



# **2ND ASEAN INDIA GRASSROOTS INNOVATION FORUM**

DAVAO CITY, PHILIPPINES

20 - 22 NOVEMBER, 2019



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## **EXECUTIVE SUMMARY**

With the objective of enhancing co-operation between India and ASEAN Member States in the field of Science, Technology and Innovation (STI), the Department of Science and Technology (DST), India; the Department of Science and Technology (DOST), Philippines and the National Innovation Foundation (NIF) – India organized the 2<sup>nd</sup> ASEAN India Grassroots Innovation Forum at Davao City, Philippines between 20<sup>th</sup> and 22<sup>nd</sup> November, 2019.

Commensurate with India's position in considering ASEAN at the heart of country's Act East Policy, the ASEAN India Grassroots Innovation Forum, be it the 2018 edition in Indonesia or this year's forum in Philippines, has become an effective instrument driving a meaningful relationship between India and the ASEAN Member States (AMS). The grassroots innovators, the student innovators, the experts and professionals from the participating countries continue to engage in meaningful dialogues with each other leading to sharing of knowledge and an opportunity to grow together, aligned with "Shared values, common destiny" approach that India and ASEAN has been advocating in recent times for strengthening the relationships.

The key attributes of the three day forum was Panel discussions on topics of contemporary importance like Incubation of student innovations, Best practices of Grassroots Innovation and the Grassroots Innovation eco-system; along with competition in two distinct categories — (a) The Grassroots Innovation competition (b) The Student Innovation Competition. Simultaneously, the participants in the forum were also demonstrating the inherent merit of their innovations through an Exhibition. Overall the forum attempts to raise the profile of each and every participant by virtue of an implicitly imparted learning rooted in profile of fellow participant from another country. The Science, Technology and Innovation excellence of one country has the potential to create a societal impact in another country, however, the first step is building cognizance and scouting of a potentially impactful "product" or "service" rooted in Science, Technology and Innovation. It's here, where the role of ASEAN India Grassroots Innovation Forum is paramount and worthy of a growth in years to come.

The 2<sup>nd</sup> ASEAN India Grassroots Innovation Forum proved to be a reason for double celebration for India as the first prize in both the categories viz. grassroots innovation and student innovation was won by innovators from India, Mr Thirupati Nannam and Mr Pranjal Srivastava respectively. More importantly, it was a great exposure for fifteen innovators representing India and fifty two innovators representing various AMS.

The integration of the innovators in the program gave the forum its diverse perspectives and allowed for real engagements focusing on the issues anchored by the experiences of the young innovators working to transform the realities of their respective countries. Importantly, it allowed for engagement between policy makers, the private sector, academics, student and grassroots innovators to build alliances that will contribute to driving innovation in AMS and India, as well as facilitate exchange and sharing of experiences among stakeholders across the ASEAN region and with India.

At the end of three day forum, following four objectives envisaged at the beginning are desired to be broadly fulfilled -

- Progressively advocate Science, Technology & Innovation by sharing experience and best practices in grassroots innovation among ASEAN communities and India
- Encourage innovation among the students and grassroots communities in AMS
- Develop and strengthen the regulations to create ecosystem for grassroots innovation
- Collaborate to promote and socialize grassroots innovations to governments, academics, business sectors and the broader communities

Overall, the three day forum along with parallel activities witnessed participation of 720 delegates comprising of stakeholders from the government, industry, academia, innovators and others from the 10 ASEAN Member States (AMS) namely Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand, and Vietnam together with the ASEAN Dialogue Partner being India.

# INAUGURAL SESSION OF 2<sup>ND</sup> ASEAN GRASSROOTS INNOVATION FORUM

Delivering the Inaugural address, Dr. Rowena Cristina Guevara, Undersecretary for Research and Development, DOST welcomed delegates from India and all ASEAN Member States (AMS). She touched upon the concurrent organization of Grassroots Innovation and Inno-Tech summit in Philippines.



Dr. Rowena Cristina Guevara, Undersecretary for Research and Development, DOST, Philippines

"I call on all sectors of our society to seek new opportunities to foster improved scientific, technological and innovative solutions and double down our efforts to synergize government-academe-industry partnership to bring significant changes in the region's STI landscape," said DOST Undersecretary for R&D Rowena Cristina Guevara at the opening ceremony. "We also need to build consensus on the role of STI as a driving force for sustainable development," added Undersecretary Guevara.

She observed that though there is tremendous advancement of Science & technology throughout the globe, yet there are certain challenges that need to be addressed. In her

view, innovation need not be complex, end application is important. She urged that all sectors of the society need to address and bring significant changes to seek new opportunities towards the challenges that face AMS. For this there is a need to conceptualize the innovations in Science & Technology and efforts should be vested in synergizing the government, industry and civil society to significant development in scientific landscape. She also shared that DOST considers R & D as the core of economic and social growth within the country and towards fulfilling SDG GOAL 17- Partnership for growth. She expressed her hope that recent collaborative efforts between India and Philippines will create significant impact in days to come.

H.E Jaideep Majumdar, Ambassador of India to the Republic of Philippines appreciated India's role in technology, governance, delivery of public services and improvement in the lifestyle of the poor sections of the society. He mentioned that India and ASEAN hold 25 years of partnership which will be further strengthened through forums like these.



H.E Jaideep Majumdar, Ambassador of India to the Republic of Philippines

Mr George T Barcelon, Chairman, Philippine Chamber of Commerce and industry (PCCI) highlighted the importance of 5H's to be resolved through the collaborations at ASEAN Forum: Hunger, Health services, Higher Education, Housing and Happiness index.

Mr Subrat Tripathy CEO, Dharma Port, Adani Ports and Dr Aloknath De, CVP – Samsung were other delegates who spoke at the inaugural session and reiterated India's commitment towards strengthening relationship between India and ASEAN Member States (AMS) on principles of Science, Technology and Innovation.

### INAUGURATION OF EXHIBITION



The exhibition with participation from India and AMS was jointly inaugurated by senior representatives attending the forum

The Exhibition encompassing participation from India and ASEAN Member States (AMS) was jointly inaugurated by Dr. Rowena Cristina Guevara, Undersecretary for Research and Development, DOST; H.E Jaideep Majumdar, Ambassador of India to the Republic of Philippines and Mr George T Barcelon, Chairman, Philippine Chamber of Commerce and industry (PCCI).

About 45 participants each from ASEAN Member States and India showcased the merit of their innovations and entrepreneurship ventures during the three day exhibition.





Student innovators from India demonstrating their innovations during the Innovation exhibition

Some key exhibitors country wise were as follows -

Thailand - Thailand Institute of Scientific and Technological Research (TISTR) & Geoinformatics and Space Technology Development Agency (GISTDA) Indonesia - PT Merapi Tani Instrumen, PT Telaga Filter Air Minum and PT Master Solusi Indonesia

#### Philippines -

- Industrial Technology Development Institute
- Technology Application and Promotion Institute
- Advanced Science and Technology Institute
- Philippine Institute of Volcanology and Seismolog
- Ateneo Shoe Academy
- Philippine Genome Center- Mindanao Satellite Facility
- DigiHub
- Food Processing and Innovation Center
- ComFoods
- Mindanao Renewable Energy Center
- SMARRDEC
- Vertical Helophyte Filter System
- STARBOOKS
- SETUP
- Coconut Husk Decorticator
- Modified Braille Aparatus
- Snap on and off Handle for 5 Gallon Bottle
- Mechanical Cacao Fruit Bagger
- Odor Control Composition
- ORHealth
- Florence Home Kitchen
- Pastil Queen
- MS3 Agriventures
- Davao Bioskin Tech.
- Teles Lamps
- Ana's Breeders Farm
- Yvette's Bags and Beads
- Nalabagga Gem Food Products
- Dabawenyo Capsicum
- AiFEN True Water Inc.



Innovators / Entrepreneurs from AMS participating in the Exhibition



Grassroots innovators from India demonstrating their innovations during the Innovation exhibition





Innovators / Entrepreneurs from AMS participating in the Exhibition











H.E Jaideep Majumdar, Ambassador of India to the Republic of Philippines interacting with innovators from India and encouraging them



Ms Aarushi Tandon, a student Innovator from India participating in the Exhibition



Innovators from Lao PDR explaining about their innovations to visitors

#### India –

#### **Innovators**

- Thirupati Nannam Tree Climber
- Ravindra Ganpat Chopade Golden Embossing Machine
- Ghanshyam Bhikaji Jadhav Tillage Equipment with Mechanical Sensor
- Saravanamuthu Shanmugam Modified bed for patients
- Gurmeet Singh Modified tractor operated sprayer
- Madhav Ajay Lavakare Assistive spectacles for the deaf with voice to text conversion and display feature
- Pranjal Srivastava Thermoelectric Stove Generator
- Vasa Sekhar Multipurpose Agriculture Wheel Sprayer and Water sprinkling system
- Babi Gogoi Tea Processing machinery for small gardens
- Harsha Aurobindo Satpathy Wearable indicator to ensure body hydration
- Shrutiparnna Ratha Saving water through usage monitor
- Anushree Nagarajappa Eco Friendly Agricultural Tools
- Ashaben S Pawar Sewage Cleaning Machine
- Bandana Plucking device for Lemon, Karanda (karonda) and Berries
- Aarushi Tandon Innovative and low cost bed with detachable wheelchair

#### Others -

- Althea DRF Lifesciences ltd.
- StarShield Technologies Pvt Ltd
- LetsEndorse Development
- Audicor Cardiometrics Pvt. Ltd
- Sattva MedTech Pvt. Ltd.
- Garv Toilets
- NSG India
- Digibook Technologies P Ltd
- Cropin
- Parvata Foods Pvt. Ltd.
- WaterAid India
- Blessings Palm Pvt. Ltd.
- Monolith Technologies Private Limited (formerly La Vela Pictures Pvt. Ltd)
- InvoViron Industries Trading Pvt Ltd
- Kristnam Technologies
- Acquafront Infrastructure Pvt. Ltd.
- Amol Carbons Pvt. Ltd.

## **TECHNICAL SESSIONS**

On Day 1, three technical sessions were organized and to begin with there was a Keynote session by Undersecretary Brenda L. Nazareth-Manzano, Regional Operations, DOST and Mr Tushar Garg, Scientist, National Innovation Foundation (NIF) – India.



Undersecretary Brenda L. Nazareth - Manzano (Philippines) delivering a keynote address



The panel discussion was witnessed by nearly 80 participants from 11 different countries

Undersecretary Brenda L. Nazareth - Manzano touched upon the importance of grassroots innovation in the world at large, and Philippines understanding this really well as evident in country's recently enacted legislation to support grassroots innovators in the country.

Mr Tushar Garg, Scientist, NIF spoke about the possibilities and the extent to which a deeper engagement can be envisaged between India and AMS in relation to Science,

Technology and Innovation. He further shared the case studies from India of various innovators who created a huge social impact and the pioneering work of NIF in this domain.



Mr Tushar Garg, Scientist, NIF – India delivering a keynote address

(I)
Incubation of student innovations

(II)
Best practices of
Grassroots
Innovations

(III)
Grassroots
Innovations ecosystem

3 distinct themes identified for panel discussion during 2<sup>nd</sup> ASEAN India Grassroots Innovation forum



Dr. Mrutyunjay Suar (Left) and Dr Fidero Kuok (Right) during Panel discussion on "Incubation of Student Innovations"





Dr. Anthony C. Sales (Left) and Mr Quang Vu Xuan (Right) delivering presentations on the topic "Grassroots Innovation Eco-system" and "Incubation of Student Innovations" respectively

The 1<sup>st</sup> topic for presentation and discussion was "Incubation of Student Innovations" and the three panelists from India, Cambodia and Vietnam delivered their individual presentations.

Dr. Mrutyunjay Suar, Director, School of Biotechnology, Kalinga Institute of Industrial Technology (KIIT), India walked the audience through the journey of KIIT in terms of incubation and some successful present day incubates - Prantae Solutions and journey of Dr Nusrat J M Sanghamitra from CyCa oncosolutions and others.

Dr Fidero Kuok, Faculty of Chemical and Food Engineering, Institute of Technology of Cambodia, talked about role of University Research in Accelerating Student Innovations with case study of Techno Incubation Center, Cambodia. He also touched upon already adopted best practices of incubation, with special emphasis on Bi4FPD i.e. Business Incubation for Food Product Development.



Ms Manilat KINPHOUNSINH (Left) and Mr. Rex Lor (Right) delivering presentation on the topic "Best Practices of Grassroots Innovation"

Mr Quang Vu Xuan, CEO of BEST Training & Consulting (BEST: Business – Entrepreneurship – Skills - Technology), Vietnam took the audience through the journey of student innovations and incubation in Vietnam.



Mr Wachiraphan Charoenwet (Left) and Dr. Kyaw Kyaw Moe (Right) delivering presentation on the topic "Best Practices of Grassroots Innovation" and "Best Practices of Grassroots Innovation" respectively



Dr Sanjeev Saxena, ADG – ICAR, India sharing his experiences on Grassroots Innovation Eco-system

The 2<sup>nd</sup> topic for presentation and discussion was "Best Practices of Grassroots Innovation" and the three panelists from Lao PDR, Thailand and Philippines delivered their individual presentations.

Ms Manilat KINPHOUNSINH, Deputy Director of Promote innovation Division, Department of Technology and Innovation, Ministry of Science and Technology, Lao PDR; Mr. Rex Lor, Head of Solutions Mapping at UNDP Accelerator Labs PH, Philippines and Mr Wachiraphan Charoenwet, Thailand represented their respective country viewpoints on the topic "Best Practices of Grassroots Innovation" before the audience.

Through her presentation, Ms Manilat KINPHOUNSINH from Lao PDR updated the audience on status of grassroots innovation in the country and the anticipated developments in future.

Mr. Rex Lor, Head of Solutions Mapping at UNDP Accelerator Labs PH, Philippines touched upon Accelerator Labs, Solution mapping, and realizing a global network of grassroots innovators & solutions.

The delegate from Thailand also shared the ongoing projects of National Science Museum, Thailand.

The 3<sup>rd</sup> topic for presentation and discussion was "Grassroots Innovation Eco-system" and the three panelists from Myanmar, India and Philippines delivered their individual presentations.

Dr. Anthony C. Sales, Regional Director, DOST XI, Philippines; Dr Sanjeev Saxena, ADG – ICAR (Indian Council of Agricultural Research), India and Dr. Kyaw Kyaw Moe, Myanmar represented their respective country viewpoints on the topic "Grassroots Innovation Ecosystem" before the audience.

Dr. Kyaw Kyaw Moe from Myanmar touched upon selected innovations like Clamping Prism, Fixturing Clamp, Chain Sprocket Housing, Plastic Packing Machine, Car Washing Machine, Plant Stand, Pamphlet Stand, Drilling Machine, Hydraulic Press Machine, Paper Cutting Machine, LED Cube with Arduino, Semi Closed Impeller and Closed Impeller. He also referenced some other innovations like lawn mower aircraft, Advance cook stove, Lead removal from waste water, Automatic Can crusher and Probiotic bacteria.

Dr. Anthony C. Sales, Regional Director, DOST XI, Philippines walked the audience through GRIND 2022: Framework Plan for Grassroots Innovation in the Philippines. In this interesting presentation, he attributed "The Indian Experience" as an inspiration for the Philippines for grassroots innovations. He also touched upon 4 L's (Learning, Leveraging, Linking and Legitimization) for the framework and also shared Philippines way of defining grassroots innovation as "Innovations emanating from the community, specifically those without formal R&D background, to include those from the marginalized sectors of rural

farmers/Fisher folks, students, indigenous peoples, women, people with disabilities, micro, small and medium enterprises, and senior citizens".

Dr Sanjeev Saxena, ADG – ICAR, India sharing his experiences on Grassroots Innovation Eco-system with an emphasis on Agricultural sector.



Engr. Franch Maverick Lorilla, Agilab Technology Business Incubator Manager, University of Southeastern, Philippines summarizing the discussion



The panel discussion was witnessed by nearly 80 participants from 11 different countries

The overall discussion was summarized by Engr. Franch Maverick Lorilla, Agilab Technology Business Incubator Manager, University of Southeastern Philippines.

Some of the key points that he touched upon include the following -

As grassroots innovation are typically bottom-up initiatives, public policies should support the emergence, recognition and diffusion of grassroots innovations. Through solution mapping it is possible to build a global network of grassroots & innovation solutions. Options need to be explored for cooperation and collaboration at the regional level to support grassroots innovation ecosystems, in terms of knowledge networks, supporting institutional capacities and providing policy advice. It's important to Learn, Leverage, Legitimate and Link the grassroots innovations that spur as a solution from the community.



Group photograph on day 1 after the Technical sessions

Moreover, focus should be on incubation of student innovations through capacity building and helping them refine their innovative products. TBIs therefore have a significant role to play. Fellowships from the government will help and motivate the students in the direction of creativity.

The diversity of nationality, research, challenges and solution that emerged through discussions at the technical panels facilitated dialogues among stakeholders to build relationships, share experiences, learn, as well as set milestones and take stock.

## STUDENT INNOVATION COMPETITION

Forty students from seven countries participated in a Student Innovation Competition adjudicated by a panel of following five jury members from different countries —

- Prof S N Naik (CRDT, IIT Delhi, India)
- Dr. Fidero Kuok (Dean, Institute of Technology of Cambodia, Cambodia)

- Mr Naksayfong KHOUNNAVONGSA (Technical Officer, Science Promotion and Service Center, Department of Science, MOST, Lao PDR)
- Mr WARINTHORN CHAVASIRI (Assistant Professor, Department of Chemistry, Faculty of Science, Chulalongkorn University, Thailand)
- Mr Mohamad Latife Bin Shamsuddin (Senior Executive, Malaysian Innovation Foundation, Malaysia)



Malaysia, an AMS, through its social media highlighting its jury representative member (Source: Facebook)















Forty Student innovators from seven countries participated in the student innovation competition

#### The participants by country were as follows –

#### Cambodia

- o Mr. Chea Virak
- o Ms Seyla Sour
- Ms. Kao Chandavy
- Ms. Sreng Laymey
- o Ms. You Rany

#### India

- o Anushree Nagarajappa
- o Arushi Tandon
- Ashaben S Pawar
- o Bandana
- Harsha Aurobindo Satpathy
- Madhav Ajay Lavakare
- o Pranjal Srivastava
- o Shrutiparnna Ratha
- Vasa Sekhar

#### Indonesia

- Alwan Hanif Ramadhan
- o Firman Fathoni
- Muchamad Ravi Ramadhani
- Neng Rizqi Ni'mah
- o Rizka Fajriana Putri Ramadhani

#### Laos PDR

- Mr. Anouphab SIHARATH
- o Mr. Chansaveuy VANNAVONG
- Mr. Santi KEOMEXAY
- Mr. Tavanh INTHAVONG
- o Ms. Malisa SAYAVONG

#### Myanmar

- o Mr. Min Htet Zaw
- o Mr. Nyi Nyi Win
- o Mr. Phyo Thu Ayng
- Ms. Kyawt Kyawt Khine
- o Ms. Thet Hnin Swe

#### Philippines

- o Francis Gift Jhoy E. Paculanang
- o Genelito T. Marte Jr.

- o Jeanne Loise S. Pempeña
- Julieferd C. Torres
- Luzette Renee G. Llanos
- o Neri H. de Asis Jr.
- o Rejino F. Oroz

#### Thailand

- MASTER PAYRAMIN LERDPONG
- MASTER PRYNN JITTIPHALANGSRI
- MASTER SIRAPOP TANGVORAKASEM
- MASTER Tanakorn Wongaree



Prof S N Naik, a Jury member from India interacting with student innovators during the student innovation competition

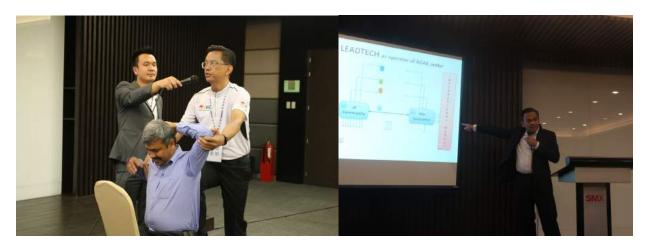
## **GRASSROOTS INNOVATION COMPETITION**

Twenty seven innovators from six countries participated in a Grassroots Innovation Competition adjudicated by a panel of following four jury members from four different countries:

- Prof G M Bhat (Director, Institute of Technology, University of Kashmir, India)
- Mr Edwar Yazid (Senior Researcher, Indonesian Institute of Sciences, Indonesia)

- Mr. Khin Maung Myint (Joint Secretary General, Fed. Myanmar Engineering Society Myanmar)
- Mr. Tran Anh Quan (Director, Training Center, Institute for industrial Machinery & Instruments, Vietnam)







Twenty seven innovators from six countries participated in the grassroots innovation competition









Twenty seven innovators from six countries participated in the grassroots innovation competition





Twenty seven innovators from six countries participated in the grassroots innovation competition

The Twenty seven participants by country were as follows –

- Cambodia
  - Mr. Seang Sovuthy
- India
  - o Babi Gogoi
  - o Ghanshyam Bhikaji Jadhav
  - o Gurmeet Singh
  - o Ravindra Ganpat Chopade
  - o Saravanamuthu Shanmugam
  - Thirupati Nannam
- Indonesia
  - o Hafizh Pristiyono
  - o Novy Hapsari
  - Saut Marpaung
  - o Suprapto
  - Tegar Nur Hidayat
- Laos PDR
  - o Mr. Bounthavy SOUDTHICHACK

- Mr. Latsamee THAMMAVONG
- Mr. Taithong SISAYKEO
- o Mr. Xaiyaphone MOUKDA
- Ms. Paly SOTOUKY

#### Philippines

- o Engr. Reyman Zamora
- Jason Occidental
- King Francis Genilla
- o Mr. Denmar Perez
- Mr. Rey Macandang

#### Thailand

- Mr. Amphol Aphathanakorn
- Mr. Jakrapol Baesuvan
- Mr. PoonChai Chitanuntavitaya
- o Mr. Tapol Tongjitkasem
- Ms. Onaraya Voravarachai





Prof G M Bhat (Left) and Mr Edwar Yazid (Right) amidst Q&A with innovators participating in Grassroots Innovation Competition

## AWARD CEREMONY

The first prize in the grassroots innovation category went to Mr Thirupati Nannam, a grassroots innovator from India who has come up with an innovation "pole climber" which is a creative and frugal solution. It's an affordable, inexpensive and safe product used for both the pole climbing and tree climbing.

The prizes were conferred to all six winners by Dr Leah J Buendia, Assistant Secretary, Department of Science and Technology (DOST), Philippines and Mr Tushar Garg, Scientist, National Innovation Foundation (NIF) – India.



Mr Thirupati Nannam (India) was conferred with the 1st prize in the Grassroots Innovation Category for the innovation Pole Climber



Mr Pranjal Srivastava (India) was conferred with the 1st prize in the Student Innovation Category for the innovation Thermoelectric Stove generator





The second prize (Top) and third prize (Bottom) winners of the student innovation (left) and grassroots innovation (right) category

The prize includes an amount of USD 1500 (1st), USD 1000 (2nd) and USD 500 (3rd) and a Trophy.

The second prize in the grassroots innovation category went to Mr Tegar Nur Hidayat from Indonesia who has come up with an innovative product titled "Palm fruit collector", designed and developed to effectively and efficiently collect palm fruit and help rural farmers increase their income and avoid child labour.

The third prize in the grassroots innovation category went to Mr Ravindra Ganpat Chopade from India who has come up with an innovation titled Golden Embossing Machine which is a state of the art product providing an automated solution to manual printing (student thesis and dissertations etc) thereby saving their time.

The first prize in the student innovation category went to Mr Pranjal Srivastava from India who has come with an innovation titled "Thermoelectric Stove generator".

The second prize in the student innovation category went to Ms Neng Rizqi Ni'mah from Indonesia who has come with an innovation titled "Multifunction Ruler".

The third prize in the student innovation category went to Mr Madhav Ajay Lavakare from India who has come with an innovation titled "Assistive spectacles for the deaf with voice to text conversion".



Group photograph of all 6 prize winners

"I am positive that the ideas that emerged from our discussions and dialogues will eventually come into fruition to help us leverage our standing and harness our potentials to become frontrunners in science, technology and innovation," said by DOST Assistant Secretary Buendia at the closing ceremony. "We ought to see the recommendations from this forum realized, applied or improved upon in our own countries and create or support innovative policies that spell the difference for our citizens," she added.





Delegates from Cambodia

Delegates from Myanmar



Participants from Philippines (Left) and Delegates from Malaysia (Right)





Delegates from Lao PDR

## THE ROAD AHEAD

The Three day 2nd ASEAN India Grassroots Innovation forum concluded with a lot of learning for more than one hundred participants from India and ASEAN Member States. More importantly, there was a lot of optimism and positivity amongst all participants and citizens from eleven countries now look forward to the 3<sup>rd</sup> edition of grassroots innovation forum.

As a matter of fact the participation levels were significantly higher in comparison to the 1<sup>st</sup> ASEAN India Grassroots Innovation held at Jakarta, Indonesia during September 2018. In every component of the forum, there is a rise in participation levels and also the 2<sup>nd</sup> forum was far more diversified in terms of representation from various countries.

Few encouraging statistics being -

- No. of student innovators: 2019 (40), 2018 (28) A rise of 42%
  - In 2018, 6 countries participated whereas in 2019, a total of 7 countries participated.
- No. of grassroots innovators: 2019 (27), 2018 (11) A rise of 145%
  - In 2018, 3 countries participated whereas in 2019, a total of 6 countries participated.
- Whereas in 2018, jury had a representation from five countries; in 2019, the jury had representation from 8 countries.
- Whereas in 2018, the panel discussions had a representation from six countries; in 2019, the panelists represented 7 countries.

The above statistics reveal that both India and ASEAN Member States (AMS) are taking enhanced interest in the forum, and the Science, Technology and Innovation based cooperation between India and AMS is all set to grow such that citizens could benefit.

## ANNEXURE 1 (MEDIA COVERAGE)

#	TITLE	SOURCE	LINK
1	India sees agri linkages in Davao Region, Mindanao	Edge Davao	https://edgedavao.net/the-economy/2019/11/21/india-sees-agri-linkages-in-davao-region-n
2	Researchers sent to India	SunStar Davao	https://www.sunstar.com.ph/article/1833173/Davao/Business/Researchers-sent-to-India
3	ASEAN AND INDIA SET FOOT IN DAVAO CITY FOR SCIENCE, TECHNOLOGY AND INNOVATION	PIA	http://www.dost.gov.ph/knowledge-resources/news/62-2019-news/1746-asean-and-india-set-foofor-science-technology-and-innovation-2019-11-28.html
4	PH strengthens ties with India on science, technology , innovation	Manila News	https://www.manilanews.net/news/263219636/ph-strengthens-ties-with-india-on-science-technol
5	PH strengthens ties with India on science, technology , innovation	PIA	https://pia.gov.ph/news/articles/1030767
6	ASEAN-India forum tackles science, tech & innovation	Manila Bulletin	https://news.mb.com.ph/2019/12/01/asean-india-forum-tackles-science-tech-innovation/
7	ASEAN-INDIA GRASSROOTS INNOVATION FORUM AND 2nd INNOTECH SUMMIT,	PTV Mindanao	https://www.facebook.com/ptvnewsmindanao/videos/424153938251659/?v=424153938251659

	GIPAHIGAYON SA DAVAO CITY		
8	ASEAN-India Grassroots Innovation Forum and 2nd Innotech Summit, gipahigayon sa Davao City	PTVIsMin News Break	https://www.youtube.com/watch?v=ZQhKBbOleUg&feature=share&fbclid=IwAR39n1u0y-F3MxBuFuiX_lh9AecietCqo2GryC8iHIIyB0HU
9	Indians excel at ASEAN India Grassroots Innovation Forum	DST	https://dst.gov.in/indians-excel-asean-india-grassroots-innovation-forum
10	ASEAN AND INDIA SET FOOT IN DAVAO CITY FOR SCIENCE, TECHNOLOGY AND INNOVATION	DOST	http://dost.gov.ph/knowledge-resources/news/62-2019-news/1746-asean-and-india-set-foot-in-discience-technology-and-innovation-2019-11-28.html
11	India ASEAN InnoTech Summit 2019	SMAARDEC	http://smaarrdec.usep.edu.ph/single-page/?post_id=1103
12	India, PHL to pilot-test high-yield garlic, onion farming in Mindanao	Business World	https://www.bworldonline.com/india-phl-to-pilot-test-high-yield-garlic-onion-farming-in-mindanao
13	ASEAN-India Grassroots Innovation Forum, nagpapatuloy sa Davao City	Radyo Pilipinas	http://radyopilipinas.ph/rp-one/articles/national/asean-india-grassroots-innovation-forum-nagpapacity
14	NEWS BREAK: ASEAN-India Grassroots Innovation Forum and 2nd Innotech Summit, gipahigayon sa Davao City	PTV Break	https://www.scoopnest.com/s/Sa%20davao