



राष्ट्रीय नवप्रवर्तन प्रतिष्ठान — भारत

विज्ञान एवं प्रौद्योगिकी विभाग, भारत सरकार का स्वायत्तशासी संस्थान

National Innovation Foundation - India

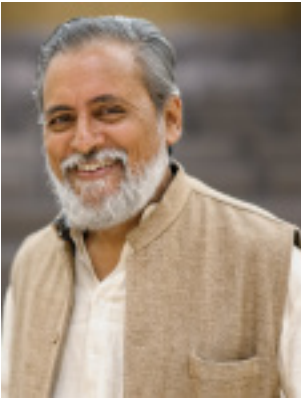
Autonomous Body of the Department of Science and Technology, Govt. of India



National Innovation Foundation (NIF) - India

Autonomous Body of the Department of Science and Technology, Govt. of India

INTRODUCTION



Prof. Anil K Gupta

Executive Vice Chairperson, NIF &
Professor, Indian Institute of Management, Ahmedabad

Supporting the journey of grassroots innovators and creative children from the remote corners of the country to the precincts of the Rashtrapati Bhavan is a unique privilege of the Honey Bee Network (the Network) and National Innovation Foundation-India (NIF), an active part of the Network. The social esteem that NIF adds or reinforces in the vision of grassroots communities is a non-material individual and collective incentive. By facilitating licensing of technologies to third party entrepreneurs or supporting commercialisation by innovators/communities themselves, it also contributes towards material individual and collective incentives. The portfolio of incentives, as the earlier studies by the Network have shown is vital for sustaining an inclusive innovation ecosystem.

NIF has been experimenting with a variety of incentives in motivating creative communities to share their ideas widely with other communities. It is recognised however, that sharing relevant knowledge with every knowledge provider is one such goal where a great deal more remains to be done. It was a commitment that NIF and The Network had made right in the beginning that sharing will take precedence over scouting. However, while NIF has achieved unprecedented success in scouting the creative minds of the country, thanks to the Network volunteers, its achievements in dissemination of ideas have been less sanguine.

There are several other challenges that NIF has faced during the year in terms of validation of technologies, getting patent applications examined and processed on priority, licensing of technologies, and supporting entrepreneurial urges of the innovators. The renewal of MVIF (micro venture Innovation Fund) took time and thus as many innovators could not be supported as was planned.

Similarly, limitation of financial resources did not permit as many projects for validation of people's knowledge and innovation at third party labs as was the need given enormous rise in popular expectations. The dissemination of innovations in tribal regions has been taken up thanks to the special support by DST for the purpose.

In spite of all the challenges, NIF has supported validation of 168 technologies and developed 47 prototypes and products during the year. It filed 63 patents and licensed 2 technologies to entrepreneurs. Under the collaboration between NIF and Indian Council of Medical Research (ICMR), about eighty herbal human health related claims of traditional healers have been validated.

NIF's more than a decade and a half long experience building upon the Network experiments for around three decades provide a solid foundation for supporting Start-up India, Digital India and Healthy India. We are grateful to the Office of the President of India, for the confidence shown in its capabilities for organising Festival of Innovation and supporting Innovation Scholar in residence program at Rashtrapati Bhavan. In addition to the Innovation Exhibition at the venue, FOIN includes annual Global Roundtable on Inclusive Innovation, conference of National Innovation Clubs, Innovations in the delivery of public services, roundtable on Financing Innovations, Gandhian Young Technological Innovation (GYTI) Awards, Exhibition and roundtable on Innovations in Medical and Biotechnology, Innovation exhibition on Swachh Bharat and Children's Creativity and Co-creation workshop. The NIF decided to commemorate the contribution of Dr A P J Abdul Kalam towards Ignite awards by renaming these after him. Hon'ble President of India, Shri Pranab Mukherjee ji gave away the Dr.

APJ Abdul Kalam IGNITE competition awards to the school student winners at IIMA.

I wish all the best to the HBN volunteers and hope many more volunteers will join hands with NIF to make it meet the emerging challenges as successfully as it has met the earlier ones. It is a matter of great satisfaction that Department of Science and Technology has encouraged NIF by facilitating its participation in several national and international developmental missions of the country. The NIF has enjoyed full support from all the wings of DST and other science Departments.

A young self-motivated team, full of dedication and perseverance has worked hard under the leadership

of Dr Vipin Kumar, Director, and Chief Innovation Officer, NIF to achieve outstanding milestones in the Indian march toward a creative and inclusive India. The guidance and support of the NIF board of directors, and society chaired by Dr R A Mashelkar is gratefully acknowledged.

I wish NIF continues to meet the rising aspirations of the grassroots innovators with renewed energy and enthusiasm.



Anil K Gupta

PREFACE



Dr R A Mashelkar, FRS
Chairperson, NIF
National Research Professor
President, Global Research Alliance

In the 'decade of innovation', the NIF is increasingly seen as a pivot of many national programs in promoting innovations in different sectors of economy and at various levels in society. Various initiatives have been taken up by Rashtrapati Bhavan in collaboration with NIF to promote innovation, particularly grassroots innovation in the country, and its linkages with higher education system. NIF organized the second Festival of Innovation (FOIN) at the Rashtrapati Bhavan during

Residence program,.

NIF has continued to unearth thousands of creative ideas of people from the informal sector and school students, many of which have been taken forward for validation, value addition, prototyping, product development, Intellectual Property protection or diffusion at NIF or partner institutions.

NIF has not only been making concerted efforts towards the promotion of grassroots innovations, which is its mandate, but also towards enriching

the inclusive innovation ecosystem in the country. It has also started engaging more actively with the various schemes and components of the Government in furtherance of common missions and goals. NIF, thus has engaged with a large number of institutions/organisations making them partners and stakeholders in the process. Knowledge Networking in today's era is a crucial step for facilitating sharing of information among different stakeholders. It reduces transaction costs of different actors, be it innovators, entrepreneurs, investors, public policy makers and mentor or R and D experts.

I am sure NIF will continue to serve the interest of the creative common people of the country earnestly. I wish the NIF team the very best.

With my best wishes

A handwritten signature in dark ink, appearing to read 'R A Mashelkar'.

R A Mashelkar

DIRECTOR'S MESSAGE



Dr Vipin Kumar

The year that went by was a year of action. Many new initiatives were taken up to expand the reach of NIF, on its own and in partnership with other

of NIF, as per the suggestion of Quinquennial Committee for Future Directions (QCFD), were also chalked out. NIF and ICMR partnership entered the

human ailments being taken up for validation. The Micro Venture Innovation Fund (MVIF), set up at NIF with the support of SIDBI, graduated to its second phase where not only grassroots innovators but also any entrepreneur willing to establish a grassroots innovation-based enterprise could be supported. NIF partnered with the Department of Science and Technology (DST) for its Science Express - Climate Change Special to reach thousands of students across the country. NIF has also been working with the DST to revamp its existing INSPIRE scheme for school children. Many other activities for scouting and documentation, validation, value-addition, intellectual property protection, dissemination, diffusion, etc. were undertaken by the NIF team, about which detailed information is available under Sectional Activities in the pages ahead.

While undertaking various activities, NIF and the Honey Bee Network also mourned the irreparable loss of our beloved Dr A P J Abdul Kalam who had been a great support and source of motivation for the Network. NIF renamed the IGNITE competition in his memory as the Dr A P J Abdul Kalam IGNITE Awards so that creative children continue to draw inspiration from his soul. Our Hon'ble President Shri Pranab Mukherjee *ji* gave away the awards of the

NIF had been mentioning for the past many years that creative ideas of children matter and that the

nation should take careful note of these.

I wish to take this opportunity to express my deepest gratitude to the Hon'ble President of India

continuous support in various innovation-related activities. Such a support at the highest level not only motivates the innovators but also the young staff members and inspires all of them for life. I also wish to convey my sincere regards to the Hon'ble Minister of Science & Technology and Earth Sciences, Dr Harsh Vardhan *ji*, Hon'ble Minister of State for Science & Technology and Earth Sciences, Shri Y S Chowdary *ji* for their guidance. My heartfelt gratitude to Dr R A Mashelkar, Chairperson, NIF, Prof Ashutosh Sharma, Secretary, DST, Prof Anil K Gupta, Executive Vice-Chair, NIF and Governing Board members for their guidance, support and feedback from time to time. I also wish to thank all the members of the QCFD for their time and the suggestions they provided, which would help NIF improve its delivery and impact and scale up activities. My colleagues at NIF, SRISTI, GIAN and HBN family also deserve much appreciation for their continued support.

The team at NIF continues to draw inspiration from

contribution of the volunteers of the Network who generously devote their time and energy for the cause of the grassroots innovations. NIF remains committed to serve the interest of the grassroots innovators to the best extent possible.

With kind regards to all

Vipin Kumar



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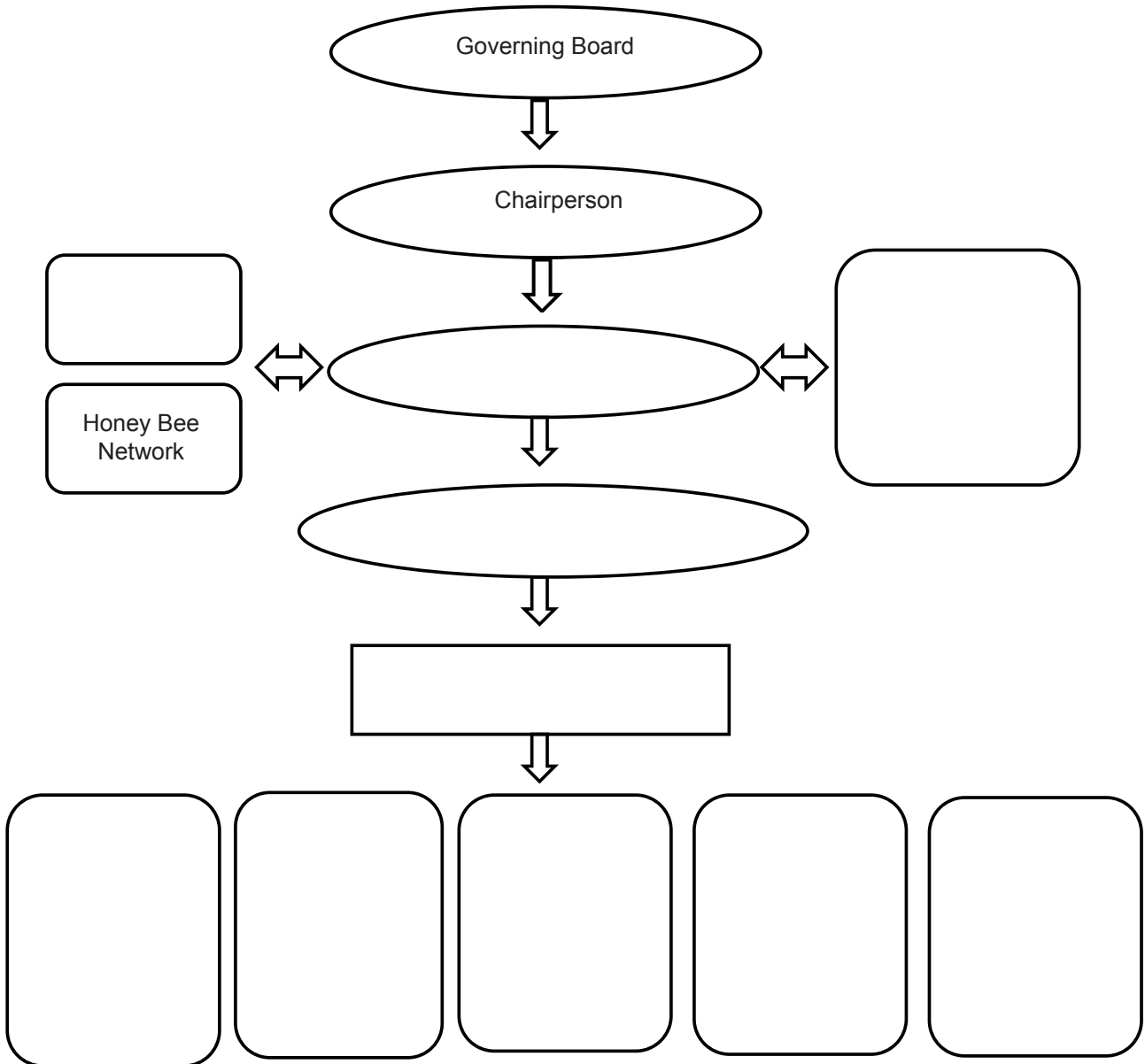
GOVERNING BOARD

- 1. Dr R A Mashelkar – Chairperson, NIF**
National Research Professor and President, Global Research Alliance, Pune
- 2. Prof Anil K Gupta - Executive Vice-Chairperson, NIF**
Professor, IIM Ahmedabad
- 3. Ms Elaben Bhatt - Member**
Founder - SEWA, Ahmedabad
- 4. Dr V L Kelkar**
DST Nominee Member, Pune
- 5. Shri H K Mittal - Member**
Scientist G, Adviser and Head, NSTEDB, DST, Govt. of India, Delhi
- 6. Dr Girish Sahni – Member**
Director General, CSIR, Delhi
- 7. Dr Soumya Swaminathan - Member**
Director-General, ICMR, Delhi
- 8. Dr Trilochan Mohapatra- Member**
Director-General, ICAR, New Delhi
- 9. Prof Devang Khakhar - Member**
Director - IIT Mumbai
- 10. Ms Riya Sinha**
Honey Bee Network Nominee - Member, Delhi
- 11. Prof Pankaj Chandra - Member**
Chairman, Board of Management, Ahmedabad University and, Former Director, IIM Bangalore
- 12. Shri Kishore Biyani - Member**
Future Group, Mumbai
- 13. Shri Pradyumna Vyas - Member**
Director, NID Ahmedabad
- 14. Secretary, AYUSH - Ex-officio**
Member, Delhi
- 15. Chairman, SIDBI - Ex-officio**
Member, Lucknow
- 16. Secretary**
MSME - Ex-officio, Member, Delhi
- 17. Chief Secretary, Government of Gujarat - Ex-officio**
Member, Gandhinagar
- 18. Financial Advisor, DST - Ex-officio**
Member, Delhi
- 19. Director/Chief Innovation Officer**
NIF - Ex-officio Member, Ahmedabad

FINANCE COMMITTEE

- 1. Dr R A Mashelkar**
Chairperson, NIF
National Research Professor and President, Global Research Alliance, Baner, Pune
- 2. Prof Anil K Gupta**
Executive Vice-Chairperson, NIF &
Professor IIM, Ahmedabad
- 3. Prof Pankaj Chandra**
Member, NIF
Chairman, Board of Management, Ahmedabad University &
Former Director, IIM Bangalore
- 4. Ms Elaben Bhatt**
Member, NIF
Founder, SEWA, Ahmedabad
- 5. Financial Advisor, DST - Ex-officio**
Member, Delhi
- 6. Director/Chief Innovation Officer**
NIF - Ex-officio Member, Ahmedabad

ORGANISATIONAL CHART



Moving Ahead

Continuing its efforts in scouting and documentation, validation, value addition, protecting intellectual property rights (IPRs) and facilitation of diffusion, National Innovation Foundation-India (NIF), India has built new partnerships and launched several new initiatives during the year. The demise of the former President of India Dr A P J Abdul Kalam, Bharat Ratna, was an irreparable loss to NIF, the Honey Bee Network (HBN) and the grassroots innovators (GRI). Dr Kalam was a life-long champion of grassroots innovations. He started the tradition of honoring creative and innovative

communities and individuals in 2002. He continued to motivate the young and the old alike, and gave away the national IGNITE Award, since its inception in 2008, till 2014. NIF and HBN have been celebrating his birthday on October 15 as the Children's Creativity and Innovation Day. To commemorate the ever-inspiring memory of Dr Kalam, 2015 onwards, NIF decided to rename the IGNITE Award as Dr A P J Abdul Kalam IGNITE Award so that creative children continue to draw inspiration from his spirit.



Opening of NIF Cell at KIIT University, Bhubaneswar

Learning walks in search of creativity at the grassroots: The *Shodhyatras*

NIF collaborated with Society for Research and Initiatives for Sustainable Technologies and Institutions (SRISTI) in organising the 35th *Shodhyatra* in Gandachara, Narayanpur to Lalitpara (Hatirmatha), Dhalai District of Tripura from May 13-18, 2015 and the 36th *Shodhyatra* from Ziro to Yetap, Lower Subansiri district of Arunachal Pradesh during January 17-22, 2016. In this *shodhyatra*, many *yatris* from different walks of life, from India and abroad, walked together to learn from four teachers: a) nature, b) each other, c) one's inner self, and d) common people. During the *shodhyatras*, the *yatris* organised village meetings, ideas and biodiversity competitions and met creative artisans, artists, centenarians, farmers, outstanding traditional knowledge holders and innovators. NIF demonstrated relevant and useful innovations to the villagers, put up poster exhibitions and shared the Honey Bee database with them.

In Tripura, walking in a tribal region having one of the highest educational coverage and attainment in the country was a revealing experience. In spite of being a geographically disadvantaged region, Tripura overtook Kerala in literacy percentage in 2013. The *shodhyatris* observed the traditional handlooms, crop varieties, musical instruments and experienced a pervasive culture of value-sharing and hospitality. Women here weave colours in their foldable handlooms as also in life, while the younger generation has learnt the art of fusing traditional and contemporary designs. Children, as always, amazed the *yatris* with their unbound imagination to solve problems. Culturally rich, managing local knowledge so well, the Chakma,

Tripura, Riang and other communities have been asserting their identity. Collaboratively, new paths have to be discovered to enhance their access to modern institutions and technologies.

Anant Kumar Chakma, a traditional healer, had a well-documented register with an index of symptoms and their combinations. Having walked over 5,000 km, the *shodhyatris* saw the most thoroughly-written documentation, maintained by the Chakma community healers, in their own script. Many healers, the *yatris* met, had a book of their experiences, formulations and feedback from the patients. The *shodhyatris* came across several cases of treating tumours through external applications. This is different from conventional medicine. Perhaps, there is a case for alternate heuristics to be tried and listed through systematic scientific trials. A lively healing tradition, based on local diversity, deserves an urgent attention because the younger generation might not be able to sustain it without external incentives and support.

Walking with the Chakma tribe, the *yatris* observed a rich tapestry of conservation, creativity and colours in community pursuits. In almost all the houses, a vibrant living tradition of weaving on a foldable handloom, with striking colours and beautiful patterns, was seen. Mostly, the ladies here wear what they weave. They either use these themselves or gift them to others. The younger ladies have started modifying the designs within the confines of their traditions. There is a large number of local varieties of paddy, brinjal, jackfruit and other vegetables, tubers and grains. There are paddy varieties which mature in the period ranging from two



Shodhyatra in Tripura



Idea competition among children

to six months. Most farmers grow them organically.

Even though most of the houses have toilets, some areas call for urgent action due to the problem of scarcity of water. Most schools had lights, functional toilets and water. In general, there is good community sanitation and hygiene in the region. The hunger for education is intense. The *shodhyatris* have never come across so many educated grandparents in a tribal region. Healthy people and a healthy environment in an otherwise economically-depressed region points to the interventions required in future. There is *in-situ* value addition in local fruits like jackfruits, pineapples, bananas and litchis. This shows great entrepreneurial potential of the youth.

An ethical engagement of external entrepreneurs with the local youth can trigger knowledge-based enterprises using local resources. While absorbing the generosity of local culture and institutions, the *shodhyatris* from all over the country drew inspiration from the outstanding culture of conserving biodiversity, colourful handlooms and clean environment. The presentation of cycle-based ploughs and other water-lifting devices generated a lot of curiosity.

One of the surprising observations was that chemical weedicides were used in some of the fields to prepare them for ginger and other crops. The government should take a view to keep such regions chemical-free. The architectural design innovations were appreciable but there were practically no rooftop water-harvesting structures. With so much problem of water, it would be an affordable and viable water storage structure to add a small bamboo or tin channel below the tinsheds which would collect water in tanks, in this high rainfall region.

The *shodhyatra* also taught the *yatris* a great deal about the extraordinary tradition of maintaining inter-

generational records of herbal healing knowledge system. During an idea contest, a little kid Tunnab Joy Tripura gave an interesting idea of two children holding a long umbrella from two sides, under which other kids can walk and go to school together. Many communities entertained the *shodhyatris* by performing their traditional dance and songs.

It was observed that in some regions, the traditional forms had given way to modern dance steps, given the numerous dish TVs in the region. A recipe contest brought out diversity of a large number of uncultivated tubers, leafy vegetables and other food items, collected from forests, for meeting their nutritional needs. Many of these were also functional foods. Handloom designs had a considerable scope for adaptation for contemporary needs. The Chakmas are economically poor but mentally strong. In spite of residing in a stress-prone region, the people have strong spirit and a desire to improve their lives. They are proud of their culture.

The Chakma kids are motivated to learn even during their summer vacation. They are also a tolerant community. They have gone through a turbulent past due to sociopolitical conflicts in the region. Linking a predominantly self-provisioning society with market is of course a daunting task. It may increase their vulnerability but, it may also reduce it, depending on the terms at which the exchange takes place between the formal and informal sectors.

A follow-up action has been started. A bamboo processing machine, hand- and pedal-driven water pumps were provided to the community. The community engagement continues and hopefully, the fuller developmental potential will eventually unfold.



Biodiversity competition

36th Shodhyatra at Ziro valley, Lower Subansiri District, Arunachal Pradesh

The 36th Shodhyatra was organised in Lower Subansiri district of Arunachal Pradesh during January 17-22, 2016 by SRISTI, with support from Nature Care & Disaster Management Society (NCDMS), Ziro and NIF India.

The walk began from Ziro and ended at Yetap, during which the *shodhyatris* covered a distance of approximately 80 km, partly in mountainous terrain, covering 23 villages and 18 schools on the route. About 65 people took part in the *shodhyatra*, from different states of the country and varying background such as farmers, innovators, students, professionals, teachers, etc. These *yatris* met with the people of the Apatani and Nyishi tribes.

The *yatris* organised village meetings, idea and biodiversity competitions and met creative artisans, outstanding traditional knowledge holders and innovators. They also met many traditional knowledge holders who had come up with their ingenious

formulations to treat human animal ailments. We documented number of ideas and traditional practices, including the forgotten recipes and practices related to agriculture and, human and animal health. During the *yatra*, we demonstrated the innovations which would be useful to them and shared the honey bee database. We also distributed booklets related with agriculture, veterinary practices and potential innovation which could be useful in their area.

The 36th Shodhyatra was the most outstanding one in terms of learning and knowledge-sharing. During the walk, many traditional knowledge practices for agriculture, human and animal health were documented, along with some creative innovations. The Biodiversity Management Committees of the region was excellent, active and operational, which the *shodhyatris* had never seen functioning so well elsewhere. It was observed that there was a significant respect for the community-conserved areas, managed by the local communities.



Recognition of local innovators

The creative children of the region took the *yatris* by complete surprise, by their excellence, empathy and ebullience. Many creative ideas of the school children were recognised and it was felt that many of these deserved higher recognition. The *shodhyatris* also met children who not only identified a problem but also wanted to implement their ideas. A small advance was also offered to two such kids, through their school, for implementation of their idea. They also attended the workshop for children at the Festival of Innovation (FOIN) at the Rashtrapati Bhavan, New Delhi in March 2016. While there was a considerable scope for improving facilities at the schools, the teachers nevertheless warmly cooperated and helped the *yatris* to uncover local talent.

A tremendous scope for adding value to local herbal knowledge and bringing local products into market was felt. The Honey Bee Network, through SRISTI & NIF, proposes to stay engaged with local communities. Two innovations, which caught the *yatris* attention were bamboo flattening machine of Lyagi Baht and modified

paddy thresher of Mihin Pussang, who replaced the belt pulley system with an axle with two universal joints, thereby improving efficiency. The *yatris* met a lady farmer Hage Tado Nanya who had conserved about 15 varieties of paddy and other such crops.

The *yatris* appreciated the efforts of the local communities in undertaking organic farming, making various bamboo-based crafts, and managing natural resources. The cultural creativity, social amity and ecological sensitivity of the place are worth mentioning. One of the most redeeming facts was an almost complete absence of malnutrition among children. The respect for elders was also very inspiring.

We had a meeting with Chief Secretary Shri Ramesh Negi after the end of the *yatra* to share the experiences. He agreed to support the innovation promotion initiatives in the state, starting with an innovation exhibition-cum-workshop, being proposed at Itanagar in the following months.



Bamboo craft in shodhyatra

Dr A P J Abdul Kalam IGNITE Awards 2015 – The national competition for technological ideas and innovations by students and other children



The Hon'ble President of India, Governor of Gujarat and Chief Minister of Gujarat giving away Dr A P J Abdul Kalam IGNITE Awards 2015

IGNITE 2016 – the national competition for original technological ideas and innovations of school student and out of school children has started accepting entries after conclusion of the IGNITE 15 competition on August 31, 2015. About 10,000 entries have already been received for the competition continuing till August 31, 2016.

In the Dr A P J Abdul Kalam IGNITE 2015 competition

a total 28,106 submissions of students from every State & Union Territory of the country of the country were received. The Hon'ble President Shri Pranab Mukherjee gave away the awards on November 30th, 2015 to 41 student awardees at Indian Institute of Management, Ahmedabad. Dr A P J Abdul Kalam IGNITE competition is a national competition of technological ideas and innovations by school students, aiming to trigger and harness the creativity of



The Hon'ble President of India and Governor of Gujarat visiting Dr A P J Abdul Kalam IGNITE Awards 2015 exhibition

the school children and promote original, inclusive and compassionate thinking among them. The competition is organised by NIF in association with the Central Board of Secondary Education (CBSE), SRISTI and other partners. A number of state educational boards viz. Board of School Education, Haryana, Nagaland Board of School Education, Goa Board of Secondary and Higher Education, Directorate of Higher Education, Himachal Pradesh, West Bengal Board of Secondary Education, Madhya Pradesh Board of Secondary Education, Rajiv Gandhi Shiksha Mission, Department of School Education, government of Chhattisgarh and the Directorate of School Education, government of Puducherry actively promoted the competition this year.

The response to the competition was overwhelming and 28,106 submissions were received from all the states and Union Territories during September 1, 2014 to August 31, 2015. This year, a total of 31 ideas by 41 students of 27 districts from 18 states were awarded

for their ideas/innovations, at a function organised at Indian Institute of Management, Ahmedabad (IIM-A) on November 30, 2015. On his maiden visit to Gujarat, the Hon'ble President of India Shri Pranab Mukherjee visited IIM-A to give away the Dr A P J Abdul Kalam IGNITE Awards 2015. He addressed the students and faculty of IIM-A on how to improve higher education in India and, nurture the innovation ecosystem in the country. Governor of Gujarat Shri O P Kohli, Chief Minister of Gujarat Smt Anandiben Patel, Secretary, Department of Science & Technology (DST) Prof Ashutosh Sharma, IIM-A Director, Prof Ashish Nanda and NIF's Chairperson Dr R A Mashelkar graced the occasion. The function was jointly organised by NIF and IIM-A.

Dr Mashelkar, while welcoming the dignitaries, talked about reinventing and reimagining India through inclusive innovation. Professor Sharma mentioned various initiatives undertaken by DST to promote the culture of inclusive innovation in the country. He



IGNITE awardees with Hon'ble Chief Minister of Sikkim

specifically shared information about about two new initiatives where NIF is expected to play an important role— the INSPIRE scheme for school children and a competition to harness the creativity of ITI students.

In his address, the President mentioned that NIF and IIM-A had given a global identity to the Indian model of social innovation. He also talked about linking higher education, innovation and industry, and briefed some of the innovation promotion activities being carried out by his office, such as the Innovators in-Residence programme where select innovators are hosted by the President at the Rashtrapati Bhavan for a couple of weeks. He also mentioned how the Festival of Innovation (FOIN), organised at the Rashtrapati Bhavan, with the support from NIF tries to link grassroots innovators with the innovative minds at different levels and in different sectors.

Earlier, the President visited the IGNITE Award exhibition, showcasing award winning ideas and prototypes by students at the venue. Recalling what he saw at the exhibition, he remarked, "The children have proved that innovative spirits can dispel any amount of inertia and replace it with exciting new possibilities. Innovations from creative youngsters are the best examples of *samvedana se srijansheelta* (innovation from compassion/empathy)." It may be mentioned that in most cases, the prototypes were actually developed at Fab Lab of NIF by its team of dedicated engineers

based on the ideas provided by the students.

Smt Patel mentioned that naming the IGNITE Award after Dr Kalam was a befitting tribute to Dr Kalam's legacy. Observing that majority of the award winners were from rural areas, she remarked that there is no dearth of talent among the youth of this country. She particularly mentioned two innovative ideas viz. solar farming machine and foldable hand cart, which have the potential to help a lot of farmers and urban poor in Gujarat. She also sent letters of appreciation to all the student winners.

In his vote of thanks, NIF's Executive Vice-Chairperson Prof Anil K Gupta thanked the President and other dignitaries, and congratulated all the young award winners. He complimented Smt Patel for her immediate consideration of implementing two student ideas that she appreciated at the exhibition.

A three-day workshop (November 28-30, 2015), with IGNITE awardees and school children, was also organised in collaboration with SRISTI and UNICEF. The idea was to involve disadvantaged children from slums and rural areas, and have them identify and resolve the unmet social needs of the poor, together. NIF has started receiving entries for Dr A P J Abdul Kalam IGNITE Award 2016 and over 8,000 submissions have already been received.

Second Festival of Innovation, Rashtrapati Bhavan, New Delhi, March 12-19, 2016



Inauguration of FOIN by The Hon'ble President of India and Minister of Science & Technology and Earth Sciences at Rashtrapati Bhavan

The celebration of the spirit of grassroots innovation at the Rashtrapati Bhavan empowers the creative communities in a manner that was never attempted before in the history of the country. The second week-long Festival of Innovation (FOIN) was inaugurated on March 12, 2016 by the Hon'ble President of India Shri Pranab Mukherjee at the Rashtrapati Bhavan and it continued till March 19. The FOIN focused the attention of the nation towards the untapped creative potential of knowledge-rich, economically poor people. India is perhaps the only country where the head of the state hosts such a festival at his official residence. The President's Secretariat was assisted by NIF, SRISTI and the Honey Bee Network.

The Honey Bee Network, a social movement, was started 28 years ago to uncover the hidden innovative talent at grassroots. It has made a small contribution towards the recognition, respect and reward for the unsung heroes of our society. The FOIN will further help in making India a creative, compassionate and collaborative society.

The President inaugurated the exhibition of grassroots innovations and was accompanied by Union Minister for Science & Technology and Earth Sciences Dr Harsh Vardhan, Union Minister for Minority Affairs Dr Najma A Heptulla, Prof Ashutosh Sharma, Dr R A Mashelkar and Prof Anil K Gupta. He also released the book of the previous edition of FOIN (2015).

The President interacted with the innovators and appreciated the unique features of each innovation. The festival encompassed global roundtable conferences and sessions, and a meeting of National Innovation Clubs (NICs) to deliberate on the progress and future plans of the innovation movement in India.

Nobel Laureate Shri Kailash Satyarthi and other distinguished national and international thinkers, policy makers, academicians and entrepreneurs, scholars etc., were part of the festival this year.



FOIN exhibition at Rashtrapati Bhavan

Round Tables on inclusive Innovations



The Hon'ble President of India and Minister of Science & Technology and Earth Sciences visiting FOIN exhibition at Rashtrapati Bhavan

Secretary to the President Smt Omita Paul welcomed the guests and highlighted that the programme was expanded this year to include innovation scholars, writers and artists in-residence from across the country. She narrated the genesis of FOIN and said, "In 2013, the President met the vice-chancellors of various central universities. During the meeting, he shared the need for triggering an innovation movement in India. This idea was followed up with the directors of Indian Institutes of Technology (IITs), National Institutes of Technology (NITs) and other central & state universities. This also led to a detailed discussion with Dr R A Mashelkar and Prof Anil K Gupta. The discussion laid foundation for an event that would include discussions and debate to generate new ideas and tap the potential at grassroots."

The FOIN saw a wider participation, both nationally and globally this year. A total of 65 grassroots innovators exhibited their innovations including newly developed crop varieties and farm machineries developed by the farmers, creative energy saving and other utilities by mechanics, school children, ITI students, etc. Eighty-five innovation clubs participated from various universities and institutions across the country. Seven innovation scholars, two artists and two writers were hosted by the President at the Rashtrapati Bhavan for two weeks, as part of the FOIN.

The global roundtable on inclusive innovation (March

12-13) included several sessions: Leveraging science, technology and innovation in developing inclusive ecosystem; education for inclusive innovation development; incubation and acceleration models for innovative start-ups; innovation and skill development; incentives for innovation in public policy and programmes; and social innovations for a large-scale change. The round table participants discussed the need for inclusive innovations and accelerated growth. Three key steps to boost innovation were identified: speed, scale and sustainability. The requirement of policy changes to address the issues plaguing innovation was also stressed. Mobile telephony and biometry were identified as two key drivers of



Round table on innovations in medical science and biotechnology

innovation in India, particularly for financial inclusion, direct benefit transfer, aggregating a lot of relevant information, e-commerce, etc., the challenge identified was how to spread the booming start-ups to Tier-II and -III cities.

The participants discussed how science and technology could aid inclusive innovation across different sectors. The focus on youth, both in schools and colleges, and also the ones out of institutions, was felt important. The interaction between research firms and universities is key to innovation as shaping and reshaping of interactions will shape the innovation movement. The participants also discussed the role of education in shaping up inclusive innovation ecosystem. It was noted that very few innovation policies are synchronised with changes in education and social development policies and programmes. Hence, there is a need to have citizen-driven innovations, along with the tech-driven ones, to bring about durable change in the ecosystem.

An important takeaway, based on the children’s creativity workshop organised by the Honey Bee Network, was that children should not be treated as mere sink of sermons but, also as a source of ideas and innovations. The participants emphasised that pursuing innovative solutions for the problems at hand requires a different attitude, full of curiosity and concern. This needs to be built right from the early stage of education.

Following the three round tables, a summary was presented to the President. The President mentioned that a culture of innovation and entrepreneurship needs to be institutionalised as part of our socio-economic ecosystem. Innovation and entrepreneurship needs to be inclusive and focus on a variety of enterprises such as young technology firms, upcoming manufacturing businesses and rural innovator companies. He mentioned that scaling up of these processes would

require initiatives which are built around: a) Financially sustainable business models; and b) Participation by lower-income and excluded groups. In the session on innovation and skill development, various skill development mechanisms and the role of institutions such as Industrial Training Institutes (ITIs) was considered as key to promote innovation. The need to leverage on demographic dividend was also stressed. Apart from this, openness to interdisciplinary streams, diversity in hiring people and creating flat organisations (an organisational structure with few or no levels of middle management between staff and executives) were identified as key to setting up successful entrepreneurship ecosystem. A participant remarked how our focus should be on transforming *mice* (small and micro enterprises) to *gazelle* (medium-sized and agile).

The session on public policy and programmes brought out how incentives boost innovation in public policy and programmes, and their need to be replicated elsewhere. Incentivising at micro level and creating metrics for assessing the success of the delivery systems was suggested.

Shri Kailash Satyarthi, the Nobel laureate, while addressing another session on social innovations for a large-scale change remarked, “India has been the land of innovation for ages and that’s why it has developed its society in such a way that allows people to live in harmony, while appreciating its diversity. Over centuries, our minds have become seasoned to think within the box. It’s important to start with the question mark and not with a full stop.” Shri Satyarthi also proposed a 3D model for social innovation – *Dream* for big, dream for better; *Discover* inner strength, new ideas, things outside the box and opportunities around us; and *Do* and act now attitude.

Hurdles in social innovations were identified during the course of roundtable discussions. These were:



Minister of State for Department of Science & Technology and Earth Sciences visiting FOIN exhibition



Governor of Uttarakhand visiting FOIN exhibition

Concentration of power; silos approach of working; not catching up on technology advancement; exclusion of citizens in decision-making; and asymmetry of information between the government and the citizen. It was suggested that rather than looking for solutions, we should increase the number of people with problem-solving attitude. A new kind of public-private partnership (PPP) needs to be put in place to engage and involve people, thinkers and public officials in the process of developing innovations.

Lastly, a break-out session was held during which four groups discussed on key areas simultaneously - incubation and acceleration models for innovative start-ups; innovation and skill development; incentives for innovation in public policy and programmes; and social innovations for a large-scale change.

Marking the end of the day, the participants witnessed a scintillating 45-minutes-long *kathak* performance by Ahmedabad-based danseuse Aditi Mangaldas and her troupe.

A national roundtable on public service delivery – macro-level initiatives for innovations and grassroots action for inclusion was held on March 14. The discussions centered around innovations in public service delivery and the role of different players at different levels of governance in bringing about change. Outstanding *sarpanch*, district, state and central level officers, head of various central services, and other scholars attended the discussion. The curriculum, it was suggested, should be redesigned to include learning modules for innovation. The crux of this round table was how to meet the needs of those who deserve services but cannot desire. Four dimensions in public service delivery were identified: Accessibility to resources and technology; assurances, both vertical and horizontal; ability, skills transformation; and attitude. Many public service personnel, including a women *sarpanch* and district collectors from different parts of India, shared innovations undertaken in their respective states.

The participants identified a need for inclusive action for making public services available to

all. In this context, the challenge identified by the participants was how to undertake inclusive action for making public services available to these excluded people. Some groups get better services than others. So, the second area is to focus on the design and investment pattern of the scheme. Third area of focus is organisational design and infrastructure.

A poster exhibition was organised, highlighting the innovative measures undertaken by public servants in their areas of service and their overall impact.

A workshop of innovative and creative children was organised by SRISTI, in collaboration with UNICEF, NIF and HBN. Selected privileged and underprivileged children sought solutions to societal problems in slums around Delhi through their creative ideas. The workshop began with exposure of these children to innovations by other children, technology students and people at the grassroots. The children were encouraged to imbibe the empathetic values in developing innovative ideas to solve basic problems faced by the people living in slums. The overall objective of the programme was to develop an operational framework for empowering children to not only articulate their problems but, to also find solutions, both individually and collectively. The children creativity workshop aimed at tapping the dormant creative potential of children who, often, did not get a chance to articulate their ideas. Held over two days, the first day involved brainstorming, visiting the innovations displayed at FOIN exhibition and meeting grassroots innovators, followed by their visits to the slums. On the second day of the workshop, the children worked in groups, sketching the problems and presenting their ideas to solve them. These children came up with multiple solutions to various problems.



Book Release of FOIN

Gandhian Young Technological Innovation (GYTI) Award



GYTI awards 2016

On March 13, the Gandhian Young Technological Innovation (GYTI) Awards were organised by SRISTI, with the support from Biotechnology Industry Research Assistance Council (BIRAC). GYTI Award is an initiative to foster youth-driven innovations across India. These awards celebrate the spirit of 'service before self', taught by Mahatma Gandhi. The innovations by technology students from all over the country, in various fields of engineering, science

and other applied technologies, were screened by a reputed national and international jury.

Following the award ceremony, the global roundtable continued with discussion on developing inclusive innovation, incubation and acceleration models for innovative start-ups. The participants discussed about the lack of scalable models for start-ups and innovations in India. Three levels were identified for scaling up of innovation projects: (a) curation, (b) mentorship, and (c) brokers/agents for facilitating, funding and supporting entrepreneurial ventures. Also, the experience of international incubator partnership models was shared to facilitate innovation.

Visitor's Awards 2016

In the evening, Visitor's Awards 2016 were conferred by the Hon'ble President Shri Pranab Mukherjee. The awards felicitated Vice-Chancellor of the Tezpur University Prof Mihir Kanti Chaudhuri. The Tezpur University was adjudged as the best university while two awards were bagged by the Jawaharlal Nehru University (JNU). The Visitor's Award 2016



MOU between NIF-India and JKUAT, Kenya

for Innovation went to Prof Rakesh Bhatnagar for the development of a genetically-engineered vaccine and a therapeutic antibody against anthrax while the Visitor's Award 2016 for Research went to the molecular parasitology group for their pioneering work in the area, especially anti-malaria, leishmaniasis and amoebiasis. The Union minister for Human Resource Development Smt Smriti Zubin Irani, vice-chancellors of various universities and other dignitaries attended the ceremony.

Meeting of National Innovation Clubs

On March 15, a meeting of National Innovation Clubs was called in which representatives from six clubs shared their experiences — IIT Kanpur, Central University of Jammu, IIT Madras, IIT Tiruchirappalli, Jamia Milia Islamia and IIT Delhi. Presentations were made by technology entrepreneurs Shri Sharad Sharma, co-founder and CEO, Brand Sigma and Shri Vishal Gondal, CEO and founder, GOQii.

Shri Sharad Sharma suggested democratisation of access to building blocks of innovations. Once done, hundreds of experiments to solve problems can be triggered. Shri Vishal Gondal observed that there is need to apply common sense to the technology, making it simple and functional for the user. Speaking on the occasion, Smt Omita Paul said creativity, innovation, entrepreneurship and start-ups are subsets of the same kind of mindset and must be promoted. She narrated how various innovative measures undertaken by her have made a significant impact at the Rashtrapati Bhavan and on the lives of people in the President's Estate.

Another session on inspiring innovations was organised on the same day, with participation of academicians, technology business incubators (TBIs) as well as senior officers from India and abroad. A poster presentation on outstanding achievements by NICs and outstanding TBIs was held. Professor Gupta said it is important to understand exclusion before we move on to design inclusive innovations. He listed five types — spatial exclusion, sectoral exclusion, seasonal exclusion, social exclusion and skill exclusion – and added that these gaps need to be filled.

Roundtable conference on the innovations in medical science and biotechnology

On March 16, a roundtable conference on the innovations in medical science and biotechnology was held, followed by interaction of the scientists with grassroots innovators. This roundtable saw one of the finest minds of the country coming together and

brainstorming over how innovations in medical science and technology could be scaled up and be made more effective. The participants highlighted their innovations in the field of healthcare and biotechnology during the course of discussion.

A need for looking at innovative solutions at affordable costs for low-income households was reiterated by most of the participants. A question raised was how to link grassroots innovators with other disciplinary departments in the universities. Prototyping and product development through the process of testing, re-testing, validation and partnering with industry was considered necessary. A number of institutions have been able to come up with low-cost devices which have brought down costs for various tests. Many of these institutions are supported by Indian Council of Medical Research (ICMR) and some by Department of Biotechnology (DBT). However, some participants observed that it was painful that many medical devices haven't reached the point where the ministry of health can use them for public healthcare. Industry support is needed to achieve this kind of penetration. Also, too much dependence on imported medical devices and equipment needs to be brought down, remarked another discussant.

Interaction with the leaders of banking and financial sectors

An interaction with the leaders of banking and financial sectors on financing innovations was held on March 17, followed by a presentation on key recommendations emanating from the discussions to the President. The conference focused mainly on four areas: Grassroots innovations; how incubation systems could be strengthened further; angel funding; and financing from other sources. Two sessions were held to discuss the financial aspects involved in the process of innovation across multiple sectors.

The first session discussed about financing options for funding innovations. It was realised that traditional funding does not work for financing micro and small sector. It was recommended that we should keep at least one per cent of fund in banks aside to fund low-cost innovations. Special efforts are needed to commercialise public research and development (R&D) innovations. It was also suggested that a separate branch be made in banks to finance only innovations.

Several reasons for lack of commercialisation of innovations were identified as: Insufficient financing in the informal sector; interest rate inversion; and despite the recent stress on entrepreneurship, a fundamental

problem remains that while entrepreneurship index has gone up, the innovation index has slumped. Big companies that get lowest interest rates have the highest non-performing assets (NPAs). In this phase of copy-paste entrepreneurship (borrowing ideas from the West and scaling them up), when it goes bust, it may affect the real innovation that is happening in India. The financing is important but regulation is also a significant part. Opening doors to corporate social responsibility (CSR) to finance innovations was also suggested.

The second session discussed how we can strengthen the innovation ecosystem and it was suggested that a National Innovation Promotion Board should be set up which could govern and lay policies for innovation in India. This was followed by a presentation to the President. The session was attended by Union Minister of State for Finance Shri Jayant Sinha, Union Minister of MSMEs Shri Kalraj Mishra, Union Minister of Railways Shri Suresh Prabhu and Union Minister of Road Transport and Shipping Shri Nitin Jairam Gadkari, among others, who discussed the role of government as a facilitator, the need to set up innovation centres at various places, the need to start thinking differently so that we can get new ideas in place and the need to generate employment, respectively.

The President also launched the Small Industries Development Bank of India (SIDBI)'s *Startup-Mitra* portal during the conference. This portal will be a market place for all types of requirements of stakeholders and is expected to be a national ecosystem for Indian start-ups. SIDBI-*Startup-Mitra* will act as a one-stop solution to meet financing and other needs of early-stage and start-up enterprises.

On March 18, an exhibition of outstanding innovations related to Swachh Bharat and a workshop with farmer innovators and community workshop coordinators of NIF, facilitated by Director of CBA, MIT, Prof Neil Gershenfeld was held. Professor Gershenfeld, Professor Gupta, Prof Gajendra Singh (Former DDG-Engineering, ICAR), Prof Amit Seth (IIT Gandhinagar), principals and instructors from ITIs, teams from Fab Labs and grassroots innovators attended the workshop.

Prof Gershenfeld explained the need for digital fabrication and shared his experiences about Fab Labs across the world, citing some interesting examples. He emphasised on the use of modern materials for reducing the weight and cost of the products. He suggested organisation of regional workshops at the community level to sensitise the local innovators. The

problems being faced by the community workshop coordinators were also discussed and solutions were devised for addressing their concern.

FOIN 2016 concluded on March 19 with a 12-hour coding competition (*Hackathon*), to develop web and mobile applications in hackathon style (non-stop rapid development). The topics on which the applications were developed were: a) Teachers taking attendance after every class, 2) Examination authentication for students, 3) Monitoring entry into public monuments, and 4) Monitoring of public toilets.

The President felicitated the winners of the competition in each category in the presence of Chairman of Manipal Global Education Shri Mohandas Pai, and Shri Karl Mehta of Code for India, among other dignitaries. The innovation exhibition continued till the evening of March 19.

Sectional Activities

a) Scouting and Documentation (S&D)

National biennial campaigns

The Ninth National Biennial Competition, which started from April 1, 2013 concluded on March 31, 2015 with about 33,500 submissions being received from different parts of the country. The Tenth National Biennial Competition started from April 1, 2015 and will continue to accept entries till March 31, 2017. During the period of report, over 3,000 entries were received from grassroots innovators and traditional knowledge holders.

New linkages

S&D team has also been communicating with the various state councils of science and technology, district collectors and Krishi Vigyan Kendras (KVKs) to engage them in S&D activities as well as for expanding the network. Linkages have been explored in Chhattisgarh, Haryana, Rajasthan, Daman and Diu, Dadra and Nagar Haveli, Andaman and Nicobar, Punjab, Tripura, Arunachal Pradesh, Andhra Pradesh and Uttar Pradesh and activities started in new regions of many of these states/Union Territories.

Meetings/workshops

A series of interactive workshops/meetings with students, innovators, knowledge holders and villagers were organised in identified new areas viz. Raipur, Durg, Dhamtari (Chhattisgarh), Vizag (Andhra Pradesh), Angul (Odisha), Supol (Bihar), Itarsi (Madhya Pradesh), Daman and Diu, Dadara Nagar

Haveli, Kullu (Himachal Pradesh), East Midnapur (West Bengal), Allahabad and Pratapgarh (Uttar Pradesh), and Madurai (Tamil Nadu) in addition to many regions where NIF already has a presence.

The meetings were organised to promote lateral learning among traditional knowledge holders, spreading awareness about grassroots innovations and scouting new biodiversity-based local practices. More than 100 innovators and knowledge holders participated in the same. The concept of prior-informed consent and its implications was explained, along with the requirements of National Biodiversity Authority (NBA), for filing patent applications in case of herbal practices.

Gandhian Inclusive Innovation Challenge Awards (GIICA) 2015

The Challenge Awards to develop new/improved solutions for three challenges viz. paddy transplanter, wood stove and tea leaf-plucking machine were re-announced during this period, against which about 300 submissions were received, which are being reviewed.

b) Value Addition, Research and Development (VARD)

Engineering

To further strengthen the fabrication facilities at NIF's Fab Lab, the process of procurement of the following machines was initiated viz. CNC-VMC machine, laser cutter, mechanical shearing machine, power press, laser cutter, CNC wire-cut EDM, sheet and piper bender, medium-duty and heavy-duty Lathe machines, etc.

For the Dr A P J Abdul Kalam IGNITE Award 2015, prototypes of 18 award winning student ideas were developed in the Fab Lab. The team also guided student innovators Sapir Debbarma and Klishan Debarma (Tripura), Dipankar Das (Andaman and Nicobar Islands), Sourav Dey (Jharkhand), Santokh Singh and Khushwant Rai (Punjab) and grassroots innovator, Mohd Rafiq Ahangar, Jammu and Kashmir, while they worked on their innovations in the Fab Lab.

During the period, 23 innovators from 12 states were supported for improved prototype development, with the total amount being over 10 lakh. Also, projects for value addition/validation of 13 innovations from five states were initiated in five institutes/organisations. The engineering team also helped intellectual property rights (IPR) team by drafting technical details for filing

provisional and complete patent applications.

NIF had also engaged with ST Microelectronics, a leading global manufacturer of semiconductors, for developing improved prototypes of grassroots technologies. A prototype of posture correcting chair, was developed by the ST Microelectronics team for which suitable modifications are being discussed to explore the possibility of integrating this chair in tractors with the help of John Deere as well as in daily use furniture.

Research Advisory Committee meeting for herbal practices

The separate meetings of Research Advisory Committees (RAC) and Project Review Committees (PRC) for projects related to agriculture, veterinary and human health were conducted on October 31, 2015 at IIM Ahmedabad to assess the progress of various research programs being carried out and planned by NIF. The annual work statement in each section is given below.

Agriculture

The experimental report of three paddy varieties namely Gopika, NMS 2 and Sriram, developed by Shri Sashidharan, Kerala, Shri Shankra Guru, Karnataka and Late Shri Ram Lanjewar, Maharashtra, respectively, were received from Kerala Agricultural University, Kerala, University of Agricultural Sciences, Bengaluru and Vasant Rao Naik Marathwada Agricultural University (VNMKV), Parbhani. The variety Gopika paddy was studied in field using randomised block design (RBD) with three replications and found 38.9 q/ha yield which was comparable with Jyoti, Uma and Aiswarya check varieties. The field trial for NMS 2 with other varieties was performed by using RBD with three replications and found yield of 49.92 q/ha as a significant parameter with S.E.m. \pm value as 181.8, CD ($p=0.05$) value as 526.5 and CV as 5.31%. VNMKV, Parbhani will be re-conducting the experiments on Sriram paddy variety during kharif 2016 as the experiments failed due to scanty rainfall.

Biochemical analysis of four varieties of carrot were carried out at CALF Lab (National Dairy Development Board, Anand). The results show that the β -carotene content was highest in Madhuvan carrot (277.75 mg/kg), followed by Laxmangarh selection (124.5 mg/kg), Durga 4 (72.08 mg/kg) and JMP (21.89 mg/kg) while the highest iron content was detected in Madhuvan carrot (276.7 mg/kg), followed by JMP (160.54mg/kg), Laxmangarh selection (143.42 mg/kg) and Durga 4 (95.8 mg/kg).

Molecular characterisation of innovator's *HRMN-99* apple variety was pursued along with two check varieties *Anna* and *Dorsett golden*, which are claimed for fruiting in plain areas with the help of Gujarat State Biotechnology Mission, Gandhinagar, Gujarat. During molecular characterisation of three apple varieties by 14 DNA SSR primers it was found that all three varieties are with different accessions and don't overlap in their ancestry.

Station trials for the potential farmers varieties

The station trials are being conducted on Onion (*Rasidpurpyaj*) and cauliflower (Ajitgarh selection), Isabgol (Marulsab) and Hyacinth bean (JK 1) varieties by S K N Agriculture University, Jaipur, S K Rajasthan Agricultural University, Bikaner and S D Agricultural University, Dantiwada, Gujarat, respectively, for validating innovators' claims and performance evaluation.

A project has also been sanctioned to Tamil Nadu Agricultural University, Coimbatore for the evaluation of *Casuarina* spp (2); *Crossandra* (4) and *Anthurium* (2) famers' varieties by conducting field trials and for which the required planting material shall be submitted during the months of June-July, 2016.

In the second phase of diffusion, performance trials were initiated for the *HRMN-99* apple variety by transplanting 2,572 saplings of the variety in the fields of 250 famers and four research organisations of 11 states viz. West Bengal, Jharkhand, Chhattisgarh, Madhya Pradesh, Maharashtra, Manipur, Tripura, Karnataka, Gujarat, Uttarakhand and Uttar Pradesh.

Nomination of Farmers Plant Varieties for conducting multi-location trials under All India Coordinated Research Project (AICRP)

Twelve farmers plant varieties have been included for multi-location trials under AICRP scheme of ICAR. Seed samples and testing fee for paddy and mustard varieties have been submitted to the respective AICRP nodal agencies. The planting material of 10 farmers plant varieties (black pepper and cardamom) have been submitted at nine respective AICRP centers as per the requirements for multi-location trials. Indian Institute of Spices Research, Calicut (nodal agency of AICRP on spices crops) has granted exemption for the testing fee of farmers varieties.

Multi-location trials at farmers field

The trials of *Pandrinath-1* variety of Soybean were conducted at 11 farmers fields of Madhya Pradesh

and Maharashtra, taking up RBD with eight treatments and three replications. Soybean *Pandrinath-1* variety developed by Kashinath N Lokhande performed very well in Wardha, Maharashtra and Multai, Madhya Pradesh during rabi 2015-16 as compared to other varieties like JS 335 etc. The maximum yield was recorded as 12 q/ac and 13 q/ac from the farmers field of Maharashtra and Madhya Pradesh, respectively. It was found that there was no significant difference between yields (CD= ns at P=0.05) at different locations with S. Em. Value of ± 3.48 , and a CV% of 55.73. The data and feedback of farmers shows that the soybean variety *Pandrinath-1* showed better yield and gave superior performance as compared to other available varieties of soybean (like JS-335).

The trials of *Sitara Sringar* variety of mustard were performed during rabi 2015-16 at 46 farmers fields in Banaskantha district of Gujarat by using RBD with three replications. The yield results were found to be overwhelming with the yield, ranging between 3.73 q/ac to 10.13 q/ac. Eighty-five per cent farmers recorded more yield as compared to local varieties. This study was focused on yield performance while the dissemination study and data analysis is in progress.

The trials for *RLV-1* variety of mustard were performed during rabi 2015-16 in farmers fields of Banaskantha district of Gujarat. Sixty per cent farmers recorded more yield as compared to local varieties. The evaluation trials of *Marulsab* variety of Isabgol were conducted during rabi 2015-16 in farmers field of Banaskantha district of Gujarat. The result was found to be overwhelming for the yield of the variety in most of the area, though in areas with high TDS water conditions, the variety failed to perform.

This study is done for yield performance while the dissemination study and data analysis is in progress.

The trials in farmers fields for carrot varieties were conducted at Patan district to evaluate the performance of two farmers varieties of carrot in comparison with three local checks. The treatments comprised five varieties which were replicated in five blocks under randomised block design. The test variety Laxmangarh Selection gave significantly higher carrot yield i.e. 522.2 ± 67.77 q/ha ($F=12.5$; df 4,20; $Pd < 0.05$) which was found to be far superior to the check varieties while Madhuvan Gajar the other test variety recorded lower yield as compared to all check varieties.

Field experiments at Grambharti field

To evaluate the bioefficacy of six herbal preparations against leaf curl disease of chilli and seven herbal

preparations against pests of okra, experiments were conducted as per RBD, consisting of 12 treatments and three replications. The results showed that maximum reduction in leaf curl incidence was observed in treatments of buttermilk (76.4 per cent) followed by buttermilk with cow urine (45.3 per cent), goat milk and Sristi Krushak. The treatment of *Balanitesaegyptica* provided at par reduction in leaf curl incidence as compared to streptomycin (chemical). Overall buttermilk formulation alone and in combination with cow urine was found to be most suitable for the control of leaf curl incidence and also possess plant growth promoter activity that manifested in increased flowering and better fruit production in Grambharti field trials.

In the okra experiment, the formulation of Ganesh Dutta @40ml/L showed significantly lower green fly counts as compared to other treatment including chemical control (S. Em. \pm 0.25; CD = 0.73, P=0.05; CV% = 19.04). It was found that the formulation of Ganesh Dutta @ 10 ml/L controlled fruit borer (50%) and reduced fruit damage (20.7%) which was at par with other herbal preparations (except Sristi AZS 10ml/L) and chemical control. The treatment with Sristi AZSS @10ml/L and chemical showed higher yield as compared to all other treatments. The formulation of Ganesh Dutta @ 40ml/L showed 21.75 per cent better yield than control.

Performance evaluation of two varieties of carrot (*Durga 4 and JMP*) was carried out along with one national check and two local check varieties at Grambharti research farm, using RBD with five treatments and five replications. *Durga 4* variety was found to be superior with the highest yield of 157.3 q/ac with S. Em. \pm 6.09 values, followed by national check 147.2 q/ac with S. Em. \pm 4.96 values and local checks (F= 38.1; Pd^{0.05}). During rabi 2015-16, ten wheat varieties developed by innovative farmers were evaluated against two check varieties named HD-2976 and GJ- 496 with RBD experimental design (T X R = 12X3). The yield parameter was found significantly different during the analysis with S.Em. \pm 1.97; CD 5.97 at P=0.05 and CV% 9.52. Maximum yield was achieved by T₄ = HZG 30 as 45.5 q/ha (Karnataka), followed by T₃ = *Kudrat 7* (UP) as 41.7 q/ha, T₅ = *BLK* (Raj) as 40.4 q/ha and T₁₁ = GJ-496 (Control) as 39.5 q/ha., whereas the yield of check variety T₁₂ = HD 2,967 was recorded as 37.5 q/ha. From the experiment it is found that yield of three innovators' varieties (*HZG 30*, KA; *Kudrat 7*, UP and *BLK*, RJ) of wheat was higher as compared to check variety GJ 496, whereas the yield of T₁₁ = Rajyog (MP) as 39.2 q/ha and T₈ = *RK 4* (UP) as 37.9 q/ha was superior as compared to check variety T₁₂ = HD-2,976.

An evaluation trial of three farmers developed pigeon

pea varieties (*Kudrat 3*, *Richa 2000* and *Richa 2001*) and two locally popular varieties (*Chotila* and *GDP 1*) was conducted for two consecutive years during *kharif* 2014 and 2015. The results revealed significant superiority and suitability of farmers varieties for the area during both the years of trial randomised block design (RBD) with three replications. During the analysis, it was found that *Kudrat 3* outperformed the other varieties with an average yield of 3,190.12 kg/ha (2014) and 3,317.28 kg/ha (2015) with 129.84 and 232.90 as S. Em. \pm values, 400.08 and 717.62 as CD (p=0.05) values, 10.80 and 18.20 as CV % values for both the years respectively.

During two consecutive annual analysis, maximum pods per plant were observed as 943.50 and 935.75, respectively in *Richa2001* followed by *Richa 2000* and *Kudrat 3* with 50.63 and 104.89 as S Em. \pm values, 156.02 and 323.19 as CD (p=0.05) values, 18.89 and 31.20 as CV % values, respectively.

Two field experiments were carried out to test the bio-efficacy of 10 herbal preparations against pests of cotton and brinjal crops by randomised block design (RBD) with three replications. The experiments have been completed but analysis is in progress.

Veterinary

Treatment of retention of placental conditions through indigenous medications

Clinical conditions of bovines affected with placental retention were confirmed and validation of medications for curing the ailment was carried out at Department of Animal Reproduction, Gynaecology and Obstetrics, Nagpur Veterinary College, Nagpur. It was found that the formulations of Karsanbhai Govindbhai Patel and Mulchandbhai Linbhabhai Parmar from regions of Gujarat showed better results in expelling placenta in less than five hours of duration after administration. The medication of Tulsirambhai Bhabdubhai Pavar and Thakor Makwana Panchabhai Virabhai resulted in expulsion of placenta within nine hours of duration. Thus, the study confirmed efficacy of these medications in treatment of placental retention in clinical conditions. However, one of the test medication of Manabhai Kesharabhai Patel did not result in proper involution of uterus.

Efficacy of indigenous veterinary medications for curing ephemeral fever

Clinical and biochemical evaluation were conducted at Dr G.C Negi College of Veterinary and Animal Sciences, Palampur, Himachal Pradesh against

bovine ephemeral fever-affected animals. Lameness of affected animals is a predominant clinical sign affecting livestock. Indigenous medications of S Ponnar, Amar Singh and R Periyasamy had shown significant reduction in lameness on second day of treatment, in comparison with control animal population. The test medication of Sheik Hefajat Hussain, Bihar showed that lameness condition was reduced significantly by fourth day of treatment. However the medication by Lakshmanbhai Pabbabhai Bharwad did not show significant reduction in clinical parameters. This coordinated trial was held with the help of state veterinary institutions in Kangra district of Himachal Pradesh.

Evaluating indigenous veterinary medications for treatment of bloat

Indigenous veterinary medications were clinically evaluated for their efficacy against bloat at the Department of Clinical Medicine, Ethics & Jurisprudence, Nagpur Veterinary College, Nagpur, Maharashtra. The medication of Debeswar Rabha, Assam, Sitanath Munda, Jharkhand, Vanshbhadur Singh and Ramswarup Yadav of Bihar had resulted in reduced abdominal girth and enhanced rumen motility due to bloat.

The practice of P Vayapuri from Tamil Nadu was tested at Department of Veterinary Clinical Medicine, Nagpur Veterinary College. The rumen motility of naturally-affected goat was found to be 0.33 ± 0.21 cycles per minute. This was enhanced after feeding test medication to 1.66 ± 0.21 per minute at 2.5 hours and 2.33 ± 0.21 cycles per minute at eight hours post treatment. This proved that treatment with medication had shown impact to reduce bloat in goats.

Efficacy of poultry medications as feed supplement

Five medications from West Bengal were studied at College of Veterinary Science, Hassan, Karnataka. The polyherbal medication of Smt Tapashi Bera showed better efficacy.

Efficacy trials against clinical conditions of lactational anestrus in farm animals

Three indigenous medications against lactational anestrus condition were evaluated at the Department of Veterinary Gynaecology and Obstetrics, Nagpur Veterinary College, Nagpur. The practices of Smt Laduben Somabhai Parmar, Bhurabhai Jethabhai Rabari and Jagdishbhai Galbabbhai Parmar from Gujarat showed follicular development. These

medications induced waves of folliculogenesis, confirming their efficacy in treatment of lactational anestrus in farm animals.

Clinical evaluation of medication against subclinical mastitis condition

The practice of Smt Omavati Rathore and Smt Geeta Rathore, Jamonia village in Sehore district of Madhya Pradesh was clinically evaluated by examining subclinical mastitis (SCM) condition in farm. About 45 quarters were examined and 12 quarters (26.66 per cent) were confirmed for SCM. The plant preparation was given to these affected animals and improvement was recorded with California Mastitis Test, a standard diagnostic tool for SCM. The scored data were statistically analysed using paired test. The calculated value of $t_{0.05}$ for 11 d.f was 2.61 which was more than the table value $t_{0.05,11}$ of 2.20, indicating that the medication was useful against SCM.

Institutional linkages for evaluating indigenous veterinary medications

A total of eight projects, completed at Dr GC Negi College of Veterinary and Animal Sciences (Palampur), Himachal Pradesh; Nagpur Veterinary college (Nagpur), Maharashtra; Veterinary University Training and Research Centre (Salem), Tamil Nadu; Veterinary College (Hassan), Karnataka and Bombay Veterinary College (Mumbai), Maharashtra were recommended for closure. The research project at Pt Deen Dayal Upadhyaya Pashu Chikitsa Vigyan Vishwa Vidhyalaya Evam Go Anusandhan Sansthan (Mathura), Uttar Pradesh was recommended for withdrawal as adequate extension had been provided. Five new veterinary projects received from Veterinary College (Shimoga), College of Veterinary Science (Proddatur), Andhra Pradesh, College of Veterinary and Animal Sciences (Udgir), Maharashtra, Faculty of Veterinary Sciences & Animal Husbandry (Jammu) and College of Veterinary Science & Animal Husbandry (Bhubaneswar), Odisha were presented before the Project Review Committee on October 31, 2015.

Evaluation of validated practices through Research Advisory Committee (RAC)

Fifteen indigenous veterinary practices were presented and assessed by the RAC. These indigenous medications were found effective against ailments viz. bloat, ephemeral fever, anestrus, retention of placenta and tick infestation. As part of the follow up, interaction with villagers was held at Dodgam, Banaskantha district in Gujarat, for practice of Karsanbhai Govindbhai Patel against expulsion of placenta. A visit was also carried

out at Bahlolpur in East Champaran district, Bihar to interact with Sheik Hefazat Hussain and villagers for the validated medication in treatment of ephemeral fever among farm animals.

Network meeting among healers, Odisha & West Bengal

Network meeting were conducted in Odisha (Angul, Angul district) and West Bengal (Bajkul, Purba Medinipur district) so as to share and strengthen outstanding traditional knowledge holders network. The healers meeting at Odisha was conducted with the support of Innovation Club, Odisha.

Establishment of Institutional linkage, Uttarakhand

A demonstration was conducted in the village Soked of Tuini Taluk, Dehradun with the help of state animal husbandry department. Farmers could eagerly take up medication and apply over their livestock, as they felt the need for a low-cost, locally-available medication in hilly regions. The feedback from farmers and veterinary officer were sought on the next day which was affirmative, after seeing the impact of indigenous medication practiced by Shri Kathaviya Khumaji Badaji of Sabarkantha district in Gujarat. We intend to share these effective medications through meetings at the Directorate of Animal Husbandry, Uttarakhand. This will help in large-scale adoption of this practice in hilly regions as the plant is commonly available. The gap between the sustainable knowledge system of farmers and formal education system, providing livestock service, will be reduced and framework for synergistic action were contemplated through these efforts.

Human Health

During this period, the progress reports were received for various human health-related practices, being evaluated at different institutions around the country. For antiurolithiatic activity, four herbal practices were validated under *in-vivo* conditions, of which two practices showed significant antiurolithiatic activity. Another two herbal practices were evaluated for their antiepileptic potential, using Maximum Electroconvulsive Shock (MES) model in rats. Both the practices demonstrated significant antiepileptic activity. Of the three antiobesity herbal practices sent for validation, two demonstrated significantly reduction in serum total cholesterol, low-density lipoprotein (LDL) and triglyceride (TG) levels, compared to the control. There were no significant effects on the serum High-density lipoprotein (HDL) levels by both the treatments. The third herbal practice produced insignificant effects on serum total cholesterol and HDL levels while

significant reduction was observed in serum LDL and TG levels. The antiasthmatic activities of five herbal practices were evaluated in Dunkin-Hartley Guinea pigs where a significant decrease in histamine levels and leukocyte count levels were observed in the test groups as compared to the disease control. Herbal preparation, based on grassroots practices, were clinically evaluated on human subjects for their efficacy against gingivitis and plaque. The formulations exhibited positive results in *in-vitro* experiments against various microbes (*Streptococcus mutans* MTCC497, *Streptococcus gordonii* MTCC2695, *Neisseria mucosa* MTCC1772, *Moraxella sp.* MTCC3605, and *Brevibacteriumliquefaciens* MTCC25) and also in clinical trials.

NIF - ICMR collaboration

An extensive programme for the screening of 800 herbal practices was started under NIF-ICMR collaboration and about 80 prospective leads were shortlisted for validation. Major emphasis has been given to 11 different disease categories viz. pain, inflammation and arthritis, anti-diabetic, liver disorders, cancer, obesity, osteoporosis, malaria, tuberculosis, hypertension and cardiovascular disorder, de-addiction, diarrhoea and dysentery. NIF team visited different Contract Research Organisations (CROs) and institutes for validation of leads under this ICMR-NIF Task Force project. Seven institutes submitted their proposals which were evaluated by expert members in terms of cost, timeline and suitability. Before going ahead with the projects for validation, the committee suggested to visit different CROs/institutes to access their expertise, facility and undertake discussions about cost reduction. NIF completed the visits of different CROs, along with the experts, constituted in consultation with ICMR, for evaluating the facilities and expertise available with them. The protocols and study parameters for each group of human diseases were also finalised in consultation with experts. NIF team also visited healers' places for detailed documentation and verification of plants, and practices. In most of the cases, NIF team also interacted with the patients who were treated by the healers to document their experiences. During this period, ICMR also released the second installment under the ICMR-NIF Task Force project for validation of the claims of herbal healers.

NIF-CSIR collaboration

NIF signed three MoUs with CSIR-CDRI for validation of two herbal anti-hypertensive leads in spontaneously hypertensive rat, using telemetric system and 16 leads for validation of herbal leads for antimalarial activities. The validation of hypertension and malaria leads has

already started. A visit was also made to CSIR-CIMAP to strengthen the synergy with NIF, for validation of herbal grassroots practices and plant varieties. NIF has already shared the details of parameters for evaluation of biochemical markers in a carrot variety, developed by a grassroots innovator. NIF has invited the student researchers of CIMAP to select the leads from NIF's database for validation of, and value addition in the technological claims of innovators. It was mentioned that IPR shall be owned by the respective knowledge holder, the research scientist might publish the paper only after filing of the patent. However, in case of substantial value addition, the IPR can be shared with researcher, depending upon the individual research/value-addition.

NIF-SRISTI collaboration

Six formulations of tea for physicochemical analysis (moisture, total ash, acid insoluble, water soluble ash, alkalinity of ash, crude fibre, water extract, foreign matter (impurity), colour and sample appearance) were undertaken. Field evaluation of herbal pesticide to control pest, a practice documented during the 34th *shodhyatra* in Sikkim, was tested in mustard for sucking pests for which the initial results have been extremely promising. The field trials of five agricultural practices were conducted at farmers fields. A meeting was also organised to demonstrate the method of preparation of herbal pesticides at Jasdan, Rajkot. Twenty recipes were documented and evaluated for their nutritional contents and some of them were recorded with higher concentration of protein, carbohydrate, ascorbic acid, iron, potassium and boron. Twenty-one bacterial isolates from five fruit-ripening practices were evaluated for their ripening time, in comparison with their practice. It was observed that individual bacterial isolate had taken more time in ripening than respective practices. Value-added formulation for animal and human disinfectants were developed. Veterinary formulations were shared with Indian Herbs and Rakesh Pharmaceuticals whereas human disinfectants were shared with 3M Bangalore for evaluation. Also, 11 plants were processed for sending to various institutes for practice validation.

c) Business Development and Micro Venture

Launch of second phase of MVIF

NIF and Small Industries Development Bank of India (SIDBI) have launched the second phase of Micro Venture and Innovation Fund (MVIF). An agreement was signed on Friday, January 15, 2016. The first phase of this fund was launched in the year 2003 and 193 projects by various grassroots innovators, across

districts and states, benefitted from it with more than 75 per cent recovery. It proves that grassroots innovators scouted and mentored by the Honey Bee Network are at good risk.

In its second phase, the fund will be made available to innovators and entrepreneurs for technology commercialisation. Innovative technologies will be incubated and launched in the market with support of this fund.

Technology transfers and further progress

The technologies of walnut cracker and walnut peeler of Mushtaq Ahmad Dar were transferred to M/S Rafiq Engineering Works, Anantnag for commercialisation.

Nagpur-based Kaviraa Solutions, to which NIF had transferred the technology of adjustable walker, successfully launched its first warehouse in the city on September 20, 2015. NIF mentored the marketing team of Kaviraa Solutions and assisted them by showcasing the innovation to the medical fraternity in the city of Nagpur.

NIF also supported Ahmedabad-based India Innovatix Private Limited, to which NIF had transferred the technology of Pole Pro of Mushtaq Ahmad Dar, in introducing the innovations to various state electricity boards of the country, by dispatching customised letters in support of the innovation.

Participation in meetings, fairs and exhibitions

NIF had participated in the India-Africa Forum Summit 2015, held during October, at New Delhi where the Hon'ble President of Zimbabwe Mr Robert Mugabe showed a lot of interest in grassroots innovations, specially the sugarcane bud chipper. This was followed by a post-event meeting with Mr Maxwell Ranga, the ambassador of Zimbabwe to India. A unit of the device was provided to them for trials. Similarly, interest was evinced by a few other African countries in the multi-purpose processing machine. A few African delegates also had a site visit for the innovation of grassroots innovation *Pole Pro*, promoted by the entrepreneur, Indian Inovatix Private Limited.

NIF participated in the 35th India International Trade Fair (IITF), New Delhi during November 14-27, 2015. The participation resulted in direct sales, worth about Rs.800,000 and orders worth another Rs.600,000. In addition to this, several queries were also received regarding the dealership of the innovations, which shall help innovators in the expansion of their business.

The displayed innovations were also appreciated by Dr Harsh Vardhan, Union Minister for Science & Technology and Earth Sciences.

To promote grassroots innovations in various spheres and areas, NIF also displayed/ demonstrated innovations and participated in a number of other events. NIF facilitated an Innovation Showcase at India Engineering Sourcing Show (IESS) 2015, Mumbai organised by Engineering Export Promotion Council (EEPC) during November 24-26. NIF participated in CII's National Start-up Center meeting on September 25, at Bengaluru. The proposal aims to accelerate the successful development of entrepreneurial ventures, based on local needs and opportunities. NIF participated in Jamia Milia Islamia's Foundation Day event on Oct 29-30, 2015 at New Delhi and also participated in Women of India Exhibition 2015 at Dilli Haat, New Delhi during November 12-23, 2015. NIF participated in the Foundation Day celebrations of the National Council for Rural Institutes (NCRI), Hyderabad on October 19-20, 2015 and in a state-level *mela* in a remote area in Bundelkhand region of Uttar Pradesh during December 13-17, 2015 setting up a small exhibition of grassroots innovation.

Other initiatives

NIF team organised an innovators' meet on September 22, at NIF, Ahmedabad with an objective of resuming dialogue with innovators, sharing best practices and latest developments and trends. A dialogue with various logistics providers and import-export houses

was also initiated so as to facilitate simplified shipment of grassroots innovations to international customers. The business development team at NIF is also working towards leveraging contemporary technologies like *WhatsApp* in engaging with customers proactively and improving client experience. This is expected to optimise the average time spent by a customer enquiring with us.

d) Intellectual Property Rights

During the period, 62 provisional specifications (PS), one direct complete specification (CS), 21 PS to CS applications and 74 requests for examination (RFE) were filed at the Indian Patent Office (IPO). During this time, the IPR section received 10 first examination reports (FER) and attended four hearings at IPO. NIF team also followed up with the herbal healers, for completing the necessary documentation, as required by the National Biodiversity Authority, for obtaining a patent on herbal products in India.

Twelve applications were filed for registration of

farmers varieties under Protection of Plant Varieties & Farmers Rights Authority Act 2001. The registration certificate (No. 64 of 2015) has been issued for pigeon pea variety - *Richa 2000*, developed by Rajkumar Rathore of Sehore, Madhya Pradesh.

e) Dissemination and Social Diffusion

NIF team undertook extensive fieldwork along the Sikkim *shodhyatra* route, to map local resources, identify problems and resource persons. Certain innovations were identified for diffusion, of which, a proposal to install the multipurpose processing machine in Lum village, North Sikkim was sanctioned. Another project of the machine in Rampur (UP) has been revived. The biomass gasifier, installed in Chak 2 village on Rajasthan-Haryana border, has been taken back from the villagers as they had stopped using it. NIF facilitated the dissemination of HRMN-99, a new apple variety, suitable for tropical and sub-tropical areas, under which over 7,200 samplings were provided to 17 institutions, 450 farmers in 250 villages across the country, including the northeastern states and Andaman & Nicobar Islands.

Media

Like previous years, this year too NIF team engaged with media (both print and electronic) to bring our articles and stories on grassroots innovations and about its work. NIF coordinated with *Mail Today*, *saddahaq.com*, *NDTV*, *TLC*, *Times Internet Ltd*, *NSP*, *The Hindu*, *The Times of India*, *Tathya Bharti*, *World Cycling Atlas* and others in connection with stories on innovators and NIF.

Science Express: Climate Change Special

DST had invited NIF to participate in the eight phase of the Science Express: Climate Change Special (October 15, 2015 to May 7, 2016) and allotted a part of Coach 11 to NIF, to setup an innovation exhibition where NIF put up eight innovations of grassroots innovators and school students, coming from seven states viz. bamboo stripper-cum-splinter for incense stick-making, cotton wick-making machine, wrapper picker, Mitticool range of earthen products, tree climber, manual milking machine, modified walker with adjustable legs and travelling bag with folding seat. This exhibition showcased select innovations demonstrating the ingenuity of common people and school students. It aimed at inspiring and instigating at the same time so that the visitors may themselves start identifying persistent problems and come up with technological solutions. Along with the exhibits, backlit posters of these innovations, highlighting the work and

various schemes of NIF were also put up in the coach. NIF also organised innovation/poster exhibitions at the platforms and conducted on-the-spot ideas' competitions for school students throughout the route (on select stations). As part of the outreach program, NIF also tried to reach out to various schools in the city and conduct ideas' competitions there as well. NIF successfully undertook these activities at 19 stations in nine states viz. Jammu & Kashmir (2), Uttar Pradesh (1), West Bengal (1), Assam (1), Odisha (1), Chhattisgarh (2), Telangana (2), Andhra Pradesh (4) and Gujarat (5), connecting with over 35,000 students during platform and outreach activities, collecting 15,135 submissions/ideas of the students in the process.

In Jammu and Kashmir, the NIF team reached out to about 1,700 students across 38 schools in Udhampur and Samba, and another 1,300 during the platform activities. A total of 1,158 creative ideas of the students were collected in the process. At Allahabad, 2,104 ideas were collected while at New Jalpaiguri and New Bongaigaon, only 86 ideas could be mobilised as most of the schools were closed due to winter vacations. Fifty-six ideas could be collected from Jharsugada (Odisha) and 1,053 from Bilaspur and Kumhari (Chhattisgarh). During the halts at Telangana and Andhra Pradesh, NIF/Palle Srujana was able to directly connect with over 13,700 students, of whom 8,616 submissions/ideas were collected. In Gujarat,

2,062 ideas were collected from the students, reaching out to over 11,000 school students. A meeting with 100 school teachers was also organised in the Valsad district to sensitise and help them develop creative thinking in children.

Quinquennial Committee for Future directions (QCFD)

For a healthy growth and development of any institution, a periodic review of its whole range of activities, vision, mandate, perspective and its relationship with value-based social movements is necessary. Accordingly, it was decided to initiate a regular process of reviewing NIF's mandate and activities every five years, to reinstate the commitment towards its goals. For this purpose, a Quinquennial Committee for Future Directions (QCFD) was set up under the chairmanship of Prof V S Ramamurthy, former secretary, DST, former director, NIAS, Bengaluru and an eminent scientist and institution builder. This committee included Prof Anil K Gupta, Prof Kuldeep Mathur, who has nurtured many ideas which led to establishment of NIF, Ms Riya Sinha Chokkakula, former CIO, NIF, Prof Sudershan Iyengar, a Gandhian educationist and former vice-chancellor of Gujarat Vidyapeeth and Dr Vipin Kumar as member secretary. The committee conducted multiple meetings with the staff, innovators and other stakeholders, and submitted its view to the NIF. One of the key recommendations of the committee was to



Idea competition among school children

decentralise the operations of NIF and open regional offices so that innovators need can be served better. The Committee appreciated the sustained efforts made by NIF and complimented the enormous energy put in staff of NIF and volunteers of Honey Bee Network in achieving various goals.

Budding initiatives

MoU with National Institute of Advanced Studies (NIAS)

NIF and National Institute of Advanced Studies (NIAS) signed a memorandum of understanding on May 10, 2015 at the NIAS campus in Bengaluru to collaborate and further efforts in the areas of intersection of science, technology and innovation (STI), public policy and social sciences. The collaboration aims to explore mutual learning opportunities through action-based research with the motif to bring change at the ground. Under the agreement, NIF will facilitate developing a Honey Bee Network hub at NIAS which will act as a diffusion and dissemination platform for grassroots innovations. In addition to many cooperative actions, a summer school on inclusive innovations is also being planned jointly.

MoU with National Health Systems Resource Centre

NIF and National Health Systems Resource Centre (NHSRC) entered into an agreement on April 27, 2015 to collaborate on various activities related to public health. Under the scope of the agreement, a number of activities have been envisioned which includes assessment of innovative healthcare technologies, supporting technology transfer for bulk production, supporting pilot studies to validate efficacy and use in public health system, conducting joint training and capacity-building in identified areas of work and collaborating in various other areas in the field of healthcare technologies. NHSRC, New Delhi is the apex body for technical assistance setup under National Rural Health Mission (NRHM) of the government of India, mandated to assist in policy and strategy development in the provision and mobilisation of technical assistance to the states and in capacity-building for the Ministry of Health and Family Welfare (MoHFW) at the centre and in the states.

MoU with John Deere India

NIF entered into an understanding on April 16, 2015 with John Deere India Private Limited (JDIPL), Pune to work closely on innovative grassroots projects of mutual interest. Under the agreement, a number of initiatives have been planned. John Deere will support

NIF innovators and invite them to their factory for knowledge-sharing. Their engineers would also visit the innovators' place for reciprocal learning and exchange of ideas. The innovators and engineers would also work on joint projects for value addition and product development. John Deere would identify innovations from NIF's database to explore opportunities for large-scale manufacturing and commercialisation. JDIPL is engaged in the business of producing tractors and other agricultural machines and providing leading-edge technology, product designs and innovative ideas to support JDIPL's global business.

Other partnerships

A memorandum of understanding (MoU) was signed between NIF and Himachal Pradesh-based Horticultural Produce Marketing and Processing Corporation Limited (HPMC) on August 20, 2015. This relationship will create ground for leveraging each other competencies, particularly NIF's technical strength and HPMC's strong distribution network. Another MoU was signed between Honey Bee Network institutions, including NIF and Cumulus, the international association of 49 global universities and colleges of art, design and media, on December 5, 2015 in a meeting at IIT Bombay. This relationship will help mobilise international design expertise for grassroots innovations. NIF and Honey Bee Network collaborated with Camaleonte Limited and the team attended the launch of program *Silver Bullets to the Silver Market* at Helsinki, Finland during November 10-11, 2015.

Recognitions to grassroots innovators

Archana Konwar, Assam (*crutches with shock absorbers*) won the National Centre for Promotion of Employment for Disabled People (NCPEDP)-Mphasis Universal Design Award 2015. Earlier, NIF had nominated Archana, along with Biju Varghese, Kerala (*retrofitting attachment for car to make it disabled-friendly*) and Shalini Kumari, Bihar (*modified walker with adjustable legs*) for the same.

NIF and SRISTI nominated a number of young student innovators for the National Child Awards for Exceptional Achievement 2015, instituted by the Ministry of Women and Child Development, of which Soring Lepcha (designed a *cost-effective water filter for controlling water-borne diseases in his village*), Mayal Lepcha (*fitted a small generator in the water tap so that when water flows through it, one can charge a mobile phone*), Ananya K G (*automatic mobile nebuliser that works on solar energy*), Aditya Makkar (*designed a rickshaw X with reverse gear, foldable seat and indicators*) and

Affan Siddiqui (*designed bus steps at a low height to provide relief to elderly*) were selected for the prestigious awards, which were given at the hands of the Hon'ble President of India Shri Pranab Mukherjee at Rashtrapati Bhavan on the occasion of Children's Day on November 14, 2015. Some of these children were IGNITE awardees while others were identified during *shodhyatras* and workshops on children's creativity, organised by SRISTI in collaboration with UNICEF, NIF and other Honey Bee Network partners.

Innovators, Writers and Artists In-residence programme for innovation scholars

On December 11, 2013 the President had launched an In-residence programme for writers, artists and innovation scholars at Rashtrapati Bhavan to provide further impetus to grassroots innovation. In 2014 and 2015, two batches of innovators were provided residency at the Rashtrapati Bhavan.

The third batch of innovation scholars was provided residency starting March 12, 2016, for a period of two weeks. The innovation scholars included grassroots innovators G Ratnakar (Karnataka, *mini water turbine*), Mushtaq Ahmad Dar (Jammu and Kashmir, *walnut cracker*), Lalbiakzuala Ralte (Mizoram, *bamboo splint-making machine*), C Mallesham (Andhra Pradesh, *Asu making machine*), Amrutbhai Agrawat (Gujarat, *Aaruni bullock cart and innovative pulley*), Ms Anuradha Pal (Delhi, *Right Biotic, antibiotic finder*) and Swapnanil Talukdar (Assam, *foot-operated manual page turning*

machine). During their residency, these innovation scholars-in-residence interacted with the concerned ministries, research institutions, etc., for possible support for further research and development and/or diffusion of their innovations. The purpose is to build their linkages with policy, technology and other institutions such as industry associations, Bureau of Indian Standards and other stakeholders. The President also interacted with the scholars in-residence and motivated them. NIF coordinated with the President's House and helped in screening of entries, coordination with innovators, technical institutions, government departments, ministries etc., for making the programme a great success.

Administrative matters

Recruitment of staff

In order to recruit good professionals to undertake the various incubation-related activities, which have been increasing manifold, interviews for the positions of Senior Fellows, Fellows, Research Associates, Managers, etc., were conducted on April 7, May 12, June 12-13, October 16, 2015 and January 12-13, January 30, and February 23, 2016 wherein a total of 76 candidates were selected.

Government-related activities

NIF submitted to the DST the Annual Report for 2014-15 in English and Hindi, along with the Annual Review



Valedictory Function - In-Residence programme for Innovation Scholars

Statement 2014-15, inputs for DST's Annual Report 2015-16, inputs for the presentation for Parliamentary Standing Committee meeting on the of indigenous technology in rural development, data for the study of autonomous bodies, inputs for reply to the Department of Expenditure, Ministry of Finance related to quantitative and qualitative outputs in 2015-16, annual RTI report, outcome budget 2011-15 and inputs related to Parliamentary questions.

List of Publications of 2015-2016

2016

1. Gopalbhai Surtia, Paresh Panchal, Mahesh Patel, Ravikumar RK and Vipin Kumar. (2016) Improving livelihood initiatives through environmental friendly solutions derived from livestock byproduct. *International Journal of Science, Environment and Technology*, 5(2):658 – 665
2. Kanal Chhajed, Rakesh Maheshwari, Raghunath Lohar, Khimji Kanadiya (2016) Assistive Aid for Women Workers Carrying Load on Their Head: A Case Study. *International Journal of Innovative Research in Science, Engineering and Technology* 5(2): 2159 -2168
3. Keyur Panara, Pawan K. Singh, Pooja Rawat, Vivek Kumar, Momin Maruf, Kanti Patel, R K Ravikumar and Vipin Kumar (2016) Importance of *Alangiumsalviifolium* and its Pharmacological Update, *European Journal of Medicinal Plants*, 12(4): 1-15
4. Ravikumar R K, Kinhekar Amol S, Ingle V C, Sonkusale Prashant, AwandkarSudhakar P., Tembhurne Prabhakar A, Kumar Vipin (2016) Effect of Heat Stress on Haematological and Immunological Parameters in Broiler Chicken, *The Indian Journal of Veterinary Sciences and Biotechnology*, 11(3): 40-42
5. Ravikumar R K, Dutta L, Kinhekar A S, Kumar V (2016). People's knowledge for addressing societal needs: Lessons learnt while engaging farming communities as a part of research system. *Adv. Anim. Vet. Sci.* 4(1s): 1-8
6. Ravikumar R K, Periyaveeturaman C, Selvaraju D, Kinhekar AS, Dutta L and Vipin Kumar (2016) Community oriented ectoparasite intervention system: Concepts for on-farm application of indigenous veterinary medication, *Adv. Anim. Vet. Sci.* 4(1s): 9-19.

Ø Published international conference proceedings

2016

1. Indigenous innovations in livestock production systems: NIF initiatives, Invited paper, Sarjan R K, Prasad R M V and Anand Rao K Innovative designs and implements for global environment and entrepreneurial needs optimizing utilitarian sources, *INDIGENOUS, International Livestock Conference & Expo, 23rd Annual convention, ISAPM, Hyderabad, India, 28-31, Jan, Pp. 28-35.*

2015

1. Christian Toelg, Vipin Kumar (2015) A rural innovation framework for African countries, *Intersection of Indigenous and Traditional Knowledge and Technology Design*, Bidwell, N. J, & Winschiers-Theophilus, H., Santa Rosa, California: Informing Science Press
2. Dayabhai Bharwad, Vipul Vasan, Amol S Kinhekar, Vivek Kumar, Ravikumar R.K. and Vipin Kumar (2015) Therapeutic evaluation of indigenous veterinary medication for endoparasite infestation in bovines under field condition. *Indian Journal of Applied Research* 5(4): 755-756.
3. Devgania BS, Khordia D, Chodvadiya MB, Patel R, Patel D, Kinhekar AS, Singh PK, Kumar V, Bhojne GR, Ravikumar RK, Kumar V. (2015) Reverence of community towards grassroot livestock innovation: Responding to stakeholders need against sub-clinical mastitis in Amreli District, Gujarat, India. *Adv. Anim. Vet. Sci.* 3(12): 689-693.
4. Jamunabhen Bhanabhai Patel, Sheila Patel, Purushotham Patel, Ravikumar, R K , Amol S Kinhekar, Vivek Kumar, Ingle V C, Sudhakar Awandkar, Prabhakar A Tembhurne and Vipin Kumar, (2015) Poultry immunity against Ranikhet Disease Virus (RDV) - A case study of an indigenous poultry medication in village production systems of Maharashtra, India, *Journal of Chemical and Pharmaceutical Research* 7(4):1040-1042.
5. Jayshree D. Patel, Nirmal S. Sahay and Vipin Kumar (2015) Fingerprinting of the *Acacia nilotica* (L.) bark extract having antibacterial property. *Journal of Health Science* 3:132-136

6. Mahipalchary Kadivendi, Rakesh Maheswari, Ravikumar, R K , Mukeshkumar M. Chauhan, Amol S Kinhekar, Vivek Kumar and Vipin Kumar (2015) Integrated approach for Engaging Farming Community- Opportunities and Challenges for Low Cost Inputs. *International Journal of Agriculture Innovations and Research* 3(6): 1691-1695.
 7. Pandit R, Singh P K and Kumar V (2015). Natural remedies against multi-drug resistant *Mycobacterium tuberculosis*. *Journal of Tuberculosis Research*, 3 (4): 173-183.
 8. Periyaveeturaman, C , Selvaraju, D, Kinhekar, A S , Singh, P K , Ravikumar, R K and Kumar, Vipin (2015) Efficacy of herbal composition against ectoparasite infestation in dogs, *Advances in Applied Science Research*, 6(8): 242-245.
 9. Ravikumar R K , Amol S Kinhekar and Vipin Kumar. (2015) Innovative means for regulating global warming through indigenous veterinary system: Are we missing sustainable solutions? *Journal of Chemical and Pharmaceutical Research*, 7(5):951-954.
 10. Ravikumar R K, Kinhekar A S and Kumar Vipin. (2015) Indigenous veterinary medication: An approach for mitigating climate change in livestock production system, *Ruminant Science*, 4(2): 29-32.
 11. Ravikumar, R K, Amol S Kinhekar, Nirmal S Sahay, Vivek Kumar, Pawan K Singh, Mahesh B Chodvadiya and Vipin Kumar (2015) Methodological approach for sustaining indigenous veterinary knowledge of society: Case studies to control of endoparasite from the regions of Gandhinagar, Bhavnagar and Junagadh districts of Gujarat State, India, *Indian Journal of Applied Research*, 5(10): 640-642.
 12. Ravikumar, R K , Amol S Kinhekar and Vipin Kumar (2015) Study on Efficacy of Veterinary Medication for Effective Rumen Function - A Strategy to Minimize Greenhouse Gas Emission. *Global Journal for Research Analysis*, 4 (4): 1-2.
 13. Ravikumar R K, Hardev Choudhary and Vipin Kumar. (2015) Means for retaining farming communities in semi-arid regions of Gujarat state. *Agric. Update*, 10(2): 158-163
 14. Ravikumar, R K , Lopamudra Dutta, Vivek Kumar and Vipin Kumar (2015) Strengthening indigenous veterinary system - An approach for mobilizing community from West Bengal", *Asian Academic Research Journal of Social Science & Humanities*. 34 (1): 286-290
 15. Ravikumar R K, Vivek Kumar, Hardev Choudhary, Amol S Kinhekar and Vipin Kumar, (2015) Efficacy of indigenous polyherbalectoparasiticide formulation against hard tick infestation in cattle (*Bos indicus*), *Ruminant Science*, 4(1):43-47.
 16. Sitaben Lasiabhai R Gaikwad, Dayabhai N Ramana, Rahamethkhan P Solanki, Lakhabhai B. Khatana, Gohil Nanuben K, Vasava Natvarbhai G, Purshotam Patel, Nirmal S Sahay, Jayshree Patel, Ravikumar R K, Pawan K Singh, Amol S Kinhekar and Vipin Kumar, (2015) Efficacy of an indigenous veterinary medication to control endoparasite infestation in clinically diagnosed large ruminants affected with diarrhoea amongst field conditions: Gujarat, India, *European Journal of Experimental Biology*, 5(5):81-84
 17. Vijay Kumar, Devendra Patil, Nitin Maurya (2015) A Study of Attack on PHP and Web Security, *Communications on Applied Electronics (CAE)*, Foundation of Computer Science FCS, New York, USA, 1(4): 1-13
- Ø **Book Chapter**
1. Vipin Kumar and Ravikumar R K, (2015) Realistic aspiration of livestock health care through Indigenous Veterinary System in India, New Delhi:Dairy India
- Ø **Abstract in Conference**
1. Amirdaraj K, Bhoodhathan K, Ayyathurai K, Kumar V, Singh PK, Chandrashekhar V M (2015). Biological evaluation of some selected medicinal plants (NIF leads) for their hepatoprotective and anti-arthritis activity, 3rd ICCIG at IIMA, p 121
 2. Dharambir Kamboj, and Anamika Dey (2015) Role of Intermediaries in bridging and blending innovations from formal and informal sectors for an Inclusive Innovation system 3rd ICCIG at IIMA, p 125
 3. Ghulam Hassan1 Qadiri, Badri Mahato1, Abdul Rehman Sada1, Gulam Hassa Pala1, Tejal Gandhi2 (2015), Evaluation of Antihypertensive Activity of Four Herbal Grassroots Practices, 3rd ICCIG at IIMA, p 122
 4. Gulam A M, Hakeem A R, Robert, Rammehar S,

- Nida A K, Ombeer, Kumar V, Singh P K, Trivedi S (2015). Validation of antimycotic potential of traditionally used Indian herbal extracts against dermatophyte strains causing human skin disease. 3rd ICCIG at IIMA, p 120
5. Khumujam Jina Devi and Debati Devi (2015) Mangal Herbal Soap, 3rd ICCIG at IIMA, p 125
 6. Mahesh Patel (2015) Dynamics of Technology Commons: A case of Bullet Santi, 3rd ICCIG at IIMA, pp. 134-135
 7. Mohanlal B, Binoy Kurian, and Gulshan Vashistha (2015) Reversible reduction gear for marine diesel engine and Z- drive propeller. 3rd ICCIG at IIMA, p 123
 8. Nitin Maurya (2015) Innovation imperative: The case of Mushtaq Ahmad Dar, a young Kashmiri innovator. 3rd ICCIG at IIMA, p 123
 9. Prakash Singh Raghuvanshi and Hardev Chaudhary, (2015) Kudrat reformer, 3rd ICCIG at IIMA, p 125
 10. Ravikumar R K, Vivek Kumar, Sudeep Kumar, Mohinder Bhadwal, Sakarabhai Kallubhai Bhariya and Khumaji Badaji Kataviya (2015) Methodologies of institutional recognition for veterinary knowledge holder(s) –An approach in the regions of Jammu & Kashmir, Tamil Nadu and Gujarat, 3rd ICCIG at IIMA, pp 118-119
 11. Thakor Makvana Pachalbai, Mrugesh Patel, Samir K Shah, Mamta B Shah (2015) Phytopharmacological studies on indigenous medicinal plants, 3rd ICCIG at IIMA, pg122
 12. Vivek Kumar (2015) Is all traditional knowledge community knowledge? 3rd ICCIG at IIMA, p 39
- Ø **Published National conference proceedings**
1. Ravikumar, R K , and Vipin Kumar, (2015) New frontiers for Indigenous Knowledge Research System [IKRS]: Non Linear Innovation System [NLIS] and Open Source Innovation System [OSIS], Lead Paper, Eds. Jaswinder Singh, HK Verma, Navdeep Singh, Simrinder Singh and Rajesh Kasrija, National conference on push to the livestock farming through knowledge empowerment of the farmers, Nov 18-20, Guru Angad Dev Veterinary and Animal Sciences University [GADVASU], Ludhiana. Pp. 239-242. [1st National Conference of Society of Veterinary and Animal Husbandry Extension (SVAHE)].



**National Innovation Foundation- India
(NIF)**

REVISED ANNUAL ACCOUNTS

FOR THE YEAR 2015-2016



NATIONAL INNOVATION FOUNDATION - INDIA
Regn.No.F/7412/Ahmedabad

REVISED BALANCE SHEET AS AT MARCH 31, 2016

	Schedule No.	INR-Rupees As at March 31, 2016		INR Rupees As at March 31,2015
CAPITAL FUND & LIABILITIES				
Capital Fund	1		520,56,046	290,79,870
Earmarked Funds	2		1254,90,513	1285,08,337
Current Liabilities and Provisions	3		36,86,962	59,37,984
Total			1812,33,520	1635,26,191
ASSETS				
Fixed Assets	4			
Gross Block		374,16,139		310,12,495
Less : Depreciation		233,49,592		197,03,811
Net Block			140,66,547	113,08,684
Current Assets, Loans, Advances and Other Assets	5		1671,66,973	1522,17,507
Total			1812,33,520	1635,26,191
Significant Accounting Policies and Notes on Accounts	11			

As per our report of even date
 For **Ramanlal G. Shah & Co.**
 Chartered Accountants
 Firm Regn. No. 108517W

Vivek S. Shah
 Partner
 Vivek S. Shah
 Membership No. 112269
 Place : Ahmedabad
 Date : **29 SEP 2016**



The above Balance Sheet to the best of my/our belief contains a true account of the Funds/Liabilities and Assets/Property of the Trust

[Signature]
TRUSTEE

Executive Vice Chairperson
National Innovation Foundation-India
 Autonomous Body of Department of Science & Technology, Govt. of India
 Satellite Complex, Satellite, Ahmedabad-15

NATIONAL INNOVATION FOUNDATION - INDIA
Regn.No.F/7412/Ahmedabad

REVISED INCOME AND EXPENDITURE ACCOUNT FOR THE YEAR ENDED ON MARCH 31, 2016

	Schedule No.	INR-Rupees For the year ended on March 31, 2016	INR-Rupees For the year ended on March 31, 2015
INCOME			
<u>Grant/ subsidies</u>			
Plan Grant from Department of Science and Technology [DST] (Less: Amount Transferred to GOI DST Grant for fixed assets representing expenditure on non-recurring items) (Refer Schedule 11 , Notes on Accounts Note No. F)		1200,00,000 (59,15,394)	643,81,000 (21,70,796)
Interest earned	6	1140,84,606 43,49,747	622,10,204 -
Other Income	7	43,509	-
Total		1184,77,862	622,10,204
EXPENDITURE			
Establishment Expenses	8	315,91,339	195,32,714
Recurring Expenses	9	568,20,924	346,67,112
Other Administrative Expenses	10	98,47,286	88,48,574
Depreciation		36,45,781	30,93,402
Total		1019,05,330	661,41,802
Excess of Income over Expenditure transferred to Balance Sheet		165,72,532	(39,31,598)
Significant Accounting Policies and Notes on Accounts	11		

As per our report of even date
For **Ramanlal G. Shah & Co.**
Chartered Accountants
Firm Regn. No. 108517W

Partner
Vivek S. Shah
Membership No. 112269
Place : Ahmedabad
Date :

29 SEP 2016



The above Balance Sheet to the best of
my/our belief contains a true account of the
Funds/Liabilities and Assets/Property of the
Trust

[Signature]
TRUSTEE

Executive Vice Chairperson
National Innovation Foundation-India
A. S. Body of Department of Science & Technology, Govt. of India
Satellite Complex, Satellite, Ahmedabad-15

NATIONAL INNOVATION FOUNDATION - INDIA
Regn.No.F/7412/Ahmedabad

SCHEDULE FORMING PART OF REVISED BALANCE SHEET AS AT MARCH 31, 2016

	INR-Rupees As at March 31, 2016		INR-Rupees As at March 31, 2015
Schedule : 1 - Capital Fund :			
1 Corpus Fund			
Balance as per last Balance Sheet	-		-
Add: During the year	-		-
2 Capital Fund			
Balance as per last Balance Sheet		4,33,294	4,33,294
3 GOI DST Grant for Fixed assets			
Balance as per last Balance Sheet	217,45,384		195,74,588
Add: (Grant received on account of Non-recurring items)	59,15,394		21,70,796
4 Capital Reserve			
Donation received during the year in kind		276,60,778	217,45,384
		4,88,250	
5 Balance in Income and Expenditure Account			
Balance as per last Balance Sheet	69,01,192		108,32,790
Add /(Less): Excess /(Deficit) transferred from Income and Expenditure Account	165,72,532		(39,31,598)
		234,73,724	69,01,192
Total		520,56,046	290,79,870



NATIONAL INNOVATION FOUNDATION - INDIA
Regn.No.F/7412/Ahmedabad

SCHEDULE FORMING PART OF REVISED BALANCE SHEET AS AT MARCH 31, 2016

	INR-Rupees As at March 31, 2016	INR-Rupees As at March 31,2015
Schedule : 2 - Earmarked Funds :		
Earmarked Funds		
1 DST Seeds Project		
a Balance as per last Balance Sheet	(89,200)	(89,200)
b Grant received	-	-
c <u>Less: Expenditure/Utilisation towards objectives of fund</u>		
i. Capital Expenditure		
Fixed assets	-	-
ii. Revenue Expenditure		
Consumable & Materials	-	-
Salaries & Wages	-	-
Overhead	-	-
Travel expenses	-	-
Total of Expenditure	-	-
Net Balance at the year end [a+b-c]		(89,200)
2 DST Project- Vet		
a Balance as per last Balance Sheet	(1,09,268)	(1,09,268)
b Grant received	-	-
c <u>Less: Expenditure/Utilisation towards objectives of fund</u>		
i. Capital Expenditure	-	-
ii. Revenue Expenditure		
Total of Expenditure	-	-
Net Balance at the year end [a+b-c]		(1,09,268)
3 NMPB(Ayush) Project		
a Balance as per last Balance Sheet	-	(7,084)
b Grant received	-	-
c <u>Less: Expenditure/Utilisation towards objectives of fund</u>		
i. Capital Expenditure		
Fixed assets	-	-
Others		
ii. Revenue Expenditure		
Manpower		5,594
Workshop		1,490
Total of Expenditure	-	7,084
Net Balance at the year end [a+b-c]		-
4 DST Project- Techpedia		
a Balance as per last Balance Sheet	-	-
b Grant received	-	30,61,614
c <u>Less: Expenditure/Utilisation towards objectives of fund</u>		
i. Capital Expenditure		
Fixed assets	-	-
Others	-	-
ii. Revenue Expenditure		
Communication & Contingency		2,61,614
Manpower		10,20,000
Portal Management		11,00,000
Travel		5,00,000
Workshop		1,80,000
Total of Expenditure	-	30,61,614
Net Balance at the year end [a+b-c]		-



NATIONAL INNOVATION FOUNDATION - INDIA
Regn.No.F/7412/Ahmedabad

SCHEDULE FORMING PART OF REVISED BALANCE SHEET AS AT MARCH 31, 2016

	INR-Rupees As at March 31, 2016	INR-Rupees As at March 31, 2015
5 ICMR- Herbarium and Plant Repository Project		
a Balance as per last Balance Sheet	(7,00,420)	(7,00,420)
b Grant received	7,00,000	-
c <u>Less: Expenditure/Utilisation towards objectives of fund</u>		
i. Capital Expenditure		
Fixed assets	-	-
Others	-	-
ii. Revenue Expenditure		
Consultancy Charges	-	-
Contingencies	-	-
Overhead	(420)	-
Travel	-	-
Total of Expenditure	(420)	-
Net Balance at the year end [a-c]		0
		(7,00,420)
6 ICMR- Sristi Laboratory Project		
a Balance as per last Balance Sheet	0	941
b Grant received	-	-
c <u>Less: Expenditure/Utilisation towards objectives of fund</u>		
i. Capital Expenditure		
Fixed assets	-	-
Others	-	-
ii. Revenue Expenditure		
Overhead	0	941
Total of Expenditure	0	941
Net Balance at the year end [a-c]		-
7 Rajat Jayanti Vigyan Sancharak Fellowship		
a Balance as per last Balance Sheet	-	(93,607)
b Grant received	-	-
c <u>Less: Expenditure/Utilisation towards objectives of fund</u>		
i. Revenue Expenditure	-	93,607
Total of Expenditure	-	93,607
Net Balance at the year end [a+b-c]		-
Less: Return the Balance of fund to DST	-	-
Balance	-	-
9 DST Project- wellbeing of Tribal Communities		
a Balance as per last Balance Sheet	-	-
b Grant received	9,62,395	140,00,000
c <u>Less: Expenditure/Utilisation towards objectives of fund</u>		
i. Capital Expenditure		
Fixed assets	-	-
Others	-	-
ii. Revenue Expenditure		
Consumables	-	107,17,642
Salaries	-	11,70,000
Travel	-	11,49,963
Total of Expenditure	-	130,37,605
Net Balance at the year end [a-c]		9,62,395
		9,62,395
10 Hariom Ashram		
a Balance as per last Balance Sheet	102,50,000	-
b Grant received	-	102,50,000
c <u>Less: Expenditure/Utilisation towards objectives of fund</u>		
i. Capital Expenditure		
Revenue Expenditure	4,90,000	-
Total of Expenditure	4,90,000	-
Net Balance at the year end [a-c]		97,60,000
		102,50,000
11 ICMR FOIN Project		
a Balance as per last Balance Sheet	-	-
b Grant received	13,25,000	14,30,000
c <u>Less: Expenditure/Utilisation towards objectives of fund</u>	13,25,000	14,30,000
Net Balance at the year end [a-c]		-



NATIONAL INNOVATION FOUNDATION - INDIA
Regn.No.F/7412/Ahmedabad

SCHEDULE FORMING PART OF REVISED BALANCE SHEET AS AT MARCH 31, 2016

	INR-Rupees As at March 31, 2016		INR-Rupees As at March 31,2015
12 ICMR NIF Task Force Project			
a Balance as per last Balance Sheet	60,84,487		
b Grant received	60,45,000		61,55,000
c <u>Less: Expenditure/Utilisation towards objectives of fund</u>	166,21,308		70,513
Net Balance at the year end [a-c]		(44,91,821)	60,84,487
13 DST Project - Mobile Exhibition in Tribal areas			
a Balance as per last Balance Sheet	90,00,000	-	
b Grant received	-		90,00,000
c <u>Less: Expenditure/Utilisation towards objectives of fund</u>	-		
i. Capital Expenditure			
ii. Revenue Expenditure	1,50,263		
Total of Expenditure	1,50,263		
Net Balance at the year end [a-c]		88,49,737	90,00,000
14 NABARD FOI Project			
a Balance as per last Balance Sheet	-	-	
b Grant received	20,00,000		
c <u>Less: Expenditure/Utilisation towards objectives of fund</u>			
i. Capital Expenditure			
ii. Revenue Expenditure	20,00,000		
Total of Expenditure	20,00,000		
Net Balance at the year end [a-c]		-	
15 SIDBI FOIN Project			
a Balance as per last Balance Sheet	-		
b Grant received	16,00,000		
c <u>Less: Expenditure/Utilisation towards objectives of fund</u>			
i. Capital Expenditure			
ii. Revenue Expenditure	20,00,000		
Total of Expenditure	20,00,000		
Net Balance at the year end [a-c]		(4,00,000)	
16 India-South Africa Bilateral Expert Meeting			
a Balance as per last Balance Sheet	-	-	
b Grant received	6,50,000		
c <u>Less: Expenditure/Utilisation towards objectives of fund</u>			
i. Capital Expenditure			
ii. Revenue Expenditure	1,36,915		
Total of Expenditure	1,36,915		
Net Balance at the year end [a-c]		5,13,085	
17 Micro Venture Innovation Fund- A/c SIDBI			
a Balance as per last Balance Sheet	852,28,173		793,56,862
b Income during the year from advances and investments made on account of funds	60,90,787		58,71,311
C Interest on Project From SIDBI Loan Funds	1,93,136		
Net Balance at the year end [a+b]		915,12,096	852,28,173
18 Innovation Fund			
Balance as per last Balance Sheet	178,82,170		120,27,461
Add: Amount received during the year	-		11,70,974
Add: Amount transferred during the year[Refer Note:1(g) Schedule -11	14,51,318		52,79,735
Less: Amount incurred during the year	3,50,000		5,96,000
		189,83,488	178,82,170
Total		1254,90,513	1285,08,337



NATIONAL INNOVATION FOUNDATION - INDIA
Regn.No.F/7412/Ahmedabad

SCHEDULE FORMING PART OF REVISED BALANCE SHEET AS AT MARCH 31, 2016

	INR-Rupees As at March 31, 2016		INR-Rupees As at March 31,2015
Schedule : 3 - Current Liabilities and Provisions :			
Advances received for			
Innovator fellowship fund	6,700		6,700
Outstanding Expenses	16,16,488		37,45,986
Sundry Creditors	6,40,969		21,85,298
EMD\SD	92,221		
		23,56,378	
Other Liabilities			
TDS	13,30,584		-
		13,30,584	-
Total		36,86,962	59,37,984



SCHEDULE FORMING PART OF REVISED BALANCE SHEET AS AT MARCH 31, 2016

Particulars	Balance as on 42,095		GROSS BLOCK		DEPRECIATION		Net Block As on 42,460		
	Rs.	Rs.	Additions during the year	Deductions during the year	Gross Block as on 42,460	Depreciation on 42,095		Deductions during the year	Depreciation for 2015-16
Computers & Ancillary Assets									
Computers	85,06,871	22,49,815	-	-	107,56,686	73,63,164	-	16,36,355	89,99,519
Networking equipment	11,76,491	-	-	-	11,76,491	10,58,205	-	70,972	11,29,177
Scanner	3,63,990	-	-	-	3,63,990	3,51,023	-	7,780	3,58,803
Software	33,27,960	2,28,400	-	-	35,56,360	32,02,011	-	1,44,090	33,46,101
Furniture & Fixtures and Dead Stock									
Furniture & Fixtures	25,29,194	9,54,237	-	-	34,83,431	10,71,836	-	2,28,901	13,00,737
Electrical Installations	69,610	-	-	-	69,610	40,892	-	2,872	43,764
Office Equipments									
Air Cooler	3,64,804	3,18,477	-	-	6,83,281	1,40,959	-	70,277	2,11,236
Balloon	35,438	-	-	-	35,438	24,930	-	1,576	26,506
Bio-Metric ESSL Attendance System	-	25,150	-	-	25,150	-	-	3,773	21,377
Camera	12,45,101	3,19,399	-	-	15,64,500	6,31,836	-	1,15,945	7,47,781
EPABX System	1,62,249	34,466	-	-	1,96,715	97,328	-	12,323	1,09,651
Equipment	47,54,579	38,790	-	-	47,93,369	14,68,704	-	4,97,841	19,65,545
Fab Lab Equipment	16,14,676	11,82,770	-	-	27,97,446	9,51,968	-	1,91,149	11,43,117
Fax Machine	-	36,907	-	-	36,907	29,631	-	1,091	30,722
Fire Extinguisher	18,505	-	-	-	18,505	12,586	-	888	13,474
Photo Copying Machine	57,000	1,47,000	-	-	2,04,000	41,933	-	13,285	55,218
Public Address System	60,111	-	-	-	60,111	42,286	-	2,674	44,960
Refrigerator	39,010	-	-	-	39,010	25,078	-	2,090	27,168
Sony LCD	91,000	-	-	-	91,000	64,015	-	4,048	68,063
Tape recorder	36,427	-	-	-	36,427	27,752	-	1,301	29,053
Telephone/mobile Instrument	6,84,404	3,20,233	-	-	10,04,637	3,15,279	-	79,387	3,94,666
Water Cooler	-	23,000	-	-	23,000	-	-	3,450	3,450
Books									
Books	10,927	10,790	-	-	21,717	3,278	-	7,826	11,104
Vehicles									
Activa Honda	44,168	-	-	-	44,168	33,036	-	1,670	34,706
Bajaj Pulsar	68,289	-	-	-	68,289	51,077	-	2,582	53,659
Honda city	10,37,399	-	-	-	10,37,399	5,36,485	-	75,137	6,11,622
Tata safari	13,11,519	-	-	-	13,11,519	6,78,244	-	94,991	7,73,235
Tata Indica	5,45,341	-	-	-	5,45,341	2,60,669	-	42,701	3,03,370
Mobile Exhibition Van	27,09,873	-	-	-	27,09,873	11,66,949	-	2,31,439	13,98,388
Hero HF Deluxe	52,547	-	-	-	52,547	3,941	-	7,291	11,232
Tractor (John Deere)	-	5,51,117	-	-	5,51,117	-	-	82,668	82,668
TVS Wego	58,105	-	-	-	58,105	8,716	-	7,408	16,124
Total	310,12,495	64,03,644	-	-	374,16,139	197,03,811	-	36,45,781	233,49,592
Previous Year	299,86,248	21,70,796	(11,44,549)	(11,44,549)	310,12,495	175,68,618	(9,58,209)	30,93,402	197,03,811
									113,08,684



NATIONAL INNOVATION FOUNDATION - INDIA
Regn.No.F/7412/Ahmedabad

SCHEDULE FORMING PART OF REVISED BALANCE SHEET AS AT MARCH 31, 2016

	INR-Rupees As at March 31, 2016	INR-Rupees As at March 31, 2015
Schedule : 5 - Current Assets, Loans, Advances and Other Assets :		
1 Cash and Bank Balances		
Cash Balance on hand	-	-
Balance with Banks		
In Saving Accounts		
- Kotak Mahindra, Vastrapur - SB A/c. No.762	-	51,598
- Union Bank of India,- SB A/c.No.724 & SWAP FD'es	299,34,376	305,31,377
		305,82,974
In Current Accounts		
- Axis Bank, Vastrapur - A/c. No.1548	27,26,477	2,00,535
- Axis Bank, Vastrapur - A/c. No. 8099 - MVIF	4,56,551	18,49,813
		-
		20,50,348
In Fixed Deposit Accounts		
- From NIF funds	357,31,566	332,79,522
- From MVIF funds	740,12,857	663,40,812
		996,20,334
		1097,44,423
		31,83,027
Total		1428,61,826
		1322,53,656
2 Loans, Advances and Other Assets		
Advance recoverable in cash or in kind or for value to be received	14,58,082	19,43,164
Advances for Capital Assets	44,52,813	
Advances to Innovators from MVIF Funds [SIDBI]	115,89,674	118,01,538
Accrued Interest	54,29,175	50,15,168
TDS Receivable	13,75,403	12,03,981
		-
		-
Total	243,05,146	199,63,851
Total	1671,66,973	1522,17,507



NATIONAL INNOVATION FOUNDATION - INDIA
Regn.No.F/7412/Ahmedabad

SCHEDULE FORMING PART OF REVISED INCOME AND EXPENDITURE ACCOUNT
FOR THE YEAR ENDED ON MARCH 31, 2016

	INR-Rupees For the year ended on March 31, 2016	INR-Rupees For the year ended on March 31, 2015
Schedule : 6 - Interest earned :		
Interest earned on 8% Govt. of India saving bond	-	-
Interest on fixed deposits with banks	57,92,196	52,69,925
Interest on Saving Bank account	6,943	9,810
Interest earned on others	1,926	-
Total Interest Earned	58,01,065	52,79,735
Less: Transfer to Innovation Fund	(14,51,318)	(52,79,735)
Total	43,49,747	-
Schedule : 7 - Other Income :		
Administrative overhead recovery from Earmarked Projects	-	-
Miscellaneous Income	43,509	-
Profit on sale of Fixed Assets	-	-
	43,509	-
Less: Transfer to Innovation Fund	-	-
Total	43,509	-



NATIONAL INNOVATION FOUNDATION - INDIA
Regn.No.F/7412/Ahmedabad

SCHEDULE FORMING PART OF REVISED INCOME AND EXPENDITURE ACCOUNT
FOR THE YEAR ENDED ON MARCH 31, 2016

	INR-Rupees For the year ended on March 31, 2016	INR-Rupees For the year ended on March 31, 2015
Schedule : 8 - Establishment Expenses :		
Basic Pay	35,29,904	34,26,513
Consultancy Charges		2,23,334
Contractual Payment	73,26,702	27,84,078
Dearness Allowance	42,02,312	36,08,478
Employer's NPS Contribution	7,73,371	7,03,834
Fellowship	141,91,603	70,39,552
House Rent Allowance	7,06,270	6,85,310
Medical reimbursement/Medical treatment Exp.	88,545	2,21,945
Transport Allowance	7,72,632	8,39,670
	315,91,339	
Total	315,91,339	195,32,714
Schedule : 9 - Recurring Expenses :		
1 Business Development		
Clearing House /Workshop with emt.		2,29,190
Benchmarking and Market Research	3,97,254	11,21,751
Demonstrations (BD)	14,65,566	14,78,405
Online Catalogues	9,985	66,000
Student Involvement for Business Plans	1,44,000	2,21,265
Travel (BD)	8,01,806	8,11,234
	28,18,610	39,27,845
2 Dissemination & Social Diffusion		
Innovation Exhibition		20,125
Demonstrations (Dnsd)	5,44,304	1,35,695
Diffusion of Practices Through Farmers /media /KVK	8,00,174	-
Exhibitions & Innovation exhibition	6,21,916	12,63,666
Innovation Diffusion Centre	2,52,760	2,50,235
Printing & Publication (Dasd)	2,93,742	4,74,561
Travel (Dissemination)	5,17,054	2,59,519
Workshop/Meetings (Dissemination)	14,616	33,536
	30,44,566	24,37,337
3 IPR and Law		
Experts / Mentors Committee Meeting (IPR)	9,131	2,155
Filing National Patent Applications	34,71,969	14,51,078
Filing Trade Mark and Geographical Applications	3,145	740
Meeting & Conferences	18,235	-
Travel (IPR)	1,00,526	1,08,968
	36,03,006	15,62,941



NATIONAL INNOVATION FOUNDATION - INDIA
Regn.No.F/7412/Ahmedabad

SCHEDULE FORMING PART OF REVISED INCOME AND EXPENDITURE ACCOUNT
FOR THE YEAR ENDED ON MARCH 31, 2016

	INR-Rupees For the year ended on March 31, 2016	INR-Rupees For the year ended on March 31, 2015
4 IT & Database		
Computer Maintenance & Upgradation	5,06,712	2,36,736
Database & Software Dev , Proof Reading	24,37,063	13,74,473
Internet	45,06,995	6,35,062
Travel (IT)	600	3,014
Website	2,17,738	1,26,026
	76,69,108	23,75,311
5 Scouting & Documentation		
Advertisement- Regional and National	46,14,362	32,56,269
Collaborators	39,16,655	12,65,000
Experts / Mentors Meetings (S&D)	35,521	1,07,013
Ignite (S&D)	22,76,364	9,51,564
Sample / Prototype Collection & Identification	15,39,592	90,038
Travel (S&D)	9,48,554	6,51,592
Verification / Detailed Documentation	8,66,910	19,72,852
Workshops and Publications	17,41,525	15,61,993
	159,39,483	98,56,321
6 Value Addition and Research & Development		
Experts /mentors Meetings (Vard)	2,65,931	10,57,178
Prior Art Search, Validation of Innovations	101,68,515	13,12,966
Testing of Prototypes / Products	36,11,774	1,85,184
Travel (VARD)	20,36,456	15,91,660
Value Addition and Product Development	25,48,951	(2,52,341)
	186,31,628	38,94,647
7 Technology acquired under Technology Acquisition Fund	-	-
8 FOIN/ Award Function Expenses		
Accommodation	10,66,077	10,62,819
Catering	7,87,409	6,72,567
Dissemination	3,51,632	-
Exhibition and Other Exps	14,45,860	13,05,502
Photography		38,000
Prizes		46,60,000
Stationery and Printing		6,46,113
Travel and Transportation	14,63,544	18,47,533
Trophy		2,13,326
	51,14,522	104,45,860
9 Loss on Sale of Fixed Assets	-	1,66,850
Total	568,20,924	346,67,112



NATIONAL INNOVATION FOUNDATION - INDIA
Regn.No.F/7412/Ahmedabad

SCHEDULE FORMING PART OF REVISED INCOME AND EXPENDITURE ACCOUNT
FOR THE YEAR ENDED ON MARCH 31, 2016

	INR-Rupees For the year ended on March 31, 2016		INR-Rupees For the year ended on March 31, 2015
Schedule : 10 - Other Administrative Expenses :			
Auditors Remuneration		46,000	33,708
Statutory Audit Fees			
Internal and Concurrent Audit Fees	2,01,250		
Other certification fees	18,230	2,19,480	2,28,429
Accomodation		47,276	2,87,026
Bank Charges		3,790	1,979
Building repairing charges		1,65,129	2,85,463
Conveyance Expenses		10,975	1,02,139
Electricity and Power		3,01,093	2,32,036
G.C. Meeting Expenses		2,18,536	2,77,183
Insurance Expenses		61,516	1,22,585
Office Expenses		16,66,095	10,16,341
Postage Expenses		2,47,541	3,37,862
Printing and Stationary		6,60,583	5,79,745
Recruitment Expenses		15,70,277	28,18,218
Rent, Rates and Taxes		17,91,240	11,18,700
Repairs and Maintenance		3,67,375	1,44,638
Security Expenses		8,46,060	8,30,746
Telephone and Communication Charges		1,15,895	1,02,686
Travel Expenses		10,80,889	
Vehicles Running and Maintenance		3,17,866	3,29,090
Membership Fees		3,435	
Interest & Penalty		9,482	
TDS Written Off		96,753	
Total		98,47,286	88,48,574



NATIONAL INNOVATION FOUNDATION - INDIA

F.Y. 2015-2016

ADVANCES A/c. MVIF PROJECTS		
	Rs.	Rs.
North East Region		
Bamboo Strip/Stick Making Machine	5,028	
Amount lying with coordinating agency	5,622	
Muga Reeling Machine	20,000	
Pomegranate Deseeding	12,000	42,650
North Region		
Fire Cracker Device	7,000	
Amount lying with coordinating agency	15,480	
Herbal Growth	1,62,407	
HNP-Performance Enhancer for Petrol Engine- Harinar	1,41,767	
Modified Solar Cooker	5,047	
Multi Crop Thresher	5,84,931	
Multi Seed Drill	3,85,268	
Safety Valve for Stove	16,000	
Trench Digger Machine	9,93,480	23,11,380
Western Region		
Bicycle Hoe	15,000	
Healthcare Chair	37,390	
Mitticool Clay	1,991	
Paresh Panchal- Incense Stick Macking Machine	2,50,000	
Stencil Cutting Device- Nazim Shaikh	1,68,950	
Sugarcane Rotator	47,486	
Amount payable to coordinating agency	(30,207)	4,90,610
BALANCE C/F		28,44,640




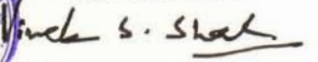
ADVANCES A/c. MVIF PROJECTS

	Rs.	Rs.
BALANCE B/F		28,44,640
Southern Region		
SEVA (Multipurpose Cooking Vessel-Abdul Razak)	42,150	42,150
Projects under direct supervision of NIF		
Bamboo Agarbati Stick Making Machine	3,00,000	
Bhagwan Singh Dangi- Reaper Winrower	3,00,000	
B.Mohanlal- Marine Reversible Reduction Gearbox	7,30,000	
Bommagani Mallesh- Remote for electronic gadgets	1,20,000	
Clear Banana Alkali- Basanta Sharma	96,050	
C.V.Raju- Anything by HAnd	3,80,045	
Dadaji Khobragade- DRK 2008 Paddy Variety	2,00,000	
Deepak Bharali- Innovative Design Making Machine	9,15,010	
Director, SMIT- Ajooba Tube Light Frames	1,82,032	
D N Venkat- Multi Tree Climbing Instrument	3,70,000	
Dr. K L Rao- Honeybee A P	9,000	
G Chandrashekhar- Passiflora Foetida	3,60,000	
Huma Toilet Cleaner- Md. Motin Ahmed	24,000	
Imli Toshi Namu- Multi Use Hand Free Visor	13,500	
Iron Mesh Making Machine- N. Indrakumar Singh	90,000	
Jai Prakash Singh- Wheat Varieties	75,000	
Jaydeep Mandal	5,30,000	
Jayprakash- Energy Efficient Stove	3,00,000	
Md.Fajlul Haque- Paddy Thresher	8,04,075	
Mujib Khan- Retrofitted Kit in Car for Physically Challenged	60,000	
Prem Singh Saini- Phone Operated Switch	2,00,000	
Rajkumar Rathore- Richa 2000	1,37,172	
Rama Shankar Sharma- Modified Hand Pump	37,000	
Shailendra Rakhecha- Animated T- Shirt	1,85,000	
Sugarcane Bud Chipper Device-Roshanlal Vishwakarma	9,00,000	
Tulsi Growth Promoter	2,00,000	
Umesh Chandra Sharma- Interlocking Bricks	4,00,000	
Yellow Fourier Technologies P.Ltd.-Indian Tea Makin	2,10,000	
Areca nut Cutting machine-Wazeer	5,00,000	
Walnut Dehulling Machine - Mushtaq Ahmad Dar	5,000	
GIAN- Cell (J&K)	70,000	87,02,884
TOTAL		115,89,674



**Schedule IXC
(Vide Rule 32)**


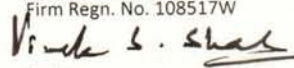
Statement of Income liable to contribution for the Financial Year 01-04-2015 to 31-03-2016

Name of the Public Trust:	NATIONAL INNOVATION FOUNDATION - INDIA Bungalow No. 1, Satellite Centre, Satellite Complex, Premchandnagar Road, Jodhpur Tekra, Satellite, Ahmedabad - 380015.	
Regn.No.	F/7412/Ahmedabad	
	INR-Rupees	
Gross Annual Income		
Plan Grant from Department of Science and Technology [DST]	1200,00,000	
Interest Income earned	58,01,065	
Total Gross Annual Income		1258,01,065
Details of Income not Chargeable to Contribution under Section 58 and Rule 32 :		
(i) Donation received during the year from other public trusts and Dharmadas		
(ii) Grants by Government and Local Authorities	1200,00,000	
(iii) Interest on Sinking or Depreciation Fund		
(iv) Amount spent for the purpose of secular education	1019,05,330	
(v) Amount spent for the purpose of medical relief		
(vi) Amount spent for the purpose of veterinary treatment of animals.		
(vii) Expenditure incurred from donations for relief of distress caused by scarcity, drought, flood, fire or other natural calamity.		
(viii) Deductions out of income from lands used for agricultural purpose :		
(a) Land Revenue and Local Funds/Cess		
(b) Rent payable to superior landlord		
(c) Cost of production, if lands are cultivated by trust		
(ix) Deductions out of income from lands used for non-agricultural purpose :		
(a) Assessment, Cesses and other Government or Municipal Taxes		
(b) Ground rent payable to the superior landlord		
(c) Insurance Premium		
(d) Repairs at 10 per cent of gross rents of buildings		
(e) Cost of collection at 4 percent of gross rent of buildings let out		
(x) Cost of collection of income or receipts from securities stocks etc.at 1 percent of such income		
(xi) Deduction on account of repairs in respect of buildings not rented and yielding no income at 10 per cent of the estimated gross annual rent		
Total Income not chargeable to contribution.		1258,01,065
Gross Annual Income Chargeable to Contribution		0
For National Innovation Foundation		
Trustee	As per our report of even date For Ramanlal G. Shah & Co. Chartered Accountants Firm Regn. No. 108517W  Partner Vivek S. Shah Membership No. 112269	
Place : Ahmedabad		
Date :		

29 SEP 2016

THE BOMBAY PUBLIC TRUST ACT 1950
Schedule IXC (See Rule 32)

Statement of Income liable to contribution for the Financial Year 01-04-2015 to 31-03-2016

Name of the Public Trust: NATIONAL INNOVATION FOUNDATION - INDIA Bungalow No. 1, Satellite Centre, Satellite Complex, Premchandnagar Road, Jodhpur Tekra, Satellite, Ahmedabad - 380015. Phone: + 91 079 26753501, +91 079 2673 2095 / 2456, E-Mail : info@nifindia.org		
Name, address and Phone Number of Trustees, Whome submit the audit report: See Annexure 1		
Details of Relating Bank Account: Saving Bank A/C no: 606802010000724 Name of Bank: Union Bank of India, Premchandnagar, Ahmedabad.		
Bank Account relating to transaction of foreign contribution of trust: N.A. F.C.R.A. No. N.A.		
Regn.No. F/7412/Ahmedabad		
	INR-Rupees	
Gross Annual Income		
Details of income not chargeable to contribution under Section 58 and Rule 32:		
(i) Donations received during the year from any source		
(a) Corpus		
(1) From Country	-	
(2) From Foriegn Country, FC.R.A. No. and Date	-	
(b) General		
(1) From Country	-	
(2) From Foriegn Country, FC.R.A. No. and Date	-	
(ii) Grants by Government and local authorities		
(a) Government and Local authorities		
(Plan Grant from Department of Science and Technology [DST])	1200,00,000	
(b) From Foriegn Country	-	
(c) By Funding agencies		
(1) From Country	-	
(2) From Foriegn Country, FC.R.A. No. and Date	-	
Interest Income earned	58,01,065	
Total Gross Annual Income		1258,01,065
(iii) Amount spent for the purpose of education	1019,05,330	
(iv) Amount spent for the purpose of medical relief	-	
(v) A) Deductions out of income from lands used for Agricultural purposes-		
(a) Land Revenue and Local Fund / Cess	-	
(b) Rent payable to superior landlord	-	
(c) Cost of production, if lands are cultivated by trust	-	
(B) Income from lands used for agricultural purpose	-	
(vi) (A) Deductions out of income from lands used for non-agricultural purpose :		
(a) Assessment, Cesses and other Government or Municipal Taxes	-	
(b) Ground rent payable to the superior landlord	-	
(c) Insurance Premium	-	
(d) Repairs at 10 per cent of gross rents of buildings	-	
(e) Cost of collection at 4 percent of gross rent of buildings let out	-	
(B) Income from lands used for agricultural purpose	-	
(vii) Cost of collection of income or receipts from securities stocks etc. at 1 percent of such income	-	
(viii) Deduction on account of repairs in respect of buildings not rented and yielding no income at 10 per cent of the estimated gross annual rent	-	
Total Income not chargeable to contribution.		1258,01,065
Gross Annual Income Chargeable to Contribution		-
For National Innovation Foundation		
Trustee		
Place : Ahmedabad		
Date :		
		As per our report of even date For Ramanlal G. Shah & Co. Chartered Accountants Firm Regn. No. 108517W  Partner Vivek S. Shah Membership No. 112269

29 SEP 2016

NATIONAL INNOVATION FOUNDATION INDIA

SCHEDULE: 11 - SIGNIFICANT ACCOUNTING POLICIES AND NOTES TO ACCOUNTS :

1. Significant accounting policies :

a) Basis of accounting

The financial statements are prepared under the historical cost convention, on the accrual basis of accounting in conformity with generally accepted accounting principles in India ('Indian GAAP') as applicable, and the relevant provisions of the Bombay Public Trust Act, 1950 and in accordance with the guidelines on accounting for the central autonomous bodies, issued by Ministry of Finance. The accounting policies have been consistently applied by the Foundation; and the accounting policies not referred to otherwise, are in conformity with Indian GAAP.

b) Revenue recognition

All income and expenditure are recognized on accrual basis except in case of specific and conditional Grants. The un-spent amount of such Grant is liable to be returned or re-directed as per the directions of the Donor organisations. Accordingly the unspent amounts as on the date of Balance Sheet are shown as liability. Government grants/subsidies are accounted on realisation basis. Benefit sharing on the MVIF support is variable considering the business risk and uncertainty associated with its collection/recovery.

c) Fixed assets and intangible assets

- i. Fixed assets are stated at cost, less accumulated depreciation. Cost includes all expenditure necessary to bring the asset to its working condition for its intended use. Fixed assets acquired from earmarked funds are shown as utilisation of funds in Schedule-2 in respective earmarked funds.
- ii. Any loss or gain on exchange rate fluctuation attributable to fixed assets is adjusted to the cost of fixed assets.

d) Depreciation and amortisation

Depreciation is provided on the Written Down Value (WDV) at rates and in the manner prescribed in Appendix I to the Income tax rules, 1962.

e) Plan/Non-Plan grant received from the Government

Plan Grants received during the year are credited to revenue account except grants utilised for acquisition of capital assets during the year is credited to respective "Capital Fund" account.



Continue to next page

NATIONAL INNOVATION FOUNDATION INDIA

SCHEDULE: 11 - SIGNIFICANT ACCOUNTING POLICIES AND NOTES TO ACCOUNTS:

Continued from previous page...

f) Earmarked Funds

Funds/grant received for specific projects are credited to separate account and utilisation of the same also debited to respective funds/grant accounts. Outstanding amount in those funds/grants shows amounts still to be incurred on running projects. Further grant is yet to be released in respect of project which shows debit balance.

g) Innovation Funds

Interest earned on investments of innovation funds during the year has been credited to Innovation Funds.

h) Fellowships and scholarships

Sponsored fellowships and scholarships are accounted against the sponsored project fund/grant. Fellowships and scholarships paid out of the organisation funds are treated as revenue expenditure and debited to "Establishment Expenses".

i) Expenditure on Technology acquisitions

Payments made for acquiring rights in innovated products from the innovators for making it available to public at large at low cost or no cost are charged to revenue account in the year of payment as recurring expenditure as "Technology acquired under Technology Acquisition Fund".

j) Investments

The investments are stated at cost.

k) Retirement and other employee benefits

The foundation has not made any retirement benefits payable to the employees. The retirement benefits are accounted for as and when they become due and payable to the employees.

l) Foreign Currency Transactions

Transactions denominated in foreign currency are accounted at the exchange rate prevailing at the date of the transaction.

2. Notes on Accounts :

- a) In the opinion of the trustees, the current assets, loans and advances have a value on realisation in the ordinary course, at least equal to the amount at which they are stated in the Balance Sheet.
- b) In opinion of the trustees, there is no contingent liability as on the date of balance sheet.



Continue to next page

NATIONAL INNOVATION FOUNDATION INDIA

SCHEDULE: 11 - SIGNIFICANT ACCOUNTING POLICIES AND NOTES TO ACCOUNTS :

Continued from previous page...

c) The balances of loans and advances to innovators are subject to confirmation / reconciliation and the necessary adjustments, if any, in respect thereto will be carried out in the year in which they are settled.

d) Taxation

In view of there is no taxable income under Income Tax Act,1961, no provision for income tax has been considered necessary.

e) Estimated amount of Capital contracts to be executed Rs. 24,21,499/- (Net of advance)

f) During the year, The trust has received Rs. 1,11,00,000/- as capital grant from Department of Science and Technology, which has been utilized as follows;

	Rs.
I. Additions to fixed assets during the year	59,15,394
II. Advance paid for fixed asset o/s as on 31/03/2016	44,52,813
III. Balance amount towards fixed assets	7,31,793

(Which have been received & put to use subsequent to the Balance Sheet date)

Total 1,11,00,000

g) Wide Finance Committee Meeting resolution no. 25/2016 & Governing Board Meeting resolution no. 181/2016 dated 27th June, 2016 here though to practice of crediting all interest earned during the year on grants to innovation fund has been changes with effect from financial year 2015-16 resulting into Rs. 43,49,747 (Rs. Forty Three Lakh Forty Nine Thousand Seven Hundred Forty Seven Only) not been credited to Innovation Fund.

h) Previous Year's figures have been re-arranged / re-grouped to make them comparable with current year's figures.

Schedule – 1 to 11 are annexed to and form an integral part of the Balance Sheet as at March 31, 2016 and the Income and Expenditure Account for the year ended on that date.

As per our report of even date attached

For Ramanlal G. Shah & Co.

Chartered Accountants

Firm Regn. No. 108517W

Vivek S. Shah

Vivek S. Shah

Partner

Membership No. 112269

Place : Ahmedabad.

Dated :

29 SEP 2016



[Signature]

Trustee,

Executive Vice Chairperson

National Innovation Foundation-India

Body of Department of Science & Technology, Govt. of India

Site Complex, Satellite, Ahmedabad-15

Place : Ahmedabad.

Dated :





National Innovation Foundation - India

Satellite Complex
Jodhpur Tekra, Near Mansi crossroads
Ahmedabad, Gujarat, India
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