we were still 25% of world GDP for the next 2000 years. Single country, richest for 3000 years, 33% and 25%. What are these countries in front of us? 75 years richest, already challenged, and you brought the planet to a crisis where climate is becoming a danger point, and for 3000 years we were the richest.

No planet was in crisis, no climate crisis. There must be some strategy, there must be some thinking, and we haven't thought about it. Well, when the British came here and the British came here before already, we were not under our own rule, there were other invaders who were here, and we were still 25% of the world's GDP when they came. And when they left, they left us with about 3% of the world's GDP. They left us saying it's a very illiterate country. The poverty ratio when they left was 90%. The literacy rate when they left was 12%. And just imagine this is the country that has given the longest epic reminder to the world. And the so-called literate haven't written an epic even one-tenth that size. And we didn't give one. Then we gave them the Mahabharata, and we are the illiterate ones. Just imagine, and we believed it and we accepted it. Well, the colonial impact, you know that they had taken away everything.

Our status, from 25% of world GDP to 2% of world GDP, was absolutely pathetic. My own economic theory of India's freedom, which is very different from the theory of freedom, which you know, is that when the British had looted us enough and there was nothing more left to do. And when they had also sucked our blood and bone marrow and living here for them was more expensive running the administration than leaving us, they decided to finally get out. So it has nothing to do with my economic theory of India's independence. The traders that they were absolutely greedy and the way they sucked our blood and our wealth, they simply could not live here because there was nothing more to suck. Our independence happened. We started planning and we started growing and we tackled poverty. And then 1991 was a threshold point. We did our reform. But the reforms that we did in 1991 were moving away from the mixed economy, but still had the flavor of a socialist economy, and they were not yielding the type of results that we would have demanded or expected.

Somewhere in 2014, there was a paradigm shift, and now you start galloping with new ideas and saying we're fair enough, well, but we need to modernize our philosophy in

terms of growth. So the Prime Minister started speaking about Viksit Bharat. As he came into power, he spoke about doubling the income of farmers and the \$5 trillion economy, and then COVID happened, and then scholars were working, and now comes the story of the Vikasit Bharat. As economists, when we say Vikasit Bharat, it's obvious that we will now start thinking about what a developed country is. A developed country is a country that has a per capita income of \$14,000. Our per capita income today is around \$2,500. So the economists started thinking in terms of the past. The government did speak about the Panch Pran. In the Panch Pran, the five promises, one of it is the development of India. The development of India, one of the Panch Pran, has now been translated on February 1 in the official document of the government, the Union Budget. The Vikasit Bharat has been explained in the following points. Zero poverty, 100% quality school education, affordable healthcare and good healthcare, 100% skilled labor, 70% women in economic activity, and making India the food basket of the world.

So the Vikasit Bharat has been precisely defined by the political authority that when we started talking about developed India, we have in mind empowered women, educated and healthy workforce, nobody living below the poverty line and everybody, having good opportunities and the country is the food basket for the world, not only for ourselves. I think this economic definition of Vikasit Bharat has not been discussed. I haven't seen it anywhere since the budget was presented, and it's almost 45 days, 50 days. Nobody has discussed, now that the government has given up their thought on what is Vikasit, can we translate these into quantifiable, monetizable parameters which we can then evaluate. I haven't seen.

New academic institutions go back to the Japanese professors, seasoned, knowing it and we as academic institutions did not accept this challenge. How are we going to get this Vikasit Bharat? The government very clearly said we are going to have four engines. There's going to be an engine of agriculture which is our tradition and in the morning session, you heard about how old agriculture has been in our country and we have been devising waste and people from across the world coming here to understand how agriculture is done without exploiting the land, without desertifying it, without wasting its water table and without land losing the quality which are under the high-geal variety green revolution as we call them. The second is MSME. The micro, small, and medium enterprises are the backbone.

They employ people; many more people would go in them now as the demographic dividend is emerging. The third is investment. Right in the morning, Dr. Vishal spoke to you about ICOM, the Incremental Capital Output Commission that's coming from investment. Investment has multiplied effects and has intergenerational implications. So, to invest and finally to grow, we will need Foreign Exchange. To earn foreign exchange, you need to export. Exports also help us to compete with the best of the best in the world. So, the quality of products that you produce or have the urge to produce to successfully export, you have to maintain that quality, and therefore, your production has to be of that quality. In the budget, because now we are talking of a full-fledged budget, which has come and the target is very clear, the objective is very clear. It talks about development. These development measures are very similar to the ones that we have just discussed.

We are talking about agriculture. In the rural economy, where more than 50% of India lives, we need to strengthen that. There has to be prosperity. We are talking about inclusive growth power. We have done Jandhan accounts. Almost everybody in the country today has a bank account. They may not have insurance. They may not have another financial product, but the bank account is invariably about 95% of the population, which is a very good number. So, we have to take everyone along because if MSMEs have to flourish and blossom, anybody and everybody should be able to contribute to growth. Manufacturing has to grow further to 'Make in India'. We have to support MSMEs. We

have to ensure employment. And let me share one more thing with you. As we grow, become vikasit, we will have to keep in mind that growth is contributed by two things. One is labor, you and me. Unhealthy labor will take sick leave. Even if they come to the office, they will not be as efficient in production. So, you need healthy labor. Unskilled labor will not be able to produce products that will compete with the best in the world. So, you need skilled labor. Skilling can be education. Skilling can be skills with your own hands to do things. So, you need skills and healthy labor. Therefore, you need employment that is skilled and healthy labor.

To produce, now you need capital. Labor, let me share one story with you. I happen to be in Trivandrum, the Center for Development Studies, doing my studies. Prof. I.S. Gulati was the professor at the Center for Development Studies as well as heading the planning commission, the planning board. The story is of 1988. He told me, Charan, you are from the reserve land. I have been promised one lakh hands, voluntary, free, for developing Kerala. What can we do? So, we brainstormed for many days and we reached a conclusion just with hands we cannot do anything. We need to be paid. We need buses to bring people from one place to another. We will need other instruments. So, we will need capital. To grow, to enhance output, you need labor and you need capital. That capital has to come from investing, and you have to invest in not only people, skills, and health, even in the economy. And you have to invest in creativity, innovation, patents, and ensuring energy supplies. As I have just mentioned, to have Vikasit Bharat, you will need so much more electricity. Where will it come from? Solar, wind power, hydro, coal, nuclear, any planning? You need to have exports. I have already discussed that, and you need to nurture and show patents and nurture innovation. These are the development measures that you will need to do. So, in the budget, the government announced, and I am going to go fast on this because you know it, and if you don't even know, you can Google and get it anywhere. But I have many more things to share with you. So, the government is thinking in terms of what to do with more income equality and reducing poverty.

For quality education, thinking of various schools and thinking of excellent centers, and using AI. For health care, there is the Ayush Ministry, but one has to think in terms of the aging population. 8% of the population, or 11 people, are above 50 years. One has to start thinking about them. Child care has to be seen, women have to be taken care and general health care has to be ensured. On skilling, again, whom do you want to skill? We want more women in the labor force, so you need to have female-focused skilling centers. Then you have to have as in the earlier session, you have to skill properly and re-skill. Those have to be done. On women, the Prime Minister has his dream, and the world over, it has been found that women are financially far more responsible than men. And therefore, you must have seen, self-help groups and micro-finance institutions are anchored and pivoted around the women. And therefore, if you want women to enter inductive economic activities, they have to be properly trained. As of now, we are not very good at female labor force participation.

Farmers, because they are producing food and we know what happened before 1969 when we had to go with the begging bowl. All of us know about PL 480 (Public Law 480), and how the Americans would blackmail us on the food. And therefore, we had to take shelter in the green revolution. So, the farmers have to be taken care of, so that they give us the best food that we can. Discuss this philosophically. Now, let me show you some hard data. This is India. As you can see, I have done the color shades. We are going to be the fastest-growing economy in the world. I, as an economist, working on economic issues for nearly 44 years now, I'm not satisfied with the, that we will be the fastest-growing economy of the world. Sorry, I'm not satisfied. With the demographic dividend of 1 crore people entering the workforce every year, where are the jobs? And we have the potential to grow more than 6.5%. China, for 30 years, from 1978 to 2008, without exception, grew at 10%. There were enough global turmoils even that time, enough uncertainties that time, but

the strategy was clear. And one would work in case there is any turmoil, uncertainty, and come around the corner and deliver. We can do it. We have a young demographic in India trained. We can do it. So, 6.5% is the fastest status that we have, but I think, as far as we are concerned, we have to improve upon it. There is something which I want you to very carefully see, very carefully see.

I have done the plotting of four countries. India, England, who looted us, China, with whom we are competing, and the Americans, who are way ahead of us, but they account for 25% of the world's GDP. We were accounting for world GDP. We want to be there. Now, please look at the figures carefully. My per capita income is \$2,500. England is \$50,000. America is \$82,000, \$82,000. China, \$12,000. Even if I grow by 10%, I will add to my per capita income \$250. If America grows at 1%, how much will it add? \$816. I am growing at 10%. I am adding \$250. They are growing at 1%. They will add \$816. As we go ahead, the gap will keep rising. Therefore, very important to be modest. We want to grow, and I think we have to grow strategically. Only then will we be able to narrow the gap. You are all welcome to do your arithmetic calculations. We are at \$2,500. To become, enter the club of your developed country. Today, the per capita income is \$14,000. If you are more than \$14,000, you qualify to be a developed country. By 2047, that \$14,000 will probably move to \$17,000. Now you can do the arithmetic calculation yourself. At what rate should we grow to just enter the club? But if you are going to grow at 6% or 6.5%, as you see here, India and China are going to grow at 4.1%, and their per capita income is \$12,000. On \$12,000, you grow at 4%. On \$2,500, you grow at 6%, you will not narrow the gap. So one has to be very, very clear as to what we mean by Vikasit Bharat and how we go.

This is the per capita income of many more countries that I have plotted for you. And therefore, once again, you have to realize we are at this point on the per capita income yardstick. The government has given six parameters of Vikasit Bharat, including zero poverty, as I just narrated to you. But I am only taking one per capita income. On per capita income, we have a long way to go. How are we doing physically? We are doing very well on debt. By the way, these Western countries used to come and preach to us, what about your debt-to-GDP ratio? It should not be more than 60%, they would come and tell us. And now, after the global financial crisis, and especially after COVID, look at their parameters. It is easy to preach to a poor man. It is very difficult to practice. And therefore, I tell them now, after COVID, if you have time, look up my speeches on Google, and you will get them. They have to learn from us how we handled COVID, and are still the fastest growing country, and we have not distorted our fiscal parameters.

Have a look at their fiscal parameters. The golden rule is 60% of GDP. And now, they are all above 100%, whereas we are far more balanced. This is the deficit ratio. We have never hidden facts. We are a developing country. We have an urge and desire to grow. We are spending more money than we can earn. When you are poor, how much can you tax your people? We have been borrowing. We agree. But we were told 3% is the golden rule. Where is the 3% for them now? Look, is anybody having 3%? Americans themselves have around 6%. After COVID, everything changed. And when we were fighting our battles, we were teased. Well, we are doing so well because of solid policy. That's why I say we have the capacity. We have the capability. We have the strength. We need to now bring in a strategy. We will grow about 10%. We can do it.

We can't let the opportunity go away. On the external sector, the golden rule is 2.5% of GDP. We are well within that range. We are not an oil-rich country. We are not a mineral-rich country. We are a normal country that has all types of products for exports and all types of requirements for imports. So, given that 2.5% is a global yardstick, we are very much within that. When it comes to inflation, fascinating story here. I will not be able to narrate the story in total today because of time. Let me just give you a bird's eye view. Because our policies were so well designed, executed, and implemented, our inflation, and

you can see the trend, is well within the range. These Americans and the Europeans and the British, when they were taking care of the new policy and during COVID, teasing us, they were saying, you will have roads full of dead people.

You do not have the money to give medicines to them. And we did it. And none of the roads had dead bodies there because we laser-beamed our support, medical, and financial. These guys were very profitable, throwing money. Anybody who has studied economics will tell you, when you put money in money, inflation will result. That's exactly what happened. Their 30-year average is 2%. Their inflation rose to 9% and 10%. And then they had to raise the interest rate. Now they are facing a recession. Every day, there is a story, will they face a recession? Where did that global responsible behavior go now, when they would come and speak to us that we have to be globally responsible? When they were throwing their money out and inflation happened, we were telling them, Don't blow your money. India set an example of very frugal expenditure, but the laser beam was very effective during COVID.

And when they raise their interest rate, like there is no tomorrow, they can face the recession, the rich countries. But where is the global responsibility when it impacts us? Because if their economies go down, our exports go down. So, absolutely global irresponsible behavior. That is the global food price inflation. India is very much under control. Okay, so broadly, I have given you an idea that Bixit Bharat has challenged us. This is the chart of India's GDP at constant prices. And you can see we are doing very well. But if you look at year to year, there are fluctuations, which is okay. We suffer from body fluctuations daily. Sometimes we feel very strong, sometimes we feel deep.

Sometimes you feel deep in the morning, but you feel deep in the evening, and that is okay. This is the per capita income. I have already told you we have a long way to go, but we are moving up. The fluctuations in per capita income are also helpful. The challenge of an economist is to contain the volatility in this fluctuation. Like for a medical doctor, the challenge is that your blood pressure should stay within a range, and your sugar should stay within a range. For an economist, the challenge is that growth should stay within the range, should not fluctuate too widely, and that is what the monetary and fiscal policy are all about.

When it comes to sectoral growth, agriculture and industry, agriculture is doing reasonably well, and everything is, and I have plotted this from 50-51 onwards. But if you focus on the last few decades, you will see that services, and even in the morning, there was a discussion when Dr. Vishal mentioned that Karnataka does very well on services, and India is doing very well. Gross FDI is a concern, but if you look up the data released yesterday by the Government of India, Ministry of Finance, the Gross FDI is doing very well, but the latest data is gone February 2025. This, of course, is plotted for 2023, which is the day, but if you look up February 2025, FDI gross is doing well, net is still very some because of the global uncertainty. The current account deficit, I have already told you, we are under 2.5. We had an aberration here in some years. There is a depreciation in the Indian rupee. As an economist, I think that it should depreciate, and it should cross 100 because the depreciated value gives me an edge in exports.

I am not shy of a depreciated rupee. We are already at 100 to a pound. Nothing wrong if we go 100 to a dollar. By the way, the Chinese used the depreciated currency, and they artificially kept it at a very low rate to compete globally and gain a global edge in the market, export market. But if you want to look at the recent episode, I must mention we are not the only country that suffered depreciation. The American economy has created lots of uncertainty in the world. Many currencies have depreciated to that extent, and it goes to the credit of the policymakers in India that the Indian currency has not depreciated.

I am now entering the last phase of my presentation. I want to show you, and this probably would sound a little repetitive for some of you, that we have fantastic human resources. But these fantastic human resources need to be engaged. If you don't engage them, they will indulge in negative activities, be it in central India, where they take to moist activities, or in North India, where they take to drugs. You have to ensure proper engagement, hands and minds engaged. Only then will you find they will contribute to economic growth; otherwise, they will be a negative economic growth. We are doing very well on demographics.

If you look at the age profile, till 2047, 2050, we will do well. Then the aging starts, and then we start looking downwards. As you can see, between 2030 and 2050, the working age population, I do not know if that working age deprivation can be from 59 to 69, is very much possible. But that turning point is coming around 46, 47. You can see the same in the last three columns, population of about 60 years, population 20 percent of the Indian population below 60 years is a big number, a very small number. We have to give them a pension, medical facilities, and all that. So we have this limited window of demographic dividends. Within this limited window, we need to maximize.

Great country, lots of diversity and density of population, different states still doing well, and peaceful existence. Literacy levels improved from 51 onwards, with substantive changes in literacy levels. Infant mortality has also improved. Some parts in the country are very, very good on health care, like one example. There are other parts of the country that are lagging behind. UP is the worst case, which needs to be corrected for infant mortality. Lots of scope for development up there. Drinking water and other facilities are improving, but it's unbelievable that even today, not every house doesn't have the diseases to fresh drinking water. Poverty, this is the figure for 11-12, the latest research, and that good research has come from the IMF by some Indian scholars, showing that poverty levels are coming down. We are the worst poverty is behind us now. About 5-6 percent of the people are in that typical poverty, but otherwise, on poverty, we have taken care of food being given to almost everybody, free of cost.

Different languages, different cultures, but the market is one. I travel across the country very extensively. I see no difference in advertisement and consumption prices. So I feel very good that in a single country, the continent size, but the market is different. I think ours is the most unique country, which has so many languages, which are so different from each other. It's a continent. If you look at it, and this again is a very unique country that we have, where we believe in diversity and we have all sorts of religions here, and we happily accommodate them and celebrate each other's festivals and have fun all year round. If you look statewide where the dominance is there, I don't think there is any other country with a parallel class. The huge size of the country and the diversity and the tolerance, respect for all that we show. I've already mentioned that capital expenditure plays a very big role in intergenerational growth, and here is the data that shows that during COVID, we had the courage to encourage capital expenditure. The deficit glide passes on the way. We'll of course not be a three percent, which is the Maastricht Treaty, which those guys who invented it also don't agree with. But of course, we are cautious of every rupee that is being spent. On employment, I would welcome you to the study, which was released by the government yesterday. The unemployment data at the national level gives us some insights. Lastly, on development measures. The challenge of being Vikasit Bharat and what it takes, while you are meeting that challenge, and you are asking the students to be a good economy. Thank you.

For a question on the issue of private sector investment in India, questioning its decline and the broader implications for India's development. In response, Dr. Singh emphasized that while the private sector has faced challenges, the path to recovery is clear. The recent drop in interest rates offers a glimmer of hope, and the sector's involvement

will increase as stability returns.

Another question concerned India's low rank on the Global Hunger Index, despite being a surplus food producer. Dr. Singh rejected this ranking, pointing out that the real issue isn't hunger but malnutrition. He emphasized that many factors contribute to such indices, and we need to evaluate them critically.

Lastly, the role of youth employment and skill development was discussed. Prof. Singh noted that India's demographic dividend is a double-edged sword. While the young workforce holds promise, we need to provide them with better education, skills, and job opportunities to ensure that they contribute to the country's economic growth rather than becoming a burden.

North Karnataka and Development: Prof. Vishnukant Chatpalli



Prof Vishnukant Chatpalli

Prof. Vishnukant Chatpalli is a former Vice-Chancellor of Karnataka Rural Development and Panchayat Development University, Gadag. He is former Registrar of Rani Channamma University, Belagavi.

THE TALK

Whenever North Karnataka is discussed, the focus is often on its under development, backwardness, and perceived inferiority compared to other regions, rather than highlighting its potential. Today, in my talk, I would like to emphasize the potential of this region and discuss its developmental history, which includes both pre-independence and post-independence contributions. I aim to present this region in a positive light. It is important to remind everyone about the history and cultural renaissance that took place here. We are honoured that kingdoms such as the Chalukyas, Rashtrakutas, Kadambas, and Vijayanagara, whose influence extended as far as today's Odisha, were based in North Karnataka. Therefore, the first point I want to make is that North Karnataka boasts a rich cultural heritage and legacy.

Our history is not that of losers; rather, it is inspiring. For instance, people like Alur Venkat Rao, who was the first to initiate the unification of Karnataka, hailed from North Karnataka. It is crucial for the delegates to understand and appreciate the significant role played by people from this region in the unification of Karnataka. Therefore, it is safe to conclude that North Karnataka is indeed the backbone of the state. North Karnataka has made immense contributions to literature, music, arts, theatre, science, and education. However, when discussing growth and development, we often rely on indicators like per capita income and employment. In 2002, Dr. Nanjundappa Committee report was released, which categorized 179 taluks in Karnataka using 35 indicators. Among these, 35 taluks were labelled as backward, 40 as more backward, and 39 as most backward. Most of these taluks are located in North Karnataka. While the 2002 report has its own limitations, a new committee under the leadership of Prof. M. Govindrao is working on the Comprehensive Composite Development Index.

Even the recent initiative by NITI Aayog to create “aspirational districts,” further divided into blocks for targeted development, includes regions from North Karnataka. An important policy for addressing employment issues in the region has been the reservation policy under Article 371-J, which has significantly helped local youth secure jobs.

Migration from North Karnataka has been a significant issue, driven by employment opportunities and infrastructure challenges. To address this, a multi-pronged, district-specific approach is needed, focusing on collective solutions and public participation.

Karnataka is the home to 5,958 Gram Panchayats, with around 2,500 of these in North Karnataka. The region is home to 9,000 villages, with 70% of the population living in rural areas. These villages are rich in socio-economic indicators. North Karnataka is also home to one of the oldest cities in the world, Belagavi, which has had strategic relevance since historical times.

The richest taluk in Karnataka, Sindhanur, is located in North Karnataka, and it is the cradle of paddy cultivation. Furthermore, the fastest-growing town in the region, Sirwar, near Manvi, is located in North Karnataka. Devagiri, the largest village in Karnataka, is also in this region. Kalaburagi district is known for its tur dal (Pigeon pea) production. Therefore, the agricultural and economic aspirations of North Karnataka hold tremendous potential.

North Karnataka is also rich in art forms. Bidriware, a copper-based craft, is internationally recognized, while Kinnal toys from Koppal, which are linked to the Vijayanagara Empire, are a source of pride for the state. Both of these art forms have received Geographical Indication (GI) tags. Economically, North Karnataka is significant, with agriculture serving as the main livelihood for 56% of the population. The region is also known for its biodiversity, medicinal plants, and some of the best air quality in the country. North Karnataka is home to four UNESCO World Heritage sites: Hampi, Badami, Aihole, and Pattadakal.

Additionally, North Karnataka is rich in biodiversity and wetlands. The region is home to three Ramsar sites: Magadikere, Agnashini, and Ankasamudra Reserve. Kappatagudda, a biodiversity treasure in the region, spans 32,000 hectares and is known for its flora, fauna, and excellent air quality. It is also home to a variety of medicinal plants. These attributes make North Karnataka an ideal location for tourism development.

In conclusion, we need to focus on tourism development, infrastructure development, economic diversification, education, skill development, healthcare access, social equity, empowerment, and innovation. Since agriculture is the primary livelihood for 56% of the population, a targeted, specific, and multidimensional approach for each of the 14 districts is essential to enhance and harness the potential of each region. A collective, decentralized approach is crucial for sustainable growth.

The overall attention should be given to making North Karnataka self-reliant (Atmanirbhar) and enabling it to match the output of other regions in Karnataka. This can be achieved through cooperation and commitment. We possess the latent potential within our DNA, sown by great personalities like Basavanna and Allama Prabhu. We simply need to tap into this potential. Thank you.

North Karnataka and Genetics : Prof. Pramod Gai



Prof. Pramod B Gai is the former Vice-Chancellor of Karnatak University, Dharwad. He is currently the Director, Karnatak Institute of DNA Research (KIDNAR), Dharwad

THE TALK

This lecture is a little deviation from the socio-economic developmental aspects of North Karnataka. I would be pleased to share the work that we have done and the issues related to an entirely relevant aspect of North Karnataka—the health issues of the people of North Karnataka.

Now you will be wondering how the cultural practices, traditional cultural practices have their impact on the health of the people of any population. We have done some work on the North Karnataka population, KIDNAR is the first of its kind in the entire Karnataka, established in 2010. The primary objective of this institute is to identify the genetic disorders and cancers, which are prevalent at high frequency in the early stage, so that they can be prevented.

This institute was established to look into the cultural practices that have their impact on the North Karnataka population. Way back three decades ago, I was teaching human genetics. I took up a project called consanguinity and mental retardation. Consanguinity is the marriage between close relatives, which is found in high frequency in Karnataka, especially in rural North Karnataka. This project I did in Hubli, Dharwad, and other places where mentally retarded schools are there. I interviewed the parents of the mentally retarded children, where I came to know staggering statistics: 72% of the parents of the mentally retarded children were relatives—relatives in one way or the other. So that means these marriages between relatives, blood relatives, result in certain abnormalities in the children.

Human genetics is a very fascinating field with tremendous social relevance. It is directly responsible for the health of the individuals. Genetics is the science of inheritance, and inheritance is the transmission of characters from parents to children. We have seen that we inherit our characters from our parents, grandparents, great-grandparents, etc.

When a child is born in a family, all the relatives gather around the child and try to see the similarity of the child's features with their ancestors. Some may say that the eyes are like the mother's, or the forehead is like the father's, or the ears of the child are like the grandmother's. Why? Because the child inherits all these characteristics from its ancestors, not one generation, but many generations together. The science of genetics has tried to answer three important problems. One is: What is inherited? What is the physical and chemical nature of the hereditary material? This problem was solved way back in 1953.

Two scientists, Watson and Crick, worked and discovered the structure of DNA, the structure of the hereditary material. They identified the physical and chemical structure of the hereditary material that we call the gene or deoxyribonucleic acid with the help of X-ray crystallography.

The second problem is how the hereditary material is transmitted from one generation to the next. Way back in 1866, Gregor Mendel conducted experiments on pea plants in the monastery where he was working, and he came out with the laws, which are called Mendel's laws of heredity. That means the hereditary material follows certain rules when it is transmitted from parents to children, from one generation to the next. Though he conducted experiments on pea plants, unfortunately, for 35 years, his laws remained in the dark.

Then the scientists tried to apply Mendel's laws to smaller animals like rats and guinea pigs and found that the laws were applicable to animals as well. Then they wanted to see whether these laws are applicable to human beings. It is not possible to conduct experiments on human beings as it is done for animals. So we have a platform called a society, and in society, we have families where one person is married to another, male married to female, and children are born. This is called a family. By analyzing the families, they try to understand how the characters are transmitted from generation to generation. We have two-generation families, three-generation families. So with the help of this family analysis, which is called pedigree analysis, they came to the conclusion that many characters, almost all the characters, are transmitted from generation to generation in a Mendelian fashion.

It was in 1909 that Sir Archibald Garrett wrote a classic book titled *Inborn Errors of Metabolism*. He came out with the application of Mendelian principles in human beings in diseases. He worked on four diseases: phenylketonuria, galactosemia, and albinism, where he showed that these diseases are transmitted from generation to generation in a Mendelian fashion. This was the first book on human genetics.

The third problem is very difficult, and still, research is ongoing: How do genes act? The genes are present in the human body inside the cell, in the nucleus, and in the chromosomes. How do they act? They behave differently in different individuals. So every individual is different from each other. That is the beauty of genetics. The genes are different in different individuals, even though they are born from the same parents. The same parents give birth to five children. All five children resemble the parents, but all of them are different in one way or the other—not only in physical characteristics but also in psychological characteristics. This is because of the combination of the genes that they get from their parents when conception takes place.

So this is the diagram of the cell. Those who are from the social sciences can understand the cell. The central portion is the nucleus. Inside the nucleus, you have thread-like structures called chromosomes. There are 46 chromosomes in human beings, and the number is fixed for every species. If the number increases to 47, the child becomes abnormal. If the number is reduced to 45, the child becomes abnormal. Inside the chromosome, there is a structure called the double helix of DNA. This is the gene that was identified by Watson and Crick.

This is the hereditary material that is transmitted from parents to children. This is responsible not only for normal characters but also for all the diseases that we know today. Right from diabetes to blood pressure, heart attack, and cancers, these genes are responsible. They are also responsible for psychological characteristics like schizophrenia or any other psychological characteristics. The genetic disorders in human beings are classified into different categories. There are more than 6000 genetic diseases in human beings, which are

found on a website called OMIM (Online Mendelian Inheritance in Man).

OMIM is a website where you can find a large number of genetic diseases. Whenever a new disease is identified, it is entered into this. These are all diseases that follow Mendelian principles. These diseases are classified into single-gene disorders, chromosomal disorders, biochemical disorders, and multifactorial disorders. Why I am telling you all this is that they are more prevalent in the North Karnataka population.

Many workers have studied consanguinity and genetic disorders in Karnataka, Andhra Pradesh, and Tamil Nadu populations. It is generally observed that disorders controlled by recessive genes are more common. There are two types of genes: recessive genes and dominant genes. Dominant genes are expressed if they are present on one chromosome. Recessive genes are expressed if they are present on both chromosomes. We get our 46 chromosomes, 23 from the mother and 23 from the father. If both parents are carriers, and the child inherits both recessive genes, the child will get the disease. Usually, recessive genes are responsible for such disorders. Therefore, when marriages between close relatives take place, the children born are affected by these disorders, including cancers.

One example I will show you is cystic fibrosis, which is found in many families. Cystic fibrosis is a recessive genetic disorder wherein the child starts producing mucus in different organs of the body. It may be in the lungs, kidneys, or liver. When the mucus accumulates, it needs to be removed, which is a continuous process. Why does it happen? It is caused by a defective gene responsible for cystic fibrosis.

This gene is recessive. Since it is recessive, both parents must be carriers for the child to be affected. This is why consanguineous marriages lead to homozygosity of recessive genes. You can see in this example, where the parents are cousins, and this results in genetic disorders.

The frequency of consanguineous marriages is much higher in South India, especially in North Karnataka. As such, the frequency of genetic diseases and cancers is also higher. These are some of the disorders found in consanguineous marriages, such as hemophilia, sickle cell anemia, Down syndrome, and others. The objective is to create awareness and identify these disorders well in advance so that they can be prevented or managed at the early stage. Thank you.

Future Agriculture - Growth and Contribution: Prof P.L. Patil



Prof. P.L. Patil

Prof. P.L. Patil, Hon'ble Vice-Chancellor of the University of Agricultural Sciences, Dharwad, with an illustrious career spanning over 35 years in agricultural education, research, and administration. He is a specialist in soil science and agricultural chemistry and has served as a Professor and head at UAS Dharwad. Professor Patil led significant initiatives such as the World Bank-funded Sujala III project focused on watershed management in Karnataka. He has authored over 360 research publications and contributed extensively to land resource inventory and watershed development. His honors include the Asia Geospatial Excellence Award, Fellowship of the Indian Society of Soil Science, and the Lifetime Achievement Award 2023. He has also been a member of the Executive Council of Central University, Bilaspur. Under his leadership, there has been notable progress in mobilizing external grants and advancing geospatial technology applications in agriculture. He is affiliated with several professional societies, including the Indian Society of Soil Science.

THE TALK

In this two-day development conclave on the transformation of Bharat, a very apt, enthusiastic, and challenging title has been coined for the event. You already had a hectic day yesterday, and today marks the second day of the conclave

On this occasion, I have been invited to give a keynote speech on future agricultural growth and its contribution. However, instead of delivering a structured speech, I will share my thoughts on the requirements for the development of future agriculture, the challenges we must address to ensure food security and nutritional security, and how we must prepare for the ever-increasing population of our country.

We have been working on this since the Green Revolution. Of course, agriculture existed even before that, with traditional farming methods that everyone is familiar with. However, to feed India's growing population, the country had no choice but to adopt the Green Revolution and introduce high-yielding varieties of crops, especially food crops like rice and wheat. As a result, we are now not only self-sufficient in food grains but also have a surplus. In fact, we have such a large surplus that a significant portion is wasted in storage. Even in years with no rainfall or during severe droughts, we have enough food grains to sustain the population for at least a year.

Despite our surplus in food production—primarily rice, wheat, and maize—we still face shortages in oilseeds and, to some extent, pulses. Therefore, our strategy should focus

on enhancing oilseed and pulse production to meet the growing demand.

For the future of agriculture, we must prioritize three key aspects: innovation, sustainability, and inclusivity. These concepts are crucial to addressing any challenges that arise in agriculture. Innovation is essential across all fields of science, and both fundamental and applied research play critical roles. I have learned that many scholars are attending this conclave, and I urge them to dedicate their efforts to both basic and applied research. My sincere request to young researchers is not to focus solely on applied research—basic research is equally important, as it contributes to scientific innovation and lays the groundwork for future advancements.

To our young generation, I recommend that at least 25-30% of research objectives be devoted to innovation and basic research, as this will be instrumental in solving continuous challenges across various scientific fields. Now, turning to agriculture, sustainable agricultural growth is crucial, and our current priority must be natural resources. Agriculture depends primarily on two vital natural resources—soil and water. Without giving due importance to these, agricultural activities will not be sustainable.

Recognizing this, the Government of India and the Government of Karnataka have continuously designed programs to explore, document, and conserve natural resources, including land, biodiversity, and water resources. Prioritizing natural resource conservation, development, and management is essential for long-term agricultural sustainability.

The first step should be conserving our natural resources, which are currently depleting and degrading, particularly land, water, and biodiversity. To address this, the Government of India and Karnataka, in collaboration with the World Bank, implemented the Sujala Project. These projects are not new to Karnataka; they have been ongoing for years. I believe Kriyansa must be familiar with the implementation of Sujala projects for soil and water conservation.

The latest initiative was Sujala-3, which was a science-based soil and water conservation project. This was the first time the World Bank funded a science-driven conservation project, supporting Karnataka's efforts through the Government of India. All agricultural universities in Karnataka collaborated on this, utilizing state-of-the-art facilities and high-resolution satellite data from ISRO, specifically the Karnataka State Remote Sensing Application Agency. The data was used to conduct land resource inventory mapping at a scale of 1:8000 for micro-watershed analysis on a pilot basis.

The first phase involved mapping 2,500 micro-watersheds, which was completed by 2019. Now, in the second phase, the project has been expanded under a new name: "REWARD", which complements Sujala-3. The abbreviation stands for soil and water conservation efforts, continuing the legacy of the original Sujala-3 project.

The ongoing phase now covers over 25,000 micro-watersheds, involving all agricultural universities in Karnataka, with Odisha also joining to assess and manage natural resources effectively. The goal is to implement resource conservation technologies at the micro-watershed level, ensuring concurrent evaluation and adaptation based on real-time data.

In this concurrent project, data generated from the land resource inventory is shared with relevant government departments for mapping, preparing Detailed Project Reports (DPRs), and making sub-watershed-based recommendations. These recommendations are implemented in phases, with results observed within one to two years. Furthermore, third-party agencies conduct monitoring and evaluation to ensure the effectiveness of resource management efforts.

Such a holistic approach to natural resource study, conservation, development, monitoring, and management is of paramount importance at this juncture. You understand the importance of soil. For those who are unaware or have not studied soil, it takes hundreds of years for just one inch of soil to form under an active climate. If the climate is not conducive, even over hundreds of years, hard rock remains unaltered. You can observe this in the Himalayan ranges or desert regions, where climatic activity is minimal—precipitation is scarce, and temperature variations are insignificant.

Under favorable conditions, at least hundreds of years are needed to develop one inch of soil. However, this precious layer of topsoil is rapidly degraded and washed away by high-intensity rainfall. If we fail to address this issue, where will we find fertile soil for growing crops to sustain our population? This is why our most critical task is to conserve soil and water, the two sides of the same coin in agriculture. Without these two natural resources, agriculture cannot thrive.

When soil is conserved using watershed development techniques, water is also preserved. Water is retained in situ, and when excess water leaves the field, recommendations exist to collect it in farm ponds. These Sujala project recommendations have been implemented by the Government of Karnataka, leading to the construction of numerous farm ponds under the Krishnabaiya Yojana.

As a result, groundwater is replenished and rejuvenated. This simple yet effective intervention continuously recharges groundwater, contributing to irrigation sustainability. Additionally, farmers receive polythene linings for farm ponds to prevent seepage losses and protect crops. This represents an essential aspect of resource development and utilization.

Since not all water can be stored on land, it naturally flows into drainage systems. Measures have been proposed to halt the flow of water at regular intervals through the construction of bridges, barrages, and small dams. These structures enhance groundwater recharge and provide additional water resources for irrigation. Thus, natural resource conservation and development can be successfully implemented if approached holistically, not only in Karnataka but nationwide. Unless we preserve soil and water, agriculture has no future. If land degradation continues due to high-intensity rainfall, topsoil erosion worsens. Silt accumulates in natural drains, rivers, and reservoirs, reducing water storage capacity. This leads to flooding, as excess water overflows beyond reservoir boundaries. One of the main causes of flooding in natural stream courses is silt deposition—both in drainage systems and reservoirs—which reduces storage capacity.

Unfortunately, desilting reservoirs is extremely difficult due to high labor requirements. Instead of addressing this expensive challenge, it is far more effective to prevent soil erosion in the first place. Soil and water conservation is not a new concept, yet it has not received the seriousness it deserves. Without mass-scale efforts, the issue cannot be tackled effectively. This is why the World Bank has funded the science-based soil and water conservation project, which is currently being implemented at the micro-watershed level. Since micro-watersheds represent hydrological units, treating them holistically ensures efficient water management.

The Government of Odisha has adopted this initiative, while Andhra Pradesh had an opportunity to participate but chose not to due to financial constraints—the state was required to contribute 25% of the funding. I am pleased to inform you that Karnataka serves as a knowledge partner and master trainer for Odisha in this endeavor.

Over the past five years, all agricultural universities in Karnataka have actively trained 150 professionals in soil and water conservation measures and land resource inventory. These trainees, ranging from SSLC graduates to diploma holders in agriculture, can now

interpret satellite remote sensing imagery. How many scholars here can interpret satellite images? This highlights the importance of human resource training in agriculture and environmental science. The continued development of high-quality experts is crucial, and efforts are underway to ensure that trained professionals remain engaged in future research. We are urging the Government of India and Karnataka to support these specialists by expanding land resource inventory initiatives—on pilot projects, taluk-wise, and district-wise, covering the entire Karnataka.

Once soil and water are conserved, they must be managed wisely. Thankfully, modern agricultural technologies exist to optimize stored water usage. These include:

1. Surface irrigation
2. Water-saving techniques
3. Sprinkler irrigation
4. Drip irrigation
5. Sensor-based irrigation techniques

For those with a physics or engineering background, there are numerous opportunities to develop moisture sensors and automation systems for smart irrigation. IoT-based technologies and artificial intelligence applications are becoming increasingly essential in agriculture. Beyond natural resource conservation, biodiversity preservation is equally important. The Government of Karnataka and India's forestry department continue to implement afforestation programs, directly addressing biodiversity concerns. If biodiversity is preserved, climate change challenges can also be mitigated.

The climate crisis is currently being tackled through water-saving irrigation methods, such as life-saving sprays that help crops survive drought conditions for 10–15 days. Additionally, breeding programs and biotechnological tools are advancing the development of climate-resilient crop varieties. Agricultural scientists are actively developing climate-tolerant crops that withstand temperature fluctuations and erratic monsoon patterns. For example:

1. Delayed monsoon-resistant crop varieties
2. Crops adapted to temperature extremes
3. Climate-resilient hybrids

The integration of biotechnological tools ensures that agriculture remains sustainable despite climatic uncertainties.

While India is self-sufficient in food production, the focus has now shifted to nutritional security. Some individuals have even begun questioning the Green Revolution, making provocative claims about its necessity. However, instead of debating past achievements, we must prioritize sustainable agriculture practices to safeguard India's future food and nutrition security.

You see, many of these individuals were not even born during the Green Revolution. Yet, they now criticize its impact, arguing that people should have simply consumed whatever was available and claiming that the Green Revolution has damaged our ecosystem. But who is responsible for this? The truth is, scientific recommendations were not followed holistically. People tend to adopt whatever is easily available. Inorganic fertilizers and pesticides are readily accessible, so they use them without considering the recommended practices. Organic farming methods were also suggested, but no one wants

to rear cattle anymore—so where will they source organic manure? Everyone is dependent on machinery, and with no livestock, there is no organic matter. Thus, they forget one part of agricultural sustainability and adopt only inorganic practices.

Instead of recognizing their own misuse of technology, they blame science itself. In doing so, they undermine scientific advancements that have contributed to agricultural success. If we had not implemented the Green Revolution, would India's population have survived and thrived as it has? One must think deeply before accepting provocative statements that criticize scientific progress.

Often, people listen to strong speeches, applaud, and move on, without realizing that the criticism is misplaced. This is a systemic issue. However, when we engage with individuals one-on-one, we can convince them, help them understand their misconceptions, and guide them toward a more balanced view. There is nothing wrong with embracing organic cultivation and natural farming, especially for improving the quality of produce and nutritional security. The current thinking revolves around regenerative agriculture, which emphasizes:

- The use of organic inputs
- Bio-agents
- Bio-fertilizers
- Bio-pesticides

We have a state-of-the-art Institute of Organic Farming, which has now expanded into a center of excellence. This institute produces all types of bio-fertilizers, trains young entrepreneurs, and has incubation centers for developing bio-insecticides and bio-pesticides for pest and disease control. Through 20 years of continuous research, we have developed scientifically validated organic farming practices for 17 crops. Organic agriculture is actively promoted, particularly for those who seek nutritional security after achieving food security.

For nutritional security, it is important to recognize that high-yielding crop varieties are designed for food security. However, if one seeks higher nutritional value, traditional varieties are the better choice. Local, indigenous crop varieties contain higher levels of essential nutrients, including:

- Minerals
- Proteins
- Amino acids

Most cereals—especially nutri-cereals and millets—are rich in minerals and polyphenols, offering significant health benefits. They are particularly beneficial for diabetic individuals, as they possess a low glycemic index, meaning they release glucose gradually into the bloodstream. Regenerative and organic agriculture emphasize these traditional varieties because they retain concentrated nutrients and serve dietary needs effectively. This does not mean that high-yielding varieties lack nutrients—they do, but in limited proportions. Due to their large-scale production, nutritional components tend to be diluted.

Thus, for nutritional security, we must preserve and promote traditional crop varieties. Every major crop has traditional varieties. For example:

- Wheat: The local variety Daikakum (Sadka) has excellent therapeutic properties, a low glycemic index, and is rich in iron and zinc while containing low gluten—ideal for those

with gluten intolerance.

- Rice: Indigenous red rice and black rice varieties are highly nutritious and should be conserved.
- Millets: Naturally rich in minerals and polyphenols, they are beneficial for health-conscious individuals.

Near Khanapur, Belagavi district a farmer named Shankar Langti organizes organic produce sales every Thursday at Gandhi Pradesh town in Dharwad near Dharwad Hotel. His stall offers nutritious rice, jowar, wheat, and millets—a great resource for those seeking healthier alternatives.

Similarly, traditional vegetable varieties have superior nutritional value. For example like Tomato and Brinjal (Udupi Gula, Malapura Badnikai)

Our agricultural universities are actively working to identify, purify, and develop traditional crop lines for distribution to farmers. A proposal has been submitted to the Government of Karnataka and Government of India to secure funding for these initiatives, involving all agricultural universities in the state. Through multiple rounds of discussion, we have:

1. Identified key crops and varieties
2. Mapped traditional crops across different agro-climatic regions
3. Proposed a systematic release framework for traditional varieties

This effort aims to ensure nutritional security through biodiversity conservation. Instead of blaming ourselves, we must guide farmers toward holistic crop cultivation, integrating both organic and inorganic practices. No land is polluted when farming is done in an integrated manner. Only certain pockets in irrigated ecosystems, where excessive pesticide or fertilizer use occurs, require corrective action.

Concerns about food contamination should be addressed based on authenticated analytical results—not assumptions. Instead of criticizing blindly, we should educate farmers about balanced, integrated farming techniques to ensure safe, nutritious food production.

Additionally, mechanical engineers, computer scientists, and IT professionals play an increasingly important role in modern agriculture. Collaborations between agricultural scientists and engineers will drive the integration of artificial intelligence, IoT, and automation—which are now essential for sustainable agriculture.

I believe these ideas highlight important agricultural considerations. If anyone has questions, I am happy to discuss further. I also extend my sincere thanks to the organizers for this opportunity.

Environmental Sustainability: Sri Ram Prasad



Sri Ram Prasad

Sri Ram Prasad is an environmentalist, social entrepreneur, and urban water sustainability advocate with over 15 years of dedicated work in lake rejuvenation and solid waste management. He is the co-founder and convener of Friends of Lakes, an informal citizen-led group, and the Federation of Bengaluru Lakes, representing over 90 lakes through citizen initiatives. Sri Ram Prasad collaborates with Bengaluru University's Water Institute, the Water Sustainability Task Force. He mentors civic bodies like BBMP and state governments on solid waste management, Bio-CNG, and landfill gas management. His projects include the Million Recharge Wells Campaign, Lake Health Monitoring through Citizen Science, and CSR-funded Lake Rejuvenation Initiatives. He is a fellow of the Institute for Resource Recovery Research and Management and actively contributes to the Bengaluru Climate Action Plan.

THE TALK

Thank you for inviting me to CMDR-CESS and thanks to everyone, including Prof. P. L. Patil Sir, for his insightful speech, which focused on agriculture. I will build upon that topic since many of you attended yesterday's session. I will reference some points from yesterday while delivering today's address.

The subject given to me is vast. I teach three-hour classes, totalling 30 hours, on environmental sustainability. Compressing that into 30 minutes is challenging, so I will touch upon only one or two key topics. However, you are welcome to ask questions on any field relevant to the discussion. Before I begin, I want to highlight the numerous policies introduced by state and union governments. Many initiatives are launched under programs like the National Clean Air Policy and greening efforts. Despite having some of the best environmental laws, their implementation remains lacking.

Let me provide a significant example—one that will shape the future. One initiative we are asked to examine concerns water basin sharing and wastewater treatment. Cities generate sewage, which is supposedly treated and then redirected to agricultural fields. However, whether the water is genuinely treated is questionable.

For instance, Bengaluru has the H&N Valley Project, where approximately Rs.1,200 crores are being spent to transport “treated” water to Kolar and Chikkaballapura. Similarly, another Rs. 1,800 crores was spent on the KC Valley Project. The intention behind these

projects is noble—Kolar has lacked water for the past 30 years—but have we studied the impact of this water on agriculture? I have spoken with around 140 farmers who reported that their tomato yields have dropped from 8 quintals to just 5 quintals after using this water. The water is rich in phosphates, nitrates, mercury, and lead.

Research institutes like Atree and Empri initially studied the water quality, but their research has mysteriously halted. This method of wastewater reuse is now national policy. While I don't argue against the policy itself, the real question is: How do we determine water quality? Science is the only solution. The World Bank is funding research in this domain, and it is the responsibility of scientists to ensure the water is truly safe for agricultural use.

Another example is Lakshmi Sagara Lake, which received untreated water more than 30 times in a year. Such contamination is enough to ruin the soil and harm farmers. Who is accountable for this negligence? Urban areas must not endanger rural communities by irresponsibly dumping untreated water. Alarming, the World Bank has allocated ₹ 3,000 crores for nature-based solutions (NBS). One such claim suggests that letting water flow for 300 meters or stabilizing it for 24 hours naturally purifies it for drinking. How many believe this?

Jakkur Lake is an example of misleading claims. Instead of clean water, the lake is filled with sewage, fostering excessive algal growth, turning it into nothing more than a “palak soup” lake. Yet, it is presented as a rejuvenation success story. This practice of promoting PR-driven environmental initiatives without genuine sustainability is concerning.

Environmental sustainability today is increasingly being driven by financial interests rather than genuine ecological concerns. Many companies invest in lake rejuvenation projects not because they care about farmers but because they need to offset their water usage and earn blue and green credits. This reality affects not only lakes but also waste management policies.

Extended Producer Responsibility (EPR) is another flawed concept. Every consumer already pays a fee embedded in product prices for the collection, transportation, segregation, and processing of plastic and electronic waste. It is the company's responsibility to ensure proper disposal, yet we—municipalities and citizens—end up bearing the cost. The polluter-pay principle is meant to ensure accountability, but in reality, the burden falls on the public.

Participatory governance is the key. Simply voting is not enough—citizens must actively engage in policy implementation and hold polluters accountable. Environmental departments rely primarily on two acts—the Water Act and the Air Act—but enforcement remains inadequate.

We must also acknowledge the carrying capacity of nature. Many environmental frameworks lack standard operating procedures (SOPs). When the Jal Shakti Abhiyan requested lake rejuvenation frameworks, we realized that existing models were designed by Japan for equipment sales rather than being tailored to tropical lake ecosystems. In response, we are now developing India-specific guidelines.

The way cities approach environmental sustainability often overlooks fundamental needs. For example, lakes in rural areas serve drinking and irrigation purposes, whereas urban lakes are increasingly designed for aesthetic value, primarily serving as walking paths.

Misguided policies also shape urban planning. Plans to make Bengaluru resemble London ignore local climatic conditions. Our city has 8–9 months of intense sun, yet trees are being removed to construct avenues without shade. Corporate-driven afforestation

projects boast planting 30,000 trees in a single acre, an unscientific approach that prioritizes numbers over actual sustainability.

Academicians and researchers must challenge flawed narratives and guide policies using scientific rigor. If we fail to uphold genuine sustainability principles, future generations will bear the consequences of our negligence. Between 1980 and 2020, decisions made prioritized feeding India's population—green revolution policies were necessary then. However, today's decisions must reflect current challenges.

To illustrate, consider EPR policies, lake rejuvenation projects, and corporate-led green initiatives. If these initiatives continue to be driven by profit motives and flawed methodologies rather than ecological concerns, we risk worsening environmental issues rather than solving them.

Environmental sustainability must not be reduced to mere credits and numbers. It is imperative to apply scientific knowledge effectively, scrutinize misleading claims, and implement policies that genuinely support ecological health rather than corporate interests.

I hope I have given you food for thought on where we need to focus our research. If you are genuinely interested in environmental sustainability, I encourage you to take an active role in shaping policies based on scientific principles. Thank you for your patience and for listening.

Knowledge Economy: Empowering Growth Drivers: Prof B J Rao



Prof. Basutkar Jagadeswar Rao

Prof. Basutkar Jagadeswar Rao, currently the Vice-Chancellor of University of Hyderabad, served as Senior Professor, Chair of Biology, Dean, Faculty of Indian Institute of Education, Science and Research, IISER, Tirupathi, Andhra Pradesh, and was associated with Biology Department at Tata Institute of Fundamental Research, Mumbai for about 24 years and served as Senior Professor and Chair of Biology Program before moving to IISER, Tirupathi in 2018. Prof. Rao is a fellow of all three National Academies of India and also a Sir J.C. Bose awardee from the Department of Science and Technology. He has made fundamental contributions in the area of genome biology and cellular regulations and adaptation, where he has published about 160 peer-reviewed international publications with high citation and impact. Prof. Rao has many awards and recognitions to his credit. Sir has contributed significantly as Chief Editor of the Journal of Biosciences, a flagship Journal of the Indian Academy of Sciences and Springer Nature, and has been instrumental in its high impact.

THE TALK

It's such a beautiful gathering. The morning session was exciting, enthralling, and also very mind-boggling. Because it touched upon some fundamental issues that all of us are facing every day, everywhere, in the country, and globally.

So moving from that aspect to the knowledge economy, I must first say that knowledge is not economy, and economy is not knowledge. But both are interlinked. One of the best things that has happened to mankind is the invention of knowledge. And invention of knowledge has happened because we wanted to learn about everything around us and everything within us.

Everything within us became *atma bodha* in the Indian system, and everything around us became a method of science and natural science. And with that came this bountiful information called knowledge. So now we know pretty much all the basic things about the universe. When did it come about, how did it come about, how long will it last, and what is all this whole system about, and the entire chemistry of the environment, and the entire damage to the environment?

So all the basics, nitty-gritties we know now. So having known, having gotten knowledge, obviously mankind wants to tamper with it, wants to experiment with it,

and wants to make good use of it. So, from knowledge came science, from science came technology, from technology came everything that we see all around us. So much so that now the technology has become artificial intelligence.

That artificial intelligence will dictate natural intelligence, and natural intelligence in turn will control artificial intelligence. You don't know where one ends, the other begins. So it has become seamless.

So the first question to ask is, do we really have to use knowledge only for economy? The answer is no. Knowledge is for the sake of knowledge to begin with. And from knowledge we acquire the power to really impact economy. There are many, many examples. We don't have to go into those details. But we need to contextualize this.

Can we discuss this in the context of Bharat? This is where I am limiting myself. Because Bharat is a very interesting template. It has never been a dull template. It has always been very interesting. Even in bad times it is interesting. And now it is much more interesting because if we solve the problems and the challenges in this Bharat template, we pretty much solve the global template. Because Bharat essentially captures all the global challenges, Bharat being what it is.

It is diverse, it is large, and it is roaring to go. It is creating problems, it is solving problems, so it is a very dynamic system. And for the last 10-15 years, Bharat has redefined itself. Before that, post-independence, we were drifting, we were just diffusing, we were doing things. But now we are doing it with much more focus. So we must look at Bharat's knowledge and economic connection.

Bharat is the fifth-largest economy now. Purely, sheerly by its brute size. Please remember, per capita GDPs are very low. We are probably somewhere 120th or so, very low. So sheer by size, we are a developing economy. We are almost there, maybe 10-15 years will be the third largest economy, literally.

But in third third-largest economy, we still have a lot of patches of poverty, a lot of patches of deprivation. We are an uneven system, we are completely uneven in many, many ways. Therefore, it is a good template to solve. And who is going to solve? All of us, all of us. We have solved some problems. We have solved the problem of generating surplus food. We have solved the problem of generating very good technology for the country. We have also created problems, and those we will solve.

So from a very, very struggling economy, we brought it up to fourth, fifth. It is stable, we are in surplus. We even donate a lot of money to other countries. We don't depend excessively on other countries at all in many ways. We export many things, we do import certain things. So, from that level to coming to this is a significant achievement in the last 75 years. Especially for the last 10-15 years.

But still, we have significant challenges. Let me give some examples. If we really want to become number 3, and from there to number 2, and from there to number 1, the so-called Vikasitha Bharat. If we want to, which we can, there are some significant changes we have to make. And I will touch upon some of those.

Currently, the construct called Bharat is a very aspirational construct. There is a large number of youth who want to learn things, who want to work hard, contribute to the system, and contribute globally. And we have resources to train them now, pretty much. But still, there are large gaps that we need to fill before we reach Vikasith state.

And I think Bharat is a very interesting template to get there. I'll elaborate a little

bit more. Now, if you look at the construct, just focus on maybe aspirational youth for now. About 15 to maybe 25-30 years age bracket. We are about 25-30-35 crore in that age bracket. It's a large fraction. It is a similar fraction in China.

And out of that, only about one-fourth get to higher education. Why higher education? Because we hope that higher education is the point where the connect happens between knowledge and economy. That's a good assumption to make. We will come to primary education also later. That's a different area.

So in that connect, we hope to educate a lot more youth into higher education realm very efficiently. When I say higher education, I mean high-quality higher education. I really do not want to talk about low quality higher education. Low-quality higher education is no education.

We need to educate at least 5 to 10 crore more youth in high-quality higher education. Can we do that? Is it possible to do it? Do we have enough higher educational institutions in the country? The answer is no.

So, if you look at our higher educational institutes, take for example IITs, NITs, central universities, and well-performing state universities or private universities, all put together, they only cover about 5 to 10% of undergraduates who are ready to go.

There are no good quality institutes, higher educational institutes for about 80-90% of our youth. We have failed there. Our problem is that we have not scaled it up. A large majority of the youth, bright youth, they may be speaking wonderful Kannada, and they may be understanding a lot of science, but because of the English language, they are facing a barrier. And they don't have a good institute to go and learn deep science and technology in Kannada and Telugu.

So there we have failed in providing the right ecosystem to a very large number of youth in the hinterland. For us, the country has been 5, 6, 7, 8 metros, and some second-tier cities. This has been our failure. Our country is not just a few metros and some second-tier cities. Our country is a large Bharat, and we have not provided infrastructure for them.

If I am a youth sitting in a village and I want to learn a lot of things, I don't know where to go. I don't have enough money to pay for higher education institutions. And we have excessively focused on developing metros. It's a very bad idea.

You know, these days size of the country should not really matter. Everything is modular. This whole biology is modular. A small animal and a large elephant live happily in biology. Scale does not matter. We are all modular.

As long as we develop a modular, decentralized, efficient governance system country can be any large any size. This particular idea has been missed by most governing bodies in the country. I don't know why. Our governance must have been much more decentralized, and we should have developed cities de novo, not top down. De novo. From the ground up. By now country should have had 300, 400 well-performing cities.

And well-performing cities mean well-performing grounds up industries, activities, wealth generation, startups, all that. That we did not do for 75, 80 years. We have only focused on Mumbai, Bengaluru, Hyderabad, etc, etc, etc. Sorry. That has destroyed Bengaluru, that has destroyed Hyderabad, and Mumbai also. We should not have gone that way. Now we need to correct it.

Develop small cities de novo with local talent, with local skills, with local high-quality

education. Then what will that do? That will generate, firstly, highly educated, highly skilled youth at the ground level in the entire Bharat. And then that model is a natural model for wealth generation.

Small cities, small towns will start generating wealth. Why do I immediately jump to wealth? After higher education, why should I immediately jump to wealth? I should jump to wealth because India is an anomalous country. Bharat is an anomalous country.

We are fifth, fourth largest economy, but still 60-70% of the families in Bharat do not make more than 25,000 rupees a month. The vast majority of families do not have enough money to spend. We have not created high-paying jobs. We have failed.

To create this, to offset this, we need to create high-quality education at scale and at the doorstep in the last mile. If we don't do it, we will not reach because of Bharat. Sorry, this will not happen.

So all of us must contribute to a model that will help develop high-quality education, high-quality training of mind and skills, so that our youth become confident of doing things on their own and do that in smaller towns.

This whole business of migration into big cities is a total disaster, leading to all the problems that Ram Prasad Gaur was mentioning. Bangalore city is untenable now in some sense. We need to send people away from Bangalore into neighbouring areas and develop there.

So for other metros also. And for that to happen, you need to have the inversion model. An inversion model is possible only if you develop a template of high-quality education at low cost. This is the elephant in the room.

Can India do high-quality education at low cost? And this is the need of the hour. If we do it, then we become Vikasith. If we fail in this, it is not possible to become Vikasith because our total resources will always be limited to us.

Till we educate a very large number of youth properly in high-quality education and make them confident in their activities, that will end up generating wealth for the country. Currently, that is not happening as well. It is beginning to happen.

Our culture for the last 60-70 years post-independence was to educate them somehow, and somehow they get some jobs. This was the model. And this model did not lead us too far.

We need a different model where we train the youth so that they become innovative enough, creative enough, that they start producing things. And when they produce things, they produce wealth. When they produce wealth, they also produce opportunities for jobs for others.

The government is not the only behemoth that can give all the jobs in the country. No. Individuals have to do it. The system has to do it. And that system has begun waking up now for the last 10-15 years. And we need to accelerate that.

This particular challenge that I have articulated about Bharat also exists in multiple other countries. Including China. They also have similar problems. They are also stuck. They are stuck at two points.

Not able to give high-quality education to all the people. Even in the USA, the

majority of people cannot afford education. All of you should know this. The majority cannot afford education because it is very expensive. The majority in developed countries cannot afford health care because it is expensive.

These are the two major, major bottlenecks or major failures of modern times. And both these major failures of modern times, Bharat has to solve, come up with a template, and Bharat probably can come up with this template.

Are you all following me? Are the points clear? So if Bharat can solve these two templates of creating quality education at low cost and creating quality health care at low cost, then I think two major, two major impediments in societal growth would have been overcome.

By the way, the solutions to these will also have a solution for the environment in some sense. Because when our youth get highly enlightened, educated, they will invent methods of mitigating the burden on the environment. I would hope so.

Because for me, education is not just getting information, not just getting degrees, it is enlightenment. We are talking about that kind of education where student do not just goes for externalia but go for more inner discoveries, go for realizing what he or she is, go for what their larger purpose in life is.

If that trigger happens in education, that's the real education, and the problem that we discussed in the previous session will also get addressed.

In the previous round of education model that we had, we only had emphasis on content, degrees, certificates, and probably going abroad, getting some job here and there, et cetera, et cetera.

And despite the system, some of us did a lot of deep learning and did whatever we did in spite of the system. Not because of the system. So there will be enough people in spite of the system every time.

But we need to take a broader section of the society into the model and make them move. That is an important thing. And that is the only model that can take Bharat into the Vikasit model.

Now, I am actually emphasizing a lot on the coming future generation. Is there a reason for that, or am I being jingoistic? One can be jingoistic and do all this hoo-ha. I'm not doing that.

I'm being very thoughtful about it, and I'm seeing that Bharat is at a very sweet spot. It has all the challenges of the global system, and it has all the opportunities of the global system, and it has this beautiful model of democracy where everybody has views. Very beautiful.

All that is good. Unlike China, China is a very opaque country. We don't want to be there. You don't know what goes on inside and what kind of problems they create and throw at the rest of the world. That is not a model for us.

So Bharat is a model. So in this model, if we do things correctly, imagine this. If we do these things correctly, 10, 15, 20 years from now, also fast forward yourself 20, 30 years, how will the world be?

Just imagine. The world will be extremely complex. Many more problems than

what Ram Prasadji mentioned. So in that kind of scenario, very complex, mechanized and somewhat machine-driven world, apps-driven world, can Bharat come as a rescue and give some solace to humanity in the form of human feelings, in the form of human touch, in the form of working together, in the form of thinking about whether flowers are blooming well or not, whether the water is clean or not.

These are the thoughts. These are human thoughts. Bharat is the only country where growth, development, knowledge, economy, and all that can happen with human emotions are interspersed in it. It will have an interesting, hybrid model if we do things well.

And this hybrid model is required, not only for us but also for the rest of the world. 15, 20, 30 years from now, we will have come up with a model that the rest of the global South will certainly need, but also maybe even the Western countries.

Because Western countries are looking at us very hopefully that we will contribute to their progress, and we will probably help them. They know it. They are not in the right direction.

We think that the Western world is moving well, but they know they are not in the right direction. They also need to do tweaking, but there are not enough people to do their tweaking. They need people from countries like India to go there and tweak their system.

Otherwise, those systems are also untenable. So when the developed world becomes untenable because of various reasons, and the developing world can come up with some solutions which will impact the developed world, I think there is a sweet spot emerging somewhere else there that we must capture.

I don't know whether you are getting this point. This is a very important point. You have to think about it.

The times have never been more exciting and interesting than they are today. I only wish I were 40 years, 50 years younger because you have enough abilities to solve problems now.

While creating problems, you can solve problems. These abilities were not there earlier at very many levels. So, I want all my youngsters, young scholars sitting here and not so young scholars also sitting here to think about some aspects of education, technology, and our own lifestyles, our own value systems.

It is important for us to go back and revise our value systems and develop that sense of feeling that he was talking. Sense of feeling has disappeared in the cities, in the universities, in the colleges, in the institutes. Nobody belongs anywhere.

We have to bring that back. It is becoming a disaster because there is no sense of belonging, and there is no sense of connectivity. Somehow, we have lost ourselves in some kind of unreal world. Thanks to Western models, we have become unreal. We have to come back to our roots.

Then we will be able to balance between the developing technology, economies, knowledge, and our value systems.

You know we are the land where two important statements were captured in Ramakrishna Matha. I remember now two important statements, very important statements.

The first statement was "atma na mokshartham". Atma is only for moksha. That

is the ultimate goal. And “sarva jagat hitaaya cha”. When we live, we spread good and do good to everybody in the world. Sarva jagat.

These have been two of our driving forces, fundamentally. All other things will come and go, technology, economy, everything will come. But these are our fundamental sources of existence by which Bharat began its journey several thousand years ago.

This we must not lose touch with. Maybe you feel that I am talking like an old man. I am an old man, but not so old. But these are very important facts that we are losing track of.

We must go there. We must revert to that, our original source of strength. As parents, as teachers, we must realign our children towards going back to our main source of strength. Our main source of strength is inside. All other things are outside. Now, I have a feeling that if we don't do this course correction, we as Bharat, there will be serious repercussions not only for Bharat but for the rest of the world.

Because of the society, the world that is going to emerge few decades from now will have no room for Gautam Buddha. Will probably have no room for Mahatma Gandhi's Shankaracharyas.

We will not even recognize them if they are sitting here. Because we would have gone away in another direction at such a fast speed and trajectory that we would not be able to come back and see where we were.

And all our main sources of strength, even if they are sitting with us, we will never recognize them.

Just imagine, we need to preserve our original strength. And therefore, each of us has to do a very interesting balancing act every day. Every day. Technology is inundating you, overwhelming you, whether you like it or not.

But at the same time, we must preserve ourselves. Our children must know what they are. Our children must find a larger purpose for themselves. It is important for them to sit somewhere and meditate every day. At least a few minutes every day. So that they can find out who they are. Now, this particular enquiry we have lost for a long time now and we are suffering because of that.

Bring back that enquiry, an original enquiry that Bharat was famous for. And then intelligently combine your inner enquiry with your outside enquiry. Intelligently, when you combine, many things will happen beautifully. And we would have solved very important fundamental problems of the society here and now, as well as the society which is much more beyond us globally. So this is one important take-home that I want you to think about. And it's very beautiful to think about this.

And when you think about this important hybrid model, many new insights will emerge. And many complex problems become simpler. And the power of intuition that we are all endowed with becomes easier to harness.

In the current societal framework, the power of intuition, the power of doing things more intuitively, is withering away; that is evaporating. You need to bring that back. Now, I have said certain important things, and I hope I have been able to communicate two or three important points which are extremely relevant for Bharat as a template. And when these points get recognized well and they become translatable, I think a new Bharat will emerge. And the new Bharat will be a Bharat full of action, but with dharma, but with

values. If you are fully active, your system is fully active, you are full of action but without dharma, that is pretty much useless, will not lead to any good results, and will create a lot of problems.

Therefore, one has to combine this. And then education, qualities, skills, technology, and economy all get connected. And country will develop a lot of wealth in the country.

We are not generating enough wealth because we are not making enough products for the rest of the world. We are not being discovery mode, we don't discover new things, we imitate what others have discovered.

Genetics, pharmaceutical genetics is the best example. We are capable of discovering, we have not discovered. We need to bring the discovery back. The mode of discovery happens when you become much more innately driven, more intuitive, and not copycat. We have been going in this race of copying others for a long time now.

Take a pause, bring out your own intuitive innovation, and then discoveries will happen. Bharat was famous for its discoveries. We discover many, many things, and we stop discovering for a while, for a long while.

Bring that back now. Innately, we are a discovery-mode culture. This is what we have lost, we bring that back.

And when we do that, we can manufacture in the country. Many processes can be invented in the country. And many technologies can be invented in the country. We have people who are capable of doing it. Because of the system, because of this, because of that, we are not doing it. But when the individual awakens, nobody can stop.

I want the individual to awaken. Let the governments come and go. Let the bureaucrats come and go. If the individuals awaken, nothing can stop it.

Because individuals are the real system. Individuals put together make up the real system. That awakening has to happen.

And when that awakening happens, the country becomes not only wealthy but also very energized. Right now, we are a mixed bag. We are doing certain things well, we are contributing well, but we have a lot of other dark patches.

Highly mixed bag. That mixed bag is improving, I know. But to get there, we need to radically change certain processes within us. And the only important realization that all of us sitting here and beyond must make is that you, as an individual, can make a change. And I want you to realize it. If you realize it, when I say you, I include myself. When you realize it, I think many, many changes can happen in the system. So you please take back yourself and develop a sense of belonging so that you to do things for others. And the system will really improve significantly, and even if there are very challenging problems, solutions will also emerge.

There are no problems with no solutions. For every problem, there are solutions. If there is a problem without a solution, that's not a problem. Every problem has to come with a solution that we need to go and discover. And I think this is the time for us to do it.

We don't have too much time. Maybe 10 years, 15 years, 20 years. And then if we don't do it, somebody else will come and do it, and we'll have to keep watching. Namaste. Thank you.

Prof. C. Raju, IIM Kozhikode and GC Member CMDR



Prof. C. Raju

Prof. C. Raju is a visiting Professor at Indian Institute of Management (IIM) Kozhikode, Kerala. He is also Governing Council Member of CMDR, Dharwad.

I normally do not give prepared speeches wherever I go. My speeches are spontaneous and momentary. Last night during dinner, I had a discussion where I engaged in more practical aspects of concepts and theories.

I shared this thought with our director at CMDR: What are we practically doing for our society? Conducting conferences, writing research papers, and repeatedly publishing research—is that enough? These papers are printed in books, and they simply stay there. What is society truly gaining from them?

In 2010, while I was at IIM Kozhikode, we had a professor from the National University of Singapore. One of our faculty members asked him, “Sir, do you insist that your faculty publish papers?” We laughed at two things: the first was the concept of publishing papers, and the second was the insistence on faculty doing so, which is becoming more common today. If you do not publish, you cannot become an Associate Professor or Professor. If you do not publish, you cannot be a PhD guide. If you are a PhD guide, you must publish. There are so many things we insist upon. However, the professor said something important: “We accept our faculty’s research only when it is useful to the society around our university.” That is the essence of meaningful research.

Now, regarding today’s topic—knowledge economy and empowering growth factors—there are hundreds of drivers. I will focus on just three: human capital, innovation and technology, and global collaboration. All other growth factors ultimately fall under these three broader categories.

Human Capital

Human capital comprises three essential elements: education, skills, and workforce experience. When we talk about educational knowledge, we must consider Finland’s approach—not because India lacks quality education, but because there are fundamental differences between the knowledge-based learning in Finland and our system.

In Finland, education is centered on knowledge-based learning and skill development. These are built upon three critical pillars: thinking, creativity, and problem-solving. From early childhood, Finnish children engage in skill-building exercises. For instance, a six-month-old baby is placed in daycare at least six hours a day, two days a week. Certified nurses care for these babies, and when infants are with others of the same age, an emotional bond develops—something that is not immediately visible but is deeply significant.

Let's contrast this with our own country. An eleven- or twelve-month-old baby crawls, tries to stand, and eventually falls. What do we do? We rush to pick them up. But in Europe, they say: "Leave it. Let the baby find a way to stand up." This allows the child to develop resilience from a young age. On the contrary, in India, from childhood until adulthood, parents make all major decisions—choosing schools, careers, and even spouses. We do not cultivate creativity, critical thinking, or problem-solving skills in our children.

Skill Development

A simple example illustrates our education system: How many of you know how to cook? Many men would proudly raise their hands these days, while women may hesitate, wondering what the next question will be. But what is cooking really about? Cooking involves data science. The proportion of ingredients is a form of structured data, and mastering it results in culinary excellence. A great chef understands food science and creates a menu based on the precise balance of flavors—this is data science in action.

Another example: Why is a roti round? Many people can make a round roti, but few ask why it is round. Most simply learn by observing their elders. However, the real reason is physics—heat distributes more evenly in a circular shape, ensuring even cooking while consuming less energy. This makes the round shape an environmentally efficient choice. Similarly, Newton's Second Law ($F = M \times A$) can be understood through everyday life. A light travel bag requires less force to carry than a heavy one. Yet, our education system often focuses on rote memorization rather than practical application.

Innovation

There is a difference between invention and innovation. Invention refers to creating something new, while innovation is about turning an idea into a practical product or service that benefits society. For instance, the telephone was an invention, but the smartphone was an innovation. Innovation transforms an idea into something useful—without this transformation, it remains an invention rather than an innovation.

Let's look at iD Fresh Food. The idli-dosa batter existed long before, but iD Fresh innovated by hygienically packaging and distributing the product, ensuring convenience while addressing environmental concerns. This simple idea transformed into a multi-crore business, expanding to international markets. Another remarkable example is Arunachalam Muruganatham, the "Padman" of India.

He saw rural women using unhygienic menstrual methods and realized this was a widespread social issue. He developed a cost-effective machine to produce sanitary pads and empowered women to manufacture them locally. His innovation went beyond solving a personal problem—it addressed a national health crisis and earned him recognition worldwide.

Digital Transformation & Global Collaboration

Take Starbucks as an example. Initially, the company sold coffee beans and machines. But in the 1980s, Howard Schultz realized that coffee was not just a drink—it was an

experience. Observing coffee shops in Milan, Schultz saw people spending hours sipping espresso and engaging in discussions. He understood that selling an experience was more valuable than just selling coffee. When he returned to the U.S., he introduced premium cafes with comfortable seating, WiFi, phone charging stations, and a relaxing ambiance. Today, Starbucks is present in 70+ countries with over 37,000 outlets, offering digital convenience—customers can order via smartphones and enjoy a seamless experience.

Conclusion

Education with skills, innovation, and digital transformation is the key driver of the knowledge economy. Businesses and individuals must adopt creativity, problem-solving, and adaptability to thrive in this evolving landscape.

THE PANEL DISCUSSION



The panellists are Prof. S.R. Keshav from Bangalore University, Prof. S.T. Bagalkoti, Registrar of Haveri University, and Dr. Shrikanth Deshpande, who is the Trustee of Deshpande Foundation. Prof. M.R. Narayan, Rtd. Professor, ISEC, Bengaluru, and currently associated with the Fiscal Policy Institute of the Government of Karnataka. The moderator of the session, Prof. Basavaprabhu Jirli, Director, CMDR, Dharwad.

THE DISCUSSION

Prof. Basavaprabhu Jirli, the moderator, initiated the panel discussion and he said... The topic of the panel discussion is Economic Growth and Global Competitiveness. When we talk of economic growth, during my initial words yesterday, I mentioned the growth of the last decade, but it was corrected by Prof. Bhimray Metri Sir, Director of IIM Nagpur, corrected me that since more than 30 years, the growth rate of Indian GDP has been consistently more than 7%.

When we look back at how this change is happening—how India became the world's fifth largest economy and is poised to occupy the third position shortly—how these changes happened over time, we notice that the resources were the same: human beings, human resources, and natural resources. Everything was the same, yet change occurred. What are the driving factors behind this change? That was the basic objective with which we started this discussion.

We want to understand how the global competitiveness of India has increased over time and what the driving factors are. For this, we have four distinguished panellists with us.

The first question goes to Prof. M.R. Narayan: How has India's position in the global competitiveness index evolved over the past decade, and what key factors have contributed to this change?

Thank you very much, sir, for sending the question in a time-driven format. Our target to reach in global competitiveness is Singapore, the top-ranking country in the world. There are four important components that make a country competitive and top-ranked internationally: economic performance, government efficiency, business efficiency, and infrastructure. If I look at India's performance compared to Singapore, our poor competitiveness is evident in infrastructure, where India scores only 31.1 compared to Singapore's 77.1. Similarly, economic performance is weak, and government efficiency also contributes to low efficiency.

I also want to inform the audience about the World Economic Forum's Global Competitiveness Index. For example, in 2019, India ranked 68th among 141 countries with a score of about 61.4. Singapore topped the list with a score of 84.8. The gap between India and the top country highlights the areas where we must improve competitiveness to be globally competitive.

There are four pillars of competitiveness: enabling environment, markets, human capital, and innovation ecosystem. Due to time constraints, I will not go into further details but emphasize that these indices guide us on where to concentrate our efforts.

Now, I take the opportunity to request Prof. S.T. Bagalkoti: *What strategies should India adopt to increase its export competitiveness beyond its traditional sectors?*

The question is about strategies to improve India's global competitiveness. I beg to digress because competitiveness is often viewed in terms of exports, FDI, and national comparative advantage.

However, national growth is the sum of growth in its constituent regions: states, districts, talukas, and even villages. Competitiveness must be scaled down to the local level to understand and enable it. I want to share discussions from the committee on the redressal of regional imbalances in Karnataka.

Karnataka is the second most prosperous state by gross state domestic product and fourth in per capita SDP. But only four districts are above the state average; most are below average. Agriculture has declined to 9%, manufacturing stagnated at 20-25%, and services dominate.

Competitiveness is productivity, which I define as value per resource. Decisions at farm and firm levels are local, so local competitiveness must be emphasized as much as national or global. Unless local production is competitive, national or global competitiveness cannot improve.

Regarding disparity, districts like Bangalore Urban, Dakshina Kannada, Udupi, and Chikamagalur are progressing rapidly, while Shimoga, Dharwad, and Mandya have declined. This is because growth is service-sector-driven, and agriculture-dominant areas are lagging.

Studies by Dr. Ranjanappa Committee, CMDR, and Karnataka Evaluation Authority show limited regional transition and persistence of backward pockets.

This is due to the failure to identify and leverage comparative advantage in regions. We must identify growth possibilities and constraints at the local level, especially talukas. We analyze taluka-level data to find growth constraints and institutional or policy recommendations. I have a comprehensive list of mechanisms, focusing on enhancing rural competitiveness because rural areas are backward. Urban growth is concentrated, polarizing development. Agriculture and rural cottage industries are declining, causing migration. Improving rural competitive advantage is critical.

We need to scale competitiveness to local levels, identify comparative advantages, analyze growth patterns, and make appropriate policies for local, regional, national, and global growth. India's growth is vital globally. I do not expect India to develop only in parts; growth must percolate to all regions. This requires development of local comparative advantage and competitiveness.

This was Gandhiji's view: production by the masses, not mass production. China adopted small-scale and cottage industry models. These flourished in India but are now

declining. Skill development is crucial. Our Prime Minister frequently emphasizes skill development, upskilling, and reskilling.

We have another panelist from the Deshpande Foundation focusing on skill development. Sir, I would like to ask you: *How is India addressing the skill gap to meet the demands of an increasingly technology-driven global economy?*

I will connect today's topic of economic growth and global competitiveness. Growth and competitiveness complement each other. Good economic growth generates surplus capital, invested in R&D, leading to better productivity. Productivity leads to better quality and reduced costs, building competitiveness nationally and internationally. Multiple players influence growth: businesses, government, export/import markets, and social organizations.

Social organizations contribute to health, education, sanitation, and technology. Deshpande Foundation, founded by my brother and his wife, is based in Hubli with three verticals: agriculture (farm ponds), startups (incubation centers), and Deshpande Education Trust (skill development). India has 6.4 lakh villages with 64% of the population living there. Many rural youth must join the main workforce.

Though agricultural, not all can be employed in farming. Research shows rural youth lack proper education and feel helpless about the future. As Dr. A.P.J. Abdul Kalam said, we must first dream to realize dreams. We make rural youth dream of a better future and provide skills to join the industrial workforce. DET trains youth for 3-4 months in English, communication, analytical skills, and exposes them to Tally accounting software, MOOCs, and ERP systems. Finally, training includes AI-enabled interview apps.

Students (from 10th pass to graduates) take multiple AI-based interview simulations to prepare for job placements. Over 15 years, DET has trained 20,000 students, with about 80% placement. Jobs pay Rs.2.5 to Rs.4 lakhs per annum. Assuming Rs. 4 lakhs average salary, 20,000 placements contribute Rs. 800 crores annually. Social organizations thus significantly contribute to economic growth.

Early intervention programs like Skill in a Village (SIV) train English and communication skills for high school and primary students. These interventions prepare rural youth for jobs in technology-driven industries. The skill paradigm shifted from family-based professions to IT-based skills. Policy interventions must match this shift.

My next question to Prof. S.R. Keshav sir: *What policy reforms would you prioritize to improve India's ease of doing business rankings further?*

The World Bank discontinued the ease of doing business rankings after 2019, where India ranked 63rd. Nonetheless, the central government continues reforms through the business reform action plan. The 2025-26 budget includes reforms like fast-track regulatory approvals and decriminalization of 100 business laws. Access to credit for MSMEs and measures to make them globally competitive are key. The government aims to ease business operations while increasing disposable income to drive demand.

Atmanirbhar Bharat and production-linked incentive schemes support this. Despite this, India's exports and imports have roughly doubled, representing 2.4% and 2.9% of world trade, respectively. We must learn from China, which had a \$1 trillion trade surplus in 2024. India aims to become a \$5 trillion economy, requiring a big leap in investment. China strategically directed FDI in sectors only after domestic competition matured. Investments in human capital and health are critical.

China began AI and blockchain tech investments in 2000, 20 years before India. Better late than never, India needs a big push soon.

Now, I open the forum for audience questions. Meanwhile, I pose a common question to all panelists: India is the world's largest producer and importer of pulses and oilseeds. Employability of students remains an issue. What educational system can help achieve global competitiveness and economic growth?

Panelists, please share your views. Sir, regarding pulses and oilseeds: These crops are mostly grown in rain-fed, dry land areas with fragile resource bases. Farmers have small, fragmented holdings and poor access to technology. Though missions for these crops existed, the Green Revolution did not benefit them. Irrigated lands shifted from pulses to water-intensive crops like sugarcane and paddy. Thus, shortages persist. New incentives for high-yield, climate-resilient seeds have been announced. Farmers must be encouraged to grow pulses and oilseeds.

Regarding employability, Education traditionally focuses on knowledge, creating a skill gap with industry needs. Finishing schools help by teaching communication, analytical, and computer skills. DET expanded Skill Plus to 75 colleges in Karnataka and Telangana. Students attend evening training, paying small fees. This program began 3-4 years ago with positive results and is scaling up.

The 100 aspirational districts program targets dry lands for pulses and oilseeds. Uncertain monsoons challenge agriculture.

Regarding education, before NEP 2020, syllabi lagged market needs by 25 years. Education must make students future-ready, not just for current jobs. NEP 2020 attempted STEM and critical thinking integration, but teacher training and syllabus implementation are challenges.

Teachers often create their own syllabi, not market-aligned. Without proper implementation, policies fail. Curriculum flexibility, allowing cross-stream subjects, is needed.

Prof. M.R. Narayan, I argue for skill-based education to maximize economic growth and competitiveness, based on the economic theory of demographic dividends. Many in the audience are young and working adults. Population structure from 2020-2050 shows a high working-age share (25-60) with declining youth and children. To maximize returns, priority must be on children and youth. 700 million people will be working age.

Per capita income equals labor productivity multiplied by the working population. Growth in income equals growth in productivity plus growth in effective work participation. "Effective producers" consider age-based productivity. The economic support ratio (producers to consumers) differs from demographic dependency ratios.

As this ratio grows, investment in skill-based education drives growth. Though it will decline due to aging, India has not yet reached that point. Therefore, skill-based education and human development investments are essential to generate effective producers and sustain growth. Productivity is key for competitiveness, guiding economic growth.

Question from Audience: *What role do innovation and entrepreneurship play in growth? How can policymakers build an innovation ecosystem, and will it affect regional imbalances?*

Innovation and entrepreneurship are vital for competitiveness. Education must focus on creativity. The policy must increase R&D investment. India spends about 0.7%

of its GDP on government R&D, lower than Korea and China (~2.1%). Private sector R&D is minimal.

Innovation ecosystems require labs, incubators, and ease of doing business. Single-window clearances can reduce entrepreneurs' hassles. MSMEs hesitate to grow due to regulatory burdens; easing restrictions is critical.

Education should be skill-based; governments and private sectors should invest in R&D. Local comparative advantage must be identified, promoting entrepreneurship. Finishing schools mainly help non-engineering students gain communication and computer skills. Market demand shifts explain engineering graduates joining software jobs.

State governments embed skill programs like apprenticeships. Implementation and qualified instructors remain challenges. Life skills courses are available online and offline via MOOCs and platforms like SOIEM.

Question from audience: *India was called Vishwaguru. Why not export knowledge?*

Knowledge process outsourcing is underutilized. India is blooming as Vishwaguru. With the highest youth population, India can leverage skills not easily automated, like hospitality and the care economy. Government initiatives focus on integrating ancient knowledge with modern problems. Protecting and patenting indigenous knowledge, especially tribal medicines, is essential for knowledge export. Currently, India exports professionals but must brand Indian knowledge for global recognition. China transformed its brand; India can do likewise. On knowledge export: IT exports represent knowledge work. Hypothetical: If Indian-origin IT experts abroad return home, how would that impact India? Experts can work globally; a complete return is not essential. India must absorb willing experts and retain domestic talent. Focus remains on Viksit Bharat.

Next question: *Despite extensive English education, students lack spoken English skills. What can policymakers do?*

Education policies seem politicized. Teaching depends on teacher quality; often, teachers negatively impact student skills. Private schools perform better due to accountability. Teacher outcomes should be measured like student outcomes. Experiential and activity-based learning is missing. The curriculum should be flexible for cross-stream subjects. State governments have apprenticeship-embedded skill programs. Qualified instructors are essential. Online platforms like SWAYAM, other Learning Management Systems, offer MOOCs on life skills courses.

Next question: *Widening inequality sees the rich richer and the poor poorer. Local entrepreneurs face challenges from large brands. How to bridge this gap?*

Inequality typically rises initially (Kuznets curve), then declines. Currently, inequality grows as India develops. Income tax payers and billionaires increase, signalling a future narrowing. Trickle-down economics failed; now, inclusive growth aids lower-income groups. Financial inclusion has rapidly expanded. In a decade, inequality should reduce with improved employment and skills. Remain optimistic about bridging inequality.

Next question: *Regarding cooperative federalism, the southern states feel neglected by the central government. How can India unite towards Viksit Bharat?*

India is one nation; north and south are parts of Bharat. Southern states are more developed; northern states need more support. The Finance Commission allocates funds based on poverty, income, literacy, and forest cover. Funds aim to uplift backward states

without penalizing developed ones. Southern states support others, but should not bear a disproportionate burden.

All Indians are equal. Funds and development should aim for parity.

The central government handles defence, law and order, foreign policy, and economic policies, benefiting all states. Finance commission formulas are established and revised. Cooperative federalism is essential. Northern backward states will progress.

Final question: How will Dr. Govindrao Committee's approach to regional imbalances differ from prior committees? Will economic or social indicators be prioritized? How will cultural issues like language identity be handled?

We must avoid emotionalizing language issues. The committee distinguishes outcome and input indicators. Outcome indicators: per capita income, human development, living standards. Input indicators: infrastructure (physical, digital), health, education, environment. Data is assessed at the taluka and district levels. Gaps are identified with targeted solutions. Approximately 50 indicators are used, including digital connectivity. Resource allocation will be bottom-up from the taluka to the state level. This contrasts with previous top-down approaches. More specific recommendations will be made per taluka and sector.

This concludes the panel discussion. We discussed education reform, skill development, entrepreneurship, policy support, employability, intellectual property rights, and knowledge export. I thank all panelists for their valuable insights.

THE VALEDICTORY SESSION



Chief Guest for Valedictory Session: Dr. Mahadeva Prasanna, Director, IIIT, Dharwad

All participants, thank you very much for this invitation. I believe the wealth of information summarized by Dr. Jai Prabhakar has already been well covered by many experts. I will focus on the role of technology in the past decade and the outlook for the next two decades.

Our country is known as a young nation, and initiatives by both the central and state governments, especially in higher education, are highly encouraging. Earlier, engineering education was rigid, with students required to follow a fixed curriculum without flexibility. However, much flexibility has now been introduced, allowing students to pursue their passions.

This flexibility is the greatest support for today's higher education students. AI has been talked about for decades, but since 2010, with increased data and computing power, AI has become highly impactful. Modern software not only processes data but also makes sense of it.

Given rapid changes, I cannot assure students that the subjects they study now will remain relevant by graduation. Therefore, we must teach students the art of learning, unlearning, and relearning—enabling them to adapt continually. Now, only 25-30% of the curriculum is core foundation courses; the rest allows students to explore their interests. This flexibility helps students pursue interdisciplinary studies.

Yet students question why attend classes when top lectures are freely available online. Educators must not just keep pace but run alongside these trends. Our young population is the nation's wealth. Preparing them as global citizens requires inculcating Indian values alongside the best global practices. While Western models excel in economic development and product innovation speed, our Eastern values emphasize tenacity, hard work, and sustainability.

We must blend these approaches in education to prepare the next generation. Communication with today's youth is complex—they are exposed to vast knowledge and different perspectives, often multiple generations ahead of us in awareness. Our goal must

be to develop thinkers and leaders who positively impact society, not just software engineers chasing salaries. Multidisciplinary thinking is now essential as technology permeates all fields.

Institutions must embed values in students amid technological interventions. Creating dialogue between generations is vital to hand over a better nation. The tagline “Vasudhaiva Kutumbakam” (the world is one family) must resonate deeply with our youth. Institutions must rise to this challenge.

The last two decades have seen major investments in innovation and entrepreneurship, especially in AI and IT, providing immense opportunities for startups to grow globally with relatively low investment. Government schemes support young innovators from early on, offering grants and resources. This is the best time for our youth to achieve greatness. We must raise awareness among communities and youth to leverage these opportunities fully and realize the nation’s goals. With these thoughts, I conclude. Thank you very much.

Guest of Honour:

Dr. S. Murlidhar, Professor, GFGC, Kolar & Member, Executive Council, CESS

Good afternoon to all honorable guests, participants, resource persons, speakers, and scholars.

The last two days have featured wonderful discussions on key drivers of our country’s transformation across sectors, including agriculture, manufacturing, fintech, banking, environmental sustainability, and higher education, with a focus on regional balance and demographic dividend.

I had the opportunity to attend several sessions and gathered many takeaways that will shape the nation’s transformation. Apart from economic and environmental improvements, we must focus on the Human Resource Development (HRD) index and happiness index, equally important parameters. Recent initiatives like Skill India, Make in India, and Startup India have contributed greatly to utilizing the demographic dividend, enhancing HRD and happiness indexes.

This conclave, jointly organized by CMDR Dharwad and CESS Bengaluru, has been a wonderful platform for these discussions. As educators and researchers, we have serious responsibilities arising from these deliberations. The knowledge economy session clarified how frontiers of knowledge empower the workforce and strengthen education institutions to deliver quality higher education. In agriculture and environmental sustainability sessions, speakers highlighted technology’s role and the opportunities and challenges it brings across domains. Technology cannot be stopped; it brings competitiveness and transformation. The key is to continuously improve skills, as what was relevant a year ago may not be today, emphasizing the Japanese Kaizen principle of continuous improvement. We must improve ourselves so Bharat can become a Vishwa Guru (world teacher) soon. Thank you for this opportunity.

Presidential Remarks:

Prof. Kailash Chandra Sharma, Chairman, CMDR, Dharwad

Prof. Mahadev Prasanna, Prof. Murlidhar, Prof. Basavaprabhu, and the galaxy of intellectuals present here, we are nearing the conclusion of this two-day conclave. Dr. Jai Prabhakar has briefly summarized deliberations across eight sessions, including the valedictory and inaugural ones. The theme—Transformation of Bharat: Story of a Decade and Future—encompasses many disciplines. We have discussed six relevant key drivers. Though the conclave ends, discussions must continue for better self-understanding and

societal contribution. We must decide our roles in Bharat's rapid progress toward Viksit Bharat, a knowledge-based society. Resource persons reviewed changes over the past decade and future projections. Collective wisdom from Kanyakumari to Kashmir drives progressive development across sectors.

Challenges were discussed along with possible solutions. Emerging technologies and their challenges were noted. Demographic dividend remains a major asset, with Bharat the youngest country by working-age population for the next two decades. If trained and skilled, this demographic will drive tremendous progress, as already seen globally. Indian technocrats abroad have contributed greatly, but now is the time to stay and grow infrastructure and ecosystems locally.

We must strategize goals carefully. Mr. K. Vijay Raghavan and Mr. Varun Agrawal recently wrote on the goal of Indian science at the India Science Festival in Hyderabad. Global innovation expert Thomas Barlow emphasized that this century belongs to India, and ambitions should be high. India can learn from Germany, America, and China, but must develop a unique model.

Today, we have the scale, industry, startups, markets, and resources to invest in science and technology with a focused strategy. Our youth, guided by faculty, are key stakeholders. Students thrive when allowed flexibility and multidisciplinary choices, breaking mental silos.

NEP 2020 enables this multidisciplinary higher education network. Prof. Bhimraya Mathri stressed embedding spirituality in workplaces to improve results and work culture, critical for Bharat as a manufacturing hub. One computer science graduate asked, "Are you in control of your happiness or is money, power, or fame controlling you?"

Spirituality helps control the mind, as Arjuna sought from Krishna in the Gita. Spirituality and happiness indices are important for workforce well-being. I recently read a book by a bureaucrat on Gita Acharan. AI is today's buzzword, but 5000 years ago, Krishna advised Arjuna that truth can only be accessed by natural intelligence. AI is a tool to enhance human thinking, not replace it. We must master AI and keep control.

With these thoughts, I conclude by thanking all resource persons, intellectuals, faculty, and students for their participation. Let us deliberate, decide our roles, and accelerate Bharat's transformation. Thank you and congratulations.

GALLERY OF THE CONCLAVE









Conclave in the Media

'Tackling backwardness more critical than addressing regional imbalance'

DHARWAD, DHNS: Finance Department Secretary and senior IAS officer R Vishal observed that tackling backwardness is more critical than addressing regional imbalance as backwardness has not decreased uniformly.

He noted this while speaking after inaugurating a two-day Development Conclave themed 'Transformation of Bharath—The story of a decade and future outlook,' organised jointly by Centre for Multi-Disciplinary Research (CMDR) and Centre for Economic and Social Studies (CESS) here.

He said the administration framework focuses on understanding the purpose of government and then on building a robust framework.

"Karnataka has evolved from Dr Nanjundappa Committee report to Dr Govind Rao's report. Karnataka has better parameters like high per capita income and better consumption variables; however, underlying details can hamper the outlook. Hence, there is a need to consider the sustainability of actions, namely operational, financial, environmental, and degree of externality," Vishal elaborated.

He emphasised that administrators should improve logistics, which can drive development and ensure proper resource utilisation.

On welfare schemes, Vishal replied that they are excellent schemes but they impact the exchequer in a single time. "But Karnataka is a forward-looking state that can manage the effect with better



Finance Department Secretary and senior IAS officer R Vishal lights the lamp to inaugurate a two-day Development Conclave organised by the CMDR in Dharwad on Thursday. DH PHOTO

prudence," he asserted.

Experiential learning
CMDR Chairman Prof Kailash Chandra Sharma, focussing on the impact and revolution of National Education Policy (NEP) 2020 said that experiential learning brings industries closer to academia.

He proposed the need to accept the gravity of Indian Knowledge systems and further the multi-disciplinary approach to realise the potential of Bharath.

Appreciating the success of Raisina Dialogue, an annual multilateral conference by India, attended by more than 130 countries in 2025, he said, today the country is driving dialogue at the international level, foregrounding the values of 'Vasudhaiva Kutumbakam.'

He accentuated the development of the future of India, and called for development in terms of a

knowledge-based society. CMDR Director Prof Basavaprabhu Jirli and CESS director Gowrishha were present.

Research journal
The first edition of CMDR Journal of Social Research, an academic research journal, was released on the occasion. This journal is dedicated to advancing social research across social science disciplines. Dr Jai Prabhakar, anthropology faculty at CMDR, is the chief editor of this journal. The winners of the essay competition on 'Indian Knowledge Systems: Relevance of ancient practices for contemporary problems' were felicitated.

The conclave's agenda encompasses various dialogues, including Make in India, Diplomacy and Foreign Policy, Knowledge Economy, Agricultural and Environmental Sustainability, and Action Frameworks.



HC



ಮುಂಚೂಣಿಯಲ್ಲಿವೆ ರಾಜ್ಯದ ಪ್ರಮುಖ ಯೋಜನೆಗಳು

ಅಭಿವೃದ್ಧಿ ಸಮ್ಮೇಳನದಲ್ಲಿ ರಾಜ್ಯ ಹಣಕಾಸು ಇಲಾಖೆ ಕಾರ್ಯದರ್ಶಿ ವಿಶಾಲ್ ಆರ್. | ಜನರ ಕಲ್ಯಾಣಕ್ಕಾಗಿ ಉತ್ತಮ ಯೋಜನೆ

• ಕಳೆದ ದಿನಗಳಲ್ಲಿ ರಾಜ್ಯದ ಪ್ರಮುಖ ಯೋಜನೆಗಳು ಎಲ್ಲ ಮುಖಂಡರಿಗೂ ಮುನ್ನೋಟದಲ್ಲಿವೆ. ಸಮಗ್ರ ಅಭಿವೃದ್ಧಿಗಾಗಿ ಉತ್ತಮ ಯೋಜನೆಗಳನ್ನು ರೂಪಿಸಿ ಕಾರ್ಯದರ್ಶಿ ವಿಶಾಲ್ ಆರ್. ಹೇಳಿದರು. ಸೇವಾಭಾರತದಲ್ಲಿನ ಅಭಿವೃದ್ಧಿ ಕಾರ್ಯದರ್ಶಿ ವಿಶಾಲ್ ಆರ್. ಹೇಳಿದರು. ರಾಜ್ಯದ ಪ್ರಮುಖ ಯೋಜನೆಗಳನ್ನು ಕುರಿತು ವಿವರಿಸಿ ಅವುಗಳ ಮೂಲಕ ರಾಜ್ಯದ ಅಭಿವೃದ್ಧಿಗಾಗಿ ಕಾರ್ಯದರ್ಶಿ ವಿಶಾಲ್ ಆರ್. ಹೇಳಿದರು. ರಾಜ್ಯದ ಪ್ರಮುಖ ಯೋಜನೆಗಳನ್ನು ಕುರಿತು ವಿವರಿಸಿ ಅವುಗಳ ಮೂಲಕ ರಾಜ್ಯದ ಅಭಿವೃದ್ಧಿಗಾಗಿ ಕಾರ್ಯದರ್ಶಿ ವಿಶಾಲ್ ಆರ್. ಹೇಳಿದರು. ರಾಜ್ಯದ ಪ್ರಮುಖ ಯೋಜನೆಗಳನ್ನು ಕುರಿತು ವಿವರಿಸಿ ಅವುಗಳ ಮೂಲಕ ರಾಜ್ಯದ ಅಭಿವೃದ್ಧಿಗಾಗಿ ಕಾರ್ಯದರ್ಶಿ ವಿಶಾಲ್ ಆರ್. ಹೇಳಿದರು.



ಅಭಿವೃದ್ಧಿ ಸಮ್ಮೇಳನದಲ್ಲಿ ರಾಜ್ಯ ಹಣಕಾಸು ಇಲಾಖೆ ಕಾರ್ಯದರ್ಶಿ ವಿಶಾಲ್ ಆರ್. | ಜನರ ಕಲ್ಯಾಣಕ್ಕಾಗಿ ಉತ್ತಮ ಯೋಜನೆ

ಕಳೆದ ದಿನಗಳಲ್ಲಿ ರಾಜ್ಯದ ಪ್ರಮುಖ ಯೋಜನೆಗಳು ಎಲ್ಲ ಮುಖಂಡರಿಗೂ ಮುನ್ನೋಟದಲ್ಲಿವೆ. ಸಮಗ್ರ ಅಭಿವೃದ್ಧಿಗಾಗಿ ಉತ್ತಮ ಯೋಜನೆಗಳನ್ನು ರೂಪಿಸಿ ಕಾರ್ಯದರ್ಶಿ ವಿಶಾಲ್ ಆರ್. ಹೇಳಿದರು. ಸೇವಾಭಾರತದಲ್ಲಿನ ಅಭಿವೃದ್ಧಿ ಕಾರ್ಯದರ್ಶಿ ವಿಶಾಲ್ ಆರ್. ಹೇಳಿದರು. ರಾಜ್ಯದ ಪ್ರಮುಖ ಯೋಜನೆಗಳನ್ನು ಕುರಿತು ವಿವರಿಸಿ ಅವುಗಳ ಮೂಲಕ ರಾಜ್ಯದ ಅಭಿವೃದ್ಧಿಗಾಗಿ ಕಾರ್ಯದರ್ಶಿ ವಿಶಾಲ್ ಆರ್. ಹೇಳಿದರು.

ರಾಜ್ಯದ ಪ್ರಮುಖ ಯೋಜನೆಗಳನ್ನು ಕುರಿತು ವಿವರಿಸಿ ಅವುಗಳ ಮೂಲಕ ರಾಜ್ಯದ ಅಭಿವೃದ್ಧಿಗಾಗಿ ಕಾರ್ಯದರ್ಶಿ ವಿಶಾಲ್ ಆರ್. ಹೇಳಿದರು. ರಾಜ್ಯದ ಪ್ರಮುಖ ಯೋಜನೆಗಳನ್ನು ಕುರಿತು ವಿವರಿಸಿ ಅವುಗಳ ಮೂಲಕ ರಾಜ್ಯದ ಅಭಿವೃದ್ಧಿಗಾಗಿ ಕಾರ್ಯದರ್ಶಿ ವಿಶಾಲ್ ಆರ್. ಹೇಳಿದರು.

ಕರ್ನಾಟಕ ರಾಜ್ಯದ ಪ್ರಮುಖ ಯೋಜನೆಗಳು ಸಮಗ್ರ ಅಭಿವೃದ್ಧಿಗೆ ಪೂರಕ: ವಿಶಾಲ್.ಆರ್

ಕರ್ನಾಟಕ ರಾಜ್ಯದ ಪ್ರಮುಖ ಯೋಜನೆಗಳು ಎಲ್ಲಾ ವಲಯಗಳಲ್ಲಿ ಮುಂಚೂಣಿಯಲ್ಲಿದ್ದು, ಸಮಗ್ರ ಅಭಿವೃದ್ಧಿಗೆ ಪೂರಕವಾಗಿವೆ ಎಂದು ರಾಜ್ಯ ಹಣಕಾಸು ಇಲಾಖೆ ಕಾರ್ಯದರ್ಶಿ ವಿಶಾಲ್.ಆರ್ ಹೇಳಿದರು. ಅವರು ಸೆಂಟರ್ ಫಾರ್ ಮಲ್ಟಿಡಿಸಿಪ್ಲಿನರಿ ಡೆವಲಪ್‌ಮೆಂಟ್ ರಿಸರ್ಚ್ ಮತ್ತು ಬೆಂಗಳೂರಿನ ಸೆಂಟರ್ ಫಾರ್ ಐನ್ಟೆಲಿಜೆಂಟ್ ಆಂಡ್ ಸೋಶಿಯಲ್ ಸೈನ್ಸ್ ಸ್ಟಡೀಸ್ ಸಹಯೋಗದಲ್ಲಿ ಓಪಿಯನ್ ಪರ್ಲ್‌ನಲ್ಲಿ ಆಯೋಜಿಸಿದ ಎರಡು ದಿನಗಳ ಅಭಿವೃದ್ಧಿ ಸಮ್ಮೇಳನದ ಬದಲಾದ ಭಾರತ ಎಂಬ ವಿಷಯದ ಕುರಿತು ಆಯೋಜಿಸಿದ ಸಮ್ಮೇಳನವನ್ನು ಉದ್ಘಾಟಿಸಿ ಮಾತನಾಡಿದರು.

ಪ್ರಸ್ತುತ ರಾಜ್ಯವು ಉತ್ತಮ ತಲಾ ಆದಾಯ, ಜೀವನ ಕೈಲಿಯಿಂದ ಕರ್ನಾಟಕ ರಾಜ್ಯವು ಮುಂಚೂಣಿಯಲ್ಲಿದೆ ಎಂದು ಅವರು ಡಾ.ನಂಜುಂಡಪ್ಪ ಮತ್ತು ಪ್ರೊ.ಗೋವಿಂದರಾವ್ ಅವರ ನೇತೃತ್ವದಲ್ಲಿ ವರದಿಗಳ ಅನುಗುಣವಾಗಿ ಪ್ರಾದೇಶಿಕ ಅಸಮತೋಲನ ತೊಡೆದುಹಾಕಲು ಅನೇಕ ಯೋಜನೆಗಳನ್ನು ರೂಪಿಸಲಾಗಿದೆ ಎಂದು ಅವರು ಜನರ ಕಲ್ಯಾಣಕ್ಕಾಗಿ ಉತ್ತಮ ಯೋಜನೆಗಳನ್ನು ಕಾರ್ಯರೂಪಕ್ಕೆ ತರಲಾಗುತ್ತದೆ. ಸ್ವರವಾದ ಅರ್ಥಿಕತೆಯನ್ನು ಹೊಂದಲು ಅನೇಕ ಯೋಜನೆಗಳನ್ನು ಹಮ್ಮಿಕೊಳ್ಳಲಾಗಿದೆ ಎಂದರು.

ಕಾರ್ಯಕ್ರಮದಲ್ಲಿ ಅಧ್ಯಕ್ಷತೆ ವಹಿಸಿದ್ದ ಧಾರವಾಡ ಸಿ.ಎಂ.ಡಿ.ಆರ್ ಚೇರಮನ್ ಕೈಲಾಶಚಂದ್ರ ಶರ್ಮಾ ಮಾತನಾಡಿ... ಕಳೆದ ದಶಕದಿಂದ ಶಿಕ್ಷಣ ವಲಯದಲ್ಲಿ ಕ್ರಾಂತಿಕಾರ ಬದಲಾವಣೆಗಳು ಆಗಿದ್ದು ಪ್ರಮುಖವಾಗಿ ರಾಷ್ಟ್ರೀಯ ಹೊಸ



ಶಿಕ್ಷಣ ನೀಡಿಯಿಂದ ಕೌಶಲ್ಯಯುತವಾದ ಶಿಕ್ಷಣವು ಉದ್ಯಮದ ಜೊತೆಗೆ ಹೊಸ ರೂಪ ನೀಡಿದೆ ಎಂದು ಅವರು ಜ್ಞಾನ ಆಧಾರಿತ ಶಿಕ್ಷಣವನ್ನು ನೀಡಲು ಬಹು ಶ್ರಮ ವ್ಯವಸ್ಥೆ ಬಹಳ ಉಪಯುಕ್ತವಾಗಿದೆ ಎಂದರು. ವಸು ದೈವಿಕ ಕುಟುಂಬ ಎಂಬ ಪರಿಕಲ್ಪನೆಯಿಂದ ಭಾರತವು ಅಂತರಾಷ್ಟ್ರೀಯ ಮಟ್ಟದಲ್ಲಿ ಗಮನ ಸೆಳೆದಿದೆ ಎಂದರು.

ಇದೇ ಸಂದರ್ಭದಲ್ಲಿ ಸಿ.ಎಮ್.ಡಿ.ಆರ್. ವತಿಯಿಂದ ಹೊರತರಲಾದ ನಿಯತಕಾಲಿಕ ಬಿಡುಗಡೆ ಮಾಡಲಾಯಿತು. ಭಾರತ ಜ್ಞಾನ ವ್ಯವಸ್ಥೆ ಎಂಬ ವಿಷಯದ ಕುರಿತು ಆಯೋಜಿಸಿದ ಪ್ರಬಂಧ ಸ್ಪರ್ಧೆಯಲ್ಲಿ ವಿಜೇತರಾದ ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ ಪ್ರಮಾಣಪತ್ರ ವಿತರಿಸಲಾಯಿತು.

ಈ ಸಮಾವೇಶದಲ್ಲಿ ಐಎಎಂ ನಾಗ್ನುರ ನಿರ್ದೇಶಕರಾದ ಪ್ರೊ. ಭೀಮರಾಯ ಮೇತ್ರಿ, ಟೀಕೆಯೋಚಾ ಕಂಪನಿ ಸಲಹೆಗಾರ ಪರಶುರಾಮನ್ ನಿಟ್ಟಿ ಶಿಕ್ಷಣ ಸಂಸ್ಥೆಯ ಡಾ. ಸಂಧೀಪ್ ಡಾ. ಎಸ್.ಆರ್. ಕೇರವ, ಅರ್ಥಶಾಸ್ತ್ರಜ್ಞ ಡಾ. ಚರಣ್ ಸಿಂಗ್, ಗದಗ ಕೆ.ಎಸ್. ಅರವಿ ಕುಲಪತಿ ಪ್ರೊ. ವಿಷ್ಣುಕಾಂತ್ ಎಸ್. ಚಿಟ್ಟಪ್ಪ, ಹೈದರಾಬಾದ್ ವಿಶ್ವವಿದ್ಯಾಲಯ ಕುಲಪತಿ ಡಾ. ಬಿ. ಜಿ. ರಾವ್ ಸಂವಾದದಲ್ಲಿ ಭಾಗವಹಿಸಿದ್ದರು. ಕಾರ್ಯಕ್ರಮದಲ್ಲಿ ಚಾಮರಾಜನಗರ ವಿಶ್ವವಿದ್ಯಾಲಯದ ಉಪಕುಲಪತಿ ಪ್ರೊ. ಎಂ. ಆರ್. ಗಂಗಾಧರ, ಕರ್ನಾಟಕ ವಿಶ್ವವಿದ್ಯಾಲಯದ ಮಾಜಿ ಉಪಕುಲಪತಿ ಪ್ರೊ. ಪ್ರಮೋದ್ ಗಾಯ, ಕರ್ನಾಟಕ ಜಾನಪದ ವಿಶ್ವವಿದ್ಯಾಲಯದ ಮಾಜಿ ಉಪಕುಲಪತಿ ಪ್ರೊ. ಡಿ. ಬಿ. ನಾಯಕ್, ಗುಂಧರ್ ಕನ್ಯಾಲ್ ಸಿಎಂಡಿಆರ್ ಆಡಳಿತ ಮಂಡಳಿ ಸದಸ್ಯರಾದ ಪ್ರೊ.ಕೃಷ್ಣಾಕರ, ಪ್ರೊ. ಸಿ. ರಾಮ ಮತ್ತು ಪ್ರೊ. ವಿಜಯಲಕ್ಷ್ಮಿ ಅಮೃತಭೂಮಿ, ಪ್ರೊ. ಬಿ. ಎಸ್. ನಾಗರಾಜ್, ಪ್ರೊ. ಜಂಭುಲಿಂಗಪ್ಪ, ಪ್ರೊ. ಮುಗ್ಧೂರ್, ಪ್ರೊ. ಮನೋಜ ಡೋಳಿ, ಸಿಎಂಡಿಆರ್ ರಿಜಿಸ್ಟ್ರಾರ್ ವೇದವ್ಯಾಸ ಹುನಗುರು ಸಮಾರಂಭದಲ್ಲಿ ಉಪಸ್ಥಿತರಿದ್ದರು.

ವಿಶ್ವವಾಣಿ

ಯೋಜನೆಗಳು ಸಮಗ್ರ ಅಭಿವೃದ್ಧಿಗೆ ಪೂರಕ

ಧಾರವಾಡ: ಕರ್ನಾಟಕ ರಾಜ್ಯದ ಪ್ರಮುಖ ಯೋಜನೆಗಳು ಎಲ್ಲಾ ವಲಯಗಳಲ್ಲಿ ಮುಂಚೂಣಿಯಲ್ಲಿದ್ದು, ಸಮಗ್ರ ಅಭಿವೃದ್ಧಿಗೆ ಪೂರಕವಾಗಿವೆ ಎಂದು ರಾಜ್ಯ ಹಣಕಾಸು ಇಲಾಖೆ ಕಾರ್ಯದರ್ಶಿ ವಿಶಾಲ್.ಆರ್ ಹೇಳಿದರು. ಸೆಂಟರ್ ಫಾರ್ ಮಲ್ಟಿಡಿಸಿಪ್ಲಿನರಿ ಡೆವಲಪ್‌ಮೆಂಟ್ ರಿಸರ್ಚ್ ಮತ್ತು ಬೆಂಗಳೂರಿನ ಸೆಂಟರ್ ಫಾರ್ ಐನ್ಟೆಲಿಜೆಂಟ್ ಆಂಡ್ ಸೋಶಿಯಲ್ ಸೈನ್ಸ್ ಸ್ಟಡೀಸ್ ಸಹಯೋಗದಲ್ಲಿ ಓಪಿಯನ್ ಪರ್ಲ್‌ನಲ್ಲಿ 2 ದಿನಗಳ ಅಭಿವೃದ್ಧಿ ಸಮ್ಮೇಳನದ ಬದಲಾದ ಭಾರತ ಎಂಬ ವಿಷಯದ ಕುರಿತು ಆಯೋಜಿಸಿದ ಸಮ್ಮೇಳನವು ಉದ್ಘಾಟಿತವಾಯಿತು.

ಜನರ ಕಲ್ಯಾಣಕ್ಕಾಗಿ ಉತ್ತಮ ಯೋಜನೆಗಳನ್ನು ಕಾರ್ಯರೂಪಕ್ಕೆ ತರಲಾಗುತ್ತದೆ. ಸ್ವರವಾದ ಅರ್ಥಿಕತೆಯನ್ನು ಹೊಂದಲು ಅನೇಕ ಯೋಜನೆಗಳನ್ನು ಹಮ್ಮಿಕೊಳ್ಳಲಾಗಿದೆ ಎಂದು ತಿಳಿಸಿದರು.

ಧಾರವಾಡ ಸಿ.ಎಂ.ಡಿ.ಆರ್ ಚೇರಮನ್ ಕೈಲಾಶಚಂದ್ರ ಶರ್ಮಾ ಮಾತನಾಡಿ, ಕಳೆದ ದಶಕದಿಂದ ಶಿಕ್ಷಣ ವಲಯದಲ್ಲಿ ಕ್ರಾಂತಿಕಾರ ಬದಲಾವಣೆಗಳು ಆಗಿವೆ. ಇದೇ ಸಂದರ್ಭದಲ್ಲಿ ಸಿ.ಎಮ್.ಡಿ.ಆರ್. ವತಿಯಿಂದ ಹೊರತರಲಾದ ನಿಯತಕಾಲಿಕ ಬಿಡುಗಡೆ ಮಾಡಲಾಯಿತು. ಭಾರತ ಜ್ಞಾನ ವ್ಯವಸ್ಥೆ ಎಂಬ ವಿಷಯದ ಕುರಿತು ಆಯೋಜಿಸಿದ ಪ್ರಬಂಧ ಸ್ಪರ್ಧೆಯಲ್ಲಿ ವಿಜೇತರಾದ ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ ಪ್ರಮಾಣಪತ್ರ ವಿತರಿಸಲಾಯಿತು.

ಈ ಸಮಾವೇಶದಲ್ಲಿ ಐಎಎಂ ನಾಗ್ನುರ ನಿರ್ದೇಶಕರಾದ ಪ್ರೊ. ಭೀಮರಾಯ ಮೇತ್ರಿ, ಟೀಕೆಯೋಚಾ ಕಂಪನಿ ಸಲಹೆಗಾರ ಪರಶುರಾಮನ್ ನಿಟ್ಟಿ ಶಿಕ್ಷಣ ಸಂಸ್ಥೆಯ ಡಾ. ಸಂಧೀಪ್ ಡಾ. ಎಸ್.ಆರ್. ಕೇರವ, ಅರ್ಥಶಾಸ್ತ್ರಜ್ಞ ಡಾ. ಚರಣ್ ಸಿಂಗ್, ಗದಗ ಕೆ.ಎಸ್. ಅರವಿ ಕುಲಪತಿ ಪ್ರೊ. ವಿಷ್ಣುಕಾಂತ್ ಎಸ್. ಚಿಟ್ಟಪ್ಪ, ಹೈದರಾಬಾದ್ ವಿಶ್ವವಿದ್ಯಾಲಯ ಕುಲಪತಿ ಡಾ. ಬಿ. ಜಿ. ರಾವ್ ಸಂವಾದದಲ್ಲಿ ಭಾಗವಹಿಸಿದ್ದರು. ಕಾರ್ಯಕ್ರಮದಲ್ಲಿ ಚಾಮರಾಜನಗರ ವಿಶ್ವವಿದ್ಯಾಲಯದ



ವಿಶಾಲ್.ಆರ್.ನಾಯಕರ ಮುಖಾಂತರ ಸಮಗ್ರ ಅಭಿವೃದ್ಧಿಗೆ ಪೂರಕವಾಗಿವೆ ಎಂದು ರಾಜ್ಯ ಹಣಕಾಸು ಇಲಾಖೆ ಕಾರ್ಯದರ್ಶಿ ವಿಶಾಲ್.ಆರ್. ಉದ್ಘಾಟಿಸಿದರು.

ಪ್ರಸ್ತುತ ರಾಜ್ಯವು ಉತ್ತಮ ತಲಾ ಆದಾಯ, ಜೀವನ ಕೈಲಿಯಿಂದ ಕರ್ನಾಟಕ ರಾಜ್ಯವು ಮುಂಚೂಣಿಯಲ್ಲಿದೆ. ಡಾ.ನಂಜುಂಡಪ್ಪ ಮತ್ತು ಪ್ರೊ.ಗೋವಿಂದರಾವ್ ಅವರ ನೇತೃತ್ವದಲ್ಲಿ ವರದಿಗಳ ಅನುಗುಣವಾಗಿ ಪ್ರಾದೇಶಿಕ ಅಸಮತೋಲನ ತೊಡೆದುಹಾಕಲು ಅನೇಕ ಯೋಜನೆಗಳನ್ನು ರೂಪಿಸಲಾಗಿದೆ. -ವಿಶಾಲ್.ಆರ್, ರಾಜ್ಯ ಹಣಕಾಸು ಇಲಾಖೆ ಕಾರ್ಯದರ್ಶಿ

ಉಪಕುಲಪತಿ ಪ್ರೊ. ಎಂ.ಆರ್.ಗಂಗಾಧರ, ಕರ್ನಾಟಕ ವಿಶ್ವವಿದ್ಯಾಲಯದ ಮಾಜಿ ಉಪಕುಲಪತಿ ಪ್ರೊ.ಪ್ರಮೋದ್ ಗಾಯ, ಕರ್ನಾಟಕ ಜಾನಪದ ವಿಶ್ವವಿದ್ಯಾಲಯದ ಮಾಜಿ ಉಪಕುಲಪತಿ ಪ್ರೊ. ಡಿ.ಬಿ. ನಾಯಕ್, ಗುಂಧರ್ ಕನ್ಯಾಲ್ ಸಿಎಂಡಿ ಆರ್ ಆಡಳಿತ ಮಂಡಳಿ ಸದಸ್ಯರಾದ ಪ್ರೊ.ಕೃಷ್ಣಾಕರ, ಪ್ರೊ. ವಿ.ಎಸ್. ನಾಗರಾಜ್, ಪ್ರೊ. ಜಂಭುಲಿಂಗಪ್ಪ, ಪ್ರೊ. ಮುಗ್ಧೂರ್, ಪ್ರೊ. ಮನೋಜ ಡೋಳಿ, ಸಿಎಂಡಿಆರ್ ರಿಜಿಸ್ಟ್ರಾರ್ ವೇದವ್ಯಾಸ ಹುನಗುರು ಸಮಾರಂಭದಲ್ಲಿ ಉಪಸ್ಥಿತರಿದ್ದರು.

ಎಲ್ಲ ವಲಯಗಳಲ್ಲಿ ರಾಜ್ಯ ಮುಂಚೂಣಿ: ವಿಶಾಲ್

ಧಾರವಾಡ: ಕರ್ನಾಟಕ ರಾಜ್ಯದ ಪ್ರಮುಖ ಯೋಜನೆಗಳು ಎಲ್ಲಾ ವಲಯಗಳಲ್ಲಿ ಮುಂಚೂಣಿಯಲ್ಲಿದ್ದು, ಸಮಗ್ರ ಅಭಿವೃದ್ಧಿಗೆ ಪೂರಕವಾಗಿವೆ ಎಂದು ರಾಜ್ಯ ಹಣಕಾಸು ಇಲಾಖೆ ಕಾರ್ಯದರ್ಶಿ ವಿಶಾಲ್.ಆರ್ ಹೇಳಿದರು. ಸೆಂಟರ್ ಫಾರ್ ಮಲ್ಟಿಡಿಸಿಪ್ಲಿನರಿ ಡೆವಲಪ್‌ಮೆಂಟ್ ರಿಸರ್ಚ್ ಮತ್ತು ಬೆಂಗಳೂರಿನ ಸೆಂಟರ್ ಫಾರ್ ಐನ್ಟೆಲಿಜೆಂಟ್ ಆಂಡ್ ಸೋಶಿಯಲ್ ಸೈನ್ಸ್ ಸ್ಟಡೀಸ್ ಸಹಯೋಗದಲ್ಲಿ ಓಪಿಯನ್ ಪರ್ಲ್‌ನಲ್ಲಿ 2 ದಿನಗಳ ಅಭಿವೃದ್ಧಿ ಸಮ್ಮೇಳನದ ಬದಲಾದ ಭಾರತ ಎಂಬ ವಿಷಯದ ಕುರಿತು ಆಯೋಜಿಸಿದ ಸಮ್ಮೇಳನವು ಉದ್ಘಾಟಿತವಾಯಿತು.

ಜನರ ಕಲ್ಯಾಣಕ್ಕಾಗಿ ಉತ್ತಮ ಯೋಜನೆಗಳನ್ನು ಕಾರ್ಯರೂಪಕ್ಕೆ ತರಲಾಗುತ್ತದೆ. ಸ್ವರವಾದ ಅರ್ಥಿಕತೆಯನ್ನು ಹೊಂದಲು ಅನೇಕ ಯೋಜನೆಗಳನ್ನು ಹಮ್ಮಿಕೊಳ್ಳಲಾಗಿದೆ ಎಂದು ಅವರು ಜನರ ಕಲ್ಯಾಣಕ್ಕಾಗಿ ಉತ್ತಮ ಯೋಜನೆಗಳನ್ನು ಕಾರ್ಯರೂಪಕ್ಕೆ ತರಲಾಗುತ್ತದೆ. ಸ್ವರವಾದ ಅರ್ಥಿಕತೆಯನ್ನು ಹೊಂದಲು ಅನೇಕ ಯೋಜನೆಗಳನ್ನು ಹಮ್ಮಿಕೊಳ್ಳಲಾಗಿದೆ ಎಂದರು.



ಧಾರವಾಡ: ನಗರದಲ್ಲಿ ಹಮ್ಮಿಕೊಂಡಿದ್ದ ಸಮ್ಮೇಳನವನ್ನು ಹಣಕಾಸು ಇಲಾಖೆ ಕಾರ್ಯದರ್ಶಿ ವಿಶಾಲ್.ಆರ್. ಉದ್ಘಾಟಿಸಿದರು.

ಪ್ರಸ್ತುತ ರಾಜ್ಯವು ಉತ್ತಮ ತಲಾ ಆದಾಯ, ಜೀವನ ಕೈಲಿಯಿಂದ ಕರ್ನಾಟಕ ರಾಜ್ಯವು ಮುಂಚೂಣಿಯಲ್ಲಿದೆ. ಡಾ.ನಂಜುಂಡಪ್ಪ ಮತ್ತು ಪ್ರೊ.ಗೋವಿಂದರಾವ್ ಅವರ ನೇತೃತ್ವದಲ್ಲಿ ವರದಿಗಳ ಅನುಗುಣವಾಗಿ ಪ್ರಾದೇಶಿಕ ಅಸಮತೋಲನ ತೊಡೆದು ಹಾಕಲು ಅನೇಕ ಯೋಜನೆಗಳನ್ನು ರೂಪಿಸಲಾಗಿದೆ. ಜನರ ಕಲ್ಯಾಣಕ್ಕಾಗಿ ಉತ್ತಮ ಯೋಜನೆಗಳನ್ನು ಕಾರ್ಯರೂಪಕ್ಕೆ ತರಲಾಗುತ್ತದೆ. ಸ್ವರವಾದ ಅರ್ಥಿಕತೆಯನ್ನು ಹೊಂದಲು ಅನೇಕ ಯೋಜನೆಗಳನ್ನು ಹಮ್ಮಿಕೊಳ್ಳಲಾಗಿದೆ ಎಂದರು.

ಅಧ್ಯಕ್ಷತೆ ವಹಿಸಿದ್ದ ಧಾರವಾಡ ಸಿಎಂಡಿಆರ್ ಚೇರಮನ್ ಕೈಲಾಶಚಂದ್ರ ಶರ್ಮಾ ಮಾತನಾಡಿ, ಕಳೆದ ದಶಕದಿಂದ ಶಿಕ್ಷಣ ವಲಯದಲ್ಲಿ ಕ್ರಾಂತಿಕಾರ ಬದಲಾವಣೆಗಳು ಆಗಿವೆ. ಇದೇ ಸಂದರ್ಭದಲ್ಲಿ ಸಿ.ಎಮ್.ಡಿ.ಆರ್. ವತಿಯಿಂದ ಹೊರತರಲಾದ ನಿಯತಕಾಲಿಕ ಬಿಡುಗಡೆ ಮಾಡಲಾಯಿತು. ಭಾರತ ಜ್ಞಾನ ವ್ಯವಸ್ಥೆ ಎಂಬ ವಿಷಯದ ಕುರಿತು ಆಯೋಜಿಸಿದ ಪ್ರಬಂಧ ಸ್ಪರ್ಧೆಯಲ್ಲಿ ವಿಜೇತರಾದ ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ ಪ್ರಮಾಣಪತ್ರ ವಿತರಿಸಲಾಯಿತು.

ಅರಕೇರಿ ಸಾರಥ್ಯ

ಕನ್ನಡ ಜನಶ್ರೀ

ಪೊಸತನದ ಪಾದಿಯಲ...

ದಿನಪತ್ರಿಕೆ

ರಾಜ್ಯ ಯೋಜನೆಗಳು ಮುಂಚೂಣಿಯಲ್ಲಿ

ಅಭಿವೃದ್ಧಿ ಸಮ್ಮೇಳನದ ಬದಲಾದ ಭಾರತ ಸಮ್ಮೇಳನ, ತಲಾ ಆದಾಯದಿಂದ ಹೆಚ್ಚಳದಿಂದ ಸಾಧನೆ

ಕನ್ನಡ ಜನಶ್ರೀ ಸುದ್ದಿ ಕಾಲ

ಧಾರವಾಡ: ಕರ್ನಾಟಕ ರಾಜ್ಯದ ಪ್ರಮುಖ ಯೋಜನೆಗಳು ಎಲ್ಲಾ ವಲಯಗಳಲ್ಲಿ ಮುಂಚೂಣಿಯಲ್ಲಿದ್ದು, ಸಮಗ್ರ ಅಭಿವೃದ್ಧಿಗೆ ಪೂರಕವಾಗಿವೆ ಎಂದು ರಾಜ್ಯ ಪಾಲಿಸಿ ಇಲಾಖೆ ಕಾರ್ಯದರ್ಶಿ ವಿಶಾಲ್. ಆರ್ ಹೇಳಿದರು.

ಸೆಂಟರ್ ಫಾರ್ ಮಲ್ಟಿಡಿಸಿಪ್ಲಿನರಿ ಡೆವಲಪ್‌ಮೆಂಟ್ ರಿಸರ್ಚ್ ಮತ್ತು ಬೆಂಗಳೂರಿನ ಸೆಂಟರ್ ಫಾರ್ ಐನ್ಫೋರ್ಮೇಶನ್ ಆಂಡ್ ಸೋಲಿಯರ್ ಸ್ಪೆಷ್ ಸ್ಟಡೀಸ್ ಸಹಯೋಗದಲ್ಲಿ ಓಸಿಯನ್ ಪರ್ಲ್‌ದಲ್ಲಿ ಆಯೋಜಿಸಿದ ಎರಡು ದಿನಗಳ ಅಭಿವೃದ್ಧಿ ಸಮ್ಮೇಳನದ ಬದಲಾದ ಭಾರತ ಎಂಬ ವಿಷಯದ ಕುರಿತು ಆಯೋಜಿಸಿದ ಸಮ್ಮೇಳನವನ್ನು ಉದ್ಘಾಟಿಸಿ ಮಾತನಾಡಿದರು.

ಉತ್ತಮ ತಲಾ ಆದಾಯ, ಪರಿವರ್ತನೆ ಕ್ರಿಯೆಯಿಂದ ಕರ್ನಾಟಕ ರಾಜ್ಯವು ಮುಂಚೂಣಿಯಲ್ಲಿದೆ. ಡಾ.ನಂಜುಂಡಪ್ಪ, ಪೈ ಗೋವಿಂದರಾಜ್ ನೀಡಿದ ವರದಿಗಳ ಅನುಸಾರವಾಗಿ ಪ್ರಾದೇಶಿಕ ಅಸಮತೋಲನ ತೊಡೆದುಹಾಕಲು ಯೋಜನೆ ರೂಪಿಸಲಾಗಿದೆ. ಜನರ ಕಲ್ಯಾಣಕ್ಕಾಗಿ ಉತ್ತಮ ಯೋಜನೆ



ಕಾರ್ಯರೂಪಕ್ಕೆ ತರಲಾಗುತ್ತದೆ. ಸ್ವಲ್ಪವಾದ ಆರ್ಥಿಕ ಹೊಂದಲು ಯೋಜನೆ ಹಮ್ಮಿಕೊಳ್ಳಲಾಗಿದೆ ಎಂದು.

ಅಧ್ಯಕ್ಷತೆ ವಹಿಸಿದ್ದ ಸಿ.ಎಂ.ಡಿ.ಆರ್ ಚೇರಮಣಿ ಕೈಲಾಶಚಂದ್ರ ಶರ್ಮಾ ಮಾತನಾಡಿ, ಶಿಕ್ಷಣ ವಲಯದಲ್ಲಿ ಕ್ರಾಂತಿಕಾರ ಬದಲಾವಣೆಗಳು ಆಗಿದ್ದು, ಪ್ರಮುಖವಾಗಿ ರಾಷ್ಟ್ರೀಯ ಹೊಸ ಶಿಕ್ಷಣ ನೀತಿಯಿಂದ ಕೌಶಲ್ಯಮುಕ್ತವಾದ ಶಿಕ್ಷಣ ಉದ್ಯಮದ ಜೊತೆಗೆ ಹೊಸ ರೂಪ ನೀಡಿದ ಎಂದ ಅವರು ಜ್ಞಾನ

ಆಧಾರಿತ ಶಿಕ್ಷಣ ನೀಡಲು ಬಹು ಶಿಸ್ತಿಯ ವ್ಯವಸ್ಥೆ ಬಹಳ ಉಪಯುಕ್ತವಾಗಿದೆ ಎಂದರು. ಪದವಿ ದೈವಿಕ ಕುಟುಂಬ ಎಂಬ ಪರಿಕಲ್ಪನೆಯಿಂದ ಭಾರತವು ಅಂತರಾಷ್ಟ್ರೀಯ ಮಟ್ಟದಲ್ಲಿ ಗಮನ ಸೆಳೆದಿದೆ ಎಂದರು.

ಸಿ.ಎಮ್.ಡಿ.ಆರ್. ಹೆಚ್ಚುವರಿಯಿಂದ ಹೊರತರಲಾದ ನಿರಂತರತೆ ಜಡುಗಡೆ ಮಾಡಲಾಯಿತು. ಭಾರತ ಜ್ಞಾನ ವ್ಯವಸ್ಥೆ ಎಂಬ ವಿಷಯದ ಕುರಿತು ಆಯೋಜಿಸಿದ ಪ್ರಬಂಧ ಸ್ಪರ್ಧೆಯಲ್ಲಿ ವಿಜೇತರಾದ ವಿವಿಧರೂಪಗಳಿಗೆ

ಪ್ರಮಾಣಪತ್ರ ವಿತರಿಸಲಾಯಿತು.

ಪವಿಂ ಗಾಜುರ ನಿರ್ದೇಶಕ ಪೈ ಭಾಮರಾಯಿ ಮೇತ್ರಿ, ಬೋಯಿಟಾ ಕಂಪನಿ ಸಲಹೆಗಾರ ಪರಪುರಾಪುಲ್ ನಿಟ್ಟಿ ಶಿಕ್ಷಣ ಸಂಸ್ಥೆಯ ಡಾ. ಸಂದೀಪ್ ಶಾಸ್ತ್ರಿ, ಬೆಂಗಳೂರು ವಿಶ್ವವಿದ್ಯಾಲಯದ ಡಾ. ಎಸ್. ಆರ್. ಕೇಶವ, ಅರ್ಥಶಾಸ್ತ್ರಜ್ಞ ಡಾ. ಚರಣ್ ಸಂಗ್, ಗವಗ ಕೆ.ಎಸ್.ಆರ್.ಡಿ.ಪಿ ಕುಲಕರ್ಣಿ ಪೈ ವಿವ್ಯಾಕಾಂತ್ ಎಸ್. ಚಟಪ್ಪ, ಹೈದರಾಬಾದ್ ವಿಶ್ವವಿದ್ಯಾಲಯ ಕುಲಕರ್ಣಿ ಡಾ. ಡಿ. ಜೆ ರಾಜ್ ಸಂದೇಶದಲ್ಲಿ ಭಾಗವಹಿಸಿದ್ದರು.

ಪಾಲಿಸಿ ಇಲಾಖೆಯ ವಿವಿ ಉಪಕುಲಕರ್ಣಿ ಪೈ ಎಂ. ಆರ್. ಗಂಗಾಧರ್, ಕವಿವಿ ಮಾಜಿ ಉಪಕುಲಕರ್ಣಿ ಪೈ ಪ್ರವೀರ್ ಗಾಯಿ, ಕರ್ನಾಟಕ ಪಾನಪದ ವಿಶ್ವವಿದ್ಯಾಲಯದ ಮಾಜಿ ಉಪಕುಲಕರ್ಣಿ ಪೈ.ಡಿ. ಪಿ. ನಾರಾಯ್, ಗಿರಿದರ್ ಕಿಶೋರ್ ಸಿಎಂಐಆರ್ ಆಡಳಿತ ಮಂಡಳಿ ಸದಸ್ಯರಾದ ಪೈ.ಪೈ ಪ್ರಭಾಕರ್, ಪೈ. ಸಿ. ರಾಜು ಮತ್ತು ಪೈ. ವಿಜಯಲಕ್ಷ್ಮಿ ಅಧ್ಯಕ್ಷಭಾವಿ, ಪೈ. ಪಿ. ಎಚ್. ನಾಗೇಶ್, ಪೈ. ಪಂಪರಿಂಗಪ್ಪ, ಪೈ. ಮುಗ್ಗುಲರ್, ಪೈ. ಮಗೋಜಿ ದೇವ್, ಸಿಎಂಐಆರ್ ರಿಶಪ್ಪಾರ್ ಹೇಮಪ್ಪಾ ಹುಸುರ್ನ್ ಉಪಸ್ಥಿತರಿದ್ದರು.

ಸಂಜೆ ಮಾಧ್ಯಮ

2
21 Mar 2025

ಶಿಕ್ಷಣ ವ್ಯವಸ್ಥೆಯಲ್ಲಿ ಡಿಜಿಟಲ್ ಆಧಾರಿತ ತಂತ್ರಜ್ಞಾನ ಪರಿಣಾಮಕಾರಿ ಪಾತ್ರ : ಮಹಾದೇವ



ಧಾರವಾಡ : ಪ್ರಸ್ತುತ ಶಿಕ್ಷಣ ವ್ಯವಸ್ಥೆಯಲ್ಲಿ ಬಹಳ ಬದಲಾವಣೆ ಆಗಿದ್ದು, ಡಿಜಿಟಲ್ ಆಧಾರಿತ ತಂತ್ರಜ್ಞಾನ ಪರಿಣಾಮಕಾರಿಯಾಗಿ ಪಾತ್ರ ವಹಿಸಿದೆ ಎಂದು ಧಾರವಾಡದ ಭಾರತೀಯ ಮಾಹಿತಿ ಮತ್ತು ತಂತ್ರಜ್ಞಾನ ಸಂಸ್ಥೆಯ ನಿರ್ದೇಶಕ ಎಸ್.ಆರ್ ಮಹಾದೇವ ಪ್ರಸ್ತುತ ಅಭಿಪ್ರಾಯಪಟ್ಟರು.

ಸೆಂಟರ್ ಫಾರ್ ಮಲ್ಟಿಡಿಸಿಪ್ಲಿನರಿ ಡೆವಲಪ್‌ಮೆಂಟ್ ರಿಸರ್ಚ್ ಮತ್ತು ಬೆಂಗಳೂರಿನ ಸೆಂಟರ್ ಫಾರ್ ಐನ್ಫೋರ್ಮೇಶನ್ ಆಂಡ್ ಸೋಲಿಯರ್ ಸ್ಪೆಷ್ ಸ್ಟಡೀಸ್ ಸಹಯೋಗದಲ್ಲಿ ಓಸಿಯನ್ ಪರ್ಲ್ ದಲ್ಲಿ ಆಯೋಜಿಸಿದ ಎರಡು ದಿನಗಳ ಅಭಿವೃದ್ಧಿ ಸಮ್ಮೇಳನದ ಬದಲಾದ ಭಾರತ ಎಂಬ ವಿಷಯದ ಕುರಿತು

ನಿರ್ಣಾಯಕ ಪಾತ್ರ ವಹಿಸಲಿದೆ ಎಂದು ಯೋಜನೆಗಳನ್ನು ರೂಪಿಸುವಲ್ಲಿ ಶಿಕ್ಷಣ ಸಂಸ್ಥೆಗಳ ಪಾತ್ರ ಮಹತ್ವ ಪಡೆದಿವೆ ಎಂದ ಅವರು ಇಂದು ಮೌಲ್ಯಧಾರಿತ ಶಿಕ್ಷಣವನ್ನು ಎಂದಿನ ಯುವ ಜನಾಂಗಕ್ಕೆ ನೀಡಬೇಕೆಂದಿವೆ ಎಂದರು. ಉನ್ನತ ಶಿಕ್ಷಣದಲ್ಲಿ ಅನ್ವೇಷಣಾ ಉದ್ಯಮಕೀಲತೆಗೆ ಹೆಚ್ಚು ಮಹತ್ವ ನೀಡಬೇಕು ಎಂದರು

ಬೆಂಗಳೂರಿನ ಸಾಮಾಜಿಕ ತ್ರೈಕೋಕ ಅಧ್ಯಯನಗಳ ಸಂಸ್ಥೆಯ ಸದಸ್ಯ ಡಾ.ಎಸ್ ಮುರಲಿದರ ಮಾತನಾಡಿ...ಧಾರವಾಡ ಅಭಿವೃದ್ಧಿ ಸೂಚಕ ಎಂಬ ಕತಿಯಲ್ಲಿ ಇದ್ದು ಎಲ್ಲಾ ಕ್ಷೇತ್ರವು ಸ್ವೀಕರಿಸಿದ

ಪರಿವರ್ತನೆ ಹೊಂದುತ್ತಿದೆ ಎಂದ ಅವರು ಜ್ಞಾನ ಪರಿವರ್ತನೆಯ ಮೂಲವಾಗಿವೆ ಎಂದರು.ಪ್ರಸ್ತುತ ತಂತ್ರಜ್ಞಾನ ಕೃಷಿ, ಕೈಗಾರಿಕಾ, ಶಿಕ್ಷಣ ,ಆರೋಗ್ಯ ಕ್ಷೇತ್ರದಲ್ಲಿ ಪಾಸುಹೊಕ್ಕಾಗಿದೆ ಎಂದರು.

ಸಿ.ಎಮ್.ಡಿ.ಆರ್ ಚೇರಮಣಿ ಪೈ.ಕೈಲಾಶ ಚಂದ್ರ ಶರ್ಮಾ ಮಾತನಾಡಿ, ಭಾರತವು ವಿವಿಧ ಕ್ಷೇತ್ರದಲ್ಲಿ ಬದಲಾವಣೆ ಆಗುತ್ತಲಿದೆ ಜಗತ್ತಿನಲ್ಲಿ ಭಾರತ ಒಂದು ಮಾದರಿ ದೇಶವಾಗಿ ರೂಪಗೊಳ್ಳುತ್ತದೆ ಎಂದ ಅವರು ಜ್ಞಾನ ಮತ್ತು ಶಿಕ್ಷಣ ಕ್ಷೇತ್ರದಲ್ಲಿ ಅಗಾಧವಾದ ಬದಲಾವಣೆ ಹೊಂದುತ್ತಲಿದೆ ಎಂದರು.

ಈ ಸಂದರ್ಭದಲ್ಲಿ ಸಿ.ಎಮ್.ಡಿ.ಆರ್ ಪ್ರಾಧ್ಯಾಪಕ ಪೈ.ಪೈ ಪ್ರಭಾಕರ್ ಎರಡು ದಿನಗಳ ಸಮ್ಮೇಳನದ ವರದಿ ಪ್ರಸ್ತುತ ಪಡಿಸಿದರು.

ಸಿಎಂಐಆರ್ ಪ್ರಾಧ್ಯಾಪಕರಾದ ಪೈ.ಪೈ ಪ್ರಭಾಕರ್, ಪೈ.ಬಸವ ಪ್ರಭು ಚಿರಂ, ಪೈ. ಸಿ. ರಾಜು, ಪಾವರಿ ವಿಶ್ವವಿದ್ಯಾಲಯ ಕುಲಕರ್ಣಿ ಡಾ.ಎಸ್.ಬಿ.ವಾಗಲಕೋಟಿ, ದೇಶಪಾಂಡೆ ಫೌಢೇಶನ್ ಟ್ರಸ್ಟಿ ಶ್ರೀಕಾಂತ್ ದೇಶಪಾಂಡೆ, ಬೆಂಗಳೂರು ವಿಶ್ವವಿದ್ಯಾಲಯದ ಪ್ರಾಧ್ಯಾಪಕ ಪೈ. ಎಸ್. ಆರ್.ಕೇಶವ ಸೇರಿದಂತೆ ಇತರರು ಇದ್ದರು.

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Anugraha, 4-512/9-1, Near KalpaVriksha Lodge,
Mantralayam-518345

14) Prof. P.R. Panchamukhi

Former Chairman & Founder Member, CMDR,
(Professor Emeritus) 53-54, Doctors Colony,
Near Soudhamini Mangala Karyalaya
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